

## Agenda

1. Preliminary Procedures
  - 1.1. Call meeting to order & announce Open Meetings Act is Posted
  - 1.2. Public Notice as publicized per board policy
  - 1.3. Roll Call
    - 1.3.1. Action to excuse board members if necessary
  - 1.4. Pledge of Allegiance
  - 1.5. **1.5 Mission** Seward Public Schools - a district rooted in excellence - in cooperation with family and community members is committed to the development of the whole student and affirms that all students will have the skills to become productive, resilient, and contributing members of their community.
  - 1.6. Approval of Agenda
2. Public Forum: (The Board President reserves the right to place time limits on individuals and topics.)
  - 2.1. Public Forum on Agenda Items: This is your opportunity to speak to items on the agenda. If you are not a part of the presentation of the agenda item you need to speak now. Thank you for your participation.
  - 2.2. Public Forum on Any Topic: This is your opportunity to speak to any topic concerning the school district. Since it is not an agenda item the board cannot discuss or take action at this time on the matter. Future discussion can be requested as an agenda item. Thank you for your participation.
3. Discussion Items
  - 3.1. Stakeholder Feedback/JEO
  - 3.2. Summer Project Update
  - 3.3. Superintendent's Goals
4. Reports
  - 4.1. Administrator Reports
  - 4.2. Superintendent's Report
5. Action Items
  - 5.1. Second Reading of New and Revised Policies
  - 5.2. Math Curriculum
  - 5.3. AP World History Textbook
6. Future Agenda Items
7. Consent Agenda
  - 7.1. Approval of Minutes
  - 7.2. Approval of Financial Reports
    - 7.2.1. Treasurer
    - 7.2.2. Budget
    - 7.2.3. Activities
    - 7.2.4. Athletic

- 7.3. Approval of Claims
  - 7.3.1. General Fund
  - 7.3.2. Special Building Fund
  - 7.3.3. Depreciation Fund
- 7.4. Approval of Consent Agenda
- 8. Adjournment

Please publish the following legal notice in the August 6, 2025 edition of the Seward County Independent. Thank you.

### NOTICE OF SCHOOL BOARD MEETING

The board of education of the School District of Seward will meet in regular session on Monday, August 11, 2025 at 5:30 p.m. for a regular business meeting. The meeting will be held at the Administrative Offices located at 410 South St., Seward, Nebraska. An agenda for the meeting which shall be kept continually current is readily available for public inspection at the Superintendent's Office during normal business hours.

To view the agenda go to <http://SewardPublicSchools.org/> and find the eMeeting link.

# School District of Seward Board Report

August 11, 2025

Jessica Dominy, Principal  
Seward Elementary School

## Enrollment: as of August 6, 2025

- Preschool: 65
- Kindergarten: 92
- 1st Grade: 84
- 2nd Grade: 74
- 3rd Grade: 98
- 4th Grade: 95
- Total: 508

## Upcoming Seward Elementary Events:

- Monday, August 11th: Open House (5:00 - 6:30 PM)
- Wednesday, August 13th: 1st Day of School (1:15 Elementary Dismissal)
- Wednesday, August 20th: School Picture Day
- Week of August 25th: DIBELS Testing (1st-4th)
- Monday, August 25th: PTO Meeting @ 5:30 PM
- Monday, September 1st: No School, Labor Day

## First Day of School Celebration:

The first day of school is Wednesday, August 13th. Our theme for the 25-26 school year is "Growing Together and Rooting for Each Other" - a garden and insect theme. Our year will kick off with our first day of school celebration on August 13th outside, where students will line up with their new teachers and walk into the building together. We are looking forward to all the fun this school year will have to offer!

## Staffing Changes:

We have one new teacher joining Seward Elementary this year: Nicole Stoye (3rd Grade). We also have three new paras joining us: Donna Garman, Lindsey Meyer, and Brooklyn Rader. We are lucky to have them join the SES team!

## Strategic Planning:

This year, we will enter year two in our new strategic plan. We are looking forward to beginning this important work of achieving our new goals! Action teams will begin their work right away during fall workshop and will continue throughout the year.

## Thank You!

Our building is clean, organized, and ready for students, thanks to the maintenance team and Campbell's! I greatly appreciate how much time and effort went into preparing our school for the upcoming year. Thank you to Heidi and Christine at the District Office, and Michelle Austin, Tina Ratkovec, Stephanie Whisler, and Sev Strauss as well! They made sure teachers have orders in their classrooms over the summer.

**Board of Education Report**  
**Seward Middle School - Kirk J. Gottschalk**  
 11 August, 2025

**1. Middle School Activities.**

- 11 August - Middle School Open House, 1800-1930 hrs. (6:00-7:30 pm).  
 - 5<sup>th</sup> Grade student tours begin at 1800 hrs. (6:00 p.m.).
- 13 August - School starts, 1330 dismissal (1:30 pm)
- 1 Sept. - Labor Day, No School

**2. Staffing.**

One new full-time teacher will be at the middle school this year. Ms. Katelyn Ceerle will be teaching all middle school art classes.

**3. Outdoor Education.**

Our Outdoor Ed. experience for 6<sup>th</sup> graders and HS camp counselors at Camp Carol Joy Holling will take place from 20-22 August. Mr. Schlegel has been making all the preparations and communicating with those involved as we move forward in providing this unique educational experience for our kids.

**4. Enrollment.**

We are currently at 417 but nothing definite as we get new students coming in daily and getting requests for records of students who moved during the summer. These numbers hopefully are close to what we will begin with.

<u>Aug. 2025</u>	<u>Aug. 2024</u>	<u>Aug. 2023</u>	<u>Aug. 2022</u>
5 <sup>th</sup> Grade - 113	5 <sup>th</sup> Grade - 101	5 <sup>th</sup> Grade - 109	5 <sup>th</sup> Grade - 93
6 <sup>th</sup> Grade - 100	6 <sup>th</sup> Grade - 112	6 <sup>th</sup> Grade - 90	6 <sup>th</sup> Grade - 110
7 <sup>th</sup> Grade - 111	7 <sup>th</sup> Grade - 93	7 <sup>th</sup> Grade - 111	7 <sup>th</sup> Grade - 110
8 <sup>th</sup> Grade - <u>93</u>	8 <sup>th</sup> Grade - <u>114</u>	8 <sup>th</sup> Grade - <u>117</u>	8 <sup>th</sup> Grade - <u>105</u>
<b>TOTAL 417</b>	<b>TOTAL 420</b>	<b>TOTAL 427</b>	<b>TOTAL 418</b>

**5. Open House.**

Our middle school Open House will take place on Monday, 11 August. New students and all 5<sup>th</sup> graders are invited to come as early as 6:00 pm while the rest of the students and their families will be welcomed between 6:30-7:30 pm. It is designed to give students and their parents an opportunity to get a look at the building, meet and greet teachers, bring in paper work and supplies as well as reduce some of the first day anxieties new students and some 5<sup>th</sup> grade parents get. I plan to meet with 5<sup>th</sup> grade and new parents in the gym at 6:45 pm to provide some basic information.



**Board of Education Report  
August 2025  
Seward High School  
Scott Axt-Rich Eber-Scott Curry**



**SHS Back to School Newsletter**

Please see our back-to-school newsletter at: <https://secure.smores.com/n/0j1dp-bluejay-back-to-school-newsletter>

**Freshman and New Student Orientation**

Seward High School will be hosting a freshman and new student orientation on Monday, August 11th at 7:00 p.m. in the new theater. (Doors will open at 6:30 if students want to arrive early to start getting their T-shirts, schedules, fill out paperwork, etc. to beat the rush, and learn more about student activities (tables will be set up in the main gym for more information) Parents/guardians and students will have an opportunity to visit classrooms, meet teachers, find lockers, and get acclimated with the building. Information will also be provided regarding schedules, school policies, college planning, activity tickets, the automated lunch program, school organizations, and other relevant school information. We encourage parents/guardians to come prepared to put money in their son or daughter's lunch account and to pay for activity tickets before school starts to avoid the rush on the first few days of school. This should be an exciting night to continue transitioning to high school.

**First Day of School**

The first day of school will be on Wednesday, August 13. The schedule for the day will be a shortened bell schedule with an 8:15 a.m. start and a 1:30 p.m. end. Lunch will be served. Students will be given an information packet that includes health insurance forms, school lunch information, health history, student demographic updates, and other school-related information. Completed forms from the information packet need to be returned to the high school office by Monday, August 18th.

**Staying Connected with Seward High School**

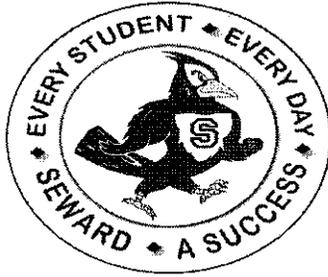
Building/District Website: [www.sewardpublicschools.org](http://www.sewardpublicschools.org)  
Facebook: <http://www.facebook.com/sewardpublicschools>  
Twitter Athletic Updates: @SewardBluejays  
Activity Calendar: <https://www.gobound.com/ne/schools/seward>  
Staff Email: [firstname.lastname@sewardschools.org](mailto:firstname.lastname@sewardschools.org)

**Activities**

Fall sports officially begin on August 11th. The All-Sports Parent meeting was on Tuesday, August 5th. Every sport will have its individual parent meetings as well.

**Enrollment numbers as of August 5, 2025**

9th-138  
10th-139  
11th-122  
12th-125  
Total-524



School District of Seward Board Report  
Dr. Shannon Hall-Schmeckpeper,  
Director of Special Services  
August 2025

### **Special Education**

We have a few new staff members to welcome to our team this year.

- ❖ Kirsten Marht is a new Speech Language Pathologist who will serve our children from birth to 3 on IFSPs, our students in community preschools, and our students at our non-public schools on IEPs.
- ❖ Rachel Hinrichs is a new Early Childhood Special Education Teacher who will serve our children from birth to 3 on IFSPs and our students in community preschools on IEPs.
- ❖ Rylee Philippi, who was a first-grade teacher last year, will be a special education teacher for us this year.
- ❖ Lindsey Meyer, Brooklyn Rader, and Julie Meier all join us as new special education paras at the elementary school.

### **Paraeducators**

We held our 3rd Paraeducator Professional Development Day on August 6th. This is an excellent opportunity for our paraeducators to learn from our staff and each other.

Dr. Fields kicked off the event. Heidi provided information on the new timecard system, and Dr. Dominy and Nathan got everyone set up with the new leave and subfinder system. There were 5 different sessions that paraeducators could choose from for their professional development. Then, in the afternoon, paraeducators had time to meet with their supervising teachers to discuss roles, responsibilities, and individual student needs.

A huge thank you to Beth Seegebarth, Maddie Carlson, Megan Connott, Erin Choquette, Erin Collings, Jocelyn Gray, and Sarah Masske (OT) for sharing their knowledge with our staff. And to Amanda Murman for helping to get everything set up for the day!

### Morning Schedule-ALL

9:00-9:45	Opening (lunchroom, Elementary School) Welcome, Dr. Fields ★ Benefits ★ Clocking in/new system					
	Beth Room 160	Maddie Room 164	Erin Room 166	Megan and Erin Room 162	Sarah Room 158	Jocelyn Room 149
10:00-10:40	Session 1	Session 2	Session 3	Session 4	Session 5	Rana and Katie
10:45-11:25	Session 1	Session 2	Session 3	Session 4	Session 5	Rana and Katie
11:35-12:15	Session 1	Session 2	Session 3	Session 4	Session 5	Rana and Katie
12:15-1:15	Lunch (provided) 12:15-12:45 12:45-1:15 Subfinder presentation and set up (Dr. Dominy and Nathan)					
1:15-3:00	Meet with individual teachers at the building level.					

Presenter	Location	Session	Topic
Beth Seegebarth	160	S1	How much help is too much?
Maddie Carlson	164	S2	Inclusion in General Education
Erin Collings	166	S3	Encouraging Student Independence and Communicating with Teachers to Support Student Independence
Megan and Erin	162	S4	Overview of the SLP's role & Modeling/Scaffolding Support
Sarah M	158	S5	Overview of OT's role and how you can support students with sensory and OT needs.

### **VR Summer Grant**

We had 10 students enrolled in our Summer VR program, with five attending from June 2nd to 6th and the other five from June 10th to 13th. The program focuses on Work-Based Learning Experiences and Workplace Readiness, providing students with practical skills and insights into various jobs. Activities include shadowing at local businesses like Pac and Save and La Cocina, visiting Concordia and completing simulated scenarios related to childcare and office management. These two weeks were packed with valuable experiences designed to prepare students for their future careers.

Students reported that they enjoyed the VR experience. Their favorite activities included the job site visits, some of the challenge tasks, and going to Concordia. A couple of key takeaways were learning about the accommodations that they need and how they can advocate for these, and how learning about different careers.

### **Program Numbers**

As of August 1st, the following are our enrolment numbers for the various programs:

- Special Education 265
- High Ability Learners 127
- 504s 58
- ELL 4 (3 Monitor)

Thank you for all you do!

*Dr. Shannon Hall-Schmeckpeper*

Dr. Shannon Hall-Schmeckpeper  
Director of Special Services

SCHOOL DISTRICT OF SEWARD  
410 South Street  
Seward, NE 68434



Dr. Matt Dominy  
Director of Curriculum and Staff  
Development  
Phone: (402) 643-2941  
FAX: (402) 643-4986

## August 2025 Board Report for Curriculum and Staff Development

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Board Members,

I hope this newsletter finds each of you well. This is an exciting time as teachers are starting to come back, we are working with our new teachers, and working out the wrinkles to all of the new materials/programs that we are going to start this year. I am looking forward to the year, and am thankful for your support!

### **Curriculum**

Our math curriculum team worked very hard over the summer to create a Math Storyboard curriculum document which is similar to what we did in social studies. The teachers also created pacing guides that will help guide our work over the next seven years. Implementation will be key as we get the year started, and our math teachers will have time during the Fall workshop to get to know their materials better.

### **Instruction**

Regarding our math curriculum, our teachers had training from the publishers before school was out to learn about their new materials. The teachers created curriculum frameworks to guide their work with these new materials. It is important for our administrators to understand what they need to look for when it comes to our new math curriculum. I created a math "look-for" document that can help the administrator provide feedback to the teachers that is directly related to these new materials.

### **Staff Development**

The ESU made the decision that only new teachers would attend the Effective Instruction Series that was previously provided by the ESU. They have rebranded this training as the New Teacher Network and experienced teachers now receive training directly from their districts. We have three new to our district teachers this year and only one is a new teacher. Our new teacher attended the training provided by the ESU while our other two teachers had PD that was directed toward their position in the district. Going forward, we will be creating our own program for all new to Seward teachers so that we can continue to grow our cohorts of teachers

together and in a way that develops the understanding of the knowledge needed to be a Seward teacher.

### **Assessment**

Currently, group assessment data is under embargo. Parents were notified of ACT scores in the Spring. Notification for parents regarding NSCAS will go out in September/October. I anticipate we will be able to do our data presentation for the Board in November.

I look forward to a fantastic school year and I thank you for your support.

Dr. Matt Dominy

# SPS FALL WORKSHOP 2025

August 8th, 11th, 12th

## SPS Mission

Seward Public Schools - a district rooted in excellence - in cooperation with family and community members is committed to the development of the whole student and affirms that all students will have the skills to become productive, resilient, and contributing members of their community.

## Elementary

Elementary

Required Trainings to be completed on the 8th, 11th, 12th at your discretion:

Username is your SPS Email

Bullying: <https://sewardschools-ne.safeschools.com/login>

Blood Borne Pathogens: <https://sewardschools-ne.safeschools.com/login>

Sexual Harassment: Student Issues and Response <https://sewardschools-ne.safeschools.com/login>

Seizure Training: <https://sewardschools-ne.safeschools.com/login> (Anyone who is on this list took the Seizure class last year, and does not need to do it this year- [Seizure list from 2024](#))

Behavior Training-The Behavior Intervention Training and Teacher Support Act was created by the Nebraska Legislature in the spring of 2023. This act mandates that every Nebraska public school teacher, administrator, counselor, paraprofessional, and nurse receive behavioral awareness training at least once every three years. This course was developed to meet the requirements of that act.

<https://canvas.education.ne.gov/browse/esucc/courses/esucc-behavior-management> (Send your certificate to Amanda Murman)

(Anyone who is CPI trained does not need to do this course)

7:00-8:00 Optional Coffee Drive-thru at Ridgewood (624 Pinewood Ave)  
8:15-8:30 Welcome back reception- In commons  
8:30-11:30 Time for Math curriculum investigation/online PD courses  
10:30-11:30 Action Team Leader Check-In- SES RM 110  
11:30-12:30 Lunch on your own  
12:30-1:30 Action Team Meetings  
1:30-4:00 Grade Level Meetings

### Monday, August 11

7:45-8:30- All Staff Breakfast- HS Cafeteria  
8:30-9:15- Welcome and Message- Dr. Fields- HS Theatre  
9:15-9:45- Welcome and Message- Dr. Dominy- HS Theatre  
10:00-12:00-Building Meetings- MP Room  
Required Training: School safety and security plan, Teacher Evaluation  
12:00-1:00- Lunch On Your Own  
1:00-2:30 - Building Meetings Continued  
2:30-3:00 Counselors meeting ES Conference RM  
3:00-3:30 Nurses Meeting- ES Conference RM  
2:30-3:30- All HS coaches-SHS Theatre.  
Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.  
3:30-4:00- Varsity Head Coaches- SHS Theatre.

### Tuesday, August 12

7:00-8:00- Optional Breakfast at Kinship Pointe (500 Heartland Park)  
8:00-9:00 Required Self-Directed PD- In your room (See above)  
9:00-10:00 Subfinder Express  
9:00-12:00 CPI Training for selected staff (Shannon will let you know if you need to do this)  
10:00-12:00 School-Based Meetings/ Online PD  
12:00-1:00— SEA Luncheon- MS cafeteria  
1:30-2:30 Med Aide Training-SMS art room  
1:30-2:30- Crisis Team Meeting- SMS library  
2:30-3:30 Emergency Response Team Meeting- SMS library  
3:00-4:00 MS Coaches Meeting- Miller's Classroom  
Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.  
2:45-4:00- Special Education Meeting- SES-Multipurpose RM

## **Middle School**

Middle

Required Trainings to be completed on the 8th 11th 12th at your discretion:

Blood Borne Pathogens: <https://sewardschools-ne.safeschools.com/login>

Sexual Harassment: Student Issues and Response <https://sewardschools-ne.safeschools.com/login>

Seizure Training: <https://sewardschools-ne.safeschools.com/login> (Anyone who is on this list took the Seizure class last year, and does not need to do it this year- [Seizure list from 2024](#))

Behavior Training-The Behavior Intervention Training and Teacher Support Act was created by the Nebraska Legislature in the spring of 2023. This act mandates that every Nebraska public school teacher, administrator, counselor, paraprofessional, and nurse receive behavioral awareness training at least once every three years. This course was developed to meet the requirements of that act.

<https://canvas.education.ne.gov/browse/esucc/courses/esucc-behavior-management> (Please send your certificate to Amanda Murman)

(Anyone who is CPI trained does not need to do this course)

### **Friday, August 8**

7:00-8:00 Optional Coffee Drive-thru at Ridgewood (624 Pinewood Ave)

8:15-8:30 Welcome back reception- In commons

8:30-11:30 Time for Math Curriculum Investigation/Online PD

10:30-11:30 Action Team Leaders Check-In- SES RM 110

11:30-12:30 Lunch on your own

12:30-1:30 Action Team Meetings

1:30-4:00 Grade Level Meetings

### **Monday, August 11**

7:45-8:30- All Staff Breakfast- HS Cafeteria

8:30-9:15- Welcome and Message- Dr. Fields- HS Theatre

9:15-9:45- Welcome and Message- Dr. Dominy- HS Theatre

10:00-12:00-Building Meetings-MS Library

Required Training: Dating Violence Prevention, School safety and security plan, Teacher Evaluation

12:00-1:00- Lunch On Your Own

1:15 - 2:30 Building Meetings Continued

2:30-3:00 Counselors meeting SES Conf. Room

3:00-3:30 Nurses Meeting- SES Conf. Room

2:30-3:30- All HS coaches-SHS theatre

Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.

3:30-4:00- Varsity Head Coaches- SHS Theatre.

### **Tuesday, August 12**

7:00-8:00- Optional Breakfast at Kinship Pointe (500 Heartland Park)

8:00-10:00 Required Self-Directed PD-In your room (See above)

9:00-12:00 CPI Training for selected staff (Shannon will let you know if you need to do this)

10:00-11:00 SubFinder Express/Securely Classroom- SMS Library

11:00-12:00 Self-Directed PD

12:00 1:00 SEA Luncheon MS cafeteria

2:30-3:30 Emergency Response Team Meeting- SMS library

3:00-4:00 MS Coaches Meeting- Miller's Classroom

Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.

2:45-4:00- Special Education Meeting- SES-Multipurpose Room

## High School

High

Required Trainings to be completed on the 8th, 11th, 12th at your discretion:

Username is your SPS Email

Bullying: <https://sewardschools-ne.safeschools.com/login>

Blood Borne Pathogens: <https://sewardschools-ne.safeschools.com/login>

Sexual Harassment: Student Issues and Response <https://sewardschools-ne.safeschools.com/login>

Seizure Training: <https://sewardschools-ne.safeschools.com/login> (Anyone who is on this list took the Seizure class last year, and does not need to do it this year- [Seizure list from 2024](#))

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(Anyone who is CPI trained does not need to do this course)

Friday, August 8

7:00-8:00 Optional Coffee Drive-thru at Ridgewood (624 Pinewood Ave)

8:15-8:30 Welcome back reception-(South Lobby)

10:30-11:30 Action Team Leaders Check-In- SES RM 110

8:30-11:30 Math curriculum investigation/ Online PD

11:30-12:30 Lunch on your own

12:30-1:30 Action Team Meetings

1:30-4:00 Department Meetings

Monday, August 11th

7:45-8:30- All Staff Breakfast- HS Cafeteria

8:30-9:15- Welcome and Message- Dr. Fields- HS Theatre

9:15-9:45- Welcome and Message- Dr. Dominy- HS Theatre

10:00-12:00 -Building Meetings- HS Library

Required Training: Dating Violence Prevention, School safety and security plan, Teacher Evaluation

12:00-1:00- Lunch On Your Own

1:00-2:30- Building Meetings Continued

2:30-3:00 Counselors meeting SES Conf. Room

3:00 3:30 Nurses Meeting SES Conf Room

Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.

3:30-4:00- Varsity Head Coaches- SHS Theatre.

Tuesday, August 12th

7:00-8:00- Optional Breakfast at Kinship Pointe (500 Heartland Park)

8:00-9:30- Required Self-Directed PD-In your room (see above)

9:00-12:00 CPI Training for selected staff (Shannon will let you know if you need to do this)

9:30-11:45 Update Canvas Websites, Subfinder Express Support, Securly Classroom

12:00-1:00- SEA Luncheon- MS cafeteria

1:30-2:30- Crisis Team Meeting- SMS library

1:30-2:30 Med Aide Training- SMS art room

2:30-3:30 Emergency Response Team Meeting- SMS library

3:00-4:00 MS Coaches Meeting- Miller's Classroom

Required Training- Concussion Awareness- Protocols for Removal From Play, Return to Play, Return to Learn.

2:45-4:00- Special Education Meeting- SES-Multipurpose RM



**Seward Public Schools**



## 1002

### Creation, Amendment and Distribution of Policies

Each of these policies shall become the official policy of the school district when the board has approved it by majority vote of the members present at any lawfully convened meeting of the board.

It shall generally be the practice of the board to adopt or amend any policy after a single reading at any regular or special board meeting. However, the board may, in its discretion, review policies at multiple meetings prior to taking action.

~~Each policy shall bear the date when it was adopted, revised or reviewed.~~

~~The superintendent shall distribute copies of these policies to all members of the board, maintain a master copy in the central office, and see to it that the policies are maintained on the school district's web site.~~ maintain an official copy of the board's policies, which may be in paper copy in the central office or on the district's website or electronic board meeting site. For any policies with specific review, hearing, or posting requirements, the superintendent will ensure those obligations are completed. The superintendent will also ensure all board members have access to a copy of the district's policies.

#### ~~Annual Review~~

~~The board shall review all policies at least once every three years. Nebraska statutes require an annual review and/or hearing to solicit public comment on these specific policies:~~

~~Parental Involvement Policy~~

~~Title I Parental Involvement Policy~~

~~(NOTE: These first two are distinct parental involvement policies, and both must be reviewed annually.)~~

~~Student Fees Policy~~

~~Bullying~~

~~Multicultural Education~~

~~Student Assessment~~

~~Teacher Evaluation~~

~~Student Academic Performance~~

~~Safety and Security Committee~~

~~Attendance and Excessive Absenteeism~~

~~The board may update or add policies as needed. The board shall determine the number of copies of policies to be made and their distribution. The superintendent shall maintain an up-to-date master copy of the policies in the main administrative office. Unless otherwise directed by the board, the master copy shall be considered the official district policy manual.~~

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **2006 Complaint Procedure**

Good communication helps to resolve many misunderstandings and disagreements. This complaint procedure applies to complaints unless the complaint is subject to a different procedure required by law, policy or contract. Individuals who have a complaint should discuss their concerns with appropriate school personnel in an effort to resolve problems at the lowest level of the chain of command. When those efforts do not resolve matters satisfactorily, including matters involving discrimination or harassment on the basis of race, color, national origin, sex, marital status, disability, or age, a complainant should follow the procedures set forth in any specific policy addressing those areas or the procedures set forth below. Allegations of sex discrimination covered by Title IX will be addressed through the board's Title IX policy.

References to "coordinator" in this policy refer to the board-designated coordinator for the applicable area, such as the Section 504 Coordinator for allegations of disability-based discrimination.

~~A preponderance of the evidence will be required to discipline a party accused of misconduct. This means that the investigator must conclude that it is more likely than not that misconduct occurred.~~Under this policy, factual conclusions will be based on a preponderance of the evidence.

### **Complaint and Appeal Process.**

1. The first step is for the complainant to speak directly to the person(s) with whom the complainant has a concern. For example, a parent who is unhappy with a classroom teacher should initially discuss the matter with the teacher. However, the complainant should skip the first step if complainant reasonably believes speaking directly to the person would subject complainant or complainant's student to discrimination or harassment.
2. The second step is for the complainant to speak to the building principal, coordinator, superintendent, or president of the board of education, as set forth below. Anyone with questions about the appropriate person to speak with may request clarification from the superintendent.
  - a) Complaints about the operation, decisions, or personnel within a building should be submitted to the principal of the building.

- b) Complaints about the operations of the school district or a building principal should be submitted in writing to the superintendent of schools.
  - c) Complaints about the superintendent of schools should be submitted in writing to the president of the board of education.
  - d) Complaints involving discrimination or harassment on the basis of race, color, national origin, sex, marital status, disability, or age may be submitted to the applicable coordinator. Complaints involving discrimination or harassment may also be submitted at any time to the Office for Civil Rights, U.S. Department of Education: by email at [OCR.KansasCity@ed.gov](mailto:OCR.KansasCity@ed.gov); by telephone at (816) 268-0550; or by fax at (816) 268-0599.
3. When a complainant submits a complaint to an administrator or coordinator, the administrator or coordinator shall first determine whether another applicable procedure is required by policy or law and if so, direct the complaint to the appropriate person to follow that procedure. If not, the administrator or coordinator will promptly and thoroughly investigate the complaint, and shall:
- a) Determine whether the complainant has discussed the matter with the respondent.
    - 1) If the complainant has not, urge the complainant to discuss the matter directly with the respondent, if appropriate.
    - 2) If the complainant refuses to discuss the matter with the respondent, the administrator or coordinator shall, in his or her sole discretion, determine whether the complaint should or must be pursued further.
  - b) Strongly encourage the complainant to reduce his or her concerns to writing.
  - c) Interview the complainant and, if necessary, the respondent against whom the complaint is filed, to determine:
    - 1) All relevant details of the complaint;

- 2) All witnesses and documents which the complainant believes support the complaint;
  - 3) The action or solution which the complainant seeks.
  - d) Respond to the complainant. If the complaint involves discrimination or harassment, the response shall be in writing and shall be submitted within 180 calendar days after the administrator or coordinator receives the complaint.
4. If either the complainant or the respondent is not satisfied with the decision, he or she may appeal the decision to the superintendent. The superintendent may assign a qualified designee to hear any appeal. ~~This provision applies to appeals under the board's policies governing complaints of discrimination or harassment, including Title IX and any other policy with a separate grievance or complaint procedure, unless that other procedure includes its own appeal process. All requirements for appeals within any other policy apply, and in addition to those requirements, the following also apply.~~
  - a) The appeal must be in writing.
  - b) This appeal must be received by the superintendent no later than three (3) calendar days from the date of the decision.
  - c) For complaints addressed through other applicable procedures that do not include a separate investigatory process, the superintendent will investigate as he or she deems appropriate.
  - d) The superintendent will prepare a written decision and provide it to the complainant and any other person entitled by law to receive the appeal decision. For complaints involving discrimination or harassment, the superintendent shall submit the decision within 180 calendar days after the superintendent received complainant's written appeal. Appeals to the superintendent from complaints involving discrimination or harassment are final once the superintendent delivers the written decision, as are all other appeals/complaints to the superintendent unless the

complaint can be appealed on the limited grounds to appeal to the board below.

5. The board's role is to set policy, establish and implement a budget, and evaluate the superintendent. The board does not manage the daily operations of the school district entrusted to its administration unless required by law or policy. Because of the board's statutory roles, it does not hear complaints or appeals that may involve oversight or discipline of students, staff, or others, unless those involve allegations against the superintendent as discussed below. The board does not hear complaints or appeals based on allegations of discrimination or harassment unless otherwise required by law. The board will hear appeals only in the following circumstances:
  - a) When the complaint is about a board policy, not implementation of the policy;
  - b) When the complaint involves the budget or school expenditures that have been or must be approved by the board; or
  - c) When the board is required by law, policy, or contract to hear a complaint or appeal.

If a complaint involves those limited grounds and a party is not satisfied with the superintendent's decision regarding the complaint or appeal, he or she may appeal the decision to the board.

- d) This appeal must be in writing.
- e) This appeal must be received by the board president no later than ten (10) calendar days from the date the superintendent communicated the decision to the complainant.
- f) This policy allows, but does not require the board to receive statements from interested parties and witnesses relevant to the complaint or appeal. However, all matters involving discrimination or harassment allegations against the superintendent shall be promptly and thoroughly investigated by the board president or a designee.
- g) The board president will notify the complainant and any other person legally required to receive the decision in

writing of the decision. If the complaint involves discrimination or harassment allegations against the Superintendent, the board president shall submit the decision within 180 calendar days after receiving the written appeal.

- h) There is no appeal from any decision of the board unless authorized by law.
6. Formal complaints about the superintendent shall be filed with the president of the board. However, complaints about the superintendent do not include disagreement with the superintendent's decision on appeal based on a complaint of discrimination, harassment, or action of any other employee who is not the superintendent. Upon receipt of a complaint, the board president or his or her designee shall promptly and thoroughly investigate the complaint, and shall:
- a) Coordinate with school district staff, other than the superintendent, to determine if another procedure in policy or law requires the complaint against the superintendent to follow another procedure. If so, the board president will coordinate handling the complaint through that procedure. If another procedure applies, such as in the case of allegations of sex discrimination against the superintendent, the board president or, at his or her discretion, the full board will serve only to hear any appeal by a party to the complaint.
  - b) Determine whether the complainant has discussed the matter with the superintendent.
    - 1) If the complainant has not, the board president or designee will urge or require the complainant to discuss the matter directly with the superintendent, if appropriate or required.
    - 2) If the complainant refuses to discuss the matter with the superintendent, the board president shall, in his or her sole discretion, determine whether the complaint should or must be pursued further.

- c) Determine, in his or her sole discretion, whether to place the matter on the board agenda for consideration at a regular or special meeting by the full board.
- d) Respond to the complainant or appeal. If the complaint or appeal involves discrimination or harassment, the response shall be in writing and shall be submitted within 180 calendar days after the president received the complaint.
- e) Appoint or contract with other individuals qualified to assist the board through this process or any other applicable procedure used to address allegations against the superintendent.

**No Retaliation.** The school district prohibits retaliation against any person for filing a complaint or for participating in the complaint procedure in good faith.

**Special Rules Regarding Educational Services and Related Services to Students with Disabilities.** Students with disabilities and their families have specific rights outlined in state and federal law, including administrative processes by which they may challenge the educational services being provided by the school district. Therefore, the appeal process contained in this policy may not be used to challenge decisions made by a student's individualized education plan (IEP) team or 504 team.

Complaints about the educational services provided a student with a disability, including but not limited to services provided to a student with an IEP, access to curricular and extracurricular activities, and educational placement must be submitted to the school district's Director of Special Education. The Director of Special Education will address the complaint in a manner that he/she deems appropriate and will provide the complainant with a copy of the Notice of IDEA Parental Rights promulgated by the Nebraska Department of Education.

Complaints about the educational services provided a student with a disability pursuant to a Section 504 plan must be submitted to the school district's 504 Coordinator. The 504 Coordinator will address the complaint in a manner that he/she deems appropriate and will provide

the complainant with a copy of the Notice of Section 504 Parental Rights adopted by the board of education.

Complaints about the educational services provided to a student who is suspected of having a disability must be submitted in writing to the school district's Director of Special Education or to the district's 504 Coordinator. The Director of Special Education or 504 Coordinator will either refer the student for possible verification as a student with a disability or will provide prior written notice of the district's refusal to do so.

**Bad Faith or Serial Filings.** The purpose of the complaint procedure is to resolve complaints at the lowest level possible within the chain of command. Individuals who file complaints (a) without a good faith intention to attempt to resolve the issues raised; (b) for the purpose of adding administrative burden; (c) at a volume unreasonable to expect satisfactory resolution; or (d) for purposes inconsistent with the efficient operations of the district may be dismissed by the superintendent or board president without providing final resolution other than noting the dismissal. There is no appeal from dismissals made pursuant to this section.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## 2008 Meetings

The formation of policy is public business and will be conducted openly in accordance with the Nebraska Open Meetings Act.

### 1. Types of Meetings

- a. The board shall hold its regular meetings on or before the third Monday of each month.
- b. Special and emergency meetings may be called as provided by law.
- c. The board may schedule work sessions and retreats in order to provide board members and administrators with the opportunity to plan, research, and engage in discussion.

### 2. Notice

The board shall give reasonable advance publicized notice of the time and place of each of its meetings, which generally will be 48 hours or more in advance of the meeting. Such notice shall be transmitted to all members of the board and to the public.

**Publication Procedure if the Newspaper Will Be Finalized for Printing Prior to the Time and Date of the Meeting.** Notice of regular and special meetings shall be (1) published in a newspaper of general circulation within the district that is finalized for printing prior to the time and date of the meeting, (2) posting on the newspaper's website, if available, and (3) posting on a statewide website established and maintained as a repository for such notices by a majority of Nebraska newspapers and, if available, on the newspaper's website.

**Publication Procedure if the Newspaper Will Not Be Finalized for Printing Prior to the Time and Date of the Meeting.** Notice of regular and special meetings shall be (1) posting on the newspaper's website, if available, and (2) posting on a statewide website established and maintained as a repository for such notices by a majority of Nebraska newspapers if no edition of a newspaper of general circulation within the school district's jurisdiction is to be finalized for printing prior to the time and date of the meeting.

Newspapers of general circulation in the district include, ~~but are not~~

~~necessarily limited to,~~ the Seward County Independent ~~or the Omaha World-Herald~~. Such notice shall contain a statement that the agenda shall be readily available for public inspection at the administration office of the school during the normal business hours. In addition, the superintendent is authorized, but not required, to publish the notice of any meeting on the school district's website, posting in three prominent places within the school district, or by any other appropriate method designated by the board.

In case of refusal, neglect, or inability of the newspaper to timely publish the notice, the school district will (1) post the notice on its website, if available, and (2) submit a post on a statewide website established and maintained as a repository for such notices by a majority of Nebraska newspapers, and (3) post the notice in a conspicuous public place in the school district's jurisdiction. The school district will keep a written record of the posting.

When it is necessary to hold an emergency meeting without reasonable advance public notice, the nature of the emergency shall be stated in the minutes of the meeting, and any formal action taken in such meeting shall pertain only to the emergency. Complete minutes of such emergency meetings specifying the nature of the emergency and any formal action taken at the meeting shall be made available to the public no later than the end of the next regular business day.

### 3. Weather Delays

In the event of inclement weather which makes it dangerous or unreasonable for board members or members of the public to attend a meeting for which notice has already been given, such meeting may be postponed by the board president. The board will communicate the delay to members of the public by posting it on the district's website and by following the same communication protocol that the district follows when student attendance at school is called off due to inclement weather. When possible, the board president and superintendent will attempt to communicate the information to local media members and business owners to assist in notifying the public of the delay. Notice of the date, time, and location of the postponed meeting will be advertised as required in the "Notice" section above.

### 4. Minutes

- a. The board shall keep minutes of all meetings showing the time, place, members present and absent, the method(s) and date(s) of the meeting notice, and the substance of all matters discussed.

- b. Any action taken on any question or motion duly moved and seconded shall be by roll call vote of the board in open session, and the record shall state how each member voted, or if the member was absent or not voting.
  
- c. The minutes of all meetings and evidence and documentation received or disclosed in open session shall be public record and shall be published on the school district's website within ten working days of the last meeting or prior to the next convened meeting, whichever occurs earlier. The minutes shall be available on the website for at least six months.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **3003**

### **Bidding for Construction, Remodeling, Repair, or Site Improvement**

#### **I. Applicability of this policy.**

Construction and contracts undertaken with federal funds, whether those funds are derived directly from the federal government (e.g. award of a federal grant) or are derived by pass-through awards from the Nebraska Department of Education (e.g. special education funds, school lunch funds, Title I funds) are subject to the policy on Construction with Federal Funds, which is found elsewhere in this section.

This policy applies to all other purchases and contracts made by the school district for construction, remodeling, repair and other site improvements.

#### **II. Projects with an Estimated Cost of Less than \$109,000**

- A. The school district will solicit quotes and/or estimates for all projects with an estimated cost of less than \$109,000.
- B. Prior to solicitation of the quotes and/or estimates, the superintendent will determine whether the district will accept oral submissions.
- C. Quotes and/or estimates may be solicited by the superintendent or his/her designee without board action.
- D. The terms of any construction project undertaken pursuant to this policy will be memorialized in a written contract which has been reviewed by the district's legal counsel and approved by the board.
- E. The district may use a Nebraska state-wide cooperative purchasing program in lieu of obtaining quotes or bids under this policy to the extent such a bid or quote is not otherwise independently required by law.
- F. Nothing in this subsection prohibits or requires the use of the formal bidding procedures. If the district is going to solicit formal bids for projects of less than \$109,000 they must follow the formal procedures outlined in this policy.

#### **III. Formal Bidding for Major Purchases and Construction**

- A. Pursuant to section 73-106 of the Nebraska statutes, the board will advertise for bids when the contemplated expenditure of the project

exceeds \$109,000 for the construction, remodeling or repair of a school-owned building or for site improvement.

- B. In projects that involve professional engineering or architecture, the board will have a registered professional engineer or architect prepare the plans, specifications, and estimates when the anticipated cost of the project exceeds \$144,000 ~~-\$118,000~~.

C. Advertising for Bids

1. The superintendent or designee will arrange to advertise for bids under this section by publishing notice in any newspaper of general circulation within the school district at least 7 calendar days prior to the date on which bids are due.
2. Nothing in this policy shall prevent the superintendent or designee from advertising in additional media outlets or for a longer period of time.

D. Bid Documents

1. The bid documents shall identify the day upon which the bids shall be returned, received or opened and shall identify the hour at which the bids will close or be received or opened.
2. The invitation for bids will be sufficiently certain and specific, will include any specifications and pertinent attachments, and will define the items or services in order to allow the bidder to properly respond.
3. The bid documents shall also provide that such bids shall be opened simultaneously in the presence of the bidders or their representatives.
4. Bids received after the date and time specified in the bid documents shall be returned to the bidder unopened.
5. If bids are being opened on more than one contract, the board, in its discretion, may award each contract as the bids are opened.
6. Sealed bids will be opened in a place and at the specific time

stated in the bid form. Bidders shall be notified of the opening and invited to be present.

7. The board shall have discretion in determining which bidders are responsible and responsive and shall award the contract to the lowest, responsible, and responsive bidder whose bid meets the bid specifications.

E. Any or all bids may be rejected if there is a sound documented reason

F. The terms of any construction project undertaken pursuant to this policy will be memorialized in a written contract which has been reviewed by the district's legal counsel and approved by the board.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **3004.1**

### **Fiscal Management for Purchasing and Procurement Using Federal Funds**

#### **I. Applicability of Policy**

This policy applies only to non-construction related purchases undertaken with federal funds which are subject to the federal Uniform Grant Guidance (UGG) and other applicable federal law, including but not limited to the Education Department and General Administration Regulations (EDGAR) and the United States Department of Agriculture (USDA) regulations governing school food service programs. In the event this policy conflicts or is otherwise inconsistent with mandatory provisions of the UGG, EDGAR or other applicable federal law, the mandatory provisions of the laws shall control.

All other non-construction purchases will be governed by the Board's general purchasing policy, which can be found earlier in this subsection. In the event of a conflict between state and federal law, the more stringent requirement shall apply.

This procurement policy shall govern all purchasing activities that relate to any aspect of the National School Lunch and Breakfast Programs. The district's goal is to fully implement all required procurement rules, regulations and policies set forth in 2 CFR 200, 7 CFR parts 210, 3016 and 3019, and by the Nebraska Department of Education.

#### **II. Procurement System**

The District maintains the following purchasing procedures.

##### **A. Responsibility for Purchasing**

The authority to make purchases shall be governed by the District's purchasing policy, which can be found elsewhere in this section. Except as otherwise provided in the District's purchasing policy, the acquisition of services, equipment, and supplies shall be centralized in the administration office under the supervision of the superintendent of schools, who shall be responsible for developing and administering the purchasing program of the school district. Purchases or commitments of district funds that are not authorized by this policy will be the responsibility of the person making the commitment.

## **B. Methods of Purchasing**

The type of purchase procedures required depends on the cost of the item(s) being purchased.

### **1. Purchases up to \$10,000 (Micro-Purchases)**

Micro-purchase means an individual procurement transaction for supplies or services using simplified acquisition procedures, the annual aggregate amount of which does not exceed \$10,000. Micro-purchases may be made or awarded without soliciting competitive quotations, to the extent district staff determine that the cost of the purchase is reasonable. For purposes of this policy "reasonable" means the purchase is comparable to market prices for the geographic area.

To the extent practicable, the District distributes micro-purchases equitably among qualified suppliers. The District will follow its standard policy on purchasing, which can be found earlier in this subsection.

### **2. Purchases between \$10,000 and \$250,000 (Simplified Acquisition Procedures)**

Simplified acquisitions are purchases that, in the aggregate amount, are more than \$10,000 and less than \$250,000 annually. For simplified acquisitions, price or rate quotes shall be obtained in advance from a reasonable number of qualified sources as detailed in the district's standard policies on purchasing and on bid letting and contracts, which can be found earlier in this subsection.

### **3. Purchases Over \$250,000**

#### **a) Sealed Bids (Formal Advertising)**

For purchases over \$250,000, the district will generally follow the bidding process outlined in the board's policy on Bidding for Construction, Remodeling, Repair or Site Improvement. If sealed bids are not accepted for a purchase of over \$250,000, the district will retain an explanation for that decision.

#### **b) Contract/Price Analysis**

The District performs a cost or price analysis in connection with every procurement action in excess of \$250,000, including contract modifications. The district will make an independent estimate of costs prior to receiving bids or proposals.

**4. Noncompetitive Proposals (Sole Sourcing)**

- a) Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source and may be used only when one or more of the following circumstances apply:
  - 1) The procurement transaction can only be fulfilled by a single source;
  - 2) The public exigency or emergency for the requirement will not permit a delay resulting from providing public notice of a competitive solicitation;
  - 3) The federal awarding agency or pass-through entity expressly authorizes written approval of noncompetitive proposals in response to a written request from the District; or
  - 4) After solicitation of a number of sources, competition is determined inadequate.
- b) Noncompetitive proposals may only be solicited with the approval of the superintendent or the board. Sufficient and appropriate documentation that justifies the sole sourcing decision must be maintained by the superintendent or designee.
- c) A cost or price analysis will be performed for noncompetitive proposals when the price exceeds \$250,000.

**5. Competitive Proposals.**

- a) The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

- 1) Requests for proposals must be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals must be considered;
  - 2) Proposals must be solicited from an adequate number of qualified sources; and
  - 3) Contracts must be awarded to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered.
- b) The District may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used to procure A/E professional services. The method may not be used to purchase other services provided by A/E firms are a potential source to perform the proposed effort.
- c) The District may select a proposal that offers the best value and that is based upon the proposer's responsiveness to the proposal, experience, reputation, staff qualifications, ability and capacity to carry on the work, price, honesty, integrity, skills, business judgment, financial stability, past performance, and other relevant factors. The evaluation may be conducted by the school board, a designated committee, or another designee of the school board.

### **C. Use of Purchase (Debit & Credit) Cards**

District use of purchase cards is subject to the policy on purchase cards which can be found elsewhere in this subsection.

### **D. Federal Procurement System Standards**

The district's procurement transactions will be conducted in a manner providing full and open competition consistent with 2 C.F.R §200.319.

The District will maintain and follow general procurement standards consistent with 2 C.F.R. §200.318.

### **E. Debarment and Suspension**

The District awards contracts only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, public policy compliance, proper classification of employees (see the Fair Labor Standards Act, 29 U.S.C. 201, chapter 8), record of past performance, and financial and technical resources when conducting a procurement transaction.

The District may not subcontract with or award subgrants to any person or company who is debarred or suspended. For all contracts over \$25,000 the District verifies that the vendor with whom the District intends to do business with is not excluded or disqualified. 2 C.F.R. Part 200, Appendix II(1) and 2 C.F.R. §§ 180.220 and 180.300.

The District will verify debarment or suspension by revising the excluded parties list on SAM.gov, collecting a certification through the bidding process, and/or by including a debarment and suspension provision in the bid and contract documents. The Superintendent or his/her designee shall be responsible for such verification.

### **F. Settlements of Issues Arising Out of Procurements**

The District alone is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the District of any contractual responsibilities under its contracts. Violations of law will be referred to the local, state, or federal authority having proper jurisdiction.

## **III. Conflict of Interest and Code of Conduct**

**A. Board and staff member conflicts of interest are governed by the district's conflict of interest policies.**

**B. Purchases covered by this policy are subject to the following additional provisions.**

1. Employees, officers, and agents engaged in the selection, award, and/or administration of district contracts which are prohibited from engaging in such actions if a real or apparent conflict of interest is present.
2. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract.
3. The board may determine at its discretion that a financial interest is not substantial enough to give rise to a conflict of interest.

### **C. Favors and Gifts**

An employee, officer, agent, and board member of the District may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts, except that this provision does not prohibit the receipt of unsolicited items of nominal value. For purposes of this policy, "nominal value" means a fair market value of \$25 or less.

### **D. Enforcement**

Disciplinary Actions including, but not limited to, counseling, oral reprimand, written reprimand, suspensions without pay, or termination of employment, will be applied for violations of such standards by officers, employees, board members, or agents of the District.

## **IV. Property Management Systems**

### **A. Property Classifications**

1. Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost that equals or exceeds the lesser of the capitalization level established by the District for financial statement purposes, or \$10,000.
2. Supplies means all tangible personal property other than those described in §200.33 Equipment. A computing device is a supply if the acquisition cost is less than the lesser of the

capitalization level established by the District for financial statement purposes or \$10,000, regardless of the length of its useful life. 2 C.F.R. §200.94.

3. Computing Devices means machines that acquire, store, analyze, process, and publish data and other information electronically, including accessories (or “peripherals”) for printing, transmitting and receiving, or storing electronic information. 2 C.F.R. §200.20.
4. Capital Assets means tangible or intangible assets used in operations having a useful life of more than one year which are capitalized in accordance with GAAP. Capital assets include:
  - a) Land, buildings (facilities), equipment, and intellectual property (including software) whether acquired by purchase, construction, manufacture, lease-purchase, exchange, or through capital leases; and
  - b) Additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations or alterations to capital assets that materially increase their value or useful life (not ordinary repairs and maintenance). 2 C.F.R. §200.12.

## **B. Inventory Procedure**

Newly purchased property shall be received and inspected by the staff member who ordered it to ensure that that it matches the purchase order, invoice, or contract and that it is in acceptable condition.

Equipment, Computing Devices, and Capital Assets must be tagged with an identification number, manufacturer, model, name of individual who tagged the item, and date tagged).

## **C. Inventory Records**

For equipment, computing devices, and capital assets purchased with federal funds, the following information is maintained in the property management system:

1. Serial number;
2. District identification number;
3. Manufacturer;

4. Model;
5. Date tagged and individual who tagged it;
6. Source of funding for the property;
7. Who holds title;
8. Acquisition date and cost of the property;
9. Percentage of federal participation in the project costs for the federal award under which the property was acquired;
10. Location, use and condition of the property; and
11. Any ultimate disposition data including the date of disposal and sale price of the property.

The inventory list shall be adjusted by the superintendent of schools or his/her designee for property that is sold, lost, stolen, cannot be repaired, or that cannot be located.

#### **D. Physical Inventory**

1. A physical inventory of the property must be taken and the results reconciled with the property records at least once every two years.
2. The Superintendent or his/her designee will ensure that the physical inventory is performed. The physical inventory will generally occur during the months of June or July, but may be conducted during other time periods with the approval of the superintendent.

#### **E. Maintenance**

In accordance with 2 C.F.R. 313(d)(4), the District maintains adequate maintenance procedures to ensure that property is kept in good condition.

#### **F. Lost or Stolen Items**

The District maintains a control system that ensures adequate safeguards are in place to prevent loss, damage, or theft of the property. The District will notify the Federal agency or pass-through entity of any loss, damage, or theft of equipment that will have an impact on the program.

#### **G. Use of Equipment**

Equipment must be used in the program or project for which it was acquired as long as needed, whether or not the project or program continues to be supported by the federal award, and the District will not encumber the

property for any non-federal program use without prior approval of the federal awarding agency and the pass-through entity.

### **H. Disposal of Equipment**

When it is determined that equipment acquired under a federal award is no longer needed for the original project or program or for other activities currently or previously supported by a federal awarding agency, the Superintendent or his/her designee will contact the awarding agency (or pass-through for a state-administered grant) for disposition instructions.

If the item has a current fair market value of \$10,000 or less, it may be retained, sold, or otherwise disposed of with no further obligation to the federal awarding agency or pass-through entity. The Superintendent or his/her designee will utilize sales procedures which ensure the highest possible return on the disposal of the equipment.

### **I. Equipment Retention**

When included in the terms and conditions of the Federal award, the Federal agency may permit the recipient to retain equipment, or authorize a pass-through entity to permit the recipient to retain equipment, with no further obligation to the Federal Government unless prohibited by Federal statute or regulation.

### **J. Equipment and Capital Expenditures**

All equipment and capital expenditures shall comply with the rules and requirements of 2 CFR 200.439.

### **K. Depreciation**

All depreciation shall comply with the rules and requirements of 2 CFR 200.436.

### **L. Reporting and Recording Federal Property Interest**

The district will comply with federal interest reporting and submit annual reports, if required, regarding a real property interest due to a renovation, major remodeling, construction, or real property project funded by federal grant funds.

## **V. Financial Management**

## **A. Identification**

The District will identify, in its accounts, all federal awards received and expended and the federal programs under which they were received. Federal program and award identification include, as applicable, the CFDA title and number, federal award identification number and year, name of the federal agency, and, if applicable, name of the pass-through entity.

## **B. Financial Reporting**

The District will make an accurate, current, and complete disclosure of the financial results of each federal award or program in accordance with the financial reporting requirements set forth in the Education Department General Administrative Regulations (EDGAR).

## **C. Accounting Records**

The District maintains records which adequately identify the source and application of funds provided for federally-assisted activities. These records must contain information pertaining to grant or subgrant awards, authorizations, obligations, unobligated balances, assets, expenditures, income and interest and be supported by source documentation.

## **D. Internal Controls**

The Superintendent or his/her designee must maintain effective control and accountability for all funds, real and personal property, and other assets through board review and approval of claims, an annual audit of the district's finances pursuant to the applicable Nebraska Department of Education and federal rules and regulations, and comparison of expenditures and outlays to budgeted amounts. The District adequately safeguards all such property and assures that it is used solely for authorized purposes. The District takes reasonable cybersecurity and other measures to safeguard information including protected personally identifiable information.

## **E. Budget Control**

Actual expenditures or outlays will be compared with budgeted amounts for each federal award at least annually and more often as required by law or deemed prudent by the board or administrative staff.

## **F. Payment Methods**

The District will comply with applicable methods and procedures for payment that minimize the time elapsing between the transfer of funds and disbursement by the District, in accordance with the Cash Management Improvement Act at 31 CFR Part 205. Generally, the District receives payment from the Nebraska Department of Education on a reimbursement basis. 2 CFR § 200.305. However, if the District receives an advance in federal grant funds, the District will remit interest earned on the advanced payment quarterly to the federal agency. The District may retain interest amounts up to \$500 per year for administrative expenses. 2 CFR § 200.305(b)(9).

Consistent with state and federal requirements, the District will maintain source documentation supporting the federal expenditures (invoices, time sheets, payroll stubs, etc.) and will make such documentation available for the Nebraska Department of Education to review upon request.

### **G. Allowability of Costs**

Expenditures must be aligned with approved budgeted items. Any changes or variations from the state-approved budget and grant application need prior approval.

When determining how the District will spend its grant funds, the Superintendent or his/her designee will review the proposed cost to determine whether it is an allowable use of federal grant funds before obligating and spending those funds on the proposed good or service. All costs supported by federal education funds must meet the standards outlined in EDGAR, 2 CFR Part 3474 and 2 CFR Part [1] [200, Subpart E](#). The Superintendent or his/her designee must consider these factors when making an allowability determination.

The Superintendent or his/her designee will consider Part 200's cost guidelines when federal grant funds are expended. The Superintendent or his/her designee will also consider whether all state - and District-level requirements and policies regarding expenditures have been followed.

### **H. Use of Program Income – Deduction, Addition, or Cost Sharing or Matching**

The default method for the use of program income for the District is the deduction method. 2 C.F.R. § 200.307(e). Under the deduction method, program income is deducted from total allowable costs to determine the net allowable costs. Program income will only be used for current costs unless the District is otherwise directed by the federal awarding agency or pass-through entity. 2 C.F.R. § 200.307(e)(1). The District may also request prior

approval from the federal awarding agency to use the addition method. Under the addition method, program income may be added to the Federal award by the Federal agency and the non-Federal entity. The program income must then be used for the purposes and under the conditions of the Federal award. 2 C.F.R. § 200.307(e)(2). The District may also request prior approval from the federal awarding agency to use the cost sharing or matching method.

While the deduction method is the default method, the District always refers to the grant award notice prior to determining the appropriate use of program income.

### **I. Cost Sharing or Matching**

For all Federal awards, any shared costs or matching funds and all contributions, including cash and third-party in-kind contributions, must be accepted as part of the non-Federal entity's cost sharing or matching when such contributions meet all of the following criteria:

- (1) Are verifiable from the non-Federal entity's records;
- (2) Are not included as contributions for any other Federal award;
- (3) Are necessary and reasonable for accomplishment of project or program objectives;
- (4) Are allowable under [subpart E \(Cost Principles\) of this part](#);
- (5) Are not paid by the Federal Government under another Federal award, except where the Federal statute authorizing a program specifically provides that Federal funds made available for such program can be applied to matching or cost sharing requirements of other Federal programs;
- (6) Are provided for in the approved budget when required by the Federal awarding agency; and
- (7) Conform to other provisions of this part, as applicable.

### **J. Documentation of Personnel Expenses**

Records that reflect charges to federal awards for salaries and wages will comply with the rules and requirements of 2 CFR 200.430.

## **VI. Written Compensation Policies**

### **A. Time and Effort Standards**

All employees who are paid in full or in part with federal funds must keep specific documents to demonstrate the amount of time they spent on grant activities. This includes an employee whose salary is paid with state or local

funds but is used to meet a required “match” in a federal program. These documents, known as time and effort records, are maintained in order to charge the costs of personnel compensation to federal grants. Charges to federal awards for salaries and wages must be based on records that accurately reflect the work performed. These records must:

- (1) Be supported by a system of internal controls which provides reasonable assurance that the charges are accurate, allowable, and properly allocated;
- (2) Be incorporated into official records;
- (3) Reasonably reflect total activity for which the employee is compensated, not exceeding 100% of compensated activities;
- (4) Encompass both federally assisted and all other activities compensated by the District on an integrated basis;
- (5) Comply with the established accounting policies and practices of the District and
- (6) Support the distribution of the employee’s salary or wages among specific activities or costs objectives.

#### **B. Time and Effort Procedures**

Time and effort procedures will follow and comply with 2 CFR 200.430(i).

#### **C. Fringe Benefits**

Except as provided otherwise by federal law, the costs of fringe benefits will be allowable provided that the benefits are reasonable and required by law, a district-employee agreement, or another policy of the District.

#### **D. Leave**

The cost of fringe benefits in the form of regular compensation paid to employees during periods of authorized absences from the job, such as for annual leave, family-related leave, sick leave, holidays, court leave, military leave, administrative leave, and other similar benefits, are allowable if they are provided under established written District leave policies.

#### **E. Unexpected or Extraordinary Circumstances**

In the event of a pandemic or other unexpected or extraordinary circumstance, the District may close school or individual buildings. In such case, the District may compensate federally funded or other employees during such closure to ensure the return of staff to employment after the closure as allowed by state or federal law.

## **F. Documentation for Personnel Expenses**

Records that reflect charges to federal awards for salaries and wages will comply with the rules and requirements of 2 CFR 200.430.

## **VII. Other Contract Matters.**

### **A. Required Terms**

The non-Federal entity's contracts must contain the applicable provisions required by section 200.326 and described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards.

### **B. Contracting with Certain Vendors**

Pursuant to the standards contained in 2 C.F.R. § 200.321, the District will take all necessary affirmative steps to assure that minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms are used when possible consistent with state law.

**Buy American.** The District participates in the National School Lunch Program and School Breakfast Program and is required to use the nonprofit food service funds, to the maximum extent practicable, to buy domestic commodities or products for Program meals. A “domestic commodity or product” is defined as one that is either produced in the U.S. or is processed in the U.S. substantially using agricultural commodities that are produced in the U.S. as provided in 7 CFR 210.21(d). The District may deviate from this general requirement only if:

- The product is not produced or manufactured in the U.S. in sufficient and reasonably available quantities of a satisfactory quality; or
- Competitive bids reveal the costs of a U.S. product are significantly higher than the non-domestic product.

### **C. Record Keeping**

#### 1. Record Retention

- a) The District maintains all records that fully show (1) the amount of funds under the grant or subgrant; (2) how the subgrantee uses those funds; (3) the total cost of each project; (4) the share of the total cost of each project provided from other sources; (5) other records to

facilitate an effective audit; and (6) other records to show compliance with federal program requirements. 34 C.F.R. §§ 76.730-.731 and §§ 75.730-.731. The District also maintains records of significant project experiences and results. 34 C.F.R. § 75.732. These records and accounts must be retained and made available for programmatic or financial audit.

- b) The U.S. Department of Education is authorized to recover any federal funds misspent within 5 years before the receipt of a program determination letter. 34 C.F.R. § 81.31(c). Schedule 10 (Local School Districts) and Schedule 24 (Local Agencies General Records) of the Nebraska Records Management Division as approved by the Nebraska Secretary of State/State Records Administrator requires the District to maintain records regarding federal awards for a minimum of six (6) years. Consequently, the District shall retain records for a minimum of six (6) years from the date on which the final Financial Status Report is submitted, unless otherwise notified in writing to extend the retention period by the awarding agency, cognizant agency for audit, oversight agency for audit, or cognizant agency for indirect costs. However, if any litigation, claim, or audit is started before the expiration of the record retention period, the records will be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken. 2 C.F.R. § 200.333.
- c) Records will be destroyed in compliance with Schedule 10, Schedule 24, and State law. This includes the completion of a Records Disposition Report.

## 2. Maintenance of Procurement Records

- a) The District must maintain records sufficient to detail the history of all procurements. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, the basis for the contract price (including a cost or price analysis), and verification that the contractor is not suspended or debarred.

- b) Retention of procurement records shall be in accordance with applicable law and Board policy.

**D. Privacy**

The District has protections in place to ensure that the personal information of both students and employees is protected. These include the use of passwords that are changed on a regular basis; staff training on the requirements of the Family Educational Rights and Privacy Act (FERPA) and State confidentiality requirements; and training on identifying whether an individual requesting access to records has the right to the documentation.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## 3023 Record Management and Retention

The school district will comply with all federal record retention requirements, the Nebraska Records Management Act, and with Schedules 10 and 24 of the Nebraska Secretary of State's Records Management Division. These requirements apply to both physical and digital records. When permitted by Schedule 10 and Schedule 24 of the Nebraska Secretary of State's Office, records will be transferred to durable electronic media for long-term storage.

### **Special Rules Related to Electronic Forms of Communication.**

Electronically stored information such as e-mail, instant messaging, and other electronic communication are important to the district's overall operation. E-mail and other forms of electronic communication which is subject to retention under the Nebraska Records Management Act may be moved to a storage method other than their original format. Each individual who creates or receives electronic communications that belong to or pertain to the operation of the district is responsible for determining whether and in what format those records must be maintained. Duplicate records may be destroyed at any time prior to the approved retention period. Staff members who are uncertain about whether a record should be retained should consult with their supervising administrator.

~~Option 1 – use if the district uses subscription Google Apps but has not activated Vault: Due to the nature and volume of forms of electronic communication related to the operation of the district, transitory or multiple copies of electronic communication will be retained with metadata intact for 30 days. After this time, the electronically stored information with metadata intact shall be subject to overwriting or deletion from the district's electronic files and records, except as otherwise required by these policies or state and federal law.~~

Option 2 – use if the district has a Subscription to Google Apps with Vault activated: The district will archive all Google Apps data with metadata intact, except for instant messaging which users determine to be transitory. Only the domain administrator or other designated individual will be able to retrieve electronic communication and other electronically stored information which has been vaulted.

~~Option 3 – use if the district uses Office 365: Office 365 allows your system administrator to tailor complete data retention policies for data and communications inclusive of the Office 365 sphere. You will need to check with your system administrator to see how he or she has set the retention for~~

~~electronically stored information. If the system administrator has selected the minimum retention options, you can adopt Option 1 above and if the system administrator has selected complete retention, you can adopt the following: The district will archive all Office 365 data with metadata intact, except for instant messaging which users determine to be transitory. Only the domain administrator will be able to retrieve electronic communication which has been deleted.~~

~~Option 4— use if the district does not use a hosted e-mail service: The district's data storage capacity is limited. Therefore, electronic communication will only be retained on District resources in its original form with its metadata intact for a period of 60 days from the date the electronic communication is created.~~

**School-affiliated Social Media Posts.** Communication on school-affiliated social media accounts are considered short-term communications pursuant to the Records Management Act. As such, they will be retained in their original form on the vendor's system and will not be deleted by the user for at least 6 months. Individuals who are uncertain as to whether a specific social media account is "school-affiliated" should refer to the Board's policy on Staff and District Social Media Use contained elsewhere in these policies.

**Special Rules Related to Security Camera Footage.** Video footage from security cameras is generally considered working papers under the Records Management Act, and will be overwritten consistent with the district's audio and video recording policy. Video footage which captures an event of educational or behavioral significance and contains personally-identifiable information will be maintained by the school district pursuant to its policy on student records.

**Student Records.** The retention of student records is also governed by the board's policy on student records.

**Records Regarding Pending or Threatened Litigation.** When litigation against the district or its employees is filed or threatened, the district will take all reasonable action to preserve all documents and records that pertain to the issue. When the district is made aware of pending or threatened litigation, a litigation hold directive will be issued by the superintendent or his/her designee. The directive will be given to all persons suspected of having records that may pertain to the potential issues in the litigation. The litigation hold directive overrides any records retention schedule that may otherwise call for the disposition or destruction of the records until the litigation hold has been lifted.

**Federal Award Records.** The district will retain federal award records as required by 2 C.F.R. § 200.334. This includes retaining all federal award records for three years from the date of submission of their final financial report. For awards that are renewed quarterly or annually, the district will retain records for three years from the date of submission of their quarterly or annual financial report, respectively. Records to be retained include but are not limited to, financial records, supporting documentation, and statistical records.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## 3026 Handbooks

The school district’s handbooks for students and staff are intended to convey information and explain school regulations and procedures that are necessary for the school to run smoothly and efficiently. The district’s handbooks are an extension of these policies and have the force and effect of board policy when approved by the board of education. Although the ~~board~~ ~~board of education~~ may ~~take action to~~ approve the handbooks annually, the administration has the authority to change the contents of any handbook without board approval so long as the changes are consistent with board policy.

The administration may provide only the amendment to the individuals affected by the change without providing them with the full handbook unless required by law.

None of the district’s handbooks creates a “contract” between the school district, staff members, parents or students.

If any information contained in any handbook conflicts with board policy or state statute, the policy or statute will govern.

Adopted on: \_\_\_\_\_  
Revised on: \_\_\_\_\_  
Reviewed on: \_\_\_\_\_

## 302936 Purchasing (Credit) Card Program

The board approves the use of a purchasing card (credit card) program for the purchase of goods and services for and on behalf of the school district. The board will determine the type of purchasing card or cards to be used in the program and may contract with a third-party provider as provided by law.

**Authorized Purchases.** Authorized users have standing authority to use the purchasing card to charge actual, necessary, and reasonable travel expenses and ~~insert other standing authorized expenditures~~. approved school purchases where a PO may. Otherwise, the purchasing card may only be used to purchase goods and services approved by the board or the superintendent or designee. The maximum amount that may be charged in a single day is \$1500 or a higher amount if approved by superintendent. insert amount.

**Unauthorized Purchases.** In no event shall the purchasing card be used for personal purchases, purchases that are not school related, alcohol purchases, or purchases that are not allowed by law. Such unauthorized use shall result in discipline, up to and including the end of employment. Individuals who make unauthorized purchases shall reimburse the district for the expense within ten days of the purchase or the discovery of the unauthorized purchase, whichever occurs first.

**Authorized Users.** Individuals holding the following titles may be assigned an individual purchasing card: District and Building Administrators—. The board may take action at any meeting to authorize additional users or to revoke or suspend user privileges. Such action shall be recorded in the minutes. The school may also maintain a purchasing card in the name of the school district. School district employees may purchase school related goods and services with the school district credit card only with authorization from the superintendent.

**Documentation.** Employees ~~seeking reimbursement for making~~ a purchasing card purchase must submit an itemized receipt ***and*** a purchasing card receipt to the school district. The itemized receipt must include the name of the business, contact information, the date, a description of each item sufficient to give the board reasonable notice of the item purchased, and the price. ***A non-itemized credit card receipt alone is not sufficient.*** Designated school personnel shall maintain the documentation for at least 7 years or as otherwise required by Schedule 10 – Local School Districts or Schedule 24 – Local Agencies (General Records) maintained by the Nebraska

Records Management Division. Employees must maintain copies of any documentation submitted to the school district.

**Suspension or Termination of Privileges.** The board or the superintendent (or his or her designee) (1) ***shall*** temporarily or permanently suspend the purchasing card privileges of any individual that does not submit an itemized receipt for each purchasing card purchase, and (2) ***may*** temporarily or permanently suspend the purchasing card privileges of any individual for any other reason. The individual's purchasing card account must be immediately closed and he or she must return the purchasing card to the superintendent or board. Purchases that are not accompanied by the required documentation shall be considered unauthorized, and the individual making the purchase must reimburse the district within 10 days of the purchase or the discovery of the non-itemized purchase, whichever occurs first.

**Reward Points or Rebates.** Any reward points, rebates, or other benefits received from the third-party purchasing card company are and shall remain the property of the school district.

**Purchase Review Procedures.** The superintendent, or his or her designee, and \_\_\_\_\_ will conduct independent reviews of credit card expenses, or a sample thereof, on a **monthly** basis. Any unlawful or unauthorized expenditure or other discrepancy will be brought to the attention of the offending employee, if any, and the board. The superintendent or his or her designee will provide the board at each regular meeting with the documentation submitted pursuant to this policy or a summary of that documentation with a description of each item sufficient to give the board reasonable notice of the items purchased. Any unlawful or unauthorized purchase must be addressed as provided in this policy or as otherwise allowed by law.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## 3043 Design-Build Contracts

This policy is adopted pursuant to the Political Subdivisions Construction Alternatives Act (NEB. REV. STAT. § 13-2901 through § 13-2914).

~~The board shall adopt a resolution by a two-thirds affirmative vote selecting the design-build contract delivery system prior to proceeding with any of the steps involved with solicitation or execution of any construction contract. For a project authorized under subsection (3) of section 13-2914, the resolution shall include a statement that the political subdivision has made a determination that the design-build contract delivery system is in the public interest based, at a minimum, on one of the following criteria: (a) Savings in cost or time or (b) requirement of specialized or complex construction methods suitable for the design-build contract delivery system.~~

I. **Definitions.** For purposes of this policy:-

A. **Act** means the Nebraska Political Subdivisions Construction Alternatives Act.

A.B. **Board** means the District's Board of Education.

B.C. **Department** means the Nebraska Department of Education.

C.D. **Design-Build Contract** (~~DBD-B~~ Contract) means a contract which is subject to qualification-based selection between the District and a Design-Builder to furnish (a) architectural, engineering, and related design services for a project pursuant to the ~~Nebraska Political Subdivisions Construction Alternatives Act (Act)~~Act and (b) labor, materials, supplies, equipment, and construction services for a project pursuant to the Act.

D.E. **Design-Builder** means ~~the~~ legal entity which proposes to enter into a ~~DBD-B~~ Contract which is subject to qualification-based selection pursuant to the Act.

E.F. **District** means Seward Public Schools.

G. **Letter of Interest** means a statement indicating interest to enter into a D-B Contract for a project pursuant to the Act.

F.H. **NEARA** means the Nebraska Engineers and Architects Regulation Act.

G.I. **Performance-Criteria Developer** (PCD) means any person licensed or any organization issued a certificate of authorization to

practice architecture or engineering pursuant to the NEARA who is selected by the District ~~pursuant to this policy~~ to assist the District in the development of Project Performance Criteria, Requests ~~For~~ Proposals, evaluation of Proposals, evaluation of the construction under a DBD-B Contract to determine adherence to the Project Performance Criteria, and any additional services requested by the District to represent its interests in relation to a project.

H.J. **Project Performance Criteria** means the performance requirements of the project suitable to allow the Design-Builder to make a Proposal~~proposal~~. Performance requirements include the following, if required by the project: capacity, durability, standards, ingress and egress requirements, description of the site, surveys, soil and environmental information concerning the site, interior space requirements, material quality standards, design and construction schedules, site development requirements, provisions for utilities, storm weather~~water~~ retention and disposal, parking requirements, applicable governmental code requirements, and other criteria for the intended use of the project.

I.K. **Proposal** means an offer in response to a Request ~~For~~ Proposals (~~"(RFP)"~~) by a Design-Builder to enter into a DBD-B Contract for a project pursuant to the Act.

L. **Qualification-based selection process** means a process of selecting a design-builder based first on the qualifications of the design-builder and then on the design-builder's proposed approach to the design and construction of the project;

M. **Request for letters of interest** means the documentation or publication by which the District solicits letters of interest;

~~1. **Act** means the Nebraska Political Subdivisions Construction Alternatives Act.~~

~~J.N. **Request for Proposals** (RFP) means the documentation by which the District solicits Proposals.e~~

K.O. **Superintendent** means the District's Superintendent of Schools, or his or her designee.

~~**Procedures.** The District shall follow the procedures below in connection with any DB Contract.~~

~~**II. Rules and Procedures for Selecting and Hiring a PCD for a Specific Project. Resolution to Select Design-Build.** The Board shall~~

adopt a resolution by a two-thirds affirmative vote selecting the design-build contract delivery system prior to proceeding with any of the steps described below.

- A. For a project, in whole or in part, for water, wastewater, utility, or sewer construction, the resolution shall include a statement that the District has made a determination that the design-build contract delivery system is in the public interest based, at a minimum, on one of the following criteria: (a) Savings in cost or time or (b) requirement of specialized or complex construction methods suitable for the design-build contract delivery system.

### **III. Selecting and Hiring a Performance-Criteria Developer (PCD)**

- A. Selecting the Most Qualified PCD for Contract Negotiations.** The required procedures for selecting the most qualified PCD for contract negotiations differ depending on the magnitude of the District's estimate of the project's basic construction cost, as described in this section A.

**Project Cost \$896,000 and Below.** For a project whose basic construction cost is estimated by the

1. ~~The~~ District to be \$896,000 or less, the District will use the following procedures for identifying the most qualified PCD:
  - a. ~~The~~ shall Superintendent will solicit statements of qualification from potential PCDs. Such solicitation shall include a general description of the project and shall indicate how interested individuals or firms can apply for consideration by the District. The Superintendent may, but is not required to, give public notice of such solicitation.
  - b. Based on the statements of qualifications and any other relevant information that the Superintendent receives, the Superintendent shall make a finding identifying the applicant most qualified to serve as the PCD for the project based on the applicant's capabilities to perform, adequacy of personnel, past record and performance, experience, and such other factors as may be determined by the Superintendent to be applicable to the District's particular requirements for the project.
  - c. Following such finding, the Superintendent shall recommend to the Board that it negotiate a contract with the applicant so identified.
- 2. Project Cost in Excess of \$896,000.** For a project whose basic construction cost is estimated by the District to exceed \$896,000,

the District will use the following procedures for identifying the most qualified PCD:

- a. The District will encourage eligible persons ~~individuals~~ or ~~organizations~~ firms who desire to provide professional services to the District as its PCD for the project to submit a statement of qualifications ~~and performance data to the District.~~ At least ~~thirty~~ fifteen (15) days prior to ~~selecting and hiring a PCD~~ the deadline to respond, the District ~~shall~~ will publish notice in a newspaper of general circulation in the District that it is seeking a PCD for a design-build project. The notice shall include the following:
  - i. A general description of the ~~Design-Build~~ project; Directions regarding how
  - ii. How interested ~~persons or organizations~~ firms can apply for consideration by the District; and
  - iii. The date by which ~~persons~~ individuals or ~~organizations~~ firms must submit their ~~applications~~ statements of qualifications; and
  - iv. A statement that any ~~person~~ individual or ~~organization~~ firm applying for consideration by the District must obtain a copy of the District's Design-Build Contract Policy from the Superintendent.
- b. To apply to be the District's PCD, applicants must submit a current statement of qualifications ~~and performance data~~ to the District. The statement of qualifications must include evidence that the applicant is licensed or certified to practice architecture or engineering pursuant to the NEARA. Applicants must update any information provided to the District to reflect any changed conditions of the applicant.
- c. Applicants shall first be certified by the Superintendent as qualified to act as a PCD for the District. In order to certify an applicant, the Superintendent shall make a finding that a PCD is fully qualified to render the required service. Factors to be considered in making this finding shall include capabilities to perform, adequacy of personnel, past record and performance, and experience; and may also include consideration of recent, current, and projected workloads; ~~experience~~; equipment and facilities; promptness, ~~and~~; the quality of work previously done by applicant; suitability to the particular task; willingness to meet time and budget requirements; and such other qualities as are

found necessary to consider in order to determine whether or not, if awarded the contract, the applicant could perform it ~~strictly~~ in accordance with its terms ~~capabilities to perform~~.

- d. The Board ~~shall~~will evaluate each qualified applicant's ~~current~~ statement of qualifications and ~~performance data any other relevant the District has received~~. The Board ~~shall~~will conduct discussions with, and may require public presentations by ~~no less than, at least~~ three applicants regarding their qualifications, approach to the project, and ability to furnish the required service, ~~and other factors identified above~~.
- e. The Board ~~shall~~will select, in order of preference, at least three applicants deemed to be most highly qualified to perform the required services after considering the factors ~~outlined~~identified above.

**L.B. Negotiating a Contract with the PCD.** The Board shall negotiate a contract with the most qualified applicant (identified via the procedures above) for professional services at compensation that the Board determines is fair and reasonable. In making such determination, the Board shall conduct a detailed analysis of the cost of the professional services required in addition to considering their scope and complexity. For all lump-sum or cost-plus-a-fixed-fee professional service contracts, the Board shall require the applicant receiving the award to execute a certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract under which such a certificate is required shall contain a provision that the original contract price and any additions thereto shall be adjusted to exclude any significant sums by which Board determines the contract price had been increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract adjustments shall be made within one year following the end of the contract.

**Prohibition Against Contingent Fees.** The contract between the District and the PCD must

- ~~A. If the Board is unable to negotiate a satisfactory contract with the applicant considered to be the most qualified at a price the Board determines to be fair and reasonable, it shall terminate negotiations with that applicant. The Board may then undertake negotiations with the second most qualified applicant. If the Board fails to reach an agreement with the second most qualified applicant, it shall terminate negotiations with that applicant. The~~

~~Board shall then undertake negotiations with the third most qualified applicant.~~

~~B. it shall either select additional applicants in order of their competence and qualification and continue negotiations in accordance with this policy until an agreement is reached or review the agreement under negotiation to determine the possible cause for failure to achieve a negotiated agreement.~~

~~M.A. The Board may designate a committee to carry out any or all of the Board's duties under the PCD selection section of this policy, provided that the Board must approve any agreement with an applicant prior to its execution. Any such committee must have among its membership at least one person who is licensed to practice architecture or engineering pursuant to the NEARA.~~

~~C. The public shall not be excluded from the meetings or proceedings under this section of this policy in accordance with the Open Meetings Act.~~

~~1. The contract between the District and the PCD shall contain a prohibition against contingent fees as follows: "The PCD warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the PCD, to solicit or secure this agreement and that the PCD has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the PCD, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or the making of this agreement." Upon violation of such provision, the District shall have the right to terminate the agreement without liability and, at its discretion, to deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, or consideration.~~

### **C. Effect of Unsuccessful Negotiations**

~~1. If the Board is unable to negotiate a satisfactory contract with the applicant to be the most qualified at a price the Board determines to be fair and reasonable, negotiations with that applicant shall be formally terminated. The Board shall then undertake negotiations with the second most qualified applicant. If the Board fails to reach an agreement with the second most qualified firm, the Board shall terminate negotiations with such applicant. The Board shall then undertake negotiations with the third most qualified applicant.~~

If the Board is unable to negotiate a satisfactory contract with any of the selected applicants,

2. the Board shall either select additional applicants in order of their competence and qualification and continue negotiations in accordance with this policy until an agreement is reached or review the agreement under negotiation to determine the possible cause for failure to achieve a negotiated agreement.

**D. Board-Designated Committee.** The Board may may designate a committee to carry out any or all of the Board's duties under this PCD selection and hiring section of this policy, provided that the Board must approve any agreement with an applicant prior to its execution. Any such committee must have among its membership at least one person who is licensed to practice architecture or engineering pursuant to the NEARA.

**E. Open Meetings Act.** The public shall not be excluded from the meetings or proceedings under this section in accordance with the Open Meetings Act.

**N.F.** The PCD is ineligible to be included as a provider of any services in a Proposal for the project on which it has acted as a PCD.

**A**

**O.G.** The PCD ~~may not be~~ is prohibited from being employed by or ~~may not have a~~ having any financial or other interest in a Design-Builder that will submit a ~~Proposal~~ proposal.

### ~~Procedures and standards to be used to prequalify~~

#### **H.IV. Pre-Qualifying Design-Builders:**

- A. **Letters of Interest.** The District, ~~with the help of the PCD,~~ shall prepare a request for ~~letters~~ Letters of interest. ~~The Interest, which request for letters of interest shall:~~
  1. Describe the project in sufficient detail to permit a Design-Builder to submit a letter of interest~~;~~.
  2. Be published in a newspaper of general circulation within the District at least thirty (30) days prior to the deadline for receiving letters of interest; and
  3. Be sent by first-class mail to any Design-Builder upon request.
- B. Letters of interest shall be reviewed by the District in consultation with the PCD. The District and the PCD will evaluate prospective Design-

Builders based on the information submitted to the District in response to the request for letters of interest.

- C. The District shall select at least three prospective Design-Builders, except that if only two Design-Builders have submitted letters of interest, the District shall select at least two prospective Design-Builders. Such selected Design-Builders shall be considered prequalified and eligible to receive and respond to the RFP.
- D. The District and PCD shall use the following standards when selecting which prospective Design-Builders to prequalify: capabilities to perform, adequacy of personnel, past record and performance, and experience; and may also include consideration of recent, current, and projected workloads; ~~experience~~; equipment and facilities; promptness, ~~and~~; the quality of work previously done ~~by applicant~~; suitability to the particular task; willingness to meet time and budget requirements; and such other qualities as are found necessary to consider in order to determine whether or not, if awarded the contract, the ~~applicant~~ Design-Builder could perform it ~~strictly~~ in accordance with its terms ~~capabilities to perform~~.

## **Procedures**

~~2. — Preparing Requests for the preparation and content of RFPs.~~  
III.V. Proposals (RFP). The District, with the ~~help~~ assistance of the PCD, ~~shall~~ will prepare the RFP, which shall contain:

- A. The identity of the ~~school district~~ District for which the project will be built and ~~the District that will execute the Design-Build Contract; design-build contract;~~
- B. A copy of this Design-Build ~~Contract~~ Contact Policy and all other policies ~~adopted by the District relating~~ related to the ~~DBD-B~~ Contract;
- C. The proposed terms and conditions of the ~~DBD-B~~ Contract, including any terms and conditions which are subject to further negotiation. The proposed general terms and conditions shall be consistent with nationally recognized model general terms and conditions which are standard in the design and construction industry in Nebraska. The proposed terms and conditions may set forth an initial determination of the manner by which the Design-Builder selects any subcontractor and may require that any work subcontracted be awarded by competitive bidding;
- D. A project statement which contains information about the scope and nature of the project;
- E. Project Performance Criteria;

- F. Budget parameters for the project;
- G. Any bonds ~~or~~and insurance required by law or as may be additionally required by the District;
- H. The criteria for evaluation of Proposals and the relative weight of each criterion;
- I. A requirement that the Design-Builder provide a written statement of ~~it~~the Design-Builder's proposed approach to the design and construction of the project, which may include graphic materials illustrating the proposed approach to design and construction but shall not include price proposals;
- J. A requirement that the Design-Builder agree to the following conditions:
  1. ~~(i)~~—An architect or engineer licensed to practice in Nebraska will participate substantially in those aspects of the offering which involve architectural or engineering services;
  2. ~~(ii)~~—At the time of the design-build offering, the Design-Builder will furnish to the Board a written statement identifying the architect or engineer who will perform the architectural or engineering work for the design-build project;
  3. ~~(iii)~~—The architect or engineer engaged by the Design-Builder to perform the architectural or engineering work with respect to the design-build project will have direct supervision of such work and may not be removed by the Design-Builder prior to the completion of the project without the written consent of the Board;
  4. ~~(iv)~~—A Design-Builder offering design-build services with its own employees who are design professionals licensed to practice in Nebraska will: (a) comply with the NEARA by procuring a certificate of authorization to practice architecture or engineering and (b) submit proof of sufficient professional liability insurance; and
  5. ~~(v)~~—The rendering of architectural or engineering services by a licensed architect or engineer employed by the Design-Builder will conform to the NEARA and rules and regulations adopted under the ~~Act~~NEARA; and
- K. Other information which the District chooses to require.\_\_\_\_\_

IV-VI. Notice of RFP. At least thirty (30) days prior to the deadline for receiving and opening Proposalsproposals, the ~~notice of the RFP~~District shall cause a Notice of RFP to be:

- A. Published in a newspaper of general circulation within the District;
- B. Filed with the Department; and
- C. Sent ~~by first class mail~~directly to the prequalified Design-Builders only.

**~~Procedures for preparing~~**

**~~V.VII. Preparing and submitting~~ Submitting Proposals:**

- A. Prequalified Design-Builders shall prepare and submit Proposals as required by the RFP.
- B. All Proposals shall be sealed. Proposals shall not be opened until expiration of the time established for making Proposals as set forth in the RFP.
- C. Proposals may be withdrawn at any time prior to acceptance.
- D. The District has the right to reject any and all Proposals except for the purpose of evading the law. The District may thereafter solicit new Proposals using the same or a different Project Performance Criteria.

**~~Procedures for evaluating~~**

**~~VI.VIII. Evaluating Proposals:~~**

- A. The District may only proceed to negotiate and enter into a ~~DBD-B~~DBD-B Contract if there are at least two proposals from prequalified Design-Builders.e
- B. ~~The District Board shall refer the proposals for recommendation to designate members of a selection committee. The selection committee, which shall be a group of include~~ at least five persons ~~designated by the District.~~ Members of the selection committee ~~shall~~must include ~~(1):~~
  1. One or more members of the ~~school board,~~ (2) Board;
  2. One or more members of the ~~school~~District's administration or staff, ~~(3) the school's architect or engineer~~ (4) any;
  3. The PCD;
  4. Any person having special expertise relevant to selection of a ~~design-builder~~Design-Builder or construction manager under the Act;i and ~~(5) a~~
  5. A resident of the District other than an individual included in subdivisions (1) through (4) of this subsection.

A member of the selection committee designated under subdivision (4) or (5) of this subsection shall not be employed by or have a financial or other interest in a ~~design-builder~~Design-Builder who has a

~~proposal~~Proposal being evaluated and shall not be employed by the District or the ~~school's architect or engineer~~PCD.

C. The District shall refer the Proposals for recommendation to the selection committee.

B.D. The selection committee and the District shall evaluate ~~proposals~~Proposals taking into consideration the criteria enumerated in ~~subdivisions~~subsections (1) through (7) of this subsection with the maximum percentage of total points for evaluation which may be assigned to each criterion set forth following the criterion. The following criteria shall be evaluated, when applicable:

1. ~~(1)~~ — The financial resources of the design-builder to complete the project **(up to ten percent)**;
2. ~~(2)~~ — The ability of the proposed personnel of the design-builder to perform **(up to thirty percent)**;
3. ~~(3)~~ — The character, integrity, reputation, judgment, experience, and efficiency of the design-builder **(up to thirty percent)**;
4. ~~(4)~~ — The quality of performance on previous projects **(up to thirty percent)**;
5. ~~(5)~~ — The ability of the design-builder to perform within the time specified **(up to thirty percent)**;
6. ~~(6)~~ — The previous and existing compliance of the design-builder with laws relating to the contract **(up to ten percent)**; and
7. ~~(7)~~ — Such other information as may be secured having a bearing on the selection **(up to twenty percent)**.

**NOTE TO BE DELETED: The percentages listed above must be modified so that they add up to 100%. This can be done directly in the policy, at the time the school board designates the Design-Build method for a specific project, or at a later time but before the RFP is published and sent out.**

C.E. The records of the selection committee in evaluating proposals and making recommendations shall be considered public records for purposes of NEB. REV. STAT. § 84-712.01.

<sup>e</sup>D.F. ~~D.~~ The District shall then evaluate and rank each ~~proposal~~Proposal on the basis of best meeting the criteria in the ~~request~~

for proposals RFP and taking into consideration the recommendation of the selection committee.

~~3. Procedures for Negotiations between the District and Design-Builders Submitting Proposals Prior to the District's Acceptance of a Proposal.~~

**IX. Negotiating a Design-Build Contract**

~~E.A.~~ E.A. The District may attempt to negotiate a ~~DBD-B~~ DBD-B Contract with the highest ranked Design-Builder selected by the ~~Board~~ District and may enter into a ~~DB Contract~~ Design-Build contract after negotiations.

~~F.B.~~ F.B. The negotiations shall include a final determination of the manner by which the ~~design-builder~~ Design-Builder selects a subcontractor.

~~G.C.~~ G.C. If the District is unable to negotiate a satisfactory ~~DBD-B~~ DBD-B Contract with the highest ranked Design-Builder, ~~it~~ the District may terminate negotiations with that Design-Builder. The District may then undertake negotiations with the second highest ranked Design-Builder and may enter into a ~~DBD-B~~ DBD-B Contract ~~with that Design-Builder~~ after negotiations.

~~H.D.~~ H.D. If the District is unable to negotiate a satisfactory ~~DB Contract~~ contract with the second highest ranked Design-Builder, ~~it may terminate negotiations with that Design-Builder. The~~ the District may ~~then~~ undertake negotiations with the third highest ranked Design-Builder, if any, and may enter into a ~~DBD-B~~ DBD-B Contract ~~with that Design-Builder~~ after negotiations.

~~I.E.~~ I.E. If the District is unable to negotiate a satisfactory ~~DB Contract~~ contract with any of the ranked Design-Builders, ~~it~~ the District may either revise the RFP and solicit new ~~Proposals~~ proposals or cancel the ~~design-build~~ Design-Build process. ~~—~~ under the Act.

~~J.F.~~ J.F. If the District is able to negotiate a satisfactory ~~contract~~ D-B Contract with a ~~design-builder~~ Design-Builder, the District shall file a copy of all ~~design-build contract~~ D-B Contract documents with the ~~State Department of Education~~ within thirty (30) days after their full execution. Within thirty (30) days after completion of the project, the ~~design-builder~~ Design-Builder shall file a copy of all contract modifications and change orders with the ~~State Department of Education~~.

**Procedures for Filing and Acting on**

**VII.X. Formal Protests Relating to the Solicitation or Execution of DBD-B Contracts:**

~~A. — Definitions.~~

**A. Definitions.** For this section on "Formal Protests Related to the Solicitation of Execution of D-B Contracts" the following definitions apply:

1. **Interested party** shall mean an actual or prospective ~~bidder~~Design-Builder whose direct economic interest would be affected by the award of a contract by the District to another party or by the failure of the District to award a contract to such actual or prospective ~~bidder~~Design-Builder.
2. **Protest** shall mean a written objection by an interested party on any phase of the bidding procurement process, including specification, preparation, ~~bid solicitation~~performance criteria development, RFP, pre-qualification, ranking, contract negotiations, and ~~intent to award~~.

**B. Right to Protest.** An interested party may protest to the Superintendent. The protest shall be submitted in writing on company letterhead within five working days after ~~public notice of the bid event giving rise to the protest.~~ Protests based on alleged apparent improprieties in a solicitation or other request for ~~proposals~~Proposals must be filed before ~~bid~~Proposal opening or the ~~closing date~~deadline for receipt of proposals. In all other cases, the protest must be filed within five working days following the selection of the ~~design-builder~~Design-Builder. To expedite handling of protests, the envelope containing the protest should be clearly labeled "Protest". The written protest shall include as a minimum the following:

1. The name and address of the interested party;
2. Appropriate identification of the relevant solicitation, and if a ~~bid~~Proposal has been opened, its number, and date of opening;
3. A detailed statement of reasons for the protest;
4. Supporting, exhibits, evidence, or documents to substantiate any claims unless not available within the filing time, in which case the expected availability date shall be indicated; and a list of all persons who have knowledge of facts relevant to the protest; and
5. The action(s) the protestor desires the ~~school district~~District to take to resolve the protest.

The Superintendent will immediately decide upon receipt of the protest whether or not the award of a contract shall be delayed, or if the protest is timely received after the award, whether the performance of the

contract should be suspended. The ~~school-district~~District shall not proceed further with the solicitation or with the award of the contract and shall suspend performance under the contract, if awarded, unless the Superintendent makes a written determination that the protest is clearly without merit or that award of the contract without delay is necessary to protect the substantial interests of the District.

C. ~~C.~~—**Authority to Resolve Protests.** Prior to the commencement of an administrative review by the Board concerning any protest, the Superintendent shall attempt to resolve any protest filed by an interested party concerning any solicitation. If the protest is not resolved by mutual agreement, the Superintendent shall create and deliver a Decision to the protestor within a reasonable time after the written protest was received. The Decision shall include a written summary of the Superintendent's investigation and a recommendation regarding the outcome of the protest. The Decision shall (1) state the reasons for the action taken, and (2) inform the interested party of their right to the administrative review by the Board. A copy of the Decision shall be mailed or otherwise furnished immediately to the interested party and any other party intervening protester and all other ~~bidders.~~Design-Builders. If not satisfied with the decision of the Superintendent, any interested party protester may appeal to the Board, but the decision shall be final unless the interested party protester files a timely appeal with the Board.

D. ~~D.~~—**Board Appeal Procedures.** Any interested party protester, within five working days of receipt of a decision of the Superintendent, may file with the Superintendent a written notice of appeal for an administrative review before the Board. The Notice of Appeal must clearly state the action protested and the basis of appeal. The Board will conduct an administrative review at its next regularly scheduled meeting or at a special meeting. ~~The school district board of education~~The Board shall consider the Decision of the Superintendent and shall make the final decision on the protest. ~~The school district board of education's~~The Board's decision shall be final.

~~VIII.~~XI. **Refinements and Changes.** A ~~DBD-B~~DBD-B Contract may be conditioned upon later refinements in scope and price and may permit the District, in agreement with the Design-Builder, to make changes in the project without invalidating the ~~DBD-B~~DBD-B Contract. Later refinements shall not, however, exceed the scope of the project statement contained in the RFP.

XII. Adherence to Performance Criteria. Throughout the project, the PCD shall remain engaged on the project and shall be responsible for monitoring the Design-Builder's adherence to the Performance Criteria in the

Design-Builder's performance of the D-B Contract. Upon PCD's observation that the Design-Builder's performance of the D-B Contract has or is reasonably likely to materially diverge from the Performance Criteria, the PCD shall promptly notify the District of such observation and the basis for the same.

~~IX.XIII.~~ **Projects Excluded.** The District shall not use a ~~design-build contract~~Design-Build Contract for any construction project excluded by NEB. REV. STAT. —§ 13-2914 or any other applicable law.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **3047 Data Breach Response**

### **I. Preparation**

A data breach is an instance in which personal information as defined by state law or personally identifiable information as defined by federal law is released or accessed in an unauthorized manner. The district will implement and maintain reasonable security procedures and practices that are appropriate to the nature and sensitivity of the personal information handled by the district. In order to ensure compliance with state and federal law; in the event of a breach the following preparatory steps shall be taken.

#### **A. Data Governance**

The superintendent, or their designee, will create an annually updated data directory that will include:

1. Computing devices purchased by the district,
2. Software that is installed on district devices,
- 2.3. Approved vendors/contractors that have access to personal information or personally identifiable information,
- 3.4. Staff members with access to district devices,
- 4.5. Staff members with active usernames and passwords for any district software.

#### **B. New Devices and Software**

Any new software or device that is used in a district building for district purposes will be submitted to the superintendent or their designee for inclusion in the directory.

### **II. Incident Response Plan**

#### **A. Assessment and Investigation**

1. If the District becomes aware of a data breach it will make every reasonable effort to remedy the cause of the breach as soon as possible.

1.2. The District will contact its cyber or relevant data breach insurance provider -in the event of a suspected breach.

2.3. The District will conduct a good faith, reasonable, and prompt investigation to determine the likelihood that personal information has been or will be used for an unauthorized purpose.

3.4. This investigation will include, but not be limited to, an assessment of what software, hardware, and physical documents were accessed; which District personnel had access to the compromised data; and what specific data was compromised.

**B. Notification of Effected Individuals**

1. If the investigation determines that the use of information about a Nebraska resident for an unauthorized purpose has occurred or is reasonably likely to occur, the district shall give notice to the affected Nebraska resident.
2. Notice shall be made as soon as possible and without unreasonable delay, consistent with the legitimate needs of law enforcement and consistent with any measures necessary to determine the scope of the breach and to restore the reasonable integrity of the computerized data system.

**C. Notification of Law Enforcement and Outside Organizations**

1. Should notice of the breach be required to any individual, notice of the breach will be simultaneously sent to the Nebraska Attorney General's office.
2. The Superintendent will determine if the Family Policy Compliance Office will be notified of the breach.
3. The Superintendent will determine if the Privacy Technical Assistance Center will be notified of the breach.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **4051 Staff and District Social Media Use**

Social media is an important tool for communicating, keeping up-to-date with current developments in education, and for conducting research to enhance management, teaching, and learning skills. The district also uses social media accounts to provide information to district stakeholders. This policy is intended to ensure (1) appropriate use of social media by staff and (2) appropriate control of social media accounts belonging to or affiliated with the district. Staff should also refer to the district's policy on Staff Computer and Internet Usage.

### **I. Personal Versus School-Affiliated Social Media Use**

#### **A. Personal Social Media Use**

1. The school district will not require staff members or applicants for employment to provide the district with their username and password to personal social media accounts.
2. The district will not require staff to add anyone to the list of contacts associated with the staff member's personal social media accounts or require a staff member to change the settings on his or her personal social media accounts so that others can or cannot view their accounts.
3. Staff members whose personal social media use interferes with the orderly operation of the school or who use social media in ways that are not protected by the First Amendment may be subject to discipline by the district.
4. Staff members who wish to begin using or to continue using the school district name, programs, mascot, image or likeness as part of any social media profile must notify their supervising administrator of the use, and must secure the administrator's permission to do so.

#### **B. School-Affiliated Social Media Use**

1. Any social media account which purports to be “the official” account of the school district (e.g., “**Bulldog Bluejay** Wrestling”), or any of its programs, classes or entities will be considered to be an account that is used exclusively for the school district’s business purpose. Staff members may not use “official” accounts for personal use.
2. Staff ~~may be~~ required to provide their supervising administrator with the username and password to school-affiliated social media accounts.
3. Staff may be required to interact with specified individuals on school-affiliated social media accounts.
4. When staff use school-affiliated social media accounts to comment on school-related matters, they do not do so as private citizens and are therefore not entitled to First Amendment protections. They are also not allowed to make any press releases or other official communications on behalf of the district without prior administrative approval. In other words, staff do not speak “for the district” directly or indirectly unless specifically authorized and directed to do so.

## **II. Staff Expectations in Use of Social Media – Applicable to Both Personal and School-Affiliated Use**

### **A. General Use and Conditions**

Staff must comply with all board policies, contract provisions, and applicable rules of professional conduct in their social media usage. They must comply with the board’s policy on professional boundaries between staff and students at all times and in both physical and digital environments.

Staff must obtain the consent of their building principal or the superintendent prior to posting any student-related information in order to make sure that the publication does not violate the Federal Education Records Privacy Act or any other laws. Staff must also comply with all applicable state and federal record retention requirements, even with regard to personal social media usage.

Staff must comply with all applicable laws prohibiting the use or disclosure of impermissible content, such as copyright laws, accountability and disclosure laws, and any other law governing the use of resources of a political subdivision. Questions about appropriate content should be referred to the staff member's supervising administrator.

## **B. Acceptable Use**

~~1. Staff may use social media for instructional purposes.~~

2.1. Staff may use social media for school-related communication with fellow educators, students, parents, and patrons. Student communication must be consistent with the district's professional boundaries policies and expectations.

3.2. Teachers should integrate the use of electronic resources, which may include social media, into the classroom. As the quality and integrity of content on social media is not guaranteed, teachers must examine the source of the information and provide guidance to students on evaluating the quality of information they may encounter. This includes spotting AI-generated content, fakes, spoofs, and discerning the quality and reliability of content.

## **C. Unacceptable Use**

1. Staff shall ~~not~~ never access obscene or pornographic material while at school, on school-owned device or on school-affiliated social media accounts.

2. Staff shall not engage in any illegal activities, including the downloading and reproduction of copyrighted materials.

3. Staff shall not access social media networking sites such as Facebook, TwitterX, and Instagram, Snapchat, and TikTok on school-owned devices or during school time unless ~~such access is for an educational activity which has been preapproved by the staff member's immediate supervisor~~ permitted by district policy or preapproved by the staff member's

immediate supervisor. This prohibition extends to using chat rooms, message boards, or instant messaging in social media applications and includes posting on social networking sites using personal electronic devices.

### **III. School-Affiliated Digital Content**

#### **A. General Use and Conditions for School-Affiliated Accounts**

Staff must obtain the permission of their supervising administration prior to creating, publishing, or using any school-affiliated web pages, blogs, microblogs, social media pages or handles, or any other digital content which represents itself to be school-related, or which could be reasonably understood to be school-related. This includes any content which identifies the school district by name in the account name or which uses the school's mascot name or image.

Staff must provide administrators with the username and password for all school-affiliated accounts and must only publish content appropriate for the school setting. Staff may not provide the username and password to school-affiliated accounts to any unauthorized individual, including students and volunteers.

#### **B. Moderation of Third Party Content**

The purpose of school-related social media accounts is to disseminate information. No school-related or school-affiliated social media account covered by this policy shall permit comments by the public unless otherwise approved by the superintendent. All comment functions for applications such as Facebook and Instagram must be turned to "off" without this approval.

In the event the superintendent permits content created by anyone other than the administrator of the account to appear on the account's pages, such as comments made by students, parents, and patrons, the account administrator must monitor the content to ensure it complies with this policy. Posts, comments, or any other content made on the account's pages or tags or links to official school accounts on another account may be removed when the content meets any of the following conditions:

1. Is obscene, lewd, lascivious, true threat, or appeals to prurient interests;
2. Contains information relating to a student matter or personnel matter which is protected under or prohibited by state or federal law;
3. Contains fighting words or content that is threatening, harassing, or discriminatory ~~words or phrases~~;
- 3.4. Advocates, promotes, or encourages the use of drugs, alcohol, or other prohibited substances;
- 4.5. Incites or is reasonably anticipated to incite violence, illegal activity, or a material and substantial disruption to school operations or activities; or
- 5.6. Contains any other threat to the safety of students and staff.

The district may restrict access to its official accounts for violations of these rules, such as deleting comments or prohibiting comments. Accounts that are not official school accounts are those owned and operated by board members and employees for their personal use, even if they discuss school matters.

Every official school account administrator must keep a copy of any removed content or banned/blocked individual account and must provide a copy to the superintendent along with written notification for the reason the post has been removed. All questions about the appropriateness of removal must be directed to the superintendent.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **4057 Superintendent Evaluation**

The board shall observe and evaluate the superintendent based upon actual classroom observations for an entire instructional period at least twice during his first year of employment and at least once each year thereafter. Additional evaluations may be conducted at the discretion of the board. For the purposes of this policy, "actual classroom observation" shall mean observing the superintendent performing activities that are typical of his or her position. An "entire instructional period" for administrators cannot be defined in terms of an instructional period and shall be satisfied by the actual observation of some aspect of the superintendent's work during the semester for no less than 40 minutes.

**Purpose.** The purposes of the formal job evaluation are:

1. To provide a means of rational, structured communication between the board and superintendent to create a more constructive and effective working relationship.
2. To provide a basis for commending, rewarding, and reinforcing good work, as well as identifying areas where the superintendent needs to improve.
3. To clarify the superintendent's role and inform the superintendent of the board's expectations.

**Dates.** Unless otherwise provided for in the superintendent's employment contract, the first year evaluations should take place (1) at or prior to the **October** board meeting, and (2) at or prior to the **January** board meeting. Annual evaluations shall generally take place ~~at a board meeting held~~ during the month before the date in the superintendent's employment contract by which the board must notify the superintendent of its intention to consider the nonrenewal or amendment of the contract. In the absence of such a contract provision, the annual evaluation should take place at or prior to the March board meeting. The Superintendent shall remind the Board members in writing at least 45 days before the date of each upcoming evaluation and shall make his evaluation an agenda item for the board meeting.

**Evaluation Document.** The superintendent shall submit a recommended evaluation document to the board. The board shall meet and discuss the proposed document with the superintendent. The board may amend and adopt the proposed evaluation document. The board may amend the document or adopt a new document without amending this policy. The superintendent shall submit the evaluation document to the Nebraska Department of Education.

**Evaluation Procedures.** Each board member shall have the opportunity to complete a draft evaluation document. The board president shall compile the individual draft evaluations into a single and final evaluation, provide a copy to the superintendent, and discuss it with him or her. If the superintendent's evaluation is conducted at a board meeting, ~~the~~ the superintendent's evaluation may be conducted in closed session if it is necessary to prevent needless injury to the superintendent's reputation and if he or she has not requested it be done in open session.

**Deficiencies.** If deficiencies are noted in the superintendent's work performance, the board shall provide the superintendent at the time of the observation with a list of deficiencies and a list of suggestions for improvement and assistance in overcoming the deficiencies. The board shall also provide the superintendent with follow-up evaluations and assistance when deficiencies remain, a timeline for improvement, and sufficient time to improve. In the alternative, the board may rely upon the superintendent's education, training, and expertise and require him or her to submit a "list of suggestions for improvement" or plan of improvement for the board's consideration.

**Personnel File.** The evaluation shall be signed by the board president (or other member of the board) and the superintendent. The superintendent shall place a copy of the evaluation in his or her personnel file. The superintendent may provide a written response to the evaluation to the board. A copy of the response shall also be placed in the superintendent's personnel file. The board may meet with the superintendent to discuss the written response.

**Policy Limitation.** The evaluation procedures are included in this policy as a result of the board's statutory obligation to evaluate the superintendent and do not give the superintendent any rights not provided by statute. The board's failure to comply with any procedures provided in this policy but not required by law shall not prohibit the board from taking any action regarding the superintendent's employment, up to and including the nonrenewal, amendment, or cancellation of the employment contract.

Adopted on: \_\_\_\_\_  
Revised on: \_\_\_\_\_  
Reviewed on: \_\_\_\_\_

**4059**  
**Behavioral and Mental Health Training**

All public school employees who interact with students and any other appropriate personnel are required to complete ~~at least one hour of~~ behavioral and mental health training with a focus on suicide awareness and prevention training every year. The training may include, but need not be limited to, topics such as identification of early warning signs and symptoms of behavioral and mental health issues in students, appropriate and effective responses for educators to student behavioral and mental health issues, trauma-informed care, and procedures for making students and parents and guardians aware of services and supports for behavioral and mental health issues.

The superintendent will determine the appropriate personnel required to receive the training. The training materials for this training must be included in the Nebraska Department of Education’s list of approved training materials. The length of the training shall be a reasonable amount as determined by the school board.

These employees must complete the training designated by the school district or superintendent no later than **October 31** of each school year or within 30 days of their initial employment, whichever is later. Failure to complete this training may subject the employee to employment-related discipline.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **5001 Compulsory Attendance and Excessive Absenteeism**

### **Required Attendance**

Every person residing in the school district who has legal or actual charge or control of any child who is of mandatory attendance age shall cause that child to attend a public or private school regularly unless the child has graduated from high school or has been allowed to disenroll pursuant to this policy.

### **Mandatory Attendance Age**

All children who are or will turn six years old before January 1 of the current school year are of mandatory attendance age. Children who have not turned eighteen years of age are of mandatory attendance age.

### **Exceptions**

This policy does not apply when attendance is made impossible or impracticable by severe weather conditions or by the mental or physical illness of the student or a child whom the student is parenting.

A child who will not reach age 7 before January 1 of the current school year may be excused from mandatory attendance if the child's parent or guardian completes an affidavit affirming that alternative educational arrangements have been made for the child. A copy of the required affidavit is attached to this policy.

### **Discontinuing Enrollment – 5 Year Old Students**

The person seeking to discontinue the enrollment of a student who will not reach six years of age prior to January 1 of the current school year shall submit a signed, written request to the superintendent using the form which is attached to this policy. The school district may request written verification or documentation that the person signing the form has legal or actual charge or control of the student. The school district shall discontinue the enrollment of any student who satisfies these requirements. Any student whose enrollment is discontinued under this subsection shall not be eligible to reenroll in this school district until the beginning of the following school year unless otherwise required by law.

## **Discontinuing Enrollment – 16 and 17 Year Old Students**

Only children who are at least 16 years of age may be disenrolled from the district. The person seeking to discontinue the child's enrollment shall submit a signed, written request and submit it to the superintendent using the form which is attached to this policy. The district will follow the procedures outlined on the attached form in considering requests to disenroll.

Only children disenrolling to attend a exempt school may be exempt from this policy. The person with legal or actual charge or control of the child must provide the superintendent with a copy of the signed request submitted to the State Department of Education for attending exempt schools. The superintendent may confirm the validity of the submission with the State Department of Education.

## **Attendance Officer**

Each building principal is designated as an attendance officer for the district. Each building principal, at his or her discretion, may delegate these responsibilities to any other qualified individual. The attendance officer is responsible for enforcing the provisions of state law relating to compulsory attendance. This responsibility includes but is not limited to filing a report with the county attorney of the county in which a student resides. Compensation for the duties of attendance officer is included in the salary for the superintendent or designee.

## **Excused Absences<sup>[1]</sup>**

The following absences will be considered excused if they are confirmed by communication to the school from the student's parent/guardian:

1. Physical or mental illness of the student (a physician's verification is required after four (4) consecutive days of absence for illness)
2. Severe weather
3. Medical appointments for the student
4. Death or serious illness of the student's family member

5. Attending a funeral, wedding or graduation
6. Appearance at court or for other legal matters
7. Observance of religious holidays of the student's own faith
8. College planning visits
9. Personal or family vacations

### **Excessive Absenteeism**

When a student receives ~~5~~ <sup>[2]</sup> unexcused absences or the hourly equivalent in any semester, the Attendance Officer ~~will follow the attached procedure for addressing barriers to the student's attendance.~~ may send written notification of the student's total absences to the student's parent or guardian. When a student receives <sup>10</sup> unexcused absences or the hourly equivalent in any school year, the Attendance Officer will send written notification of the student's total absences to the student's parent or guardian and offer to meet with the student's parents or guardians to discuss any barriers to the student's attendance. When a student receives <sup>15</sup> unexcused absences or the hourly equivalent in any school year, the Attendance Officer will send written notification of the student's total absences to the student's parent or guardian and shall schedule a meeting with relevant stakeholders to discuss and address any barriers to the student's attendance, unless the Attendance Officer determines that such a meeting would not be productive in facilitating the student's regular attendance.

When a student is absent more than twenty days per year or the hourly equivalent and any portion of the absences is unexcused, the Attendance Officer ~~may~~ <sup>must</sup> file a report with the county attorney of the county in which the student resides. For example, if the student accumulates 23 days of excused absences due to documented illness and is tardy one time, the Attendance Officer ~~may~~ <sup>must</sup> file a report with the appropriate county attorney.

### **~~Making Up Absences (Optional — Remove or revise based on your District's practices.)~~**

~~When a student receives [X] unexcused absences or the hourly equivalent in any semester, the student shall be required to make up those absences~~

through attendance in [insert program]. Absences shall be made up at a rate of [insert rate.]

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **5016 Student Records**

The school district shall manage student records and reports as is necessary for effective administration and in compliance with law. In general "student records" shall not include transitory communications such as email, text messages, handwritten communication between school and home, and the like, and these items will not generally be maintained by the district. "Student records" also shall not include any records created and maintained by the district's law enforcement unit for a law enforcement purpose.

For purposes of the district's compliance with state and federal law, [and subject to the limitations in the paragraph above,](#) the district "maintains" as "student records" all records, files, and documents which are located in any format and within any storage unit of the district, whether in hard copy, digital, or otherwise.

Each building principal will assign responsibilities for the preparation and maintenance of records and will ensure compliance with the applicable federal and state laws, regulations, and record retention schedules regarding their storage and use in the building. No "student record" or record required to be retained by the Nebraska Secretary of State's Record Retention Schedules applicable to the district will be destroyed unless it is first saved in a retrievable, digital format. This includes only records required to be kept by the applicable Retention Schedules and "student records" as defined by state and federal law, and this policy does not prohibit the district from following its record expungement procedures for all other records.

Students or their parents, guardians, teachers, counselors, or school administrators shall have access to the school's files or records maintained concerning themselves or their students. For purposes of this policy, "teachers" include paraeducators and volunteers who are providing educational services to a student on behalf of the School District. A school official may access, maintain, and use education records containing personally identifiable information (PII) when he or she has a legitimate educational interest in such. "School official" includes any agent, volunteer, or contractor performing an institutional service or function for which the school would otherwise use its own employees and who is under the school district's direct control with respect to their access to, maintenance of, and use of PII from student records. For example, a school official may include, but would not be limited to, a teacher or other educator, administrator, supervisor, instructor, or support staff member (including health or medical staff and law enforcement unit personnel); school board member; volunteer; contractor or consultant who, while not employed by the school, performs an institutional

service or function for which the school would otherwise use its own employees and who is under the direct control of the school with respect to the use and maintenance of PII from education records, such as an attorney, representative of the district's insurance providers, auditor, medical consultant, therapist, or a third-party website operator who has contracted with the school district or its agent to offer online programs for the benefit of students and/or the district; members of law enforcement acting on behalf of the school district; a parent or student volunteering to serve on an official committee, such as a disciplinary or grievance committee; or a parent, student, or other volunteer assisting another school official in performing his or her tasks. A school official typically has a "legitimate educational interest" if the official needs to review an education record in order to fulfill a school-related professional, contractual, statutory, or regulatory responsibility.

All disciplinary material shall be removed and destroyed upon the pupil's graduation or after the pupil's continuous absence from the school for a period of three years, and after authorization is given by the State Records Board pursuant to state law. Upon request, the school district will disclose education records without consent to officials of another school district in which a student seeks or intends to enroll.

Outside agencies such as physicians, probation officers, psychologists, child guidance clinics, and other agencies concerned with child welfare who are working directly with a child may have access to information pertaining to that child with written parental consent or upon issuance of a valid court order.

The school district shall share student data, records, and information with school districts, educational service units, learning communities, and the State Department of Education to the fullest extent practicable unless otherwise prohibited by law. This includes sharing information with the Department of Education necessary to comply with the requirement of state law that all third-year high school students take a college entrance exam. Any redisclosure of information related to the administration of this exam shall be governed by the agreement between the Nebraska Department of Education and the third-party testing company.

Each year, the school district will notify parents and guardians of their rights under this policy and the Family Educational Rights and Privacy Act.

Adopted on: \_\_\_\_\_  
Revised on: \_\_\_\_\_  
Reviewed on: \_\_\_\_\_

## **5031 Student Appearance**

The board directs the Administration to develop and maintain a dress code that governs student appearance and that shall be included within the student handbook(s). The Administration may elect to adopt different versions of the dress code for different schools, buildings, or grades (e.g., elementary dress code, high school dress code, etc.).

**General Regulations.** Dress codes adopted in conformance with this policy may prohibit student attire or appearance that:

- Causes or is reasonably likely to cause a material and substantial disruption to the District's programs and activities.
- Invades the rights of others.
- Promotes, depicts, or refers to violence, drugs, alcohol, vulgarity, obscenity, illegal activity, hate speech, bullying speech, lewd speech, indecent speech, or harassing speech.
- Includes words, gestures, or images that contain or imply sexual content or innuendo.
- Otherwise undermines the District's mission to inculcate the habits, manners, and values fundamental to civility, community, and the educational environment.

Students may be required to adhere to uniform standards and/or wear district-approved or issued uniforms in order to participate in activities.

**Specific Limitations on Dress Codes.** Except as provided in the *Health and Safety Standard* below, the specific dress codes enacted pursuant to this policy may not:

- Target, disproportionately impact, discriminate, or be applied in a discriminatory manner against any students on the basis of race, religion, sex, disability, or national origin;
- Prohibit a student from wearing attire associated with race, national origin, or religion (including religious attire, natural and protective hairstyles, adornments or other such characteristics); or
- Require a student's hair be permanently or temporarily altered.

**Health and Safety Standard.** Notwithstanding these *Specific Limitations on Dress Codes*, this policy allows for dress codes to regulate characteristics associated with race, national origin, or religion under the following circumstances:

- In the absence of regulating the student's appearance or attire, it is reasonably certain that the health and safety of the student or another individual will be impaired;
- Regulating the student's appearance or attire is for nondiscriminatory reasons;
- Regulation of the student appearance or attire is applied equally;
- The administrator (or his or her designee) engages in a good-faith effort to reasonably accommodate the student and notifies the student's parent or guardian, in a language that such parent or guardian understands, of the school district's attempt to accommodate the student's appearance or attire; and
- The school district uses a process to obtain written or oral consent from a student's parent or guardian prior to altering a student's appearance or removing or altering a student's attire.

**Record Retention.** When the *Health and Safety Standard* is used, the school must keep records on each effort to reasonably accommodate a student's appearance or attire, hairstyle, adornment, or other characteristics associated with race, national origin, or religion occurring at school, on school grounds, or at a school-sponsored event and ensure that such records allow for analysis of related data and delineate:

- The reason for such student's referral relating to the dress code; and
- Federally identified demographic characteristics of such student.

**Dress Code Enforcement.** School personnel are authorized to request immediate changes in the appearance or attire of student so as to remedy any dress code violations. Enforcement of dress code violations must be done in a manner that is consistent with a school's overall discipline plan and in a consistent manner. A student's violation of the dress code shall not subject the student to long-term suspension, expulsion, or mandatory reassignment as provided in NEB. REV. STAT. § 79-267. A violation of the dress code may not require the student to miss substantial classroom time, instruction time, or school activities.

Under no circumstances is any administrator, teacher, other member of the school district's staff, or any school district contractor allowed to permanently or temporarily alter or cut a student's hair.

No student shall be disproportionately affected by dress code enforcement because of the student's gender, race, color, religion, disability, or national origin.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **6031 Emergency Exclusion**

**Grounds for Emergency Exclusion.** Any student may be excluded from school in the following circumstances subject to the procedural provisions governing short term suspension found elsewhere in these policies or state law:

(a) If the student has a dangerous communicable disease transmissible through normal school contacts and poses an imminent threat to the health or safety of the school community; or

(b) If the student's conduct presents a clear threat to the physical safety of himself, herself, or others, or is so extremely disruptive as to make temporary removal necessary to preserve the rights of other students to pursue an education.

Any emergency exclusion shall be based upon a clear factual situation warranting it and shall last no longer than is necessary to avoid the dangers that prompted the exclusion.

**Extension of Exclusion.** Pursuant to the Student Discipline Act, the principal has the authority to exclude a student from school for up to five school days on an emergency basis. If the superintendent or superintendent's designee determines that it is appropriate to consider the extension of an exclusion beyond five days, such consideration shall be made according to the procedures set forth below.

**Notification of Student's Parent(s) or Guardian(s).** The superintendent or the superintendent's designee shall notify the student's parent(s) or guardian(s) that the principal has proposed the extension of the exclusion. If the initial notice is oral, the superintendent shall confirm it in writing. The notice shall include notice of a recommended hearing examiner and an alternate hearing examiner for consideration by the parent(s) or guardian(s) if a hearing is requested.

**Opportunity to Request a Hearing.** The student's parent(s) or guardian(s) may submit a request for a hearing on the proposed extension of the exclusion within one school day of receiving the notice of the proposed extension.

**Failure to Request a Hearing.** If the parent(s) or guardian(s) do not request a hearing within ~~two~~one school days of receiving oral or written notice, the proposed extension of the exclusion shall automatically go into effect.

**Appointment and Qualifications of a Hearing Examiner.** The parent(s) or guardian(s) shall notify the superintendent within one school day of receiving notice of the recommended extension and proposed hearing examiner and alternate hearing examiner if the alternate hearing examiner is preferred.

**Hearing Examiner's Notice to Parent(s) or Guardian(s).** The hearing examiner shall promptly give written notice of the time, date and place of the hearing. The hearing will be held within ten school days after the initial date of exclusion; provided, the hearing may be held more than five school days after receipt of the request upon a showing of good cause. No hearing will be held on less than two (2) school days' notice unless otherwise agreed to by the student's parent(s) or guardian(s) and school officials.

**Continued Exclusion.** If a hearing is requested, the principal may determine in his or her sole discretion that the student shall remain excluded from school until the hearing officer makes a recommendation to the superintendent.

**Examination of Student's Records and Affidavits.** Prior to the hearing, the student and his/her parent(s) or guardian(s) shall have the right to examine and have school officials explain the student's records and any affidavits that will be used by school officials at the hearing.

**Attendance at Hearing.** The hearing may be attended by the hearing examiner, the principal (or designee), the student, and the student's parents or guardian(s). The student may be represented at this hearing by a representative of the family's choice.

**Student's Witness(es).** The student and his/her parent(s) or guardian(s) may ask any person with knowledge of the events leading up to the sanction or with general knowledge of the student's character to testify on behalf of the student. If school personnel or other students are requested to testify by the student's parent(s) or guardian(s), the hearing officer shall endeavor to help obtain the presence of such witnesses at the hearing.

**Right to Know Issues and Nature of Testimony.** The student and his/her

parent(s) or guardian(s) have the right to request in advance of the hearing the issues which the administration will propose in support of the extension, and the general nature of the testimony of any administrative or expert witnesses.

**Presence of Student and Witnesses at the Hearing.** The student and witnesses may be excluded at the discretion of the hearing examiner in accordance with state statutes. The student may speak in his/her own defense and may be questioned on such testimony, but may choose not to testify. The school district shall make available to testify at the hearing any employee who is a witness to the matter upon request from the parent(s) or guardian(s).

**Sworn or Affirmed Testimony.** The principal or his or her designee shall present evidence supporting the recommended extension. Witnesses will give testimony under oath of affirmation, and may be questioned.

**Hearing Examiner's Report and Recommendations.** The hearing examiner shall prepare a report of his or her findings and recommendations, and forward the report to the superintendent.

**Superintendent's Decision.** The superintendent will review the hearing examiner's report and determine whether to extend the exclusion. He or she shall have the decision delivered or sent by registered or certified mail to the student, student's parent(s), or guardian(s). If the superintendent decides to extend the exclusion, the extension will take effect immediately.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## 6034 Concussion Awareness

The Nebraska Unicameral has found that concussions are one of the “most commonly reported injuries in children and adolescents who participate in sports and recreational activities and that the risk of catastrophic injury or death is significant when a concussion or brain injury is not properly evaluated and managed.”

The School District will:

- a. Require all coaches and trainers to complete a training course approved by the Chief Medical Officer ~~one of the following on-line courses~~ on how to recognize the symptoms of a concussion or brain injury and how to seek proper medical treatment for a concussion or brain injury.÷
  - ~~HEADS UP to Youth Sports Coaches: Online Concussion Training~~ Heads UP Concussions in Youth Sports
  - ~~Concussion in Sports (NFHS) What You Need to Know~~
  - ~~Sports Safety International~~
  - ~~ConcussionWise~~
  - ~~ACTIVE™ Athletic Concussion Training for Coaches; and~~
  
- b. On an annual basis provide concussion and brain injury information to students and their parents or guardians prior to such students initiating practice or competition. This information will include:
  - 1 The signs and symptoms of a concussion;
  - 2 The risks posed by sustaining a concussion; and
  - 3 The actions a student should take in response to sustaining a concussion, including the notification of his or her coaches.

A student who participates on a school athletic team must be removed from a practice or game when he/she is reasonably suspected of having sustained a concussion or brain injury in such practice or game after observation by a coach or a licensed health care professional who is professionally affiliated with or contracted by the school. The student will not be permitted to participate in any school supervised team athletic activities involving physical exertion, including practices or games, until the student:

- a. has been evaluated by a licensed health care professional;
  
- b. has received written and signed clearance to resume participation in athletic activities from the licensed health care professional; and

- c. has submitted the written and signed clearance to resume participation in athletic activities to the school accompanied by written permission to resume participation from the student's parent or guardian.

If a student is reasonably suspected after observation of having sustained a concussion or brain injury and is removed from an athletic activity, the parent or guardian of the student will be notified by the school of:

- a. the date and approximate time of the injury suffered by the student,
- b. the signs and symptoms of a concussion or brain injury that were observed, and
- c. any actions taken to treat the student.

The school district will not provide for the presence of a licensed health care professional at any practice or game.

School officials shall deem the signature of an individual who represents that he/she is a licensed health care professional on a written clearance to resume participation that is provided to the school to be conclusive and reliable evidence that the individual who signed the clearance is a licensed health care professional. The school will not take any additional or independent steps to verify the individual's qualifications.

Students who have sustained a concussion and returned to school may need informal or formal accommodations, modifications of curriculum, and monitoring by medical or academic staff until the student is fully recovered. The school's "return to learn protocol" shall ~~be the guidance~~ follow the model provided by the Nebraska Department of Education, entitled "Bridging the Gap from Concussion to the Classroom REAP," and accompanying materials and future supplements. Nothing in this policy or the referenced protocol shall entitle a student who has sustained a concussion to an individualized plan under Section 504 of the Rehabilitation Act, although staff will refer students who have sustained a concussion for evaluation under Section 504 as appropriate.

Adopted on: \_\_\_\_\_  
Revised on: \_\_\_\_\_  
Reviewed on: \_\_\_\_\_

## **5003 Admission of Part-Time Students**

A student may be permitted to enroll on a part-time basis pursuant to this policy and applicable curricular practices when enrollment is appropriate for reasons that include but are not limited to the following: the student attends another education institution on a primary basis; is enrolled for a limited number of credit hours needed to graduate; has a modified schedule because of a disability or as part of an individualized education plan; or is a student who attends a private, denominational, or parochial school or a school that elects not to meet accreditation or approval requirements (referred to herein as an exempt school student or an exempt school, respectively).

**Eligibility and Application for Enrollment.** A student may be eligible for part-time enrollment if the student:

1. is of appropriate age to attend school;
2. is a resident of this school district or a resident of another school district attending a private, denominational, parochial, or exempt school. For residents of another school district, the student is only eligible to part-time enroll if
  - a. this school district is the closest to the student's residence that offers the extracurricular sport or activity they desire to participate in, and their resident school district does not offer that sport or activity, or
  - b. the school building the student would attend if accepted for part-time enrollment is closer than the school building the student attends or would attend at the resident district;
3. has not graduated from high school; and
4. has not received a graduate equivalency diploma.

The parent or guardian must meet all of the district's admission requirements and file an application for enrollment on forms provided by the school district by August 1 prior to the year of enrollment. For second semester high school courses, the application must be filed by December 1. For students who move into the district mid-semester, the application must be filed within 20 days of moving into the district. The administration shall review the application, determine whether to approve or deny it, notify the parent or guardian, and schedule enrollment at an educationally appropriate time in the building or attendance center of the administration's choice. Enrollment does not carry over from one school year to the next, and the parent or guardian must apply for enrollment each school year.

**Limitations Based on Resources.** The part-time enrollment of students is subject to limitations for grades, classes, courses, and programs based on the limited resources available to the school district. Full-time students shall be given priority for enrollment in grades, classes, courses, and programs.

**Placement of Students.** Students accepted for part-time enrollment shall be placed in courses for which they have adequate preparation and which are determined to be educationally appropriate based on criteria that include, but are not limited to the student's age, achievement test scores, academic record, evaluation by school personnel and any other standards used by the district for the placement of students.

**Grades and Academic Honors.** Students accepted for part-time enrollment shall receive grades, report cards, and transcripts, but shall not be eligible to graduate, receive a diploma or qualify for class ranking unless they meet all district requirements including earning a sufficient number of credit hours and semesters of attendance.

**Applicability of School Rules.** Students accepted for part-time enrollment are subject to all rules and standards of the board of education and administration as set forth in policy, handbooks or other communications, as well as the rules and directives of the building administration and staff. They must remain on the school campus during scheduled classes but must leave the school campus when not engaged in a course, course-related activity, or an extracurricular activity or sport, unless the building principal approves their presence. Students who violate school policies, rules, or directives shall be subject to disciplinary procedures up to and including suspension and expulsion.

**Extracurricular Sports and Activities.** [OPTION 1: accredited private school students can't participate] Students who are enrolled in a private, denominational, or parochial school may not participate in extracurricular sports and activities sponsored by the school district.

[OPTION 2: accredited private school students can participate]. Students who are enrolled in a private, denominational, or parochial school may not participate in extracurricular sports and activities sponsored by the school district if they participate in extracurricular sports and activities at any other public, private, denominational, or parochial school. Any such students who desire to participate in extracurricular sports and activities regulated by an athletics or activities association in which this school district is a member must be enrolled in 5 credit hours in this school district to participate. [Choice A: let them participate in non-regulated activities without enrolling in classes] Students seeking to participate in extracurricular sports and activities not

regulated by such an entity may participate without enrolling in any classes at the school district but must still fill out the application form. [Choice B: require some number of credit hours from the district to participate in non-regulated activities]. Students seeking to participate in extracurricular sports and activities not regulated by such an entity may only participate if they enroll in at least [5] credit hours on a part-time basis.

Exempt school students may only participate in extracurricular sports and activities if they are enrolled in at least 20 credit hours per semester and enrolled in the number of credit hours at this school district set out below. Exempt school students are not eligible to participate in extracurricular sports and activities sponsored by the school district if they participate in any sport or activity sponsored by any other public, private, denominational, or parochial school. Any such students who desire to participate in extracurricular sports and activities regulated by an athletics or activities association in which this school district is a member must be enrolled in 5 credit hours in this school district to participate. [Choice A: let them participate non-regulated activities without enrolling in classes] Students seeking to participate in extracurricular sports and activities not regulated by such an entity may participate without enrolling in any classes at the school district but must still fill out the application form. [Choice B: require some number of credit hours from the district to participate in non-regulated activities]. Students seeking to participate in extracurricular sports and activities not regulated by such an entity may only participate if they enroll in at least [5] credit hours on a part-time basis.

All students permitted to participate in extracurricular sports and activities under this policy must also meet all other eligibility requirements set by the board, administration, and coach/sponsor prior to participating and for continued participation in the sport or activity. This includes but is not limited to rules for completing courses; up/down lists for deficient grades and/or incompletes; and all eligibility and other requirements of the Nebraska School Activities Association and any other governing bodies for the activity or sport.

**Transportation.** Part-time school students are not entitled to transportation or reimbursement for transportation to and from the school for class attendance purposes, unless required by law. Eligible part-time students are entitled to transportation to and from practices and extracurricular events to the same extent as the school district's full-time students, but part-time students must arrange their own transportation and arrive timely to the designated pick-up point for such transportation.

**Option Enrollment.** Students may not enroll on a part-time basis pursuant to the school's option enrollment program.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

## **5031 Student Appearance**

The board directs the Administration to develop and maintain a dress code that governs student appearance and that shall be included within the student handbook(s). The Administration may elect to adopt different versions of the dress code for different schools, buildings, or grades (e.g., elementary dress code, high school dress code, etc.).

**General Regulations.** Dress codes adopted in conformance with this policy may prohibit student attire or appearance that:

- Causes or is reasonably likely to cause a material and substantial disruption to the District's programs and activities.
- Invades the rights of others.
- Promotes, depicts, or refers to violence, drugs, alcohol, vulgarity, obscenity, illegal activity, hate speech, bullying speech, lewd speech, indecent speech, or harassing speech.
- Includes words, gestures, or images that contain or imply sexual content or innuendo.
- Otherwise undermines the District's mission to inculcate the habits, manners, and values fundamental to civility, community, and the educational environment.

Students may be required to adhere to uniform standards and/or wear district-approved or issued uniforms in order to participate in activities.

**Specific Limitations on Dress Codes.** Except as provided in the *Health and Safety Standard* below, the specific dress codes enacted pursuant to this policy may not:

- Target, disproportionately impact, discriminate, or be applied in a discriminatory manner against any students on the basis of race, religion, sex, disability, or national origin;
- Prohibit a student from wearing attire associated with race, national origin, or religion (including religious attire, natural and protective hairstyles, adornments or other such characteristics); or
- Require a student's hair be permanently or temporarily altered.

**Health and Safety Standard.** Notwithstanding these *Specific Limitations on Dress Codes*, this policy allows for dress codes to regulate characteristics associated with race, national origin, or religion under the following circumstances:

- In the absence of regulating the student's appearance or attire, it is reasonably certain that the health and safety of the student or another individual will be impaired;
- Regulating the student's appearance or attire is for nondiscriminatory reasons;
- Regulation of the student appearance or attire is applied equally;
- The administrator (or his or her designee) engages in a good-faith effort to reasonably accommodate the student and notifies the student's parent or guardian, in a language that such parent or guardian understands, of the school district's attempt to accommodate the student's appearance or attire; and
- The school district uses a process to obtain written or oral consent from a student's parent or guardian prior to altering a student's appearance or removing or altering a student's attire.

**Record Retention.** When the *Health and Safety Standard* is used, the school must keep records on each effort to reasonably accommodate a student's appearance or attire, hairstyle, adornment, or other characteristics associated with race, national origin, or religion occurring at school, on school grounds, or at a school-sponsored event and ensure that such records allow for analysis of related data and delineate:

- The reason for such student's referral relating to the dress code; and
- Federally identified demographic characteristics of such student.

**Dress Code Enforcement.** School personnel are authorized to request immediate changes in the appearance or attire of student so as to remedy any dress code violations. Enforcement of dress code violations must be done in a manner that is consistent with a school's overall discipline plan and in a consistent manner. A student's violation of the dress code shall not subject the student to long-term suspension, expulsion, or mandatory reassignment as provided in NEB. REV. STAT. § 79-267. A violation of the dress code may not require the student to miss substantial classroom time, instruction time, or school activities.

Under no circumstances is any administrator, teacher, other member of the school district's staff, or any school district contractor allowed to permanently or temporarily alter or cut a student's hair.

No student shall be disproportionately affected by dress code enforcement because of the student's gender, race, color, religion, disability, or national origin.

Adopted on: \_\_\_\_\_

Revised on: \_\_\_\_\_

Reviewed on: \_\_\_\_\_

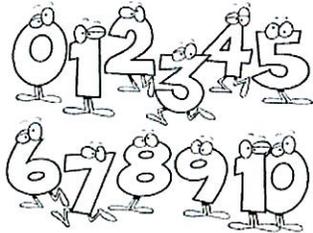
# Kindergarten Math

Focus:

How can we...

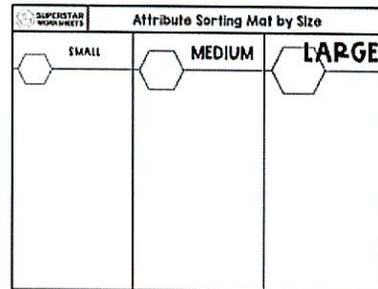
August/September/October

Topic 1-4



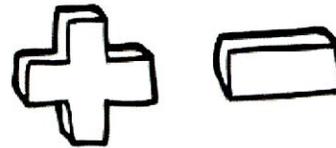
October

Topic 5



November/December/January

Topic 6-8



January

Topic 9

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

THE FOCUS OF THE STORY

In topics 1-4, students develop a fundamental understanding of number names, the counting sequence, and written numerals. They will compare numbers to 10 using matching and counting strategies.

THE FOCUS OF THE STORY

In topic 5, students classify objects into categories. They will count and compare the number of objects in each category.

THE FOCUS OF THE STORY

In topics 6-8, students develop an understanding of addition and subtraction by representing the operations in different ways. They decompose numbers to 10 in more than one way.

THE FOCUS OF THE STORY

In topic 9, students extend their understanding of number names, the counting sequence, and written numerals to 20.

LEARNING GOALS/STANDARDS

Topic 1 - Numbers 0 to 5  
 Topic 2 - Compare Numbers 0 to 5  
 Topic 3 - Numbers 6 to 10  
 Topic 4 - Compare Numbers 0 to 10

LEARNING GOALS/STANDARDS

Topic 5 - Classify and Count Data

LEARNING GOALS/STANDARDS

Topic 6 - Understand Addition  
 Topic 7 - Understand Subtraction  
 Topic 8 - More Addition and Subtraction

LEARNING GOALS/STANDARDS

Topic 9 - Count Numbers to 100

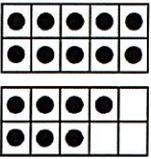
# Kindergarten Math

Focus:

How can we...

February

Topic 10



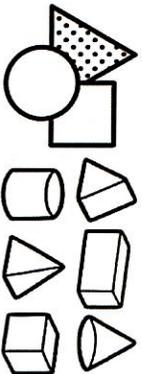
February

Topic 11

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

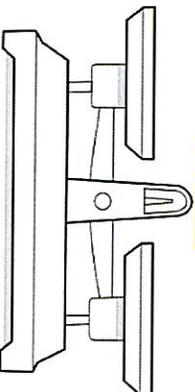
March/April

Topic 12-13



April/May

Topic 14



THE FOCUS OF THE STORY

In topic 10, students compose and decompose numbers from 11 to 19 into tens, ones and some further ones to build a foundation for understanding place value.

THE FOCUS OF THE STORY

In topic 11, students extend their understanding of the counting sequence to 100. They will count by tens and ones from any number up to 100.

THE FOCUS OF THE STORY

In topics 12-13, students identify and describe basic two- and three-dimensional shapes. They will describe the relative position of shapes. They will also analyze, compare, and create two- and three-dimensional shapes based on their attributes.

THE FOCUS OF THE STORY

In topic 14, students are introduced to the measurable attributes of length, height, capacity, and weight. They will describe and compare objects by these attributes.

LEARNING GOALS/STANDARDS

Topic 10 - Compose and Decompose Numbers 11-19

LEARNING GOALS/STANDARDS

Topic 11 - Count Numbers to 100

LEARNING GOALS/STANDARDS

Topic 12 - Identify and Describe Shapes  
Topic 13 - Analyze, Compare, and Create Shapes

LEARNING GOALS/STANDARDS

Topic 14 - Describe and Compare Measurable Attributes

Kindergarten State Standards		Unwrap the Standard	Connection to instructional materials
<b>K.N.1</b>	Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Recognizing and quantifying small groups of objects without counting.</li> <li>• Verbalizing the arrangement of objects.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of subitizing.</li> <li>• Familiarity with different arrangements of objects (e.g., pairs, groups of three).</li> <li>• <b>Concepts:</b></li> <li>• Quantity recognition.</li> <li>• Visual perception of number arrangements.</li> </ul>	
<b>K.N.1.a</b>	Without counting, recognize and verbally label arrangements for briefly shown collections up to 10 (e.g., "I saw 5." "How did you know?" "I saw 3 and 2, that is 5.")	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing and verbally labeling quantities without counting, understanding</li> </ul>	<p><b>Topic 6:</b>  Let's Investigate: Wheel Parade;  Lesson 6-1, pp. 201-204;  Lesson 6-2, pp. 205-208;  Lesson 6-3, pp. 209-212;  Lesson 6-4, pp. 213-216;  Lesson 6-5, pp. 217-220;</p>

	<p>part-whole relationships.</p> <ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Familiarity with numbers up to 10, ability to identify and describe arrangements of objects.</li> <li>• <b>Concepts:</b> Understanding that numbers can represent different combinations of quantities; developing subitizing skills (recognizing small quantities at a glance).</li> </ul>	<p>Lesson 6-6, pp. 221-224; Lesson 6-8, pp. 229-232; Reteaching: pp. 235-238 Sets A-G</p>
<p><b>K.N.2</b></p>	<p>Counting and Cardinality: Students will understand the relationship between numbers and quantities.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Counting objects accurately.</li> <li>• Recognizing and writing numbers.</li> <li>• Comparing quantities (more than, less than, equal to).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of quantity.</li> </ul>

		<ul style="list-style-type: none"> <li>Identifying numbers and their corresponding quantities.</li> <li><b>Concepts:</b> The relationship between number words and the quantities they represent.</li> <li>One-to-one correspondence in counting.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; 3-Act Math: Set the Table, p. 4; Lesson 1-2, pp. 9–12; Let's Investigate: Guinea Pig Playground; Lesson 1-5, pp. 21–24; Lesson 1-10, pp. 41–44; Reteaching: p. 50 Set F</p> <p><b>Topic 3:</b> Pick a Project, p. 91, Lesson 3-5, pp. 109–112; Lesson 3-8, pp. 121–124; Reteaching: pp. 127–128 Sets B, D <b>Topic 9:</b> Let's Investigate: Winter Festival; Lesson 9-6, pp. 369–372</p>
<b>K.N.2.a</b>	Use one-to-one correspondence when counting objects to show the relationship between numbers and quantities and understand the last number counted is a direct representation of the total objects in a given set.	<ul style="list-style-type: none"> <li><b>Skills:</b> Counting objects using one-to-one correspondence.</li> <li><b>Knowledge:</b> Understanding the relationship between numbers and quantities.</li> <li><b>Concepts:</b> The last number counted represents the total quantity of objects.</li> </ul>	
<b>K.N.2.b</b>	Understand that each successive number name refers to a quantity that is one larger.	<ul style="list-style-type: none"> <li><b>Skills:</b> Counting.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; 3-Act</p>

		<p>number recognition, understanding the concept of "one more."</p> <ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Number names and their corresponding quantities.</li> <li>• <b>Concepts:</b> The relationship between numbers and their quantities, sequencing numbers in an increasing order.</li> </ul>	<p>Math: Set the Table, p. 4; Lesson 1-9, pp. 37-40</p> <p><b>Topic 3:</b> Pick a Project, p. 91, Lesson 3-7, pp. 117-120</p> <p><b>Topic 4:</b> Pick a Project, pp. 139-140; Lesson 4-5, pp. 157-160</p> <p><b>Topic 9:</b> Pick a Project, p. 347; Let's Investigate: Winter Festival: Lesson 9-5, pp. 365-368</p>
<p><b>K.N.2.c</b></p>	<p>Count out the number of objects given a number from 1 to 20.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Counting, one-to-one correspondence, recognition of numbers 1 to 20.</li> <li>• <b>Knowledge:</b> Understanding the concept of quantity and the relationship between numbers and objects.</li> <li>• <b>Concepts:</b> The ability to match numbers with a specific quantity of</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; Lesson 1-3, pp. 13-16; Lesson 1-6, pp. 25-28</p> <p><b>Topic 3:</b> Lesson 3-2, pp. 97-100; Let's Investigate: Jump to 7; Lesson 3-4, pp. 105-108; Lesson 3-6, pp. 113-116</p> <p><b>Topic 9:</b> Pick a Project, p. 347, 3-Act Math: Fresh From the Farm, p. 348; Lesson 9-1, pp. 349-352; Lesson 9-2, pp. 353-356; Lesson 9-3, pp. 357-360; Lesson 9-4, pp. 361-364</p>

		objects.	
<b>K.N.2.d</b>	Count up to 20 objects arranged in a line, a rectangular array, or a circle, and count up to 10 objects in a scattered configuration.	<ul style="list-style-type: none"> <li>Skills: Counting objects, recognizing arrangements, understanding the concept of quantity.</li> <li>Knowledge: Number recognition up to 20, understanding different configurations (line, rectangular array, circle, scattered).</li> <li>Concepts: One-to-one correspondence, grouping, and counting strategies.</li> </ul>	<p><b>Topic 1:</b> 3-Act Math: Set the Table, p. 4; Lesson 1-1, pp. 5-8; Lesson 1-2, pp. 9-12; Let's Investigate: Guinea Pig Playground; Lesson 1-4, pp. 17-20; Lesson 1-5, pp. 21-24; Reteaching: pp. 47-50 Sets A, C</p> <p><b>Topic 3:</b> Lesson 3-1, pp. 93-96; Let's Investigate: Jump to Seven; Lesson 3-3, pp. 101-104; Lesson 3-5, pp. 109-112</p> <p><b>Topic 9:</b> Lesson 9-1, pp. 349-352; Lesson 9-2, pp. 353-356; Lesson 9-3, pp. 357-360; Lesson 9-4, pp. 361-364; Let's Investigate: Winter Festival; Lesson 9-6, pp. 369-372; Reteaching: pp. 379-380 Sets A, C</p>
<b>K.N.2.e</b>	Count verbally forward and backward from any given number within 20.	<ul style="list-style-type: none"> <li>Skills: Counting forward and backward, verbal expression of numbers.</li> <li>Knowledge: Number sequence, recognition of numbers 1 to 20.</li> <li>Concepts: Understanding of</li> </ul>	<p><b>Topic 3:</b> 3-Act Math: By the Handful, p. 92; Lesson 3-7, pp. 117-120; Reteaching: p. 130 Set G</p> <p><b>Topic 4:</b> Let's Investigate: Make It Fair; Lesson 4-3, pp. 149-152; Lesson 4-5, pp. 157-160</p> <p><b>Topic 7:</b> 3-Act Math: Fruit Salad, p. 248</p> <p><b>Topic 9:</b></p>

	<p>numerical order, the concept of "more" and "less."</p>	<p>Pick a Project, p. 347; 3-Act Math: Fresh From the Farm, p. 348; Let's Investigate: Winter Festival; Lesson 9-5, pp. 365-368; Lesson 9-7, pp. 373-376; Reteaching: p. 380 Set D</p> <p><b>MDIS:</b> A14</p>
<p><b>K.N.2.f</b></p> <p>Count verbally in sequential order by ones and by tens to 100, making accurate decade transitions (e.g., 89 to 90).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Counting verbally, recognizing decade transitions.</li> <li>• <b>Knowledge:</b> Understanding the sequence of numbers, grasping the concept of tens and ones.</li> <li>• <b>Concepts:</b> Number sequence, decade (10s) transitions, verbal counting.</li> </ul>	<p><b>Topic 11:</b> Pick a Project, p. 431; 3-Act Math: Stack Up, p. 432; Lesson 11-1, pp. 433-436; Let's Investigate: Counting Seeds; Lesson 11-2, pp. 437-440; Lesson -11-3, pp. 441-444; Lesson 11-4, pp. 445-448; Lesson 11-5, pp. 449-452; Reteaching: pp. 455-456 Sets A-C</p>
<p><b>K.N.2.g</b></p> <p>Write and name numbers 0 to 20. Represent a number of objects with a written numeral 0 to 20.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Writing numbers, naming numbers, representing quantities.</li> <li>• <b>Knowledge:</b> Understanding the concept of numbers from 0 to 20,</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; 3-Act Math: Set the Table, p. 4; Lesson 1-3, pp. 13-16; Lesson 1-6, pp. 25-28; Lesson 1-8, pp. 33-36; Reteaching: pp. 47, 49 Sets B, E</p> <p><b>Topic 3:</b> Pick a Project, p. 91; 3-Act Math: By the Handful, p. 92; Lesson 3-2, pp. 97-100; Let's Investigate:</p>

	<p>recognizing symbols for these numbers.</p> <ul style="list-style-type: none"> <li>• <b>Concepts:</b> One-to-one correspondence, quantity representation, numeral identification.</li> </ul>	<p>Jump to 7; Lesson 3-4, pp. 105–108; Lesson 3-6, pp. 113–116; Lesson 3-8, pp. 121–124; Reteaching: pp. 127-129 Sets A, C, E</p> <p><b>Topic 9:</b> Pick a Project, p. 347, 3-Act Math: Fresh from the Farm, p. 348; Lesson 9-1, pp. 349–352; Lesson 9-2, pp. 353–356; Lesson 9-3, pp. 357–360; Lesson 9-4, pp. 361–364; Reteaching: p. 379 Set A</p>
<p><b>K.N.2.h</b></p> <p>Compare the number of objects in two groups, up to 20, using the words fewer than, more than, the same as.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Counting objects in two groups.</li> <li>• Using comparative language (fewer than, more than, the same as).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of quantity and comparison.</li> <li>• Recognizing numerals and their representations up to 20.</li> <li>• <b>Concepts:</b></li> <li>• Comparison of</li> </ul>	<p><b>Topic 2:</b> Let's Investigate: Hiding Kittens; Lesson 2-1, pp. 61–64; Lesson 2-2, pp. 65–68; Lesson 2-3, pp. 69–72; Lesson 2-4, pp. 73–76; Lesson 2-5, pp. 77–80; Reteaching: pp. 83-84 Sets A-D</p> <p><b>Topic 3:</b> 3-Act Math: By the Handful, p. 92; Lesson 3-7, pp. 117- 120</p> <p><b>Topic 4:</b> Pick a Project, pp. 139–140; Let's Investigate: Make It Fair; Lesson 4-1, pp. 141–144; Lesson 4-2, pp. 145– 148; Lesson 4-3, pp. 149–152; Lesson 4-4, pp. 153–156; Reteaching: pp. 163-164 Sets A-D</p> <p><b>Topic 5:</b> Pick a Project p. 171; Let's Investigate: The Crayon Question; Lesson 5-3, pp. 181–184; Lesson 5-4, pp. 185–188</p>

	<ul style="list-style-type: none"> <li>quantities.</li> <li>Vocabulary associated with comparison.</li> </ul>	<p><b>Topic 13:</b> Lesson 13-1, pp. 509–512</p>
<p><b>K.N.3</b> Base Ten: Students will work with numbers 11 to 19 to gain a foundation for place value.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> Recognizing and writing numbers 11 to 19, understanding the concept of place value.</li> <li><b>Knowledge:</b> Understanding that numbers 11 to 19 consist of a ten and some additional ones.</li> <li><b>Concepts:</b> Place value, quantity representation, and counting.</li> </ul>	
<p><b>K.N.3.a</b> Compose and decompose numbers from 11 to 19 into a group of ten ones and some more ones using a model, drawing, or equation.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> Identify numbers from 11 to 19.</li> <li>Compose numbers into groups of ten.</li> <li>Decompose numbers into tens and ones.</li> <li><b>Knowledge:</b> Understanding the</li> </ul>	<p><b>Topic 10:</b> Pick a Project, pp. 387–388; Let's Investigate: Boat Ride; Lesson 10-1, pp. 389–392; Lesson 10-2, pp. 393–396; Lesson 10-3, pp. 397–400; Lesson 10-4, pp. 401–404; Lesson 10-5, pp. 405–408; Lesson 10-6, pp. 409–412; Lesson 10-7, pp. 413–416; Reteaching: pp. 419–422 Sets A–G</p>

		<ul style="list-style-type: none"> <li>• concept of 'ten' as a group.</li> <li>• Recognizing the numbers 11 to 19.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between tens and ones in numbers.</li> <li>• Visual and physical representations of numbers.</li> </ul>	
<p><b>K.N.4</b></p>	<p>Number and Algebraic Relationships: Students will understand and demonstrate the meaning of addition and subtraction.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Performing addition and subtraction with concrete objects, understanding the concepts of more and less.</li> <li>• <b>Knowledge:</b> Recognizing numbers, understanding the symbols for addition (+) and subtraction (-).</li> <li>• <b>Concepts:</b> The relationship between addition and subtraction, the concept of</li> </ul>	

	<p>combining and separating quantities.</p>	
<p><b>K.N.4.a</b> Represent and explain addition and subtraction as part-whole relationships, with addition as putting together and/or adding to and subtraction as taking apart and/or taking from, using objects, drawings, numbers, and equations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Recognizing part-whole relationships.</li> <li>• Performing addition and subtraction.</li> <li>• Using objects, drawings, numbers, and equations to represent operations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding what addition and subtraction mean in context.</li> <li>• Familiarity with symbols for addition (+) and subtraction (-).</li> <li>• <b>Concepts:</b></li> <li>• Addition as combining or increasing.</li> <li>• Subtraction as separating or decreasing.</li> </ul>	<p><b>Topic 6:</b> Pick a Project, pp. 199–200; Let's Investigate: Wheel Parade: Lesson 6-1, pp. 201–204; Lesson 6-2, pp. 205–208; Lesson 6-3, pp. 209–212; Lesson 6-4, pp. 213–216; Lesson 6-5, pp. 217–220; Lesson 6-6, pp. 221–224; Lesson 6-7, pp. 225–228; Lesson 6-8, pp. 229–232; Reteaching: pp. 235–236 Sets A-D <b>Topic 7:</b> Pick a Project, p. 247; 3-Act, Math: Fruit Salad, p. 248; Lesson 7-1, pp. 249–252; Lesson 7-2, pp. 253–256; Lesson 7-3, pp. 257–260; Let's Investigate: Walk-a-Thon; Lesson 7-4, pp. 261–264; Lesson 7-5, pp. 265–268; Lesson 7-6, pp. 269–272; Lesson 7-7, pp. 273–276; Reteaching: pp. 279–280 Sets A-D</p> <p><b>Topic 8:</b> Pick a Project, pp. 291–292; Lesson 8-1, pp. 293–296; Lesson 8-2, pp. 297–300; Lesson 8-3, pp. 301–304; Lesson 8-4, pp. 305–308; Let's Investigate: Lost and Found; Lesson 8-5, pp. 309–312; Lesson 8-6, pp. 313–316; Lesson 8-7, pp. 317–320; Lesson 8-8, pp. 321–324; Lesson</p>

			8-9, pp. 325-328; Lesson 8-10, pp. 329- 332; Reteaching: pp. 335-338 Sets A, C, E-G
<b>K.N.4.b</b>	Compose and decompose numbers less than or equal to 10 into pairs in more than one way using verbal explanations, objects, or drawings.	<ul style="list-style-type: none"> <li>• Skills: Composing and decomposing numbers, verbal explanation, using objects, and drawing representations.</li> <li>• Knowledge: Understanding numbers and their relationships, recognizing pairs, and the concept of addition and subtraction.</li> <li>• Concepts: Number sense, pairs of numbers, and visual representation of numbers.</li> </ul>	<p><b>Topic 8:</b>        Lesson 8-1, pp. 293-296; Let's Investigate: Lost and Found; Lesson 8-5, pp. 309-312; Lesson 8-6, pp. 313- 316; Lesson 8-8, pp. 321-324, Lesson 8-9, pp. 325- 328; Lesson 8-10, pp. 329-332; Reteaching pp. 335, 337-338 Sets A, E, F, G</p>
<b>K.N.4.c</b>	For any number from 1 to 9, find the number that makes 10 when added to the given number, sharing the answer with a model, drawing, or equation.	<ul style="list-style-type: none"> <li>• Skills: Addition, number recognition, understanding the concept of "making 10."</li> <li>• Knowledge: Understanding numbers</li> </ul>	<p><b>Topic 8:</b>        Pick a Project, pp. 291–292; Lesson 8-9, pp. 325–328; Lesson 8-10, pp. 329–332; Reteaching: p. 338 Set H <b>Topic 13:</b>        Lesson 13-3, pp. 517-520; Lesson 13-4, pp. 521-524</p>

	<ul style="list-style-type: none"> <li>1 to 9, recognizing pairs of numbers that add up to 10.</li> <li><b>Concepts:</b> The relationship between numbers, the concept of addition as combining quantities.</li> </ul>	
<b>K.N.4.d</b> Efficiently, flexibly, and accurately add and subtract within 5.	<ul style="list-style-type: none"> <li><b>Skills:</b> Adding and subtracting numbers within 5.</li> <li><b>Knowledge:</b> Understanding the concepts of addition and subtraction.</li> <li><b>Concepts:</b> Number sense, number relationships, and the use of various strategies to solve problems.</li> </ul>	<b>Topic 6:</b> Pick a Project pp. 199–200; Lesson 6-7, pp. 225–228; Reteaching: pp. 235–236 Sets B-D <b>Topic 7:</b> Pick a Project, p. 247; Lesson 7-6, pp. 269–272; Reteaching: p. 282 Set G <b>Topic 8:</b> Lesson 8-2, pp. 297–300; Lesson 8-3, pp. 301–304; Lesson 8-4, pp. 305–308; Reteaching: pp. 335–336 Sets B-D
<b>K.N.4.e</b> Solve authentic problems that involve addition and subtraction within 10 (e.g., by using objects, drawings, and equations to represent the problem).	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Perform addition and subtraction within 10.</li> <li>Use objects, drawings,</li> </ul>	<b>Topic 6:</b> Pick a Project pp. 199–200; Let's Investigate: Wheel Parade: Lesson 6-1, pp. 201–204; Lesson 6-2, pp. 205–208; Lesson 6-3, pp.

	<ul style="list-style-type: none"> <li>• and equations to represent problems.</li> <li>• <b>Knowledge:</b> Understanding of basic addition and subtraction concepts.</li> <li>• Familiarity with numbers 0-10 and their relationships.</li> <li>• <b>Concepts:</b> Problem-solving strategies.</li> <li>• Representation of mathematical ideas through various mediums (objects, drawings, equations).</li> </ul>	<p>209–212; Lesson 6-4, pp. 213–216; Lesson 6-5, pp. 217–220; Lesson 6-6, pp. 221–224; Lesson 6-8, pp. 229–232; Reteaching: pp. 237-238 Sets E-G</p> <p><b>Topic 7:</b> Pick a Project, p. 247, 3-Act Math: Fruit Salad, p. 248; Lesson 7-1, pp. 249–252; Lesson 7-2, pp. 253–256; Lesson 7-3, pp. 257–260; Let's Investigate: Walk-a thon; Lesson 7-4, pp. 261–264; Lesson 7-5, pp. 265–268; Lesson 7-7, pp. 273–276; Reteaching: pp. 280–282 Sets C, E, G, H</p>
<b>SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (K.N.4)</b>		
<b>K.G.1</b> Shapes and Their Attributes: Students will identify and represent the attributes of two-dimensional shapes and three-dimensional solids.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying shapes, describing attributes, representing shapes.</li> <li>• <b>Knowledge:</b> Understanding the characteristics of</li> </ul>	

	<p>two-dimensional shapes (e.g., circles, squares, triangles) and three-dimensional solids (e.g., cubes, spheres, cylinders).</p> <ul style="list-style-type: none"> <li>• <b>Concepts:</b> Attributes such as number of sides, corners, and the ability to differentiate between 2D and 3D shapes.</li> </ul>	
<p><b>K.G.1.a</b> Identify and name two-dimensional shapes including circles, triangles, squares, and rectangles regardless of orientation or size.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing and naming shapes, understanding orientation and size.</li> <li>• <b>Knowledge:</b> Familiarity with names of two-dimensional shapes: circles, triangles, squares, and rectangles.</li> <li>• <b>Concepts:</b> Understanding that shapes can appear in different orientations</li> </ul>	<p><b>Topic 12:</b> Lesson 12-1, pp. 465-468; Lesson 12-2, pp. 469-472; Lesson 12-3, pp. 473-476; Let's Investigate: Shape Search; Lesson 12-6, pp. 485-488;  reteaching: pp. 495-496 Sets A-C</p> <p><b>Topic 13:</b> Pick a Project, p. 507; Lesson 13-3, pp. 517-520; Lesson 13-4, pp. 521-524</p>

	and sizes but remain the same shape.	
<p><b>K.G.1.b</b></p> <p>Identify and name three-dimensional shapes including spheres, cubes, cylinders, and cones regardless of orientation or size.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying and naming three-dimensional shapes.</li> <li>• <b>Knowledge:</b> Understanding the characteristics of spheres, cubes, cylinders, and cones.</li> <li>• <b>Concepts:</b> Recognizing that orientation and size do not change the identity of these shapes.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-1, pp. 465-468; Lesson 12-5, pp. 481-484; Let's Investigate: Shape Search; Lesson 12-6, pp. 485-488; Lesson 12-7, pp. 489-492 Reteaching: pp. 495-498 Sets A, E-G</p> <p><b>Topic 13:</b> Pick a Project p. 507; Lesson 13-3, pp. 517-520; Lesson 13-4, pp. 521-524</p>
<p><b>K.G.1.c</b></p> <p>Describe the relative positions of shapes in relation to other objects or shapes using terms such as above, below, in front of, behind, and next to.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying and describing the position of shapes and objects.</li> <li>• <b>Knowledge:</b> Understanding positional vocabulary (above, below, in front of, behind, next to).</li> <li>• <b>Concepts:</b> Spatial</li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 463-464; Lesson 12-2, pp. 469-472; Lesson 12-3, pp. 473-476; Lesson 12-4, pp. 477-480; Lesson 12-5, pp. 481-484; Let's Investigate: Shape Search; Lesson 12-6, pp. 485-488; Lesson 12-7, pp. 489-492; Reteaching: pp. 497-498 Sets F, G</p> <p><b>Topic 13:</b> Pick a Project p. 507; 3-Act Math: Piece Together, p. 508; Let's</p>

	<p>awareness and relationships between objects.</p>	<p>Investigate: Triangle Quilt; Lesson 13-5, pp. 525–528</p>
<p><b>K.G.1.d</b></p> <p>Create shapes using given materials and describe one or more of the attributes such as number of sides/corners.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Creating shapes, identifying attributes of shapes.</li> <li>• <b>Knowledge:</b> Understanding different shapes (e.g., squares, triangles, circles), recognizing attributes (e.g., number of sides, corners).</li> <li>• <b>Concepts:</b> Shape formation, basic geometry, attributes of two-dimensional shapes.</li> </ul>	<p><b>Topic 13:</b> Pick a Project p. 507; 3-Act Math: Piece Together, p. 508; Lesson 13-2, pp. 513–516; Let's Investigate: Triangle Quilt; Lesson 13-5, pp. 525–528; Lesson 13-6, pp. 529–532; Lesson 13-7, pp. 533–536; Reteaching: p. 540 Set D</p>
<p><b>K.G.1.e</b></p> <p>Combine simple shapes to compose larger shapes.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing and identifying simple shapes (circle, square, triangle, rectangle).</li> <li>• <b>Knowledge:</b> Understanding how</li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 463–464 <b>Topic 13:</b> Pick a Project p. 507; 3-Act Math: Piece Together, p. 508; Let's Investigate: Triangle Quilt; Lesson-13-5, pp. 525–528; Lesson 13-7, pp. 533–536</p>

		<ul style="list-style-type: none"> <li>• shapes can combine to form new shapes.</li> <li>• <b>Concepts:</b> The idea of composition, which involves putting shapes together to create larger or different shapes.</li> </ul>	
<b>K.G.2</b>	Measurement: Students will describe and compare measurable attributes.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Describe measurable attributes (length, weight, capacity, etc.).</li> <li>• Compare attributes of different objects.</li> <li>• <b>Knowledge:</b></li> <li>• Understand basic measuring terms (taller, heavier, more, less).</li> <li>• Recognize different tools used for measuring (ruler, scale, measuring cup).</li> <li>• <b>Concepts:</b></li> <li>• Attributes can be compared using descriptive language.</li> <li>• The importance of</li> </ul>	

	<p>measurement in everyday life.</p>	
<p><b>K.G.2.a</b> Describe measurable attributes of authentic objects including length, capacity, and weight.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and describe measurable attributes of objects.</li> <li>• Compare different objects based on length, capacity, and weight.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of the concepts of length, capacity, and weight.</li> <li>• Familiarity with tools for measuring (e.g., rulers, measuring cups, scales).</li> <li>• <b>Concepts:</b></li> <li>• Measurable attributes can be observed and quantified.</li> <li>• Objects can be grouped based on their measurable attributes.</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 547–548; Lesson 14-1, pp. 549–552; Let's Investigate: More for Chester; Lesson 14-2, pp. 553–556; Lesson 14-3, pp. 557–560; Lesson 14-4, pp. 561–564; Lesson 14-5, pp. 565–568</p>

<p><b>K.G.2.b</b></p>	<p>Directly compare two objects with a measurable attribute in common to describe which object is longer/shorter, heavier/lighter, and has more/less-capacity.</p>	<p>• <b>Skills:</b> Comparing objects based on measurable attributes, using terms like longer/shorter, heavier/lighter, and more/less capacity.</p> <p>• <b>Knowledge:</b> Understanding measurable attributes and the concept of comparison.</p> <p>• <b>Concepts:</b> Attributes of length, weight, and capacity.</p>	<p><b>K.G.3</b></p>	<p>Time and Money: Students will know coin names and values and tell time to the hour.</p>	<p>• <b>Skills:</b> Recognizing coin names, identifying coin values, telling time to the hour.</p> <p>• <b>Knowledge:</b> Understanding the different types of coins (pennies, nickels, dimes, quarters), knowing how to read a clock.</p>	<p><b>Topic 14:</b>  Pick a Project, pp. 547–548;  Lesson 14-1, pp. 549– 552; Let's Investigate: More for Chester;  Lesson 14-2, pp. 553–556;  Lesson 14-3, pp. 557–560;  Lesson 14-5, pp. 565–568;  Lesson 14-6, pp. 569–572;  Reteaching: pp. 575-576 Sets A-D</p>
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	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between coins and their values, the concept of time as it relates to hours.</li> </ul>	
<p><b>K.G.3.a</b> Identify the name and value of pennies, nickels, and dimes.</p>	<ul style="list-style-type: none"> <li>• Skills: Identify coins, recognize their names, determine their values.</li> <li>• Knowledge: Understanding the characteristics of pennies, nickels, and dimes.</li> <li>• Concepts: Coin recognition and basic currency values.</li> </ul>	<p><b>MDIS:</b> A61, A62, A63, A64</p>
<p><b>K.G.3.b</b> Identify the parts of digital and analog clocks. Tell and write time to the hour using digital clocks and analog clocks using only the hour hand.</p>	<ul style="list-style-type: none"> <li>• Skills: Identifying parts of clocks (hour hand, minute hand, numbers), telling time to the hour, writing the time.</li> <li>• Knowledge: Understanding the difference between</li> </ul>	<p>This standard is met in enVision Mathematics Grade 1. For example, please see:  <b>Topic 13:</b> 3-Act Math: Drip Dry, p. 520; Lesson 13-3, pp. 529-532; Lesson 13-4, pp. 533-536; Reteaching: p. 547 Set A</p>

		<ul style="list-style-type: none"> <li>digital and analog clocks, recognizing how to read time on both types of clocks.</li> <li>Concepts: The concept of time, the significance of the hour hand in telling time.</li> </ul>	
<b>K.D.1</b>	Classification: Students will sort and classify objects using one or more attributes.	<ul style="list-style-type: none"> <li><b>Skills:</b> Sorting and classifying objects based on attributes.</li> <li><b>Knowledge:</b> Understanding of attributes such as color, shape, size, and texture.</li> <li><b>Concepts:</b> The relationship between attributes and how they help in categorizing objects.</li> </ul>	
<b>K.D.1.a</b>	Identify, sort, and classify objects by size, shape, color, and other attributes.	<ul style="list-style-type: none"> <li><b>Skills:</b> Identifying objects, sorting objects, classifying objects.</li> <li><b>Knowledge:</b></li> </ul>	<p><b>Topic 5:</b> Pick a Project, p. 171; 3-Act Math: Stripes and Solids, p. 172; Let's Investigate: The Crayon Question; Lesson 5-1, pp. 173-176; Lesson 5-2, pp. 177-180; Lesson 5-3, pp.</p>

	<p>Understanding attributes such as size, shape, color, and other characteristics.</p> <ul style="list-style-type: none"> <li>• <b>Concepts:</b> Classification systems, the importance of attributes in categorizing objects.</li> </ul>	<p>181–184; Lesson 5-4, pp. 185–188; Reteaching: pp. 191-192 Sets A-D  <b>Topic 12:</b>  Lesson 12-1, pp. 465–468</p>
<p><b>K.D.1.b</b> Identify objects that do not belong to a particular group and explain the reasoning used.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying objects, reasoning, explaining choices.</li> <li>• <b>Knowledge:</b> Understanding categories and groups, recognizing differences.</li> <li>• <b>Concepts:</b> Classification, exclusion, logic.</li> </ul>	<p><b>Topic 5:</b> Let's Investigate: The Crayon Question; Lesson 5-1, pp. 173-176; Lesson -5-2, pp. 177-180; Lesson 5-3, pp. 181-184; Lesson 5-4, pp. 185-188; Reteaching: pp. 191-192 Sets A-D</p>

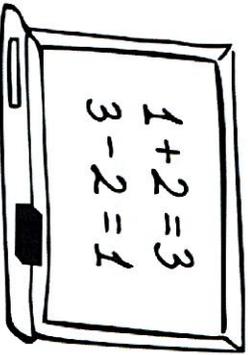
# 1st Grade Math

Focus:

How can we...

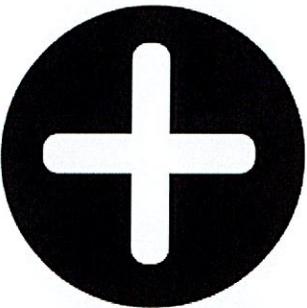
3 Weeks / Aug.

Topic 1



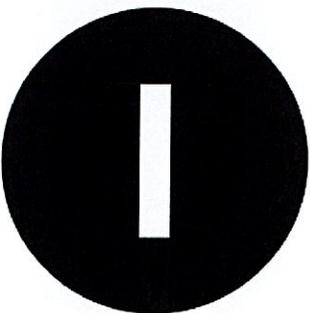
3 Weeks / Sept. Oct.

Topics 2-3



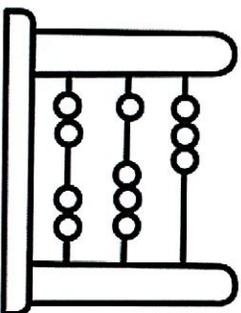
3 Weeks / Oct.

Topic 4



3 Weeks / Nov.

Topic 5



THE FOCUS OF THE STORY

In Topic 1, students represent and solve problems involving addition and subtraction within 10.

THE FOCUS OF THE STORY

In Topics 2-3, students develop fluency for addition and subtraction within 10. They explore strategies to add within 20.

THE FOCUS OF THE STORY

In Topic 4, students use strategies based on the properties of operations and the relationship between addition and subtraction to solve subtraction facts to 20.

THE FOCUS OF THE STORY

In Topic 5, students work with addition and subtraction equations. They learn how to find a missing number in an equation and determine if an equation is true or false.

LEARNING GOALS/STANDARDS

Topic 1 - Understand Addition and Subtraction

LEARNING GOALS/STANDARDS

Topic 2 - Fluently Add and Subtract Within 10  
Topic 3 - Addition Facts to 20: Use Strategies

LEARNING GOALS/STANDARDS

Topic 4 - Subtraction Facts to 20: Use Strategies

LEARNING GOALS/STANDARDS

Topic 5 - Work with Addition and Subtraction Equations

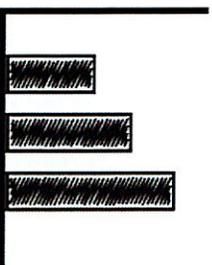
# 1st Grade Math

Focus:

How can we...

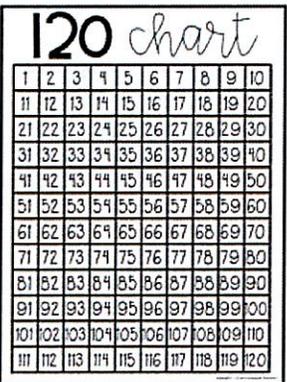
3 Weeks / Nov.

Topic 6



3 Weeks / Dec.

Topic 7



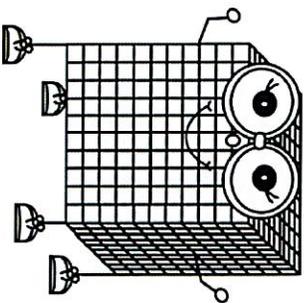
3 Weeks / Jan.

Topics 8-9



3 Weeks / Feb. Mar.

Topics 10-11



THE FOCUS OF THE STORY

In Topic 6, students organize and interpret data to answer questions. They learn to represent data visually using tally charts and picture graphs.

THE FOCUS OF THE STORY

In Topic 7, students extend their understanding of the counting sequence to numbers through 120.

THE FOCUS OF THE STORY

In Topics 8-9, students learn that two-digit numbers represent amounts of tens and ones. They use their understanding of place value to compare numbers.

THE FOCUS OF THE STORY

In Topics 10-11, students use strategies based on place value and properties of operations to add within 100 and subtract multiples of 10 within 100.

LEARNING GOALS/STANDARDS

Topic 6 - Represent and Interpret Data

LEARNING GOALS/STANDARDS

Topic 7 - Extend the Counting Sequence

LEARNING GOALS/STANDARDS

Topic 8 - Understand Place Value  
Topic 9 - Compare Two-Digit Numbers

LEARNING GOALS/STANDARDS

Topic 10 - Use Models and Strategies to Add Tens and Ones  
Topic 11 - Use Models and Strategies to Subtract Tens

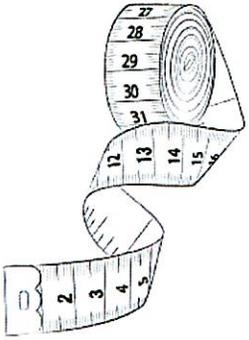
# 1st Grade Math

Focus:

How can we...

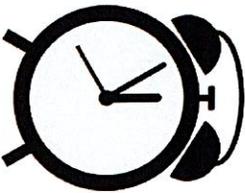
3 Weeks / Mar.

Topic 12



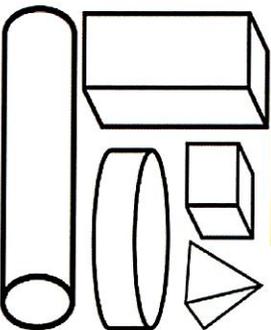
3 Weeks / Apr.

Topic 13



3 Weeks / Apr. May

Topics 14-15



## THE FOCUS OF THE STORY

In Topic 12, students use indirect measurement to compare two lengths. They measure length using nonstandard units.

## THE FOCUS OF THE STORY

In Topic 13, students are introduced to the hour and minute hands on a clock. They tell time to the hour and half hour. Students also tell the value of coins and find the value of a group of coins.

## THE FOCUS OF THE STORY

In Topics 14-15, students explore attributes of two- and three-dimensional shapes. They divide shapes into two and four equal shares to build a conceptual foundation for fractions.

## LEARNING GOALS/STANDARDS

Topic 12 - Measure Lengths

## LEARNING GOALS/STANDARDS

Topic 13 - Time and Money

## LEARNING GOALS/STANDARDS

Topic 14 - Reason with Shapes and Their Attributes  
Topic 15 - Equal Shares of Circles and Rectangles

Grade 1 State Standards		Unwrap the Standard	Connection to instructional materials
1.N.1	Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.	<ul style="list-style-type: none"> <li>Skills: Recognizing and naming quantities quickly, visual perception of arrangements.</li> <li>Knowledge: Understanding of numbers and their representations, familiarity with common arrangements (like pairs or groups).</li> <li>Concepts: Subitizing as a method of quantification, the relationship between numbers and their visual representations.</li> </ul>	
1.N.1.a	Without counting, recognize and verbally label arrangements for briefly shown collections up to 20 (e.g., "I saw 16." "How did you know?" "I saw 10 and 6, that is 16").	<ul style="list-style-type: none"> <li>Skills: Quickly recognizing and naming larger quantities without counting, understanding number combinations.</li> <li>Knowledge: Familiarity with numbers up to 20 and various arrangements (e.g., groups, pairs, tens).</li> </ul>	<p><b>Topic 2:</b> Lesson 2-4, pp. 69-72; Reteaching: p. 96 Set D</p> <p><b>Topic 8:</b> Lesson 8-1, pp. 325-328; Lesson 8-2, pp. 329-332; Lesson 8-3, pp. 333-336; Lesson 8-4, pp. 337-340; Reteaching: p. 355 Sets A-B</p>

		<ul style="list-style-type: none"> <li>• Concepts: Subitizing for larger sets, understanding how to break down numbers into smaller, recognizable parts.</li> </ul>	
<b>1.N.2</b>	<p>Counting and Cardinality:</p> <p>Students will understand the relationship between numbers and quantities to extend the counting sequence.</p>	<ul style="list-style-type: none"> <li>• Skills: Counting objects accurately, recognizing the order of numbers, and understanding that numbers represent quantities.</li> <li>• Knowledge: Familiarity with the counting sequence (1-20 and beyond), understanding cardinality (the number of objects in a set).</li> <li>• Concepts: The relationship between numbers and their corresponding quantities, the order of numbers, and how to extend counting beyond what is known.</li> </ul>	
<b>1.N.2.a</b>	<p>Count verbally by ones and tens within 120 starting at any given number.</p>	<ul style="list-style-type: none"> <li>• Skills: Counting by ones and tens, understanding addition and subtraction through counting.</li> </ul>	<p><b>Topic 7:</b>  Pick a Project, p. 283; 3-Act Math: Super Selfie, p. 284; Lesson 7-1, pp. 285-288; Lesson 7-2, pp. 289-292; Lesson 7-3, pp. 293-296; Lesson 7-4, pp. 297-300; Lesson 7-5, pp. 301-304; Let's</p>

		<ul style="list-style-type: none"> <li>• Knowledge: Familiarity with numbers up to 120, recognizing the sequence of numbers and their relationships.</li> <li>• Concepts: The relationship between a given number and the total quantity of objects, understanding the processes of counting forward (adding) and backward (removing).</li> </ul>	<p>Investigate: Funny Uncle Fred; Lesson 7-6, pp. 305-308; Lesson 7-7, pp. 309-312; Reteaching: pp. 315-316 Sets B-D</p>
<b>1.N.2.b</b>	<p>Count verbally by ones and tens within 120 starting at any given number. Understand that the given number is a direct representation of the total objects in a given set and counting on each successive number represents adding an additional object, and counting back each preceding number represents removing an object.</p>	<ul style="list-style-type: none"> <li>• Skills: Counting by ones and tens, recognizing patterns in numbers, and understanding addition and subtraction concepts.</li> <li>• Knowledge: Familiarity with numbers up to 120, the counting sequence, and how to represent quantities with numbers.</li> <li>• Concepts: The idea that a given number represents the total quantity of objects, and that counting forward</li> </ul>	<p><b>Topic 7:</b>  Pick a Project, p. 283; 3-Act Math: Super Selfie, p. 284; Lesson 7-1, pp. 285-288; Lesson 7-2, pp. 289-292; Lesson 7-3, pp. 293-296; Lesson 7-4, pp. 297-300; Lesson 7-5, pp. 301-304; Let's Investigate: Funny Uncle Fred; Lesson 7-6, pp. 305-308; Lesson 7-7, pp. 309-312; Reteaching: pp. 315-316 Sets B-D</p>

		<p>corresponds to adding to this quantity, while counting backward corresponds to removing from it.</p>	
<b>1.N.2.c</b>	Write numerals to match a representation of a given set of objects for numbers up to 120.	<ul style="list-style-type: none"> <li>• Skills: Writing numerals that correspond to visual representations of quantities.</li> <li>• Knowledge: Understanding the numeral system and how it represents quantities up to 120.</li> <li>• Concepts: The relationship between a physical set of objects and its numerical representation.</li> </ul>	<p><b>Topic 7:</b> Pick a Project, p. 283; 3-Act Math: Super Selfie, p. 284; Lesson 7-1, pp. 285-288; Lesson 7-2, pp. 289-292; Lesson 7-3, pp. 293-296; Lesson 7-4, pp. 297-300; Lesson 7-5, pp. 301-304; Let's Investigate: Funny Uncle Fred; Lesson 7-6, pp. 305-308; Lesson 7-7, pp. 309-312; Reteaching: pp. 315-316 Sets B-D</p> <p><b>Topic 8:</b> Lesson 8-2, pp. 329-332; Lesson 8-3, pp. 333-336; Lesson 8-4, pp. 337-340</p> <p><b>Topic 9:</b> Lesson 9-3, pp. 373-376</p> <p><b>Topic 13:</b> Let's Investigate: Coin Count; Lesson 13-1, pp. 521-524; Lesson 13-2, pp. 525-528; Lesson 13-5, pp. 537-540</p> <p><b>Topic 14:</b> Let's Investigate: Animal Cards; Lesson 14-3, pp. 565-568; Lesson 14-6, pp. 577-580; Lesson 14-7, pp. 585-588</p>
<b>1.N.2.d</b>	Understand patterns of skip counting by 2s, 5s, and 10s.	<ul style="list-style-type: none"> <li>• Skills: Recognizing and creating patterns through skip counting by 2s, 5s, and 10s.</li> <li>• Knowledge: Understanding the concept of skip counting</li> </ul>	<p><b>Topic 7:</b> Lesson 7-1, pp. 285-288; Lesson 7-4, pp. 297-300; Lesson 7-5, pp. 301-304</p> <p><b>MDIS:</b> A20</p>

		<p>and how it relates to addition and multiplication.</p> <ul style="list-style-type: none"> <li>• Concepts: Identifying and extending number patterns using skip counting, and recognizing the practical applications of these patterns in everyday contexts.</li> </ul>	
<b>1.N.3</b>	<p>Base Ten: Students will represent and compare two-digit numbers to gain foundations for place value.</p>	<ul style="list-style-type: none"> <li>• Skills: Representing two-digit numbers in various forms (e.g., using blocks, drawings, or numerals) and comparing them based on place value.</li> <li>• Knowledge: Understanding the place value system, specifically the value of tens and ones in two-digit numbers.</li> <li>• Concepts: The concept of greater than, less than, and equal to in relation to two-digit numbers and how to represent these values visually.</li> </ul>	

<p><b>1.N.3.a</b></p>	<p>Understand 10 as a bundle, collection, or (more abstractly) composition of ten ones and that the two digits of a two-digit number represent a composition of some tens and some ones.</p>	<ul style="list-style-type: none"> <li>• Skills: Recognizing and constructing the concept of ten as a bundle or group, and understanding how two-digit numbers are composed of tens and ones.</li> <li>• Knowledge: Familiarity with the place value system, particularly how the digits in a two-digit number represent different values (tens and ones).</li> <li>• Concepts: The idea of grouping ten ones into a single unit (a ten) and how this impacts our</li> </ul>	<p><b>Topic 7:</b> Pick a Project, p. 283; 3-Act Math: Super Selfie, p. 384; Lesson 7-1, pp. 285–288; Lesson 7-4, pp. 297–300; Let’s Investigate: Funny Uncle Fred; Lesson 7-7, pp. 309–312; Reteaching: p. 315 Set A</p> <p><b>Topic 8:</b> Pick a Project, pp. 323–324; Lesson 8-1, pp. 325–328; Lesson 8-2, pp. 329–332; Lesson 8-3, pp. 333–336; Lesson 8-4, pp. 337–340; Let’s Investigate: Robot Names; Lesson 8-5, pp. 341–344; Lesson 8-6, pp. 345–348; Lesson 8-7, pp. 349–352; Reteaching: pp. 355–356 Sets A–C</p> <p><b>Topic 9:</b> 3-Act Math: Digit Flip, p. 364</p> <p><b>Topic 13:</b> Let’s Investigate: Coin Count; Lesson 13-1, pp. 521–524; Lesson 13-2, pp. 525–528; Lesson 13-3, pp. 529–532; Lesson 13-4, pp. 533–536; Lesson 13-5, pp. 537–540</p>
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		<p style="text-align: center;">understanding of larger numbers.</p>	
<b>1.N.3.b</b>	<p>Compare two, two-digit numbers using words greater than, less than, equal to, and symbols <math>&lt;</math>, <math>&gt;</math>, <math>=</math>. Justify comparisons based on the number of tens and ones.</p>	<ul style="list-style-type: none"> <li>• Skills: Comparing two-digit numbers using appropriate terminology and symbols, and justifying comparisons based on place value.</li> <li>• Knowledge: Understanding the structure of two-digit numbers, specifically the significance of the tens and ones digits.</li> <li>• Concepts: The principles of greater than, less than, and equal to in the context of two-digit numbers.</li> </ul>	<p><b>Topic 9:</b>  Pick a Project, p. 363; 3-Act Math: Digit Flip, p. 364; Lesson 9-1, pp. 365–368; Lesson 9-2, pp. 369–372; Lesson 9-3, pp. 373–376; Let's Investigate: Which is Greater?; Lesson 9-4, pp. 377–380; Lesson 9-5, pp. 381–384; Lesson 9-6, pp. 385–388; Reteaching: p. 392  Sets C, D</p>
<b>1.N.4</b>	<p>Number and Operations: Students will compute using addition and subtraction.</p>	<ul style="list-style-type: none"> <li>• Skills: Performing addition and subtraction calculations accurately.</li> <li>• Knowledge: Understanding the properties of addition and subtraction, including</li> </ul>	

		<p>the relationship between the two operations.</p> <ul style="list-style-type: none"> <li>• Concepts: The concept of combining quantities (addition) and taking away quantities (subtraction) to solve problems.</li> </ul>	
<p><b>1.N.4.a</b></p>	<p>Add and subtract within 20, using flexible strategies such as counting on or counting back, making ten, using ten, and using doubles and near doubles.</p>	<ul style="list-style-type: none"> <li>• Skills: Performing addition and subtraction within 20 using various flexible strategies.</li> <li>• Knowledge: Understanding how to apply different strategies to simplify calculations, such as making ten, using doubles, and counting on or back.</li> <li>• Concepts: The importance of flexible thinking in math and recognizing relationships between numbers.</li> </ul>	<p><b>Topic 2:</b> Pick a Project, pp. 55-56; Lesson 2-1, pp. 57-60; Lesson 2-2, pp. 61-64; Lesson 2-3-65-68; Lesson 2-4, pp. 69-72; Lesson 2-6, pp. 77-80; Let's Investigate: Scaredy Cats Game; Lesson 2-7, pp. 81-84; Lesson 2-8, pp. 85-88; Lesson 2-9, pp. 89-92; Reteaching: pp. 95-96 Sets B, D</p> <p><b>Topic 3:</b> Pick a Project, p. 107; 3-Act Math: Go for a Spin, p. 108; Lesson 3-3, pp. 117-120; Lesson 3-4, pp. 121-124; Lesson 3-5, pp. 125-128; Let's Investigation: Big Celebrations; Lesson 3-6, pp. 129-132; Lesson 3-7, pp. 133-136; Lesson 3-8, pp. 137-140; Lesson 3-9, pp. 141-144; Reteaching: pp. 148-149 Sets C-E</p> <p><b>Topic 4:</b> Pick a Project, pp. 159-160; Lesson 4-2, pp. 165-168; Lesson 4-3, pp. 169-172; Let's Investigate: Sneaky Squirrels; Lesson 4-4, pp. 173-176; Lesson 4-5, pp. 177-180; Lesson pp. 4-6, 181-184; Lesson 4-7, pp. 185-188; Reteaching: pp. 200-201 Sets B, E</p> <p><b>Topic 5:</b> Pick a Project, p. 211; Lesson 5-1,</p>

			pp. 213–216 <b>Topic 6:</b> Pick a Project, p. 251–252
<b>1.N.4.b</b>	Efficiently, flexibly, and accurately add and subtract within 10.	<ul style="list-style-type: none"> <li>• Skills: Adding and subtracting numbers within 10 using efficient and flexible strategies.</li> <li>• Knowledge: Understanding the basic addition and subtraction facts within 10.</li> <li>• Concepts: The importance of accuracy in calculations and the ability to use various strategies to solve problems.</li> </ul>	
<b>1.N.4.c</b>	Find the difference between two numbers that are multiples of 10, ranging from 10 to 90 using concrete models, drawings, or strategies, and write the corresponding equation.	<ul style="list-style-type: none"> <li>• Skills: Finding the difference between two multiples of 10 and representing that difference using equations.</li> <li>• Knowledge: Understanding multiples of 10 (10, 20, 30, ..., 90) and how to perform subtraction.</li> <li>• Concepts: The relationship between concrete models or drawings and mathematical equations.</li> </ul>	<p><b>Topic 11:</b> Pick a Project, p. 451; 3-Act Math: So Many Colors, p. 452; Lesson 11-1, pp. 453–456; Lesson 11-2, pp. 457–460; Lesson 11-3, pp. 461–464; Let's Investigate: Story Match; Lesson 11-4, pp. 465–468; Lesson 11-6, pp. 473–476; Lesson 11-7, pp. 477–480; Reteaching: pp. 483–484 Sets A, B, D</p>

<b>1.N.4.d</b>	Mentally find 10 more or 10 less than a two-digit number without having to count and explain the reasoning used.	<ul style="list-style-type: none"> <li>• Skills: Mentally computing 10 more or 10 less than a given two-digit number.</li> <li>• Knowledge: Understanding place value and the impact of adding or subtracting 10 on a two-digit number.</li> <li>• Concepts: The concept of rounding and the relationship between tens and ones in two-digit numbers.</li> </ul>	<p><b>Topic 9:</b> Pick a Project, p. 363; Lesson 9-1, pp. 365–368; Lesson 9-2, pp. 369–372; Reteaching: p. 391 Sets A, B <b>Topic 10:</b> Pick a Project, pp. 399–400; Lesson 10-2, pp. 405–408; Lesson 10-8, pp. 429–432; Reteaching: p. 439 Set B</p> <p><b>Topic 11:</b> 3-Act Math: So Many Colors, p. 452; Lesson 11-1, pp. 453–456; Lesson 11-2, pp. 457–460; Lesson 11-3, pp. 461–464; Let's Investigate: Story Match; Lesson 11-5, pp. 469–472; Lesson 11-6, pp. 473–476; Lesson 11-7, pp. 477–480; Reteaching: p. 484 Set C</p>
<b>1.N.4.e</b>	Add within 100, including adding a two-digit number and a one-digit number, adding a two-digit number and a multiple of ten, using concrete models, drawings, and strategies that reflect an understanding of place value, the relationship between addition and subtraction, and the properties of operations. Relate the strategy to a written method and explain the reasoning used to solve.	<ul style="list-style-type: none"> <li>• Skills: Adding a two-digit number to a one-digit number and adding a two-digit number to a multiple of ten.</li> <li>• Knowledge: Understanding place value and how it applies to addition.</li> <li>• Concepts: The relationship between addition and subtraction, and the properties of operations</li> </ul>	<p><b>Topic 10:</b> Pick a Project, pp. 399–400; Lesson 10-1, pp. 401–404; Let's Investigate: Fill the Car; Lesson 10-3, pp. 409–412; Lesson 10-4, pp. 413–416; Lesson 10-5, pp. 417–420; Lesson 10-6, pp. 421–424; Lesson 10-7, pp. 425–428; Lesson 10-8, pp. 429–432; Lesson 10-9, pp. 433–436; Reteaching: pp. 439–442 Sets A, C–H</p>

		(commutative and associative).	
<b>1.N.4.f</b>	Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; sometimes it is necessary to compose a ten.	<ul style="list-style-type: none"> <li>• Skills: Adding two-digit numbers by separately adding tens and ones.</li> <li>• Knowledge: Understanding when and how to compose a ten during addition.</li> <li>• Concepts: The importance of place value in addition and the process of regrouping when the sum of the ones exceeds ten.</li> </ul>	<p><b>Topic 10:</b> Lesson 10-7, pp. 425–428; Lesson 10-8, pp. 429–432; Lesson 10-9, pp. 433–436; Reteaching: p. 442 Sets G-H</p>
<b>1.N.4.g</b>	Subtract multiples of ten from two-digit numbers (positive or zero differences) using concrete models, drawings, and strategies that reflect an understanding of place value, the relationship between addition and subtraction, and the properties of operations. Relate the strategy to a written method and explain the reasoning used to solve.	<ul style="list-style-type: none"> <li>• Skills: Subtracting multiples of ten from two-digit numbers while ensuring a clear understanding of place value.</li> <li>• Knowledge: Understanding how to represent subtraction with concrete models and drawings.</li> <li>• Concepts: The relationship between subtraction and</li> </ul>	<p><b>Topic 11:</b> Pick a Project, p. 451; 3-Act Math: So Many Colors, p. 452; Lesson 11-1, pp. 453–456; Lesson 11-2, pp. 457–460; Lesson 11-3, pp. 461–464; Let's Investigate: Story Match; Lesson 11-4, pp. 465–468; Lesson 11-6, pp. 473–476; Lesson 11-7, pp. 477–480; Reteaching: pp. 483–484 Sets A, B, D</p>

		<p>addition, as well as the properties of operations.</p>	
<b>1.N.5</b>	<p><b>Number and Algebraic Relationships:</b> Students will understand and apply properties of operations and the relationship between addition and subtraction to solve problems.</p>	<ul style="list-style-type: none"> <li>• Skills: Understanding and applying properties of operations (commutative, associative, distributive) in addition and subtraction.</li> <li>• Knowledge: Recognizing the relationship between addition and subtraction and how they can be used to solve problems.</li> <li>• Concepts: The role of properties of operations in simplifying calculations and solving mathematical problems effectively.</li> </ul>	
<b>1.N.5.a</b>	<p>Use the meaning of the equal sign to determine if equations are true and give examples of equations that are true (e.g., <math>4 = 4</math>, <math>6 = 7 - 1</math>, <math>6 + 3 = 3 + 6</math>, <math>7 + 2 = 5 + 4</math>).</p>	<ul style="list-style-type: none"> <li>• Skills: Understanding the meaning of the equal sign as a representation of equivalence.</li> <li>• Knowledge: Recognizing true equations and</li> </ul>	<p><b>Topic 1:</b> 3-Act Math: Grab a Bite, p. 4; Lesson 1-1, pp. 5–8; Lesson 1-2, pp. 9–12; Lesson 1-3, pp. 13–16; Lesson 1-4, pp. 17–20 <b>Topic 5:</b> Pick a Project, p. 211; 3-Act Math: Weighted Down, p. 212; Lesson 5-2, pp. 217–220; Let's Investigate: True or</p>

		<ul style="list-style-type: none"> <li>evaluating whether given equations hold true.</li> <li>Concepts: The relationship between both sides of an equation and how to manipulate numbers to verify equality.</li> </ul>	<p>False: Lesson 5-3, pp. 221–224; Lesson 5-7, pp. 237–240; Reteaching: pp. 243–244 Sets A, D</p>
<b>1.N.5.b</b>	<p>Use the relationship of addition and subtraction to solve subtraction problems (e.g., find <math>12 - 9 =</math>, using the addition fact <math>9 + 3 = 12</math>).</p>	<ul style="list-style-type: none"> <li>Skills: Using the relationship between addition and subtraction to solve subtraction problems.</li> <li>Knowledge: Understanding how addition facts can help find missing values in subtraction.</li> <li>Concepts: The inverse relationship between addition and subtraction and how they can be used interchangeably to solve problems.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 4, Let's Investigate: Bird Watching; Lesson 1-7, pp. 29–32; Lesson 1-8, pp. 33–36 <b>Topic 2:</b> Let's Investigate: Scaredy Cats Game; Lesson 2-8, pp. 81–84; Reteaching: p. 98 Set G</p> <p><b>Topic 3:</b> 3-Act Math: Go For a Spin, p. 108</p> <p><b>Topic 4:</b> Pick a Project, pp. 159–160; Let's Investigate: Sneaky Squirrels; Lesson 4-4, pp. 173–176; Lesson 4-5, pp. 177–180; Lesson 4-6, pp. 181–184; Lesson 4-7, pp. 185–188; Reteaching: pp. 200–201 Sets C–E</p>

<p><b>1.N.5.c</b></p>	<p>Determine the unknown whole number in an addition or subtraction equation (e.g., <math>7 + ? = 13</math>).</p>	<ul style="list-style-type: none"> <li>• Skills: Identifying the unknown whole number in addition or subtraction equations.</li> <li>• Knowledge: Understanding how to manipulate equations to isolate the unknown variable.</li> <li>• Concepts: The relationship between known and unknown values in equations and how to solve for the unknown.</li> </ul>	<p><b>Topic 5:</b> Pick a Project, p. 211; 3-Act Math: Weighed Down, p. 212; Lesson 5-1, pp. 213–216; Let's Investigate: True or False; Lesson 5-3, pp. 221–224; Lesson 5-7, pp. 237–240; Reteaching: p. 243 Set B</p>
<p><b>1.N.5.d</b></p>	<p>Use the commutative property of addition to develop addition strategies and compose/decompose numbers to develop addition and subtraction strategies. (See other flexible strategies in 1.N.4.a).</p>	<ul style="list-style-type: none"> <li>• Skills: Applying the commutative property of addition to rearrange numbers for easier addition.</li> <li>• Knowledge: Understanding how composing and decomposing numbers can simplify addition and subtraction.</li> <li>• Concepts: The flexibility of number manipulation in</li> </ul>	<p><b>Topic 2:</b> Lesson 2-5, pp. 73–76; Lesson 2-9, pp. 89–92; Reteaching: p. 97 Set E</p> <p><b>Topic 3:</b> 3-Act Math: Go For a Spin, p. 108; Lesson 3-1, pp. 109–112; Lesson 3-9, pp. 141–144</p> <p><b>Topic 4:</b> Lesson 4-3, pp. 169–172</p> <p><b>Topic 5:</b> Pick a Project, p. 211; 3-Act Math Weighed Down, p. 212; Let's Investigate: True or False; Lesson 5-4, pp. 225–228; Lesson 5-5, pp. 229–232; Reteaching: p. 244 Set C</p>

		<p>addition and subtraction strategies.</p>	
<p><b>1.N.5.e</b></p>	<p>Solve problems that call for addition of three whole numbers whose sum is less than or equal to 20 using flexible strategies with objects, drawings, and/or equations.</p>	<ul style="list-style-type: none"> <li>• Skills: Adding three whole numbers together to find a sum that is less than or equal to 20.</li> <li>• Knowledge: Understanding how to use flexible strategies, such as grouping and rearranging, to facilitate addition.</li> <li>• Concepts: Utilizing objects, drawings, and equations to represent and solve addition problems effectively.</li> </ul>	<p><b>Topic 5:</b>  Pick a Project, p. 211; 3-Act Math: Weighed Down, p. 212; Lesson 5-1, pp. 213–216; Let's Investigate: True or False; Lesson 5-3, pp. 221–224; Lesson 5-7, pp. 237–240; Reteaching: p. 243 Set B</p>
<p><b>1.N.5.f</b></p>	<p>Solve authentic problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem by using objects, drawings, and/or equations with a symbol for the</p>	<ul style="list-style-type: none"> <li>• Skills: Solving authentic problems that involve addition and subtraction within 20.</li> <li>• Knowledge: Understanding different situations such as adding to, taking from,</li> </ul>	<p><b>Topic 2:</b>  Pick a Project, pp. 55-56; Lesson 2-1, pp. 57–60; Lesson 2-2, pp. 61–64; Lesson 2-3, pp. 65–68; Lesson 2-4, pp. 69-72; Lesson 2-6, pp. 77–80; Let's Investigate: Scaredy Cats Game; Lesson 2-7, pp. 81-84; Lesson 2-8, pp. 85-88; Lesson 2-9, pp. 89-92; Reteaching: pp. 95–96 Sets B, D</p> <p><b>Topic 3:</b>  Pick a Project, p. 107; 3-Act Math: Go for</p>

	unknown number to represent the problem.	<ul style="list-style-type: none"> <li>• putting together, taking apart, and comparing.</li> <li>• Concepts: Using objects, drawings, and equations to represent problems, including the use of symbols for unknowns.</li> </ul>	<p>a Spin, p. 108; Lesson 3-3, pp. 117–120; Lesson 3-4, pp. 121–124; Lesson 3-5, pp. 125-128; Let's Investigation: Big Celebrations; Lesson 3-6, pp. 129-132; Lesson 3-7, pp. 133-136; Lesson 3-8, pp. 137-140; Lesson 3-9, pp. 141-144; Reteaching: pp. 148-149 Sets C-E <b>Topic 4:</b></p> <p>Pick a Project, pp. 159–160; Lesson 4-2, pp. 165–168; Lesson 4-3, pp. 169-172; Let's Investigate: Sneaky Squirrels; Lesson 4-4, pp. 173-176; Lesson 4-5, pp. 177-180; Lesson 4-6, pp. 181-184; Lesson 4-7, pp. 185–188; Reteaching: pp. 200-201 Sets B, E <b>Topic 5:</b></p> <p>Pick a Project, p. 211; Lesson 5-1, pp. 213–216 <b>Topic 6:</b></p> <p>Pick a Project, pp. 251–252</p>
<b>1.N.5.8</b>	Create an authentic problem to represent a given equation involving addition and subtraction within 20.		<p><b>Topic 1:</b></p> <p>Pick a Project, p. 3</p> <p><b>Topic 3:</b></p> <p>Pick a Project, p. 107</p> <p><b>Topic 5:</b></p> <p>Pick a Project, p. 211</p>
	SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (1.N.5)		
<b>1.G.1</b>	Shapes and Their Attributes: Students will represent and describe the attributes of two-dimensional shapes.	<ul style="list-style-type: none"> <li>• Skills: Identifying and describing the attributes of two-dimensional shapes, such as sides, vertices, and angles.</li> <li>• Knowledge: Understanding the characteristics and</li> </ul>	

		<ul style="list-style-type: none"> <li>• Classifications of various two-dimensional shapes (e.g., triangles, squares, rectangles, circles).</li> <li>• Concepts: The relationship between shape attributes and their classifications.</li> </ul>	
<p><b>1.G.1.a</b></p>	<p>Determine geometric attributes of two-dimensional shapes regardless of orientation or size for rhombi, trapezoids, and hexagons (e.g., a hexagon is closed with six sides).</p>	<ul style="list-style-type: none"> <li>• Skills: Identifying and describing the geometric attributes of specific two-dimensional shapes (rhombi, trapezoids, and hexagons) regardless of their orientation or size.</li> <li>• Knowledge: Understanding the characteristics that define these</li> </ul>	<p><b>Topic 14:</b>  Pick a Project, pp. 555-556; Let's Investigate: Animal Cards: Lesson 14-1, pp. 557-560; Lesson 14-2, pp. 561-564; Lesson 14-3, pp. 565-568; Lesson 14-4, pp. 569-572; Lesson 14-5, pp. 573-576; Lesson 14-9, pp. 589-592; Reteaching: pp. 595-598 Sets A-D, H</p>

		<p>shapes, including the number of sides, angles, and symmetries.</p> <ul style="list-style-type: none"> <li>• Concepts: Recognizing that geometric attributes remain constant despite variations in size or orientation.</li> </ul>	
<b>1.G.1.b</b>	Determine geometric attributes of three-dimensional shapes including cones, cylinders, cubes, and rectangular prisms regardless of orientation or size.	<ul style="list-style-type: none"> <li>• Skills: Identifying and describing the geometric attributes of specific three-dimensional shapes (cones, cylinders, cubes, and rectangular prisms) regardless of their orientation or size.</li> <li>• Knowledge: Understanding the characteristics that define these shapes, including faces, edges, vertices, and bases.</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 555-556; Lesson 14-6, pp. 577-580; Lesson 14-7, pp. 581-584; Lesson 14-8, pp. 585-588; Lesson 14-9, pp. 589-592; Reteaching: pp. 597-598 Sets E-H</p>

		<ul style="list-style-type: none"> <li>• Concepts: Recognizing that geometric attributes remain constant despite variations in size or orientation.</li> </ul>	
<b>1.G.1.c</b>	Describe lines and sides of shapes as parallel or non-parallel.	<ul style="list-style-type: none"> <li>• Skills: Identifying and describing lines and sides of shapes as parallel or non-parallel.</li> <li>• Knowledge: Understanding the definitions of parallel lines and sides, and how they apply to various shapes.</li> <li>• Concepts: Recognizing that parallel lines never intersect and are equidistant from each other.</li> </ul>	<p>Teachers have the opportunity to address this standard, please see:</p> <p><b>Topic 14:</b> Let's Investigate: Animal Cards; Lesson 14-1, pp. 557- 560; Lesson 14-2, pp. 561-564; Lesson 14-3, pp. 565- 568</p>
<b>1.G.1.d</b>	Partition circles and rectangles into two and four equal parts using the language halves and fourths.	<ul style="list-style-type: none"> <li>• Skills: Partitioning circles and rectangles into equal parts.</li> </ul>	<p><b>Topic 15:</b> Pick a Project, p. 607; 3-Act Math: Pieced Out, p. 608; Lesson 15-1, pp. 609-612; Investigate: Four-Color Flags; Lesson 15-2, pp. 613-616; Let's Lesson 15-3, pp. 617-620; Lesson 15-4, pp. 621-624; Reteaching: pp. 627-628 Sets A-D</p>

		<ul style="list-style-type: none"> <li>• Knowledge: Understanding the terms "halves" and "fourths" and how they relate to the division of shapes.</li> <li>• Concepts: Recognizing that equal parts represent a fraction of the whole shape.</li> </ul>	
<b>1.G.2</b>	Measurement: Students will measure and compare lengths.	<ul style="list-style-type: none"> <li>• Skills: Measuring lengths using appropriate tools (e.g., rulers, measuring tapes).</li> <li>• Knowledge: Understanding the concept of length and the units of measurement (e.g., inches, centimeters).</li> <li>• Concepts: Comparing lengths of different objects</li> </ul>	

		<p>and understanding relative sizes.</p>	
<p><b>1.G.2.a</b></p>	<p>Measure the length of an object as a whole number of same-size, non-standard units by placing them end to end.</p>	<ul style="list-style-type: none"> <li>• Skills: Measuring lengths using non-standard units (e.g., blocks, paperclips, or other uniform objects).</li> <li>• Knowledge: Understanding how to accurately measure an object by placing multiple units end to end.</li> <li>• Concepts: Recognizing that the length of an object can be expressed as a whole number</li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 491–492; Let's Investigate: Estimation I Spy, Lesson 12-3, pp. 501–504; Lesson 12-4, pp. 505–508; Reteaching: p. 512 Sets C, D</p> <p><b>Topic 14:</b> Let's Investigate: Animal Cards; Lesson 14-1, pp. 557– 560; Lesson 14-2, pp. 561–564; Lesson 14-7, pp. 581–584</p>

		<p>based on the number of non-standard units used.</p>	
<b>1.G.2.b</b>	<p>Order three objects by directly comparing their lengths or indirectly by using a third object.</p>		<p><b>Topic 12:</b>  Pick a Project, pp. 491–492; Lesson 12-1, pp. 493–496; Lesson 12-2, pp. 497–500; Let's Investigate: Estimation I Spy; Lesson 12-4, pp. 505–508; Reteaching: p. 511 Sets A, B</p>
<b>1.G.3</b>	<p>Time and Money: Students will solve problems with coins and tell time to the half hour.</p>	<ul style="list-style-type: none"> <li>• Skills: Recognizing and using coins to solve problems involving money.</li> <li>• Knowledge: Understanding the concept of time and how to read clocks to the half hour.</li> <li>• Concepts: Relating the values of coins and the passage of time to real-world situations.</li> </ul>	
<b>1.G.3.a</b>	<p>Understand the value of dimes and pennies (e.g., a dime is equal to ten pennies) relating to tens and ones and solve problems involving dimes and</p>	<ul style="list-style-type: none"> <li>• Skills: Understanding the values of dimes and pennies</li> </ul>	<p><b>Topic 13:</b>  Let's Investigate: Coin Count; Lesson 13-1, pp. 521–524; Lesson 13-2, pp. 525–528</p>

	<p>pennies using the ¢ symbol appropriately.</p>	<p>and their relationships to tens and ones.</p> <ul style="list-style-type: none"> <li>• Knowledge: Recognizing that a dime is worth 10 cents and a penny is worth 1 cent.</li> <li>• Concepts: Solving problems involving the addition and subtraction of dimes and pennies using the appropriate ¢ symbol.</li> </ul>	
<p><b>1.G.3.b</b></p>	<p>Count collections of like coins (penny, nickel, and dime) relating to patterns of counting by 1s, 5s, and 10s.</p>	<ul style="list-style-type: none"> <li>• Skills: Counting collections of like coins, specifically pennies, nickels, and dimes.</li> <li>• Knowledge: Understanding the values of each type of coin (pennies = 1¢, nickels = 5¢, dimes = 10¢) and how to count them in groups.</li> <li>• Concepts: Recognizing patterns in counting by 1s, 5s, and 10s, and how these patterns relate to the values of the coins.</li> </ul>	<p><b>Topic 13:</b> Pick a Project, p. 519. Let's Investigate: Coin Count, Lesson 13-2, pp. 525-528</p>

<p><b>1.G.3.c</b></p>	<p>Tell and write time to the half hour and hour using analog and digital clocks.</p>	<ul style="list-style-type: none"> <li>• Skills: Telling and writing time accurately to the half hour and hour.</li> <li>• Knowledge: Understanding how to read both analog and digital clocks.</li> <li>• Concepts: Recognizing the differences in time representation between analog and digital formats.</li> </ul>	<p><b>Topic 13:</b>  3-Act Math: Drip Dry, p. 520; Lesson 13-3, pp. 529– 532; Lesson 13-4, pp. 533–536; Lesson 13-5, pp. 537– 540; Lesson 13-6, pp. 541–544; Reteaching: pp. 547– 548 Sets B–D</p>
<p><b>1.D.1</b></p>	<p>Data Collection: Students will formulate questions to collect, organize, and represent data.</p>	<ul style="list-style-type: none"> <li>• Skills: Formulating questions for data collection and organizing</li> </ul>	

		<p>the collected data.</p> <ul style="list-style-type: none"> <li>• Knowledge: Understanding different methods for representing data, such as charts, graphs, and tables.</li> <li>• Concepts: Recognizing the importance of data collection and representation in making informed decisions.</li> </ul>	
<b>1.D.1.a</b>	Collect, organize, and represent a data set with up to three categories using a picture graph.	<ul style="list-style-type: none"> <li>• Skills: Collecting and organizing data into categories.</li> <li>• Knowledge: Understanding how to represent data visually using a picture graph.</li> </ul>	<p><b>Topic 6:</b> Pick a Project, pp. 251–252; Lesson 6-1, pp. 253–256; Lesson 6-2, pp. 257–260; Reteaching: p. 275 Set A</p>

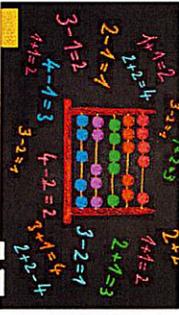
		<ul style="list-style-type: none"> <li>• Concepts: Recognizing the importance of categorizing data for clear representation and interpretation.</li> </ul>	
<b>1.D.2</b>	<p>Analyze Data and Interpret Results: Students will analyze the data and interpret the results.</p>	<ul style="list-style-type: none"> <li>• Skills: Analyzing collected data to identify patterns, trends, and insights.</li> <li>• Knowledge: Understanding how to interpret the results of data analysis.</li> <li>• Concepts: Recognizing the importance of data interpretation in decision-making and understanding phenomena.</li> </ul>	
<b>1.D.2.a</b>	<p>Ask and answer questions about the total number of data points, how many in each category, and compare categories by identifying how many more or less are in a particular category using a picture graph.</p>	<ul style="list-style-type: none"> <li>• Skills: Asking and answering questions related to data points represented in a picture graph.</li> <li>• Knowledge: Understanding how to read and interpret picture graphs, including</li> </ul>	<p><b>Topic 6:</b> Pick a Project, pp. 251–252; Lesson 6-1, pp. 253-256; Lesson 6-2, pp. 257-260; Let's Investigate: Birth Month Data; Lesson 6-3, pp. 261-264; Lesson 6-4, pp. 265- 268; Lesson 6-5, pp. 269-272, Reteaching: pp. 275–276 Sets A, B</p> <p><b>Topic 13:</b> 3-Act Math: Drip Dry, pp. 520</p>

		<p>counting data points and comparing categories.</p> <ul style="list-style-type: none"><li>• Concepts: Recognizing the importance of data analysis for making comparisons between categories.</li></ul>	
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# 2nd Grade Math

Focus:

How can we...

August / September		September		September/October/November		December	
<p>Fluently Add and Subtract within 20</p> 	<p>Work with Equal Groups</p> 	<p>Add and Subtract Fluently</p> 	<p>Solving Problems Involving Addition and Subtraction</p> 	<p>THE FOCUS OF THE STORY</p> <p>In Topic 1, students use mental math strategies to add and subtract within 20.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 2, students work with even and odd numbers, equal groups, and arrays to build a foundation for understanding multiplication.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topics 3-6, students use strategies based on place value and properties of operations to add and subtract with 100.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 7, students develop strategies to solve one- and two-step problems involving addition and subtraction. They use drawings and equations to represent problems.</p>
<p>LEARNING GOALS/STANDARDS Topic 1-Fluently add and subtract within 20</p>	<p>LEARNING GOALS/STANDARDS Topic 2- Work with equal groups</p>	<p>LEARNING GOALS/STANDARDS Topic 3- Add within 100 using strategies Topic 4-Fluently add within 100 Topic 5-Subtract within 100 Topic 6-Fluently subtract within 100</p>	<p>LEARNING GOALS/STANDARDS Topic 7- More solving problems involving addition and subtraction</p>				

# 2nd Grade Math

Focus:

How can we...

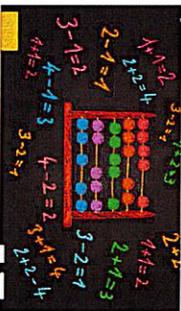
December/January

Work with Time and Money



January

Numbers to 1,000



February/March

Add and Subtract within 1,000 using models and strategies



March

Measuring Length



THE FOCUS OF THE STORY

In Topic 8, students tell and write the time to the nearest five minutes. They also develop strategies to solve problems involving dollar bills and coins.

THE FOCUS OF THE STORY

In Topic 9, students expand their understanding of place value by learning to read, write, and compare numbers to 1,000.

THE FOCUS OF THE STORY

In Topics 10-11, students use strategies based on place value and properties of operations to add and subtract within 1,000. They also explain why addition and subtraction strategies work.

THE FOCUS OF THE STORY

In Topic 12, students use appropriate tools to estimate and measure length in both customary and metric units.

LEARNING GOALS/STANDARDS  
Topic 8- Work with Time and Money

LEARNING GOALS/STANDARDS  
Topic 9-Numbers to 1,000

LEARNING GOALS/STANDARDS  
Topic 10- Add within 1,000 using models and strategies  
Topic 11-Subtract within 1,000 using models and strategies

LEARNING GOALS/STANDARDS  
Topic 12-Measuring Length

# 2nd Grade Math

Focus:

How can we...

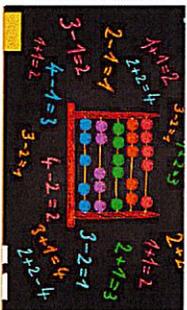
April

Shapes and Their Attributes



April/May

More Addition, Subtraction, and Length



April/May

Graphs and Data



THE FOCUS OF THE STORY

In Topic 13, students analyze and draw two-dimensional shapes and cubes based on their attributes. They also partition shapes into equal shares to build a conceptual foundation for fractions.

THE FOCUS OF THE STORY

In Topic 14, students apply their understanding of addition and subtraction to solve problems involving length measurements.

THE FOCUS OF THE STORY

In Topic 15, students represent data in line plots, bar graphs, and picture graphs. They also analyze data in the graphs to solve problems.

LEARNING GOALS/STANDARDS  
Topic 13- Shapes and their attributes

LEARNING GOALS/STANDARDS  
Topic 14- More Addition, Subtraction, and Length

LEARNING GOALS/STANDARDS  
Topic 15- Graphs and Data

LEARNING GOALS/STANDARDS

Grade 2 State Standards	Unwrap the Standard	Connection to instructional materials
<p><b>2.N.1</b></p> <p>Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Recognizing and verbally labeling structured arrangements.</li> <li>• Understanding groups and multiplicative thinking.</li> <li>• Applying place value concepts.</li> <li>• <b>Knowledge:</b></li> <li>• Familiarity with the concept of grouping numbers.</li> <li>• Understanding the relationship between tens and ones.</li> </ul> <p><b>Concepts:</b></p> <p>The role of multiplicative thinking in recognizing quantities.</p> <p>The ability to analyze and break down a number into its place value components.</p>	

	<p>Without counting, recognize and verbally label structured arrangements for briefly shown collections using groups, multiplicative thinking, and place value (e.g., "I saw 48." "How did you know?" "I saw 4 groups of 10 and 2 groups of 4 is 8...4 tens and 8 ones...48").</p>	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>● <b>Skills:</b></li> <li>● Representing three-digit numbers visually and symbolically.</li> <li>● Comparing three-digit numbers using comparative language (greater than, less than, equal to).</li> <li>● <b>Knowledge:</b></li> <li>● Understanding place value (hundreds, tens, and ones).</li> <li>● Recognizing how the position of a digit affects its value.</li> <li>● <b>Concepts:</b></li> <li>● The relationship between numbers and their values based on place.</li> <li>● Using number lines and models to compare numbers.</li> </ul>	<p><b>Topic 2:</b> Lesson 2-3, pp. 69-72</p> <p><b>Topic 9:</b> 3-Act Math: Makes Cents, p. 376; Lesson 9-1, pp. 377-380; Lesson 9-2, pp. 381-384; Lesson 9-4, pp. 389-393; Lesson 9-5, pp. 393-396; Reteaching: pp. 419-420 Sets A-D</p>
<p><b>2.N.1.a</b></p>	<p>Counting: Students will understand the relationship between numbers and quantities to extend the counting sequence.</p>	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>■ <b>Skills:</b></li> <li>■ Counting forward and backward.</li> </ul>	
<p><b>2.N.2</b></p>			

		<ul style="list-style-type: none"> <li>■ <b>Recognizing and writing numbers.</b></li> <li>● Understanding one-to-one correspondence.</li> <li>● <b>Knowledge:</b></li> <li>● Number sequences (e.g., 1-100).</li> <li>● The concept of quantity (how many).</li> <li>● <b>Concepts:</b></li> <li>● The relationship between numbers and their corresponding quantities.</li> <li>● Patterns in counting (e.g., counting by twos, fives, and tens)</li> </ul>	
<b>2.N.2.a</b>	Count within 1,000, including skip counting by 5s, 10s, and 100s starting at a variety of multiples of 5, 10, or 100.	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>● <b>Skills:</b> Counting within 1,000, skip counting by 5s, 10s, and 100s.</li> <li>● <b>Knowledge:</b> Understanding of multiples of 5, 10, and 100.</li> <li>● <b>Concepts:</b> The relationship between numbers, patterns in</li> </ul>	<p><b>Topic 8:</b> Lesson 8-1, pp. 329–332; Lesson 8-2, pp. 333–336; Lesson 8-3, pp. 337–340; Lesson 8-6, pp. 349–352; Let’s Investigate: Explain that Quarter; Lesson 8-7, pp. 353–356; Lesson 8-8, pp. 357–360; Reteaching: pp. 363–366 Sets A, B, D–F</p> <p><b>Topic 9:</b> Pick a Project, p. 375; 3-Act Math: Makes Cents, p. 376; Lesson 9-6, pp. 397–400; Lesson 9-7, pp. 401–404; Lesson 9-10, pp. 413–416; Reteaching: pp. 421–422 Sets E, F, H</p> <p><b>Topic 10:</b></p>

		<p>counting, and the concept of place value.</p>	<p>Let's Investigate: Yellow Brick Roads; Lesson 10-2, pp. 437–440 <b>Topic 11:</b> Let's Investigate: Recycling Counts!; Lesson 11-2, pp. 477–480</p>
<p><b>2.N.3</b></p>	<p>Base Ten: Students will represent and compare three-digit numbers to apply concepts of place value.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Representing three-digit numbers using various methods (e.g., models, drawings, numerals).</li> <li>• Comparing three-digit numbers based on place value.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding place value up to hundreds, tens, and ones.</li> <li>• Recognizing the significance of each digit's position in a three-digit number.</li> <li>• <b>Concepts:</b></li> <li>• The concept of greater than, less than, and equal to when comparing numbers.</li> <li>• The role of zero in place value.</li> </ul>	

	<p>Read and write numbers within the range of 0 to 1,000 using standard, word, and expanded forms.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Reading numbers in different forms.</li> <li>• Writing numbers in standard, word, and expanded forms.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding place value (ones, tens, hundreds).</li> <li>• Recognizing the relationship between numerical representation and number names.</li> <li>• <b>Concepts:</b></li> <li>• Different forms of numbers: standard form (e.g., 356), word form (e.g., three hundred fifty-six), and expanded form (e.g., <math>300 + 50 + 6</math>).</li> </ul>	<p><b>Topic 9:</b>  3-Act Math: Makes Cents, p. 376;  Let's Investigate: Pitching Target; Lesson 9-2, pp. 381–384; Lesson 9-3, pp. 385–388; Lesson 9-4, pp. 389–392; Lesson 9-5, pp. 393–396; Reteaching: pp. 419–420 Sets B, C, D</p>
<p><b>2.N.3.a</b></p>	<p>Understand 100 as a bundle, collection, or (more abstractly) composition of ten tens and that the three digits of a three-digit number represent a composition of some hundreds, some tens, and some ones.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• Understanding the concept of 100 as a collection of ten tens.</li> </ul>	<p><b>Topic 9:</b>  3-Act Math: Makes Cents, p. 376; Lesson 9-1, pp. 377–380; Let's Investigate: Pitching Target; Lesson 9-2, pp. 381–384; Lesson 9-3, pp. 385–388; Lesson 9-4, pp. 389–392; Lesson 9-5, pp. 393–396; Lesson 9-8,</p>
<p><b>2.N.3.b</b></p>			

		<ul style="list-style-type: none"> <li>Recognizing the role of each digit in a three-digit number (hundreds, tens, and ones).</li> <li>Developing an understanding of place value in larger numbers.</li> </ul>	<p>pp. 405–408; Lesson 9-9, pp. 409–412; Reteaching: pp. 419–422 Sets A-D, G</p>
	<p>Compare two three-digit numbers by using symbols <math>&lt;</math>, <math>&gt;</math>, <math>=</math> and justify the comparison based on the value of the hundreds, tens, and ones.</p>	<ul style="list-style-type: none"> <li><b>Key Components:</b> <ul style="list-style-type: none"> <li>Skills: Comparing numbers, using comparison symbols (<math>&lt;</math>, <math>&gt;</math>, <math>=</math>).</li> <li>Knowledge: Understanding the place value of hundreds, tens, and ones.</li> <li>Concepts: The relationship between numbers based on their place values.</li> </ul> </li> </ul>	<p><b>Topic 9:</b> Pick a Project, p. 375; Lesson 9-8, pp. 405–408; Lesson 9-9, pp. 409–412; Lesson 9-10, pp. 413–416; Reteaching: p. 422 Sets G, H</p>
<b>2.N.3.c</b>		<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Addition of numbers up to 100.</li> <li>Subtraction of numbers up to 100.</li> </ul> </li> </ul>	
<b>2.N.4</b>	<p>Number and Operations: Students will compute using addition and subtraction.</p>		

		<ul style="list-style-type: none"> <li>Understanding and using addition and subtraction in various contexts.</li> </ul>	
<b>2.N.4.a</b>	Fluently add and subtract within 20.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Fluency in addition and subtraction.</li> <li>Ability to solve problems involving numbers up to 20.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; 3-Act Math: Losing Marbles, p. 4; Let's Investigate: Piñata Surprises; Lesson 1-1, pp. 5–8; Lesson 1-2, pp. 9–12; Lesson 1-3, pp. 13–16; Lesson 1-4, pp. 17–20; Lesson 1-5, pp. 21–24; Lesson 1-6, pp. 25–28; Lesson 1-7, pp. 29–32; Lesson 1-8, pp. 33–36; Lesson 1-9, pp. 37–40; Lesson 1-10, pp. 41–44; Reteaching: pp. 47–50 Sets A–H</p>
<b>2.N.4.b</b>	Add and subtract using 100 strategies based on place value including properties of operations, relationships between addition and subtraction, and algorithms.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Adding and subtracting numbers up to 100.</li> <li>Applying place value concepts.</li> <li>Using properties of operations (commutative, associative).</li> <li>Understanding the relationship between addition and subtraction.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-8, pp. 537–560; Reteaching: pp. 549–550 Sets F, G</p> <p><b>Topic 13:</b> 3-Act Math: Straw Shaped, p. 560</p> <p><b>Topic 14:</b> Let's Investigate: Garden Fences; Lesson 14-1, pp. 609–612; Lesson 14-2, pp. 613–616; Lesson 14-3, pp. 617–620; Lesson 14-5, pp. 625–628; Reteaching: pp. 631–632 Sets A–D</p>

		<ul style="list-style-type: none"> <li>Utilizing algorithms for addition and subtraction.</li> </ul>	
<b>2.N.4.c</b>	Mentally add or subtract 10 or 100 to or from a given number 100 to 900.	<ul style="list-style-type: none"> <li><b>Key Components:</b></li> <li>Skills: Mentally adding and subtracting 10 or 100.</li> <li>Knowledge: Understanding place value and the effects of adding or subtracting 10 or 100.</li> <li>Concepts: The relationship between numbers, mental math strategies, and number patterns.</li> </ul>	<p><b>Topic 9:</b> 3-Act Math: Makes Cents, p. 376; Lesson 9-6, pp. 397–400; Lesson 9-7, pp. 401–404; Lesson 9-10, pp. 413–416; Reteaching: pp. 421–422 Sets E, F, H</p> <p><b>Topic 10:</b> Let's Investigate: Yellow Brick Roads; Lesson 10-1, pp. 433–436; Reteaching: p. 463 Set A</p> <p><b>Topic 11:</b> Lesson 11-1, pp. 473–476; Reteaching: p. 499 Set A</p>
<b>2.N.4.d</b>	Add up to three two-digit numbers using strategies based on place value and understanding of properties.	<ul style="list-style-type: none"> <li><b>Key Components:</b></li> <li>Skills:</li> <li>Adding two-digit numbers</li> <li>Using strategies based on place value</li> <li>Applying properties of addition (commutative and associative)</li> </ul>	<p><b>Topic 3:</b> Reteaching: p. 124–125 Sets D, E</p> <p><b>Topic 4:</b> Pick a Project, p. 135–136; Lesson 4-6, pp. 157–160; Lesson 4-7, pp. 161–164; Lesson 4-8, pp. 165–168; Lesson 4-9, pp. 169–172; Reteaching: pp. 177–178 Sets F–H</p> <p><b>Topic 7:</b> Pick a Project, p. 279; Reteaching: p. 318 Set G</p>
<b>2.N.4.e</b>	Add and subtract within 1,000 using concrete models, drawings, and strategies that reflect an	<b>Key Components:</b>	<p><b>Topic 10:</b> Pick a Project, pp. 431–432; Let's</p>

	<p>understanding of place value and the properties of operations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Adding and subtracting numbers within 1,000.</li> </ul>	<p>Investigate: Yellow Brick Roads; Lesson 10-2, pp. 437–440; Lesson 10-3, pp. 441–444; Lesson 10-4, pp. 445–448; Lesson 10-5, pp. 449–452; Lesson 10-6, pp. 453–456; Lesson 10-7, pp. 457–460; Reteaching: pp. 463–464 Sets B–D <b>Topic 11:</b> 3-Act Math: The Chemistry Set, p. 472; Let's Investigate: Recycling Counts!; Lesson 11-2, pp. 477–480; Lesson 11-3, pp. 481–484; Lesson 11-4, pp. 485–488; Lesson 11-5, pp. 489–492; Lesson 11-6, pp. 493–496; Reteaching: pp. 499–500 Sets B–D</p>
<p><b>2.N.5</b></p>	<p>Number and Algebraic Relationships: Students will create and solve problems involving addition and subtraction and work with equal groups of objects to gain foundations for multiplication.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Creating problems, solving addition and subtraction problems, recognizing equal groups.</li> <li>• <b>Knowledge:</b> Understanding basic addition and subtraction concepts, the relationship between addition and subtraction, recognizing and forming equal groups, foundational multiplication concepts.</li> <li>• <b>Concepts:</b> Addition as combining quantities, subtraction as taking</li> </ul>	

		<p>away, the idea of equal groups leading to multiplication.</p>	
<p><b>2.N.5.a</b></p>	<p>Solve authentic problems involving addition and subtraction within 100 in situations of addition and subtraction, including adding to, subtracting from, joining and separating, and comparing situations with unknowns in all positions using objects, models, drawings, verbal explanations, expressions, and equations.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Addition and subtraction within 100</li> <li>• Problem-solving with real-world contexts</li> <li>• Using different representations (objects, models, drawings, verbal explanations, expressions, equations)</li> </ul>	<p><b>Topic 1:</b>  3-Act Math: Losing Marbles, p. 4;  Lesson 1-9, pp. 37-40; Lesson 1-10, pp. 41-44; Reteaching: pp. 50 Sets G, H</p> <p><b>Topic 2:</b>  Lesson 2-5, pp. 77-80;  Reteaching: p. 84 Set D <b>Topic 3:</b>  3-Act Math: Piled Up, p. 92; Lesson 3-6, pp. 113-116; Lesson 3-7, pp. 117-120; Reteaching: pp. 123-125 Sets A-F</p> <p><b>Topic 4:</b>  Pick a Project, pp. 135-136; Let's Investigate: Family Reunion; Lesson 4-2, pp. 141-144; Lesson 4-3, pp. 145-148; Lesson 4-8, pp. 165-168; Lesson 4-9, pp. 169-172; Reteaching: pp. 175-178 Sets B, C, G, H <b>Topic 5:</b>  Pick a Project, p. 187; 3-Act Math: Laundry Day, p. 88; Lesson 5-7, pp. 213-216; Lesson 5-8, pp. 217-220; Reteaching: p. 226 Sets G, H</p> <p><b>Topic 6:</b>  Pick a Project, pp. 235-236; Let's Investigate: Different Differences; Lesson 6-3, pp. 245-248; Lesson 6-6, pp. 257-260; Lesson 6-7, pp. 261-264; Reteaching: pp. 268-269 Sets C, F</p> <p><b>Topic 7:</b></p>

			<p>Pick a Project, p. 279; 3-Act Math: The Water Jug, p. 280; Lesson 7-1, pp. 281-284; Lesson 7-2, pp. 285-288; Lesson 7-3, pp. 289-292; Lesson 7-4, pp. 293-296; Lesson 7-5, pp. 297-300; Lesson 7-8, pp. 309-312; Reteaching: pp. 315-318 Sets A-C, H</p> <p><b>Topic 8:</b> Lesson 8-4, pp. 341-344; Lesson 8-5, pp. 345-348; Reteaching: pp. 364-365 Sets B, C</p> <p><b>Topic 14:</b> Lesson 14-1, pp. 609-612; Lesson 14-2, pp. 613-616; Lesson 14-3, pp. 617-620; Lesson 14-4, pp. 621-624; Lesson 14-5, pp. 625-628; Reteaching: 631-632 Sets A-D</p> <p><b>Topic 15:</b> Lesson 15-3, pp. 649-652; Lesson 15-4, pp. 653-656; Let's Investigate: Adopt a Pet!; Lesson 15-5, pp. 657-660; Lesson 15-6, pp. 661-664; Reteaching: 668, 670 Sets B, D</p>
<b>2.N.5.b</b>	<p>Create authentic problems to represent one-step addition and subtraction within 100 with unknowns in all positions.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Solving one-step addition and subtraction problems.</li> <li>• Recognizing and using unknowns in different positions.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3</p>
<b>2.N.5.c</b>	<p>Use repeated addition to find the total number of objects arranged in an array no larger than</p>	<p>• <b>Key Components:</b></p>	<p><b>Topic 2:</b> Let's Investigate: Forming Teams; Lesson 2-3, pp. 69-72;</p>

	<p>five rows and five columns and write an equation to express the total.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Solve one-step addition and subtraction problems.</li> <li>● Identify unknowns in different positions (e.g., as the addend, the sum, the minuend, or the difference).</li> <li>● <b>Knowledge:</b></li> <li>● Understand the concepts of addition and subtraction.</li> <li>● Recognize the relationship between addition and subtraction.</li> <li>● <b>Concepts:</b></li> <li>● Use real-world contexts to create authentic problems.</li> <li>● Develop problem-solving strategies to find unknowns.</li> </ul>	<p>Lesson 2-4, pp. 73–76; Lesson 2-5, pp. 77–80; Reteaching: pp. 83–84 Sets B–D <b>Topic 3:</b> 3-Act Math: Piled Up, p. 92 <b>Topic 4:</b> Pick a Project, pp. 135–136, <b>Topic 13:</b> Lesson 13-5, pp. 577–580; Let’s Investigate: Let’s Share!; Lesson 13-7, pp. 585–588, Lesson 13-8, pp. 589–592; Reteaching: pp. 597–598 Sets E, G, H</p>
<b>2.N.5.d</b>	<p>Identify a group of objects from 0 to 20 as even or odd by counting by 2s or by showing even numbers as a sum of two equal parts.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● Skills: Counting by 2s, identifying even and odd numbers, understanding sums.</li> </ul>	<p><b>Topic 2:</b> Pick a Project, pp. 59–60; Lesson 2-1, pp. 61–64; Lesson 2-2, pp. 65–68; Reteaching: p. 83 Set A</p>

		<ul style="list-style-type: none"> <li>• Knowledge: Concepts of even and odd numbers, number properties, and basic addition.</li> <li>• Concepts: Grouping objects, recognizing patterns in numbers.</li> </ul>	
	SEE NUMBER AND ALGEBRAIC RELATIONSHIPS IN NUMBER (2.N.5)		
	Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes and three-dimensional solids.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Recognizing shapes</li> <li>• Describing attributes (sides, angles, faces, etc.)</li> <li>• Comparing and contrasting shapes</li> </ul>	
<b>2.G.1</b>		<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing three-dimensional shapes, describing their faces, identifying attributes (edges, faces, vertices), and counting these attributes.</li> </ul>	<p><b>Topic 13:</b>  3-Act Math: Straw Shaped, p. 560; Lesson 13-1, pp. 561–564; Lesson 13-2, pp. 565–568; Lesson 13-4, pp. 573–576; Reteaching: pp. 595–596 Sets A, B, D</p>
<b>2.G.1.a</b>	Recognize and describe all faces of three-dimensional shapes as two-dimensional shapes. Identify and count attributes of solid shapes including the edges, faces, and vertices.		

<b>2.G.1.b</b>	Recognize and draw two-dimensional shapes having a specific number of sides, angles, and vertices including triangles, quadrilaterals, pentagons, and hexagons.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing shapes, drawing shapes.</li> </ul>	<p><b>Topic 13:</b> 3-Act Math: Straw Shaped, p. 560; Lesson 13-1, pp. 561–564; Lesson 13-2, pp. 565–568; Lesson 13-3, pp. 569–572; Lesson 13-4, pp. 573–576; Reteaching: pp. 595–596 Sets A–D</p>
<b>2.G.1.c</b>	Partition a rectangle into rows and columns of equal-sized squares and count to find the total.	<p>Partition a rectangle into rows and columns of equal-sized squares and count to find the total.</p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Dividing circles and rectangles into equal parts.</li> <li>• <b>Knowledge:</b> Understanding fractions (halves, thirds, fourths) and vocabulary related to division of shapes.</li> <li>• <b>Concepts:</b> Equal parts and their representation.</li> </ul>	<p><b>Topic 13:</b> Lesson 13-5, pp. 577–580; Lesson 5-8, pp. 589–592; Reteaching: pp. 597–598 Sets E, H</p> <p><b>Topic 13:</b> Lesson 13-5, pp. 581–584; Let's Investigate: Let's Share!; Lesson 13-6, pp. 581–584; Lesson 13-7, pp. 585–588; Lesson 13-8, pp. 589–592; Reteaching: pp. 597–598 Sets F, G, H</p>
<b>2.G.1.d</b>	Divide circles and rectangles into two, three, or four equal parts and describe the parts using the language of halves, thirds, fourths, half of, a third of, and a fourth of.	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Equal parts and their representation.</li> </ul> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing equal shares, understanding geometric shapes, comparing shapes.</li> </ul>	<p><b>Topic 13:</b> Let's Investigate: Let's Share!; Lesson 13-7, pp. 585–588; Reteaching: p. 598 Set G</p>
<b>2.G.1.e</b>	Recognize that equal shares of identical wholes need not have the same shape.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing equal shares, understanding geometric shapes, comparing shapes.</li> </ul>	<p><b>Topic 13:</b> Let's Investigate: Let's Share!; Lesson 13-7, pp. 585–588; Reteaching: p. 598 Set G</p>

<b>2.G.2</b>	Describe Measurable Attributes: Students will measure, estimate, and compare lengths to build meaning of the measurement process.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• Skills: Measuring lengths, estimating lengths, comparing lengths.</li> </ul>	
<b>2.G.2.a</b>	Measure the length of an object using two different length units and describe how the measurements relate to the size of the specific unit.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• Skills: Measuring lengths using different units, comparing measurements.</li> </ul>	<p><b>Topic 12:</b> Let's Investigate: Choosing Units; Lesson 12-4, pp. 521–524; Lesson 12-7, pp. 533–536; Reteaching: pp. 548–549 Sets C, F</p> <p><b>Topic 13:</b> Let's Investigate: Let's Share!; Lesson 13-6, pp. 581– 584; Reteaching: p. 597 Set F</p>
<b>2.G.2.b</b>	Compare the difference in length of objects using inches and feet or centimeters and meters.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• Skills: Measuring length, comparing lengths, understanding units of measurement (inches, feet, centimeters, meters).</li> </ul>	<p><b>Topic 12:</b> Lesson 12-8, pp. 537-540; Lesson 12-9, pp. 541-544; Reteaching: p. 550 Set G</p>
<b>2.G.3</b>	Measurement: Students will use tools to measure and estimate length using standard units.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• Skills:</li> <li>• Use of measuring tools (ruler, tape measure).</li> </ul>	

		<ul style="list-style-type: none"> <li>Estimating length before measuring</li> </ul>	
<b>2.G.3.a</b>	Identify and use appropriate tools for measuring length.	<ul style="list-style-type: none"> <li>Identify different tools used for measuring length (ruler, measuring tape, etc.).</li> <li>Use selected tools accurately to measure objects</li> </ul>	<p><b>Topic 12:</b> Lesson 12-2, pp. 513–516; Lesson 12-3, pp. 517–520; Let’s Investigate: Choosing Units; Lesson 12-4, pp. 521–524; Lesson 12-5, pp. 525–528; Lesson 12-6, pp. 529–532; Lesson 12-7, pp. 533–536; Lesson 12-9, pp. 541–544; Reteaching: pp. 547–550 Sets B–F, H <b>Topic 13:</b> 3-Act Math: Straw Shaped, p. 560; Lesson 13-2, pp. 565–568; Lesson 13-3, pp. 569–572; Lesson 13-4, pp. 573–576; Reteaching: pp. 595–596 Sets B–D <b>Topic 15:</b> Lesson 15-1, pp. 641–644; Lesson 15-2, pp. 645–648; Reteaching: p. 667 Set A</p>
<b>2.G.3.b</b>	Measure and estimate lengths using whole numbers with inches, feet, centimeters, and meters.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Measuring lengths using appropriate tools (ruler, measuring tape).</li> <li>Estimating lengths using whole numbers.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-1, pp. 509–512; Lesson 12-2, pp. 513–516; Lesson 12-3, pp. 517–520; Let’s Investigate: Choosing Units; Lesson 12-5, pp. 525–528; Lesson 12-6, pp. 529–532; Lesson 12-9, pp. 541–544; Reteaching: pp. 547–550 Sets A, B, D, E, H</p>
<b>2.G.4</b>	Relate Addition and Subtraction to Measurement: Students will add or subtract to solve length problems.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li><b>Skills:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Adding and subtracting whole numbers.</li> <li>• Measuring lengths using appropriate units (e.g., inches, centimeters).</li> </ul>	
<b>2.G.4.a</b>	Represent whole numbers as equally spaced lengths on a number line diagram. Use number lines to find sums and differences within 100.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Representing whole numbers on a number line, identifying sums and differences using number lines.</li> </ul>	<p><b>Topic 14:</b> Lesson 14-4, pp. 621–624; Lesson 14-5, pp. 625–628; Reteaching: p. 632 Sets C–D</p>
<b>2.G.4.b</b>	Use addition and subtraction within 100 to solve problems using the same standard-length units.	<ul style="list-style-type: none"> <li>• Perform addition and subtraction operations.</li> <li>• Solve word problems.</li> </ul> <p><b>Key Components:</b></p>	<p><b>Topic 12:</b> Lesson 12-8, pp. 537–560; Reteaching: pp. 549–550 Sets F, G</p> <p><b>Topic 13:</b> 3-Act Math: Straw Shaped, p. 560</p> <p><b>Topic 14:</b> Let's Investigate: Garden Fences; Lesson 14-1, pp. 609–612; Lesson 14-2, pp. 613–616; Lesson 14-3, pp. 617–620; Lesson 14-5, pp. 625–628; Reteaching: pp. 631–632 Sets A–D</p>
<b>2.G.5</b>	Time and Money: Students will solve problems with dollar bills and coins and tell time to the nearest five-minute interval.	<p><b>Key components:</b></p> <ul style="list-style-type: none"> <li>• Skills: Recognizing and counting dollar bills and coins, solving simple word problems involving</li> </ul>	

		money, telling time to the nearest five-minute interval.	
		<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying and counting different denominations of U.S. currency.</li> <li>• Performing addition and subtraction with money.</li> <li>• Using symbols (\$ for dollars and ¢ for cents) appropriately in mathematical expressions.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-1, pp. 329–332; Lesson 8-2, pp. 333–336; Lesson 8-3, pp. 337–340; Lesson 8-4, pp. 341–344; Lesson 8-5, 345–348</p> <p><b>Topic 9:</b> 3-Act Math: Makes Cents, p. 376</p> <p><b>Topic 10:</b> Let's Investigate: Yellow Brick Roads; Lesson 10-1, pp. 433–436</p> <p><b>Topic 11:</b> Lesson 11-1, pp. 473–476; Let's Investigate: Recycling Counts!; Lesson 11-4, pp. 485–488</p>
<b>2.G.5.a</b>	Solve problems involving dollar bills, quarters, dimes, nickels, and pennies using \$ and ¢ symbols appropriately.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify time on analog clocks.</li> <li>• Identify time on digital clocks.</li> <li>• Write time in both a.m. and p.m.</li> <li>• Understand the concept of five-minute intervals.</li> </ul>	<p><b>Topic 8:</b> Pick a Project, pp. 327–238; Lesson 8-6, pp. 349–352; Let's Investigate: Explain that Quarter; Lesson 8-7, pp. 353–356; Lesson 8-8, pp. 357–360; Reteaching: pp. 365–366 Sets D–F</p>
<b>2.G.5.b</b>	Identify and write time to five-minute intervals using analog and digital clocks and both a.m. and p.m.		
<b>2.D.1</b>	Data Collection: Students will formulate questions to collect, organize, and represent data.	<b>Key Components:</b>	

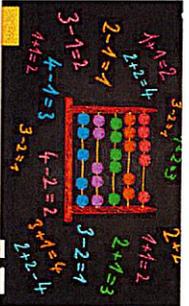
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Formulating questions, collecting data, organizing data, representing data.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Formulating authentic questions.</li> <li>• Collecting and organizing data.</li> </ul> </li> <li>• <b>Knowledge:</b></li> <li>• Understanding what constitutes authentic questions.</li> <li>• Familiarity with categories and scaling in graphs.</li> <li>• <b>Concepts:</b></li> <li>• Data representation.</li> <li>• The relationship between questions, data collection, and graphing.</li> </ul>	<p><b>Topic 15:</b>  3-Act Math: Caps Sized, p. 640;  Lesson 15-3, pp. 649–652; Lesson 15-4, pp. 653–656; Let's Investigate: Adopt a Pet!; Lesson 15-5, pp. 657–660; Lesson 15-6, pp. 661–664; Reteaching: pp. 667–670 Sets B–D</p>
<b>2.D.1.a</b>	Ask authentic questions to generate data and represent the data using scaled picture graphs with up to four categories.		
<b>2.D.1.b</b>	Ask authentic questions to generate data and represent the data using bar graphs with up to four categories.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Formulating authentic questions.</li> <li>• Collecting and organizing data.</li> </ul>	<p><b>Topic 15:</b> Lesson 15-3, pp. 649–652; Let's Investigate: Adopt a Pet!; Lesson 15-5, pp. 657–660; Lesson 15-6, pp. 661–664; Reteaching: pp. 667–670 Sets B–D</p>

		<ul style="list-style-type: none"> <li>• Creating bar graphs.</li> </ul>	
		<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Creating a data set, representing data visually, understanding line plots.</li> </ul>	<p><b>Topic 15:</b> 3-Act Math: Caps Sized, p. 640; Lesson 15- 1, pp. 641–644; Lesson 15-2, 645–648; Reteaching: pp. 667 Set A</p>
<b>2.D.1.c</b>	Create and represent a data set by making a line plot using whole numbers.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Collecting data</li> <li>• Organizing data</li> <li>• Analyzing data</li> <li>• Drawing conclusions</li> </ul> </li> </ul>	
<b>2.D.2</b>	Analyze Data and Interpret Results: Students will analyze the data and interpret the results.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Analyzing data, interpreting scaled picture graphs and bar graphs, solving one-step comparison problems.</li> </ul>	<p><b>Topic 15:</b> 3-Act Math: Caps Sized, p. 640; Lesson 15- 3, pp. 649–652, Lesson 15-4, pp. 653–656, Let's Investigate: Adopt a Pet, Lesson 15-5, pp. 657–660, Lesson 15-6, pp. 661–664; Reteaching: pp. 667–670 Sets B–D</p>
<b>2.D.2.a</b>	Analyze data using scaled picture graphs or bar graphs with up to four categories. Solve problems, including one-step comparison problems, using information from the graphs.		

# 3rd Grade Math

Focus:

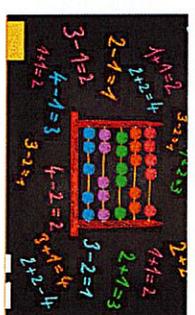
How can we...

<p>August/September (Topics 1 and 2)</p> 	<p>September/October (Topic 3 and 4)</p> 	<p>November (Topic 5)</p> 	<p>November (Topic 6)</p> 
<p>THE FOCUS OF THE STORY</p> <p>In Topics 1-2, students are introduced to multiplication and division. They use patterns to solve multiplication facts.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topics 3-4, students apply properties of multiplication and division to solve problems.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topic 5, students explore strategies for solving multiplication and division facts within 100.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topic 6, students develop and understanding of the concepts of area and a unit square. They learn different ways to measure the area of a rectangle. They relate area to multiplication and addition.</p>
<p>LEARNING GOALS/STANDARDS</p> <p>Topic 1-Understand Multiplication and Division of Whole Number</p> <p>Topic 2-Multiplication Facts: Use Patterns</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 3-Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8</p> <p>Topic 4-Use Multiplication to Divide: Division Facts</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 5-Fluently Multiply and Divide within 100</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 6-Connect Area to Multiplication and Addition</p>

# 3rd Grade Math

Focus:

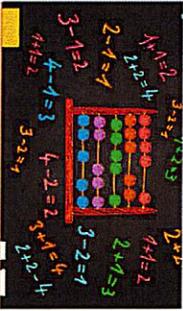
How can we...

<p>December (Topic 7)</p> 	<p>December/January (Topic 8, 9, 10)</p> 	<p>February (Topic 11)</p> 	<p>February/March (Topic 12 and 13)</p> 
<p>THE FOCUS OF THE STORY</p> <p>In topic 7, students represent data on picture graphs and bar graphs. They analyze and interpret data on graphs to solve problems.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topics 8-10, students use strategies based on place value and properties of operations to add and subtract within 1,000 and to multiply a one-digit number by a multiple of 10.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topic 11, students learn strategies to solve two-step word problems involving the four operations. They draw diagrams and write equations to represent relationships in a problem.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topics 12-13, students develop an understanding of fractions including unit fractions and equivalent fractions. They represent measurement data involving fractions on a line plot.</p>
<p>LEARNING GOALS/STANDARDS</p> <p>Topic 7-Represent and Interpret Data</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 8-Use Strategies and Properties to Add and Subtract</p> <p>Topic 9-Fluently Add and Subtract within 1,000.</p> <p>Topic 10-Multiply by Multiples of 10</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 11-Use Operations with Whole Numbers to Solve Problems</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 12-Understand Fractions as Numbers</p> <p>Topic 13-Fraction Equivalence and Comparison</p>

# 3rd Grade Math

Focus:

How can we...

<p>April/May (Topic 14)</p> 	<p>March/April (Topic 15)</p> 	<p>April/May (Topic 16)</p> 	
<p>THE FOCUS OF THE STORY</p> <p>In topic 14, students learn to tell and write time to the nearest minute. They estimate and measure liquid volumes and masses, using appropriate units and tools.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topic 15, students analyze and classify two-dimensional shapes, focusing on quadrilaterals. They use attributes to classify quadrilaterals into more specific groups.</p>	<p>THE FOCUS OF THE STORY</p> <p>In topic 16, students recognize perimeter as a measurable attribute of plane figures and distinguish between perimeter and area.</p>	<p>THE FOCUS OF THE STORY</p>
<p>LEARNING GOALS/STANDARDS</p> <p>Topic 14-Solve Time, Capacity, and Mass Problems</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 15-Attributes of Two-Dimensional Shapes</p>	<p>LEARNING GOALS/STANDARDS</p> <p>Topic 16-Solve Perimeter Problems</p>	<p>LEARNING GOALS/STANDARDS</p>

Grade 3 State Standards	Unwrap the Standard	Connection to instructional materials
<p><b>3.N.1</b></p> <p>Numeric Relationships: Students will demonstrate and represent multi-digit numbers using place value understanding.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Understanding and using place value to read, write, and compare multi-digit numbers.</li> <li>• <b>Knowledge:</b> Recognizing the value of each digit based on its position in a number.</li> <li>• <b>Concepts:</b> The decimal system, multi-digit numbers, and the relationship between digits in a number.</li> </ul>	<p>This standard is met in enVision Mathematics Grade 4. For example, please see:</p> <p><b>Topic 1:</b>  Pick a Project, p. 3; 3-Act Math: What's the Point, p. 4; Lesson 1-1, pp. 5-8; Let's Investigate: Make a Million; Lesson 1-2, pp. 9-12; Lesson 1-5, pp. 21-24; Reteaching: p. 27 Set A, B</p>
<p><b>3.N.1.a</b></p> <p>Read, write, and demonstrate multiple equivalent representations for numbers up to 10,000 using objects or visual representations including standard form and expanded form.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Reading numbers in different forms.</li> <li>• Writing numbers in standard and expanded form.</li> <li>• Demonstrating understanding using objects or visual representations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding place value up to 10,000.</li> <li>• Recognizing equivalent representations of numbers.</li> <li>• <b>Concepts:</b></li> <li>• Standard form vs. expanded form.</li> </ul>	

		<ul style="list-style-type: none"> <li>The relationship between numbers and their representations.</li> </ul>	
		<ul style="list-style-type: none"> <li><b>Key Components:</b></li> <li><b>Skills:</b></li> <li>Comparing whole numbers up to 10,000.</li> <li>Using number lines for visual representation.</li> <li>Applying reasoning strategies to justify comparisons.</li> <li><b>Knowledge:</b></li> <li>Understanding the place value system (thousands, hundreds, tens, and units).</li> <li>Recognizing the relationship between numbers.</li> <li><b>Concepts:</b></li> <li>The concept of "greater than," "less than," and "equal to."</li> <li>The use of number lines as a tool for comparison.</li> </ul>	<p>This standard is met in enVision Mathematics Grade 4. For example, please see:</p> <p><b>Topic 1:</b>  Let's Investigate: Make a Million;  Lesson 1-3, pp.13-16; Lesson 1-4, pp. 17-20; Reteaching: pp. 27-28 Sets C, D</p>
<b>3.N.1.b</b>	Represent and justify comparisons of whole numbers up to 10,000 using number lines and reasoning strategies.		
<b>3.N.2</b>	Fractions: Students will develop understanding of fractions as numbers.	<ul style="list-style-type: none"> <li><b>Key Components:</b></li> <li><b>Skills:</b> Identifying and representing fractions, comparing and ordering fractions, understanding equivalent fractions.</li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Understanding the concept of a fraction as part of a whole, the numerator and denominator, and how fractions relate to division.</li> <li>• <b>Concepts:</b> Fractions as numbers, the idea of equivalent fractions, and the relationship between fractions and whole numbers.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Partitioning two-dimensional figures.</li> <li>• Identifying equal areas.</li> <li>• Expressing area as a unit fraction.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of two-dimensional figures (e.g., squares, rectangles, circles).</li> <li>• Basic knowledge of fractions, particularly unit fractions.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Area as a measure of space within a figure.</li> <li>• The relationship between the whole and its parts.</li> </ul> </li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 435-436; Lesson 12-1, pp. 437-440; Lesson 12-2, pp. 441-444; Lesson 12-3, pp. 445-448; Lesson 12-8, pp. 465-468; Reteaching: pp. 471-474 Sets A-C; H</p> <p><b>Topic 13:</b> 3-Act Math: What's the Beef, p. 484, Lesson 13-1, pp. 485-488; Reteaching: p. 519 Set A</p>
<b>3.N.2.a</b>	Partition two-dimensional figures into equal areas and express the area of each part as a unit fraction of the whole.		
<b>3.N.2.b</b>	Find parts of a whole using visual fraction models.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying fractions, understanding parts of a whole, using visual models.</li> <li>• <b>Knowledge:</b> Recognizing the concept of whole and parts, knowing how to represent fractions visually.</li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 435-436; Lesson 12-1, pp. 437-440; Lesson 12-2, pp. 441-444; Lesson 12-3, pp. 445-448; Reteaching: pp. 471-472, Sets A-C</p>

		<ul style="list-style-type: none"> <li>● <b>Concepts:</b> Fractions as parts of a whole, equivalence in fractions, understanding numerator and denominator.</li> </ul>	
		<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Identify and represent fractions on a number line.</li> <li>● Understand the concept of fractions as parts of a whole.</li> <li>● <b>Knowledge:</b></li> <li>● Familiarity with the terms numerator and denominator.</li> <li>● Understanding the relationship between fractions and their positions on a number line.</li> <li>● <b>Concepts:</b></li> <li>● Fractions represent parts of a whole.</li> <li>● Number lines are a visual representation of numbers, including fractions.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-4, pp. 449-452; Lesson 12-5, pp. 453-456; Reteaching: pp. 472-473 Sets D-E</p>
<b>3.N.2.c</b>	Represent and understand a fraction as a number on a number line.		
<b>3.N.2.d</b>	Show and identify equivalent fractions using visual representations including pictures, manipulatives, and number lines.	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>● <b>Skills:</b></li> <li>● Identifying equivalent fractions.</li> <li>● Using visual representations (pictures, manipulatives, number lines).</li> <li>● <b>Knowledge:</b></li> <li>● Understanding the concept of fractions.</li> </ul>	<p><b>Topic 13:</b> Pick a Project, p. 483; 3-Act Math: What's the Beef, p. 484; Lesson 13-1, pp. 485-488; Lesson 13-2, pp. 489-492; Reteaching: p. 519 Sets A, B</p>

		<ul style="list-style-type: none"> <li>Recognizing that different fractions can represent the same value.</li> <li><b>Concepts:</b></li> <li>The relationship between numerators and denominators in fractions.</li> <li>The use of visual tools to demonstrate equivalence.</li> </ul>	
<b>3.N.2.e</b>	Justify whole numbers as fractions and identify fractions that are equivalent to whole numbers.	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Justifying whole numbers as fractions.</li> <li>Identifying equivalent fractions.</li> <li><b>Knowledge:</b></li> <li>Understanding the relationship between whole numbers and fractions.</li> <li>Recognizing that fractions can represent whole numbers.</li> <li><b>Concepts:</b></li> <li>Understanding equivalence in fractions.</li> <li>The concept of a fraction as a part of a whole.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-3, pp. 445–448; Reteaching: p. 472 Set C</p> <p><b>Topic 13:</b> 3-Act Math: What's the Beef, p. 484; Lesson 13-7, pp. 509–512; Reteaching: p. 522 Set G</p>
<b>3.N.2.f</b>	Compare and order fractions having the same numerators or denominators by reasoning about their size.	<ul style="list-style-type: none"> <li><b>Skills:</b> Comparing fractions, ordering fractions, reasoning about size.</li> <li><b>Knowledge:</b> Understanding of fractions, numerators, and denominators.</li> </ul>	<p><b>Topic 13:</b> Pick a Project, p. 483; Investigate: Making Gumbo; Lesson 13-3, pp. 493–496; Let's Lesson 13-4, pp. 497–500; Lesson 13-5, pp. 501–504;</p>

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between fractions with the same numerators and denominators, and how to evaluate their sizes.</li> </ul>	<p>Lesson 13-8, pp. 513–516;          Reteaching: pp. 520–522 Sets C–E, H</p>
<p><b>3.A.1</b></p>	<p>Operations and Algebraic Thinking: Students will extend understanding of multiplication and apply operational properties to solve problems.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding multiplication as repeated addition, applying operational properties (commutative, associative, distributive), and solving word problems.</li> <li>• <b>Knowledge:</b> Understanding the concept of multiplication, recognizing the properties of operations, and identifying different problem-solving strategies.</li> <li>• <b>Concepts:</b> The relationship between multiplication and addition, the role of factors and products, and how to use properties to simplify calculations.</li> </ul>	<p><b>Topic 8:</b>          Pick a Project, pp. 287–288;          Let's Investigate: Sum Farm;          Lesson 8-1, pp. 289–292;          Lesson 8-3, pp. 297–300;          Lesson 8-4, pp. 301–304;          Lesson 8-6, pp. 309–312;          Lesson 8-7, pp. 313–316;          Lesson 8-8, pp. 317–320;          Reteaching: pp. 323–326 Sets A, C, D, F–H <b>Topic 9:</b>          Pick a Project, p. 335; 3-Act Math: Fun Raiser, p. 336;          Lesson 9-1, pp. 337–340;          Lesson 9-2, pp. 341–344;          Lesson 9-3, pp. 345–348; Let's</p>
<p><b>3.A.1.a</b></p>	<p>Add and subtract up to four-digit whole numbers with or without regrouping using strategies based on place value and algorithms.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Adding and subtracting four-digit whole numbers, regrouping (carrying over and borrowing).</li> <li>• <b>Knowledge:</b> Understanding place value (thousands, hundreds, tens, and ones).</li> <li>• <b>Concepts:</b> Strategies for addition and subtraction, including using algorithms and visual aids (like number lines or base-ten blocks).</li> </ul>	

			<p>Investigate: Moon Festival Tickets; Lesson 9-4, pp. 349–352; Lesson 9-5, pp. 353–356; Lesson 9-6, pp. 357–360; Lesson 9-7, pp. 361–364; Reteaching: pp. 367–370 Sets A-G <b>Topic 11:</b> 3-Act Math: Cash Bucket, p. 408; Let's Investigate: Dog Supplies; Lesson 11-1, pp. 409–412; Lesson 11-3, pp. 413–416; Lesson 11-4, pp. 421–424; Reteaching: pp. Sets A, C, D</p> <p><b>Topic 14:</b> Lesson 14-2, pp. 537–540; Reteaching: p. 572 Set C</p> <p><b>Topic 16:</b> Lesson 16-3, pp. 621–624; Reteaching: p. 639 Set B</p>
<b>3.A.1.b</b>	<p>Determine the reasonableness of whole number sums and differences using estimations and number sense.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Estimating sums and differences of whole numbers.</li> <li>• Using number sense to assess the reasonableness of answers.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding place value and the properties of addition and subtraction.</li> <li>• Recognizing benchmarks for estimation (e.g., rounding to the nearest ten or hundred).</li> <li>• <b>Concepts:</b></li> <li>• The concept of estimation as a tool for checking calculations.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-6, pp. 309–312, Lesson 8-7, pp. 313–316; Reteaching: p. 325 Sets F, G</p>

		<ul style="list-style-type: none"> <li>The relationship between addition and subtraction.</li> </ul>	
<b>3.A.1.c</b>	<p>Solve and write one-step whole number equations to represent authentic problems using the four operations including equations with an unknown start, unknown change, or unknown result.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Solve one-step equations.</li> <li>Write equations to represent problems.</li> <li>Use the four operations: addition, subtraction, multiplication, division.</li> <li><b>Knowledge:</b></li> <li>Understand the structure of equations.</li> <li>Recognize the elements of authentic problems (real-world contexts).</li> <li><b>Concepts:</b></li> <li>Unknown start (initial value).</li> <li>Unknown change (amount added or subtracted).</li> <li>Unknown result (final outcome).</li> </ul>	<p><b>Topic 4:</b> Lesson 4-9, pp. 149-152, Reteaching: p. 158 Set I</p> <p><b>Topic 5:</b> 3-Act Math: The Cheese Sticks, p. 168</p> <p><b>Topic 8:</b> Pick a Project, pp. 287-288; Lesson 8-1, pp. 289-292; Let's Investigate: Sum Farm; Lesson 8-3, pp. 297-300; Lesson 8-4, pp. 301-304; Lesson 8-7, pp. 305-308; Lesson 8-8, pp. 309-312; Reteaching: pp. 323-326 Sets A, C-E; G, H</p> <p><b>Topic 9:</b> 3-Act Math: Fun Raiser, p. 336; Lesson 9-1, pp. 337-340; Lesson 9-3, pp. 345-348</p> <p><b>Topic 11:</b> 3-Act Math: Cash Bucket, p. 408; Lesson 11-1, pp. 409-412; Let's Investigate: Dog Supplies; Lesson 11-2, pp. 413-416; Lesson 11-3, pp. 417-420; Lesson 11-4, pp. 421-424; Reteaching: pp. 427-428 Sets A-D</p> <p><b>Topic 16:</b> Lesson 16-3, pp. 621-624; Reteaching: p. 639 Set B</p>
<b>3.A.1.d</b>	Interpret and solve two-step authentic problems involving	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Ability to interpret problems.</li> </ul>	<p><b>Topic 4:</b> Lesson 4-9, pp. 149-152, Reteaching: p. 158 Set I</p> <p><b>Topic 5:</b></p>

	<p>whole numbers and the four operations.</p>	<ul style="list-style-type: none"> <li>• Performing two-step calculations.</li> <li>• Applying the four operations: addition, subtraction, multiplication, and division.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of whole numbers.</li> <li>• Comprehension of problem-solving strategies.</li> <li>• <b>Concepts:</b></li> <li>• Recognizing real-world scenarios that require mathematical solutions.</li> <li>• Understanding the relationship between operations in a two-step problem.</li> </ul>	<p>3-Act Math: The Cheese Sticks, p. 168</p> <p><b>Topic 8:</b> Pick a Project, pp. 287-288; Let's Investigate: Sum Farm; Lesson 8-1, pp. 289-292; Lesson 8-3, pp. 297-300; Lesson 8-4, pp. 301-304; Lesson 8-7, pp. 305-308; Lesson 8-8, pp. 309-312; Reteaching: pp. 323-326 Sets A, C-E; G, H</p> <p><b>Topic 9:</b> 3-Act Math: Fun Raiser, p. 336; Lesson 9-1, pp. 337-340; Lesson 9-3, pp. 345-348</p> <p><b>Topic 11:</b> 3-Act Math: Cash Bucket, p. 408; Let's Investigate: Dog Supplies; Lesson 11-1, pp. 409-412; Lesson 11-2, pp. 413-416; Lesson 11-3, pp. 417-420; Lesson 11-4, pp. 421-424; Reteaching: pp. 427-428 Sets A-D <b>Topic 16:</b> Lesson 16-3, pp. 621-624; Reteaching: p. 639 Set B</p>
<p><b>3.A.1.e</b></p>	<p>Apply commutative, associative, distributive, identity, and zero properties as strategies to multiply and divide.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understand and apply the commutative property of multiplication.</li> <li>• Understand and apply the associative property of multiplication.</li> <li>• Understand and apply the distributive property.</li> <li>• Recognize the identity property of multiplication.</li> </ul>	<p><b>Topic 1:</b> 3-Act Math: What's the Point, p. 4; Let's Investigate: Packing Plans; Lesson 1-3, pp. 13-16; Reteaching: pp. 31-32 Set C</p> <p><b>Topic 2:</b> Lesson 2-4, pp. 49-52; Reteaching: p. 67 Set C</p> <p><b>Topic 3:</b> Pick a Project, p. 75; 3-Act Math: Thirsty Students, p. 76;</p>

		<ul style="list-style-type: none"> <li>Recognize the zero property of multiplication.</li> <li><b>Knowledge:</b></li> <li>Definitions and examples of each property.</li> <li>How each property can simplify multiplication and division problems.</li> <li><b>Concepts:</b></li> <li>The relationship between numbers in multiplication and division.</li> <li>The significance of properties in mathematical operations.</li> </ul>	<p>Lesson 3-1, pp. 77–80; Let’s Investigate: Splitting Arrays; Lesson 3-2, pp. 81–84; Lesson 3-3, pp. 85–88; Lesson 3-4, pp. 89–92; Lesson 3-5, pp. 93–96; Lesson 3-6, pp. 97–100; Lesson 3-7, pp. 101–104; Reteaching: pp. 107–108 Sets A–F</p>
3.A.1.f	Use drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to interpret and explain the meaning of multiplication and division and their relationship.	<ul style="list-style-type: none"> <li><b>Skills:</b> Ability to use various representations (drawings, words, arrays, symbols, repeated addition, and division).</li> <li><b>Knowledge:</b> Understanding the concepts of multiplication and division, including how they relate to each other.</li> <li><b>Concepts:</b> The meaning of multiplication as repeated addition and the concept of division as partitioning or grouping.</li> </ul>	<p><b>Topic 1:</b> Pick a Project, p. 3; 3-Act Math: What’s the Point, p. 4; Lesson 1-1, pp. 5-8; Lesson 1-2, pp. 9-12; Lesson 1-3, pp. 13-16; Let’s Investigate: Packing Plans; Lesson 1-4, pp. 17-20; Lesson 1-5, pp. 21-24; Lesson 1-6, pp. 25-28; Reteaching: pp. 31-32 Sets A-E</p>
3.A.1.g	Fluently multiply and divide within 100 using strategies based	<ul style="list-style-type: none"> <li><b>Skills:</b> Ability to use various representations (drawings, words, arrays, symbols, repeated addition,</li> </ul>	<p><b>Topic 5:</b> Pick a Project, p. 167; 3-Act Math: The Cheese Sticks, p. 168; Lesson 5-1, pp. 169–172;</p>

	<p>on understanding and properties of operations.</p>	<p>equal groups, number lines) to explain multiplication and division.</p> <ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Understanding the concepts of multiplication and division, including how they relate to each other.</li> <li>• <b>Concepts:</b> The meaning of multiplication as repeated addition and the concept of division as partitioning or grouping.</li> </ul>	<p>Lesson 5-2, pp. 173–176; Lesson 5-3, pp. 177–180; Let's Investigate: Building Cubbies; Lesson 5-4, pp. 181–184; Lesson 5-5, pp. 185–188; Lesson 5-6, pp. 189–192; Reteaching: pp. 195–198 Sets A–F</p>
<p><b>3.A.1.h</b></p>	<p>Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of operations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Multiplying one-digit whole numbers by multiples of 10.</li> <li>• <b>Knowledge:</b> Understanding place value and properties of operations.</li> <li>• <b>Concepts:</b> The relationship between one-digit numbers and multiples of 10, and how to use strategies for multiplication.</li> </ul>	<p><b>Topic 10:</b> Pick a Project, pp. 379–380; Let's Investigate: Stack It!; Lesson 10-1, pp. 381–384; Lesson 10-2, pp. 385–388; Lesson 10-3; pp. 389–392; Lesson 10-4; pp. 393–396; Reteaching: pp. 399–400 Sets A–D</p>
<p><b>3.G.1</b></p>	<p>Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing two-dimensional shapes, identifying attributes (sides, angles, and symmetry), and representing shapes through drawing or modeling.</li> <li>• <b>Knowledge:</b> Understanding different types of two-dimensional shapes (triangles, quadrilaterals, circles, etc.) and their specific attributes.</li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between shape attributes and their classifications, and the importance of shapes in everyday life.</li> </ul>	
<b>3.G.1.a</b>	Sort quadrilaterals into categories according to their attributes.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying different types of quadrilaterals, sorting quadrilaterals based on attributes.</li> <li>• <b>Knowledge:</b> Understanding the properties of quadrilaterals (sides, angles, parallel lines).</li> <li>• <b>Concepts:</b> Categories of quadrilaterals (e.g., squares, rectangles, rhombuses, trapezoids).</li> </ul>	<p><b>Topic 16:</b> Pick a Project, pp. 611–612; Lesson 16-1, pp. 617–620; Lesson 16-2, pp. 621–624; Lesson 16-3, pp. 625–628; Let's Investigate: Making Scenery, Lesson 16-4, pp. 629–632; Lesson 16-5, Lesson 16-6, pp. 633–636; Reteaching: pp. 639–640 Sets A–D</p>
<b>3.G.2</b>	Area and Perimeter: Students will recognize perimeter and area as attributes of plane figures and understand concepts of area measurement.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate the perimeter of various shapes.</li> <li>• Calculate the area of simple plane figures.</li> <li>• Recognize and identify plane figures (e.g., squares, rectangles).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the definitions of perimeter and area.</li> <li>• Grasp the concept of units of measurement (e.g., square units for area, linear units for perimeter).</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between the dimensions of a shape and its perimeter and area.</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• Different methods for measuring area (e.g., counting unit squares).</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate the perimeter of various polygons.</li> <li>• Identify side lengths of polygons.</li> <li>• Solve for unknown side lengths using the given perimeter.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the definition of perimeter.</li> <li>• Recognizing different types of polygons (triangles, quadrilaterals, etc.).</li> <li>• Knowing how to use addition to find the perimeter.</li> <li>• <b>Concepts:</b></li> <li>• Relationship between the side lengths and the perimeter.</li> <li>• Application of perimeter in real-life situations.</li> </ul>	<p><b>Topic 16:</b> Pick a Project, pp. 611–612; Lesson 16-1, pp. 617–620; Lesson 16-2, pp. 621–624; Lesson 16-3, pp. 625–628; Let's Investigate: Making Scenery, Lesson 16-4, pp. 629–632; Lesson 16-5, Lesson 16-6, pp. 633–636; Reteaching: pp. 639–640 Sets A–D</p>
<b>3.G.2.a</b>	Solve authentic problems involving perimeters of polygons when given the side lengths or when given the perimeter and unknown side length(s).	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Counting square units, measuring area using models.</li> <li>• <b>Knowledge:</b> Understanding the concept of area, recognizing square units.</li> <li>• <b>Concepts:</b> The relationship between length and width in finding area, the principle of using models for measurement.</li> </ul>	<p><b>Topic 6:</b> Let's Investigate: Flag Designs; Lesson 6-4, pp. 221-224; Lesson 6-7, pp. 233-236; Reteaching: p. 242 Set G</p>
<b>3.G.2.b</b>	Use concrete and pictorial models to measure areas in square units by counting square units.		

		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Find the area of a rectangle.</li> <li>• Use unit squares to model area.</li> <li>• Understand and demonstrate the additive property of area.</li> <li>• Multiply whole-number side lengths to find area.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Definition of area.</li> <li>• Properties of rectangles.</li> <li>• Concept of unit squares as a method for measuring area.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• Area can be viewed as the total number of unit squares that fit within a shape.</li> <li>• The relationship between repeated addition and multiplication in finding area.</li> </ul>	<p><b>Topic 3:</b> Lesson 3-7, pp. 101–104; Reteaching: p. 108 Set F</p> <p><b>Topic 6:</b> Let's Investigate: Flag Designs; Lesson 6-4, pp. 221–224; Lesson 6-5, pp. 225–228; Lesson 6-7, pp. 233–236; Reteaching: pp. 241–242 Sets E-G <b>Topic 7:</b> 3-Act Math: Swings and Slides, p. 252</p> <p><b>Topic 15:</b> Let's Investigate: Shape Mobiles; Lesson 15-4, pp. 597-600; Reteaching: p. 604 Set D</p> <p><b>Topic 16:</b> Let's Investigate: Making Scenery; Lesson 16-4, pp. 625-628; Lesson 16-5, pp. 629-632;</p>
<b>3.G.2.c</b>	Find the area of a rectangle with whole-number side lengths by modeling with unit squares; show that area can be additive and is the same as it would be found by multiplying the side lengths.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Using measurement tools (rulers, scales, measuring cups)</li> <li>• Estimating lengths, weights, and volumes</li> <li>• Comparing and contrasting measurements</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding units of measurement (inches, centimeters, pounds, liters)</li> </ul>	
<b>3.G.3</b>	Measurement: Students will use tools to solve measurement problems.		

		<ul style="list-style-type: none"> <li>• Familiarity with the concept of perimeter, area, and volume</li> <li>• <b>Concepts:</b></li> <li>• The importance of accuracy in measurement</li> <li>• The relationship between different units of measurement</li> <li>• Real-world applications of measurement</li> </ul>	
<b>3.G.3.a</b>	Identify and use the appropriate tools and units of measurement, both customary and metric, to solve authentic problems involving length, weight, mass, liquid volume, and capacity (within the same system and unit).	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify measurement tools, use measurement tools, convert between different units, apply measurements to solve problems.</li> <li>• <b>Knowledge:</b> Understand customary and metric units of measurement (length, weight, mass, liquid volume, capacity), recognize the appropriate contexts for each unit.</li> <li>• <b>Concepts:</b> Measurement concepts include accuracy, precision, and the relationship between different units within a system.</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 531–532; Let's Investigate: Number Lines Everywhere; Lesson 14-4, pp. 545–548; Lesson 14-5, pp. 549–552; Lesson 14-6, pp. 553–556; Lesson 14-7, pp. 557–560; Reteaching: pp. 572–574 Sets D–H</p> <p><b>MDIS</b> D13, D15, D16, D24, D27, D58, D66</p>
<b>3.G.3.b</b>	Estimate and measure length to the nearest half inch, fourth inch, and centimeter.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Estimating lengths, measuring lengths accurately.</li> <li>• <b>Knowledge:</b> Understanding units of measurement (inches and centimeters), recognizing fractions (half inch and fourth inch).</li> <li>• <b>Concepts:</b> The relationship between estimation and measurement, the importance of precision in measurement.</li> </ul>	<p><b>Topic 12:</b> Lesson 12-6, pp. 457–460, Lesson 12-7, pp. 461–464; Reteaching: pp. 473–474 Sets F, G</p> <p><b>MDIS:</b> D17</p>

<b>3.G.4</b>	Time: Students will tell time to the nearest minute and find elapsed time.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Telling time to the nearest minute, calculating elapsed time.</li> <li>• <b>Knowledge:</b> Understanding of clocks (analog and digital), the concept of minutes and hours, and how to measure time intervals.</li> <li>• <b>Concepts:</b> Time measurement, relationships between hours and minutes, and the concept of elapsed time.</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 531–532; Lesson 14-1, pp. 533–536; Lesson 14-2, pp. 537–540; Lesson 14-3, pp. 541–544; Lesson 14-9, pp. 565–568; Reteaching: p. 571 Set A</p>
<b>3.G.4.a</b>	Tell and write time to the minute using both analog and digital clocks.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Telling time, writing time, reading both analog and digital clocks.</li> <li>• <b>Knowledge:</b> Understanding the parts of a clock (hour and minute hands), the difference between analog and digital time formats, and the concept of minutes in an hour.</li> <li>• <b>Concepts:</b> Time measurement, the relationship between hours and minutes, and real-life applications of telling time.</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 531–532; Lesson 14-2, pp. 537–540; Lesson 14-3, pp. 541–544; Lesson 14-9, pp. 565–568; Reteaching: pp. 571–572, 574 Sets B, C, I</p>
<b>3.G.4.b</b>	Solve authentic problems involving addition and subtraction of time intervals and find elapsed time.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Adding and subtracting time intervals.</li> <li>• <b>Knowledge:</b> Understanding the concept of elapsed time.</li> <li>• <b>Concepts:</b> Familiarity with clocks and time notation (AM/PM).</li> </ul>	<p><b>Topic 14:</b> Pick a Project, pp. 531–532; Lesson 14-2, pp. 537–540; Lesson 14-3, pp. 541–544; Lesson 14-9, pp. 565–568; Reteaching: pp. 571–572, 574 Sets B, C, I</p>

		<ul style="list-style-type: none"> <li>• Understanding how to represent time in different ways.</li> <li>• Recognizing real-life situations where elapsed time is important (e.g., schedules, travel).</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Formulating questions for data collection.</li> <li>• Organizing data systematically.</li> <li>• Representing data in various formats (e.g., charts, graphs).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding types of data (categorical vs. numerical).</li> <li>• Familiarity with data representation tools (tally marks, bar graphs).</li> <li>• <b>Concepts:</b></li> <li>• The importance of questions in guiding data collection.</li> <li>• The process of organizing and interpreting data.</li> </ul>	
<b>3.D.1</b>	Data Collection: Students will formulate questions to collect, organize, and represent data.		
<b>3.D.1.a</b>	Create scaled picture graphs and scaled bar graphs to represent a data set with more than four categories, including data collected through observations, surveys, and experiments.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Creating scaled picture graphs.</li> <li>• Creating scaled bar graphs.</li> <li>• Interpreting data from graphs.</li> <li>• Collecting data from observations, surveys, and experiments.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of scaling in graphs.</li> </ul>	<p><b>Topic 7:</b> Pick a Project, p. 251; 3-Act Math: Swings and Slides, p. 252; Lesson 7-1, pp. 253–256; Let's Investigate: Third-Grade Data; Lesson 7-2, pp. 257–260; Lesson 7-3, pp. 261–264; Lesson 7-4, pp. 265–268; Lesson 7-5, pp. 269–272; Reteaching: pp. 275–278 Sets A-D</p> <p><b>Topic 11:</b> Let's Investigate: Dog Supplies; Lesson 11-3, pp. 417–420;</p>

		<ul style="list-style-type: none"> <li>• Familiarity with different types of graphs (picture and bar).</li> <li>• Knowing how to categorize data.</li> <li>• <b>Concepts:</b></li> <li>• Data representation.</li> <li>• Comparing data sets.</li> <li>• Analyzing and interpreting visual information.</li> </ul>	<p>Reteaching: p. 428 Set C</p>
		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Generating data based on observations or experiments.</li> <li>• Creating line plots to visually represent data.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding what a line plot is and its purpose.</li> <li>• Recognizing and using halves and whole numbers on a scale.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between data and visual representation.</li> <li>• The importance of accuracy in representing data on a line plot.</li> </ul>	<p><b>Topic 12:</b>  Pick a Project, pp. 435–436;  Let's Investigate: Measuring a Lemon; Lesson 12-6, pp. 457–460; Lesson 12-7, pp. 461–464; Retaaching: pp. 473–474 Sets F, G</p>
<b>3.D.1.b</b>	<p>Generate and represent data using line plots where the horizontal scale is marked off in halves and whole number units.</p>		
<b>3.D.2</b>	<p>Analyze Data and Interpret  Results: Students will analyze the data and interpret the results.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Collecting data</li> <li>• Organizing data</li> <li>• Analyzing data</li> </ul>	

	<ul style="list-style-type: none"> <li>• Interpreting results</li> <li>• <b>Knowledge:</b></li> <li>• Understanding types of data (qualitative vs. quantitative)</li> <li>• Familiarity with basic graphs (bar graphs, pictographs)</li> <li>• Awareness of how to read and extract information from data</li> <li>• <b>Concepts:</b></li> <li>• The importance of data in making decisions</li> <li>• Relationships between different data points</li> </ul>	
<p><b>3.D.2.a</b></p>	<p>Analyze data and make simple statements using information represented in picture graphs, line plots, and bar graphs.</p>	<p><b>Topic 7:</b>  Pick a Project, pp. 251; 3-Act Math: Swings and Slides, p. 252; Lesson 7-1, pp. 253-256, Let's Investigate: Third-Grade Data; Lesson 7-2, pp. 257-260, Lesson 7-3, pp. 261-264, Lesson 7-4, pp. 265-268, Lesson 7-5, pp. 269-272; Reteaching: pp. 275-278 Sets A-D <b>Topic 12:</b>  Pick a Project, pp. 435-436, Let's Investigate: Measuring a Lemon; Lesson 12-6, pp. 457-460, Lesson 12-7, pp. 461-464; Reteaching: pp. 473-474 Sets F, G</p>

Grade 3	<p>Numeric Relationships: Students will demonstrate and represent multi-digit numbers using place value understanding.</p> <p><b>3.N.1</b></p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and use place value to read, write, and represent multi-digit numbers.</li> <li>• Compare and order multi-digit numbers based on place value.</li> <li>• Understand the concept of zero as a placeholder.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the base-ten number system.</li> <li>• Recognizing the value of each digit in a multi-digit number based on its position.</li> <li>• <b>Concepts:</b></li> <li>• Place value concepts (units, tens, hundreds, etc.). <ul style="list-style-type: none"> <li>• The relationship between digits and</li> </ul> </li> </ul>	
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		<p>their values in a number.</p>	
		<ul style="list-style-type: none"> <li>• Skills:</li> <li>• Reading and writing numbers in standard form and expanded form.</li> <li>• Demonstrating understanding of equivalent representations.</li> <li>• Knowledge:</li> <li>• Understanding place value for numbers up to 10,000.</li> <li>• Recognizing the difference between standard form and expanded form.</li> <li>• Concepts:</li> <li>• The concept of equivalence in numbers.</li> <li>• Using objects or visual representations to illustrate numbers.</li> </ul>	
<b>3.N.1.a</b>	<p>Read, write, and demonstrate multiple equivalent representations for numbers up to 10,000 using objects or visual representations including standard form and expanded form.</p>		
<b>3.N.1.b</b>	<p>Represent and justify comparisons of whole numbers up to 10,000 using number lines and reasoning strategies.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying and using number lines, comparing whole</li> </ul>	

		<p>numbers, applying reasoning strategies.</p> <ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Understanding the concept of whole numbers up to 10,000, recognizing greater than, less than, and equal to relationships.</li> <li>• <b>Concepts:</b> The number line as a visual representation, the relative size of numbers, and the reasoning behind comparisons.</li> </ul>	
<p><b>3.N.2</b></p>	<p>Fractions: Students will develop understanding of fractions as numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying fractions as parts of a whole.</li> <li>• Comparing and ordering fractions.</li> <li>• Representing fractions using models (e.g., number lines, pie charts).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the numerator and denominator.</li> <li>• Recognizing equivalent fractions.</li> <li>• <b>Concepts:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Fractions represent numbers that are less than one whole.</li> <li>• Fractions can be used to describe parts of a set or group.</li> </ul>	
<p><b>3.N.2.a</b></p>	<p>Partition two-dimensional figures into equal areas and express the area of each part as a unit fraction of the whole.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Partitioning two-dimensional figures (shapes) into equal parts.</li> <li>• Understanding and expressing areas as fractions.</li> <li>• <b>Knowledge:</b></li> <li>• Concepts of area and unit fractions.</li> <li>• Recognizing different two-dimensional figures (e.g., squares, rectangles, circles).</li> <li>• <b>Concepts:</b></li> <li>• Equal partitioning means dividing a shape into parts that are the same size.</li> <li>• A unit fraction represents one part of a whole that is divided into equal parts.</li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying parts of a whole.</li> <li>• Using visual models to represent fractions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding fractions as parts of a whole.</li> <li>• Recognizing different fractions (e.g.,</li> <li>• 12</li> <li>• 2</li> <li>• 1</li> <li>• ,</li> <li>• 14</li> <li>• 4</li> <li>• 1</li> <li>• )</li> <li>• <b>Concepts:</b></li> <li>• The relationship between the numerator and denominator.</li> <li>• The concept of equivalence in fractions (e.g.,</li> <li>• 24</li> <li>• 4</li> <li>• 2</li> <li>• is equivalent to</li> </ul>	
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**3.N.2.b**

Find parts of a whole using visual fraction models.

		<ul style="list-style-type: none"> <li>• 12</li> <li>• 2</li> <li>• 1</li> <li>• )</li> </ul>	
<p><b>3.N.2.c</b></p>	<p>Represent and understand a fraction as a number on a number line.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying and plotting fractions on a number line.</li> <li>• Understanding the relationship between fractions and whole numbers.</li> <li>• <b>Knowledge:</b></li> <li>• Recognizing fractions as parts of a whole.</li> <li>• Understanding the concept of equal parts in a whole.</li> <li>• <b>Concepts:</b></li> <li>• The number line as a tool for representing numbers.</li> <li>• The placement of fractions on a number line between whole numbers.</li> </ul>	

<p><b>3.N.2.d</b></p>	<p>Show and identify equivalent fractions using visual representations including pictures, manipulatives, and number lines.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify fractions and their equivalents.</li> <li>• Use visual representations to show fractions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of fractions as parts of a whole.</li> <li>• Knowledge of equivalent fractions.</li> <li>• <b>Concepts:</b></li> <li>• Visual representation methods (pictures, manipulatives, number lines).</li> <li>• Relationships between different fractions.</li> </ul>	
<p><b>3.N.2.e</b></p>	<p>Justify whole numbers as fractions and identify fractions that are equivalent to whole numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying fractions, justifying whole numbers as fractions, understanding equivalence.</li> <li>• <b>Knowledge:</b> Understanding the concept of fractions, whole numbers, and equivalency.</li> <li>• <b>Concepts:</b> Relationship between whole numbers and</li> </ul>	

		fractions, representation of fractions.	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Comparing fractions, ordering fractions.</li> <li>• <b>Knowledge:</b> Understanding of numerators and denominators, size of fractions.</li> <li>• <b>Concepts:</b> Equivalent fractions, the relationship between fractions with the same numerator or denominator.</li> </ul>	
<b>3.N.2.f</b>	Compare and order fractions having the same numerators or denominators by reasoning about their size.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Understand and apply multiplication.</li> <li>• Recognize and use operational properties (commutative, associative, distributive).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Familiarity with multiplication facts.</li> <li>• Understanding of how to use properties to simplify calculations.</li> </ul> </li> </ul>	
<b>3.A.1</b>	Operations and Algebraic Thinking: Students will extend understanding of multiplication and apply operational properties to solve problems.		

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b></li> <li>• The relationship between multiplication and addition.</li> <li>• How to solve word problems using multiplication.</li> </ul>	
3.A.1.a	Add and subtract up to four-digit whole numbers with or without regrouping using strategies based on place value and algorithms.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Add four-digit whole numbers.</li> <li>• Subtract four-digit whole numbers.</li> <li>• Use regrouping when necessary.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of place value (thousands, hundreds, tens, ones).</li> <li>• Familiarity with addition and subtraction algorithms.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between addition and subtraction.</li> <li>• The concept of regrouping and why it is used.</li> </ul>	
3.A.1.b	Determine the reasonableness of whole number sums and differences using estimations and number sense.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Estimating sums and differences of whole numbers.</li> <li>• Using number sense to assess the reasonableness of calculations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding basic addition and subtraction of whole numbers.</li> <li>• Familiarity with rounding numbers to make estimation easier.</li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Reasonableness in mathematics.</li> </ul> </li> <li>• The role of estimation in checking calculations.</li> </ul>	
<p><b>3.A.1.c</b></p>	<p>Solve and write one-step whole number equations to represent authentic problems using the four operations including equations with an unknown start, unknown change, or unknown result.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Solve one-step equations.</li> <li>• Write equations to represent problems.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the four operations: addition, subtraction, multiplication, and division.</li> </ul>	

		<ul style="list-style-type: none"> <li>• Recognize parts of an equation (unknowns, constants).</li> <li>• <b>Concepts:</b></li> <li>• Equations can model real-life scenarios.</li> <li>• The relationship between operations and how they affect results.</li> </ul>	
<p><b>3.A.1.d</b></p>	<p>Interpret and solve two-step authentic problems involving whole numbers and the four operations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Ability to interpret problems.</li> <li>• Ability to perform two-step operations.</li> <li>• Use of mathematical operations (addition, subtraction, multiplication, division).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of whole numbers.</li> <li>• Familiarity with the four operations.</li> <li>• <b>Concepts:</b></li> <li>• Problem-solving strategies.</li> <li>• The relationship between numbers and operations.</li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Recognize and apply the commutative property.</li> <li>• Recognize and apply the associative property.</li> <li>• Recognize and apply the distributive property.</li> <li>• Understand the identity property of multiplication.</li> <li>• Understand the zero property of multiplication.</li> <li>• <b>Knowledge:</b></li> <li>• The definitions of each property.</li> <li>• The role of properties in simplifying problems.</li> <li>• <b>Concepts:</b></li> <li>• How properties can be used to make multiplication and division easier.</li> <li>• The relationship between multiplication and division.</li> </ul>	
<b>3.A.1.e</b>	Apply commutative, associative, distributive, identity, and zero properties as strategies to multiply and divide.		
<b>3.A.1.f</b>	Use drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to interpret and explain	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> </ul>	

the meaning of multiplication and division and their relationship.	<ul style="list-style-type: none"><li>• Ability to create drawings and arrays to represent multiplication and division.</li><li>• Ability to use symbols and words to explain mathematical concepts.</li><li>• Ability to perform repeated addition.</li><li>• Ability to group numbers into equal parts.</li><li>• Ability to use number lines for visual representation.</li><li>• <b>Knowledge:</b></li><li>• Understanding the concepts of multiplication and division.</li><li>• Recognizing the relationship between multiplication and division.</li><li>• Knowledge of how to represent numbers in different formats (arrays, symbols).</li><li>• <b>Concepts:</b></li><li>• The meaning of multiplication as repeated addition.</li><li>• The meaning of division as splitting into equal groups.</li></ul>	
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		<ul style="list-style-type: none"> <li>Understanding that multiplication and division are inverse operations.</li> </ul>	
<b>3.A.1.g</b>	Fluently multiply and divide within 100 using strategies based on understanding and properties of operations.	<ul style="list-style-type: none"> <li><b>Skills:</b> Fluency in multiplication and division within 100.</li> <li><b>Knowledge:</b> Understanding of the properties of operations (associative, commutative, distributive).</li> <li><b>Concepts:</b> Strategies for multiplication and division based on number relationships and properties.</li> </ul>	
<b>3.A.1.h</b>	Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of operations.	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Multiplying one-digit whole numbers (e.g., 1-9)</li> <li>Recognizing multiples of 10 (e.g., 10, 20, 30, ..., 90)</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b></li> <li>• Understanding place value (units, tens)</li> <li>• Properties of operations (commutative and associative properties)</li> <li>• <b>Concepts:</b></li> <li>• Relationships between numbers</li> <li>• Efficient multiplication strategies</li> </ul>	
Geometry		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying two-dimensional shapes, describing their attributes (sides, angles, vertices).</li> <li>• <b>Knowledge:</b> Understanding the properties of common two-dimensional shapes (triangles, squares, rectangles, circles).</li> <li>• <b>Concepts:</b> Recognition of shapes in various orientations and contexts; understanding</li> </ul>	
3.G.1	<p>Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes.</p>		

		<p>how shapes can be compared and classified based on attributes.</p>	
<p><b>3.G.1.a</b></p>	<p>Sort quadrilaterals into categories according to their attributes.</p>	<p>has the wrong code on the Standards document (3.G.1.1)</p>	
<p><b>3.G.2</b></p>	<p>Area and Perimeter: Students will recognize perimeter and area as attributes of plane figures and understand concepts of area measurement.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate the perimeter of various shapes.</li> <li>• Calculate the area of various shapes.</li> <li>• Compare and contrast area and perimeter.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the definitions of perimeter and area.</li> <li>• Recognize different plane figures (e.g., rectangles, squares, triangles).</li> <li>• <b>Concepts:</b></li> <li>• Explore the relationship between units of measurement for area and perimeter.</li> <li>• Understand how area relates to surface coverage and perimeter</li> </ul>	

		relates to distance around a shape.	
<b>3.G.2.a</b>	Solve authentic problems involving perimeters of polygons when given the side lengths or when given the perimeter and unknown side length(s).	<ul style="list-style-type: none"> <li>• Skills: Calculate the perimeter of polygons, manipulate equations to find unknown side lengths.</li> <li>• Knowledge: Understanding of what perimeter is, properties of polygons, and how to apply addition in the context of perimeter.</li> <li>• Concepts: Relationship between side lengths and perimeter, solving real-world problems.</li> </ul>	
<b>3.G.2.b</b>	Use concrete and pictorial models to measure areas in square units by counting square units.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Measuring area using square units.</li> <li>• Counting square units accurately.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the concept of area.</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• Recognizing square units (e.g., square inches, square centimeters).</li> <li>• <b>Concepts:</b></li> <li>• The relationship between concrete (physical objects) and pictorial models (drawings or diagrams) in understanding area.</li> </ul>	
<b>3.G.2.c</b>	<p>Find the area of a rectangle with whole-number side lengths by modeling with unit squares; show that area can be additive and is the same as it would be found by multiplying the side lengths.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Finding area, using unit squares, understanding multiplication as it relates to area.</li> <li>• <b>Knowledge:</b> Properties of rectangles, the concept of area, and how to model area using unit squares.</li> <li>• <b>Concepts:</b> Area as a measure of space, additive property of area, multiplication as a method to find area.</li> </ul>	
<b>3.G.3</b>	<p>Measurement: Students will use tools to solve measurement problems.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Using measurement tools (e.g., rulers, scales, measuring cups).</li> <li>• Estimating measurements.</li> <li>• Comparing and contrasting different measurements.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding units of measurement (inches, centimeters, pounds, liters).</li> <li>• Recognizing when to use different measurement tools.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between different units (e.g., converting between inches and centimeters).</li> <li>• The practical application of measurement in everyday situations.</li> </ul>	
<b>3.G.3.a</b>	<p>Identify and use the appropriate tools and units of measurement, both customary and metric, to solve authentic problems involving length, weight, mass, liquid volume, and capacity (within the same system and unit).</p>	<ul style="list-style-type: none"> <li>• Tools for measurement (rulers, scales, measuring cups, etc.)</li> <li>• Units of measurement (customary units: inches, feet, pounds; metric units: centimeters, meters, grams, liters)</li> </ul>	

		<ul style="list-style-type: none"> <li>• Types of measurements (length, weight, mass, liquid volume, capacity)</li> <li>• Authentic problems (real-life scenarios where measurement is applicable)</li> </ul>	
<b>3.G.3.b</b>	Estimate and measure length to the nearest half inch, fourth inch, and centimeter.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Estimating lengths, measuring lengths accurately.</li> <li>• <b>Knowledge:</b> Understanding of inches and centimeters, conversion between units, and how to read a ruler or measuring tape.</li> <li>• <b>Concepts:</b> The relationship between different units of measurement and the importance of precision in measuring.</li> </ul>	
<b>3.G.4</b>	Time: Students will tell time to the nearest minute and find elapsed time.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Telling time to the nearest minute.</li> <li>• Calculating elapsed time.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of analog and digital clocks.</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• Concepts of hours, minutes, and seconds.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between minutes and hours.</li> <li>• How to represent time on a clock.</li> </ul>	
<p><b>3.G.4.a</b></p>	<p>Tell and write time to the minute using both analog and digital clocks.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Reading time on analog clocks.</li> <li>• Reading time on digital clocks.</li> <li>• Writing time correctly in both formats.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the parts of an analog clock (hour hand, minute hand, clock face).</li> <li>• Knowing how to convert time from analog to digital format and vice versa.</li> <li>• <b>Concepts:</b></li> <li>• The concept of minutes and how they relate to hours.</li> <li>• The 60-minute hour and the 12-hour clock system.</li> </ul>	

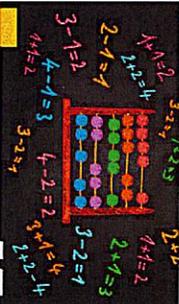
3.G.4.b	Solve authentic problems involving addition and subtraction of time intervals and find elapsed time.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Adding and subtracting time intervals.</li> <li>• Calculating elapsed time.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of time (hours, minutes).</li> <li>• Familiarity with clocks and time measurement.</li> <li>• <b>Concepts:</b></li> <li>• Relationship between hours and minutes.</li> <li>• Real-world applications of time (schedules, duration of events).</li> </ul>	
3.D.1	Data Collection: Students will formulate questions to collect, organize, and represent data.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Formulating questions</li> <li>• Collecting data</li> <li>• Organizing data</li> <li>• Representing data visually (e.g., charts, graphs)</li> <li>• <b>Knowledge:</b></li> <li>• Understanding types of data (categorical vs. numerical)</li> <li>• Familiarity with data collection methods (surveys, observations)</li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b></li> <li>• The importance of data in making decisions</li> <li>• How to interpret data representations</li> </ul>	
<b>3.D.1.a</b>	Create scaled picture graphs and scaled bar graphs to represent a data set with more than four categories, including data collected through observations, surveys, and experiments.		
<b>3.D.1.b</b>	Generate and represent data using line plots where the horizontal scale is marked off in halves and whole number units.		
<b>3.D.2</b>	Analyze Data and Interpret Results: Students will analyze the data and interpret the results.		
<b>3.D.2.a</b>	Analyze data and make simple statements using information represented in picture graphs, line plots, and bar graphs.		

# 4th Grade Math

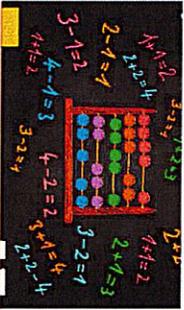
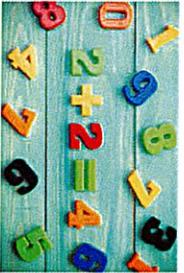
Focus:

How can we...

<p>August</p> <p><b>Topic 1</b></p> 	<p>September-November</p> <p><b>Topics 2-5</b></p> 	<p>November-December</p> <p><b>Topic 6</b></p> 	<p>December</p> <p><b>Topic 7</b></p> 
<p>THE FOCUS OF THE STORY</p> <p>In Topic 1, students expand their place value understandings from numbers to 1,000,000.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topics 2-5, students create and explore strategies for performing multi-digit calculations that involve breaking numbers apart using place value.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 6, students are introduced to multiplicative comparison situations. They use understandings of operations to solve multi-step problems.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 7, students represent, analyze, and classify numbers using understandings of multiplication.</p>
<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>

Generalize place value understanding	Fluently add/subtract multi-digit whole numbers. Use strategies and properties to multiply 1-digit and 2-digit numbers, Use strategies and properties to divide 1-digit numbers.	Use operations with whole numbers to solve problems	Factors and multiples
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## 4th Grade Math

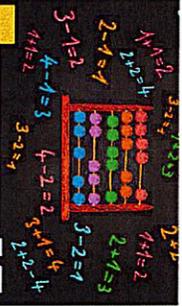
<b>January</b> <b>Topic 8</b> 	<b>January-February</b> <b>Topics 9-10</b> 	<b>February</b> <b>Topic 11</b> 	<b>March</b> <b>Topic 12</b> 
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<b>THE FOCUS OF THE STORY</b> <hr/> In topic 8, students use models and mathematical procedures to recognize, understand, and generate equivalent fractions.	<b>THE FOCUS OF THE STORY</b> <hr/> In Topics 9-10, students use their understanding of unit fractions to add and subtract fractions with like denominators and multiply a fraction by a whole number.	<b>THE FOCUS OF THE STORY</b> <hr/> In Topic 11, students represent data visually using line plots. Some data involve fractions and mixed numbers.	<b>THE FOCUS OF THE STORY</b> <hr/> In Topic 12, students learn the meaning of a decimal number by connecting to their understanding of fractions. They compare decimals using models and number sense.
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LEARNING GOALS/STANDARDS Extend understanding of fraction equivalence and ordering	LEARNING GOALS/STANDARDS Understand addition and subtraction of fractions, extend multiplication concepts to fractions	LEARNING GOALS/STANDARDS Represent and interpret data on line plots	LEARNING GOAL/STANDARDS Understand and compare decimals

**4th Grade Math**

**Focus:** How can we...

<p>March-April</p> <p>Topic 13</p> 	<p>May</p> <p>Topic 14</p> 	<p>April</p> <p>Topic 15</p> 	<p>April-May</p> <p>Topic 16</p> 
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<p>THE FOCUS OF THE STORY</p> <p>In Topic 13, students make measurement conversions</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 14, students generate and analyze patterns that grow or repeat in predictable ways.</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 15, students develop an understanding of angles. They use unit angles to measure and draw angles, and to add and</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 16, students classify 2-dimensional shapes by their sides and angles. They analyze</p>
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<p>within the same measurement system.</p>		<p>subtract angle measures.</p>	<p>and draw shapes with line symmetry.</p>
<p><b>LEARNING GOALS/STANDARDS</b> Measurement: find equivalence in units of measure</p>	<p><b>LEARNING GOALS/STANDARDS</b> Algebra: generate and analyze patterns</p>	<p><b>LEARNING GOALS/STANDARDS</b> Geometric measurement: understand concepts of angles and angle measurement</p>	<p><b>LEARNING GOALS/STANDARDS</b> Lines, angles, and shapes</p>

<b>4.A.1</b>	Operations and Algebraic Thinking: Students will extend understanding of multiplication and division and apply operational properties to solve problems involving variables.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understand and apply multiplication and division concepts.</li> <li>• Use operational properties (associative, commutative, distributive) in problem-solving.</li> <li>• Manipulate variables in mathematical expressions.</li> <li>• <b>Knowledge:</b></li> <li>• Recognize patterns and relationships in multiplication and division.</li> <li>• Understand how to represent problems with variables.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between multiplication and division.</li> <li>• The use of properties of operations to simplify calculations.</li> <li>• How to interpret and solve equations with variables.</li> </ul>
<b>4.A.1.a</b>	Add and subtract multi-digit numbers using an algorithm.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Adding multi-digit numbers.</li> <li>• Subtracting multi-digit numbers.</li> <li>• Using algorithms to perform these operations.</li> <li>• <b>Knowledge:</b></li> <li>• Place value concepts.</li> <li>• Understanding of addition and subtraction properties (commutative, associative).</li> <li>• Familiarity with standard algorithms for addition and subtraction.</li> <li>• <b>Concepts:</b></li> </ul>

		<ul style="list-style-type: none"> <li>• The relationship between addition and subtraction.</li> <li>• The importance of regrouping (carrying and borrowing) in multi-digit operations.</li> </ul>
4.A.1.b	Multiply up to a four-digit whole number by a one-digit whole number and multiply a two-digit whole number by a two-digit whole number, using strategies based on place value, properties of operations, and algorithms.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Multiply a four-digit whole number by a one-digit whole number.</li> <li>• Multiply a two-digit whole number by another two-digit whole number.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding place value.</li> <li>• Recognizing properties of operations (associative, commutative, distributive).</li> <li>• Familiarity with multiplication algorithms.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between numbers and their place values.</li> <li>• How to break down numbers for easier multiplication.</li> </ul> </li> </ul>
4.A.1.c	Divide up to a four-digit whole number by a one-digit divisor with and without a remainder using strategies based on place value.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Division of four-digit whole numbers by one-digit divisors.</li> <li>• <b>Knowledge:</b> Understanding of place value and how it relates to division.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Remainders and strategies for efficient division.</li> <li>•</li> <li>• <b>Skills:</b> Estimating products and quotients, applying number sense, and evaluating the reasonableness of answers.</li> <li>• <b>Knowledge:</b> Understanding multiplication and division concepts, knowing how to round numbers, and recognizing patterns in numbers.</li> <li>• <b>Concepts:</b> The concept of estimation, the relationship between multiplication and division, and the importance of checking work for reasonableness.</li> </ul>
<b>4.A.1.d</b>	Determine the reasonableness of whole number products and quotients using estimations and number sense.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Creating algebraic expressions and equations, using variables, representing unknown numbers.</li> <li>• <b>Knowledge:</b> Understanding of variables, basic operations (addition, subtraction, multiplication, division), and authentic mathematical situations.</li> <li>• <b>Concepts:</b> The relationship between numbers and operations, how to represent real-life situations with algebraic expressions.</li> <li>•</li> </ul>
<b>4.A.1.e</b>	Create a simple algebraic expression or equation using a variable for an unknown number to represent an authentic mathematical situation (e.g., $3 + n = 15$ , $81 \div n = 9$ ).	

<p><b>4.A.1.f</b></p>	<p>Solve one- and two-step authentic problems using the four operations including interpreting remainders and the use of a letter to represent the unknown quantity.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Apply the four operations (addition, subtraction, multiplication, division) to solve problems.</li> <li>• Interpret remainders in the context of a problem.</li> <li>• Use letters to represent unknown quantities (algebraic thinking).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the four operations and their applications.</li> <li>• Recognize what a remainder represents in division problems.</li> <li>• Grasp basic algebraic concepts, including variables.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Authentic problems that relate to real-life situations.</li> <li>• Strategies for problem-solving using multiple operations.</li> </ul> </li> </ul>
<p><b>4.G.1</b></p>	<p>Shapes and Their Attributes: Students will draw and identify lines and angles and classify shapes by properties of their lines and angles.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Drawing lines and angles</li> <li>• Identifying lines and angles in shapes</li> <li>• Classifying shapes based on properties of lines and angles</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Types of lines (straight, curved, parallel, perpendicular)</li> <li>• Types of angles (acute, right, obtuse)</li> <li>• Properties of shapes (sides, vertices, symmetry)</li> </ul> </li> <li>• <b>Concepts:</b></li> </ul>

		<ul style="list-style-type: none"> <li>• Relationships between lines and angles</li> <li>• Classification of geometric shapes (triangles, quadrilaterals, etc.)</li> <li>• Understanding how angles and lines define the characteristics of shapes</li> </ul>
<b>4.G.1.a</b>	Identify, create, and describe points, lines, line segments, rays, angles, parallel lines, perpendicular lines, and intersecting lines.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify, create, and describe geometric figures and relationships.</li> <li>• <b>Knowledge:</b> Understanding basic geometric terms and properties.</li> <li>• <b>Concepts:</b> Points, lines, line segments, rays, angles, parallel lines, perpendicular lines, intersecting lines.</li> </ul>
<b>4.G.1.b</b>	Justify the classification of angles as acute, obtuse, or right.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying and classifying angles, understanding angle measurement.</li> <li>• <b>Knowledge:</b> Definitions of acute, obtuse, and right angles.</li> <li>• <b>Concepts:</b> The properties of angles and how they relate to each other based on their measures.</li> </ul>
<b>4.G.1.c</b>	Justify the classification of two-dimensional shapes based on the presence or absence of parallel and perpendicular lines or the presence or absence of specific angles.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify parallel lines and perpendicular lines in two-dimensional shapes.</li> </ul>

		<ul style="list-style-type: none"> <li>● Recognize specific angles (like right angles).</li> <li>● Classify shapes based on the presence or absence of these attributes.</li> <li>● Knowledge:</li> <li>● Understanding what parallel and perpendicular lines are.</li> <li>● Knowledge of different types of angles (acute, obtuse, right).</li> <li>● Familiarity with various two-dimensional shapes (squares, rectangles, triangles, etc.).</li> <li>● Concepts:</li> <li>● Classification of shapes.</li> <li>● Properties of shapes related to angles and lines.</li> </ul>
<b>4.G.1.d</b>	Recognize, draw, and justify lines of symmetry in two-dimensional shapes.	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Recognizing lines of symmetry in various shapes.</li> <li>● Drawing lines of symmetry accurately on two-dimensional shapes.</li> <li>● Justifying the presence of lines of symmetry through observation and reasoning.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding what symmetry is.</li> <li>● Identifying different types of two-dimensional shapes (e.g., squares, rectangles, triangles, circles).</li> <li>● <b>Concepts:</b></li> <li>● The concept of equal halves in relation to symmetry.</li> <li>● The relationship between shapes and their lines of symmetry.</li> </ul>

<p><b>4.G.2</b></p>	<p>Measurement: Students will generate simple conversions from a larger unit to a smaller unit to solve authentic problems and measure angles.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Convert larger units of measurement to smaller units (e.g., meters to centimeters, liters to milliliters).</li> <li>• Measure angles using a protractor or other tools.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of different measurement units (e.g., length, volume).</li> <li>• Familiarity with angle measurement and the concept of degrees.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between larger and smaller units.</li> <li>• The practical application of measurement in everyday life.</li> </ul> </li> </ul>
<p><b>4.G.2.a</b></p>	<p>Identify and use the appropriate tools, operations, and units of measurement, both customary and metric, to solve authentic problems involving time, length, weight, mass, and capacity.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Identifying appropriate tools for measurement (e.g., rulers, scales, measuring cups).</li> <li>• Selecting operations (addition, subtraction, multiplication, division) to use in solving problems.</li> <li>• Converting between customary and metric units.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the different units of measurement (e.g., inches, feet, centimeters for length; ounces, pounds, grams for weight; liters, gallons for capacity).</li> <li>• Recognizing the relationships between different units (e.g., 1 foot = 12 inches).</li> </ul> </li> <li>• <b>Concepts:</b></li> </ul>

		<ul style="list-style-type: none"> <li>• The significance of measurement in everyday life.</li> <li>• The differences between customary and metric systems.</li> <li>• The importance of accuracy in measurement.</li> </ul>
<p><b>4.G.2.b</b></p>	<p>Determine the reasonableness of measurements involving time, length, weight, mass, capacity, and angles.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Reasonableness of measurements</li> <li>• Types of measurements: time, length, weight, mass, capacity, and angles</li> </ul> </li> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Evaluate the accuracy of measurements</li> <li>• Compare measurements to expected values</li> <li>• Use estimation to determine if a measurement is reasonable</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of measurement units (e.g., inches, centimeters, pounds, liters, degrees)</li> <li>• Familiarity with tools used for measurement (e.g., rulers, scales, protractors)</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Measurement concepts (e.g., converting units)</li> <li>• Real-world applications of measurements (e.g., cooking, building)</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>•</li> </ul>
<b>4.G.2.c</b>	<p>Generate simple conversions from a larger unit to a smaller unit within the customary and metric systems of measurement.</p>	<ul style="list-style-type: none"> <li>• Skills: Perform conversions between larger and smaller units, understand the relationship between different units of measurement.</li> <li>• Knowledge: Familiarity with customary units (e.g., inches, feet, yards, pounds) and metric units (e.g., millimeters, centimeters, meters, liters).</li> <li>• Concepts: Understanding that different units measure the same quantity (length, weight, volume) and how to convert between these units.</li> </ul>
<b>4.G.2.d</b>	<p>Measure angles in whole number degrees using a protractor and relate benchmark angle measurements to their rotation through a circle (e.g., <math>180^\circ = 1/2</math> of a circle).</p>	<ul style="list-style-type: none"> <li>• Skills: Measuring angles using a protractor, understanding benchmark angles, relating angles to their position in a circle.</li> <li>• Knowledge: Definition of angles, types of angles (acute, right, obtuse), the concept of a full circle (<math>360^\circ</math>), and benchmark angles (<math>90^\circ</math>, <math>180^\circ</math>, <math>270^\circ</math>).</li> <li>• Concepts: The relationship between angle measures and their rotation through a circle.</li> <li>•</li> </ul>

	<p>Recognize angle measures as additive and solve problems involving addition and subtraction to find unknown angles on a diagram.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b> <ul style="list-style-type: none"> <li>● Recognizing angle measures.</li> <li>● Adding and subtracting angles.</li> <li>● Solving for unknown angles in diagrams.</li> </ul> </li> <li>● <b>Knowledge:</b> <ul style="list-style-type: none"> <li>● Understanding what angles are and how they are measured.</li> <li>● Familiarity with different types of angles (acute, right, obtuse).</li> <li>● Ability to read and interpret diagrams.</li> </ul> </li> <li>● <b>Concepts:</b> <ul style="list-style-type: none"> <li>● The idea that angles can be combined (additive property).</li> <li>● The relationship between known and unknown angle measures.</li> </ul> </li> </ul>
<p><b>4.G.2.e</b></p>	<p>Area and Perimeter: Students will apply perimeter and area formulas for rectangles.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b> <ul style="list-style-type: none"> <li>● Calculate the perimeter of rectangles.</li> <li>● Calculate the area of rectangles.</li> <li>● Apply formulas correctly.</li> </ul> </li> <li>● <b>Knowledge:</b> <ul style="list-style-type: none"> <li>● Understand the definitions of perimeter and area.</li> <li>● Recognize the properties of rectangles.</li> </ul> </li> <li>● <b>Concepts:</b> <ul style="list-style-type: none"> <li>● Relationship between length and width in rectangles.</li> <li>● Difference between perimeter and area.</li> </ul> </li> </ul>
<p><b>4.G.3.a</b></p>	<p>Apply perimeter and area formulas for rectangles to solve authentic problems.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b> <ul style="list-style-type: none"> <li>● Calculate the perimeter of rectangles.</li> <li>● Calculate the area of rectangles.</li> </ul> </li> </ul>

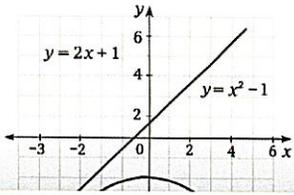
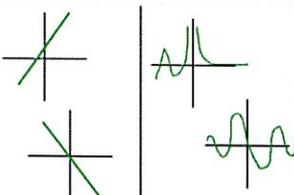
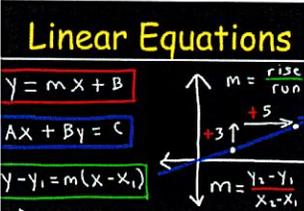
		<ul style="list-style-type: none"> <li>• Apply these calculations to real-world problems.</li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the definitions of perimeter and area.</li> <li>• Knowing the formulas for perimeter</li> <li>• <math>P=2(l+w)</math></li> <li>• <math>P=2(l+w)</math> and area</li> <li>• <math>A=l \times w</math></li> <li>• <math>A=l \times w</math> of rectangles.</li> <li>• Recognizing when to use perimeter versus area in different contexts.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between length and width in rectangles.</li> <li>• The practical applications of perimeter and area in everyday situations (e.g., fencing a yard, flooring a room).</li> </ul> </li> </ul>
<b>4.D.1</b>	Data Collection: Students will formulate questions to collect, organize, and represent data.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Formulating questions for data collection.</li> <li>• Organizing collected data effectively.</li> <li>• Representing data using various methods (graphs, charts, etc.).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding different types of data (qualitative vs. quantitative).</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• Recognizing the importance of clear and relevant questions.</li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The process of collecting data.</li> <li>• Methods of organizing and representing data visually.</li> </ul> </li> </ul>
4.D.1.a	<p>Generate and represent data using line plots where the horizontal scale is marked off in appropriate units—whole numbers, halves, fourths, or eighths.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Generating data, creating line plots, interpreting scales.</li> <li>• <b>Knowledge:</b> Understanding units of measurement (whole numbers, halves, fourths, eighths), components of line plots.</li> <li>• <b>Concepts:</b> Data representation, the importance of scale in visual data.</li> </ul>
4.D.2	<p>Analyze Data and Interpret Results: Students will analyze the data and interpret the results.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Collecting data</li> <li>• Organizing data</li> <li>• Analyzing data (finding patterns)</li> <li>• Interpreting results (making conclusions)</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding different types of data (numerical, categorical)</li> <li>• Knowing how to use charts and graphs</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Data representation</li> <li>• The process of drawing conclusions from data</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>● Importance of accuracy in data analysis</li> </ul>
<p><b>4.D.2.a</b></p>	<p>Solve authentic problems and analyze data involving addition or subtraction of fractions presented in line plots.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Adding and subtracting fractions with like denominators.</li> <li>● Interpreting line plots to extract relevant data.</li> <li>● Applying mathematical operations to solve real-world problems.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding fractions as parts of a whole.</li> <li>● Recognizing line plots as a way to display data.</li> <li>● Familiarity with the concept of addition and subtraction of fractions.</li> <li>● <b>Concepts:</b></li> <li>● The relationship between fractions and their representation in line plots.</li> <li>● Real-world applications of adding and subtracting fractions.</li> </ul>

# Algebra

Focus:

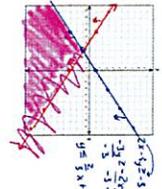
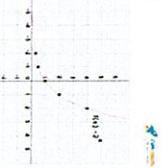
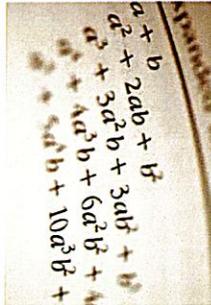
<p><b>6 Days</b></p> <p>Unit 1:</p> <p>Properties</p> <table border="0"> <tr> <td>Commutative</td> <td>Addition <math>a + b = b + a</math></td> <td>Multiplication <math>a \cdot b = b \cdot a</math></td> </tr> <tr> <td>Associative</td> <td><math>(a + b) + c = a + (b + c)</math></td> <td><math>(a \cdot b) \cdot c = a \cdot (b \cdot c)</math></td> </tr> <tr> <td>Identity</td> <td><math>a + 0 = 0 + a = a</math></td> <td><math>a \cdot 1 = 1 \cdot a = a</math></td> </tr> <tr> <td>Inverse</td> <td><math>a + (-a) = 0 = (-a) + a</math></td> <td><math>(\frac{1}{a}) \cdot a = a \cdot (\frac{1}{a}) = 1</math></td> </tr> <tr> <td>Distributive</td> <td colspan="2"><math>a(b + c) = ab + ac</math> and <math>(b + c)a = ba + ca</math></td> </tr> </table>	Commutative	Addition $a + b = b + a$	Multiplication $a \cdot b = b \cdot a$	Associative	$(a + b) + c = a + (b + c)$	$(a \cdot b) \cdot c = a \cdot (b \cdot c)$	Identity	$a + 0 = 0 + a = a$	$a \cdot 1 = 1 \cdot a = a$	Inverse	$a + (-a) = 0 = (-a) + a$	$(\frac{1}{a}) \cdot a = a \cdot (\frac{1}{a}) = 1$	Distributive	$a(b + c) = ab + ac$ and $(b + c)a = ba + ca$		<p><b>7 Days</b></p> <p>Unit 2:</p> <p><math>20x + 5 = 5x + 65</math></p> <p><math>4x + 1 = x + 13</math></p> <p><math>3x = 12</math></p>	<p><b>7 Days</b></p> <p>Unit 3:</p> 	<p><b>7 Days</b></p> <p>Unit 4:</p> 	<p><b>5 Days</b></p> <p>Unit 5:</p> 
Commutative	Addition $a + b = b + a$	Multiplication $a \cdot b = b \cdot a$																	
Associative	$(a + b) + c = a + (b + c)$	$(a \cdot b) \cdot c = a \cdot (b \cdot c)$																	
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Distributive	$a(b + c) = ab + ac$ and $(b + c)a = ba + ca$																		
<p>THE FOCUS OF THE STORY</p> <p>Properties and operations to simplify expressions</p>	<p>THE FOCUS OF THE STORY</p> <p>Solving equations and using formulas</p>	<p>THE FOCUS OF THE STORY</p> <p>Graphing and analyzing functions</p>	<p>THE FOCUS OF THE STORY</p> <p>Linear and nonlinear functions</p>	<p>THE FOCUS OF THE STORY</p> <p>Write and interpret linear equations and relationships</p>															
<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Evaluate numerical expressions using the order of operations.</li> <li>-Translate real-world scenarios into algebraic expressions.</li> <li>-Use properties of real numbers to rewrite and simplify expressions.</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>- Write and interpret one-variable equations representing real-world problems.</li> <li>-Solve one-step linear equations using inverse operations.</li> <li>-Solve multi-step equations including</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Represent relations using ordered pairs, tables, graphs, and mappings.</li> <li>-Identify functions from relations and represent using multiple formats.</li> <li>-Interpret key features of graphs including</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Graph linear functions from slope-intercept form.</li> <li>-Determine rate of change and slope from tables, graphs, and equations.</li> <li>-Write equations in slope-intercept form</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Write equations in slope-intercept form from tables, graphs, and contexts.</li> <li>-Write linear equations in standard and point-slope forms.</li> <li>-Create and interpret scatter plots; draw lines</li> </ul>															

<ul style="list-style-type: none"> <li>-Apply the distributive property and combine like terms.</li> <li>-Evaluate and interpret expressions involving absolute value.</li> <li>-Use appropriate precision in contextual problems.</li> </ul>	<p>those with parentheses and variables on both sides.</p> <ul style="list-style-type: none"> <li>-Solve equations that require moving variable terms to one side.</li> <li>-Solve and interpret absolute value equations.</li> <li>-Solve for a variable in a formula and apply to contextual problems.</li> </ul>	<p>continuity and linearity.</p> <ul style="list-style-type: none"> <li>-Analyze graphs to find intercepts and determine symmetry.</li> <li>-Identify extrema and describe end behavior of functions.</li> <li>-Sketch graphs from verbal descriptions and apply to contexts.</li> </ul>	<p>from given information.</p> <ul style="list-style-type: none"> <li>-Identify and apply transformations to linear functions.</li> <li>-Recognize and write arithmetic sequences as linear functions.</li> <li>-Interpret and graph piecewise and step functions.</li> <li>-Graph and interpret absolute value functions and their transformations.</li> </ul>	<p>of fit and informally assess fit.</p> <ul style="list-style-type: none"> <li>-Distinguish between correlation and causation in context.</li> <li>-Use technology to perform linear regression and interpret results.</li> <li>-Determine and interpret inverses of linear functions.</li> </ul>
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# Algebra

Focus:

How can we...

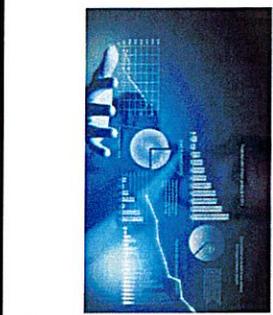
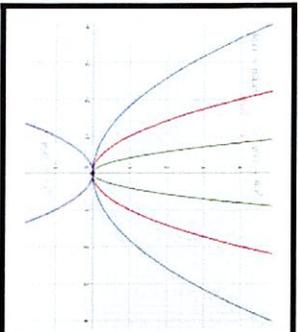
7 Days	6 Days	8 Days	7 Days	9 Days												
<p>Unit 6:</p> 	<p>Unit 7:</p> $3x - 2y > 10$ $-6x + 4y \geq 16$ $x \geq \frac{1}{3}x + \frac{16}{3}$ $y \geq \frac{3}{2}x + 4$	<p>Unit 8:</p> $a^{2m} \cdot a^m = a^{2m+m}$ $(ab)^m = a^m \cdot b^m$ $\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$ $a^0 = 1$ $a^{-m} = \frac{1}{a^m}$	<p>Unit 9:</p> <p>Graphing the function <math>h(x) = x^2</math></p> <table border="1"> <thead> <tr> <th>x</th> <th>h(x)</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td>4</td> </tr> <tr> <td>-1</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> </tr> <tr> <td>2</td> <td>4</td> </tr> </tbody> </table> 	x	h(x)	-2	4	-1	1	0	0	1	1	2	4	<p>Unit 10:</p> 
x	h(x)															
-2	4															
-1	1															
0	0															
1	1															
2	4															
<p>THE FOCUS OF THE STORY</p> <p>Solving and graphing linear inequalities</p>	<p>THE FOCUS OF THE STORY</p> <p>Solving systems of equations and inequalities.</p>	<p>THE FOCUS OF THE STORY</p> <p>Exponents, radicals, and exponential properties.</p>	<p>THE FOCUS OF THE STORY</p> <p>Exponential functions and sequences</p>	<p>THE FOCUS OF THE STORY</p> <p>Polynomial operations and factoring.</p>												
<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Solve one-step linear inequalities using inverse operations.</li> <li>-Solve multi-step linear inequalities, including those with parentheses.</li> <li>-Solve compound inequalities and represent solutions on number lines.</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Solve systems of linear equations by graphing.</li> <li>-Solve systems of equations using substitution.</li> <li>-Solve systems using elimination with addition and subtraction.</li> <li>-Solve systems using elimination with</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Apply properties of exponents to simplify expressions with like bases.</li> <li>-Simplify expressions using all properties of exponents.</li> <li>-Rewrite expressions with negative exponents as equivalent</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Identify and evaluate exponential functions in context.</li> <li>-Apply transformations to exponential functions.</li> <li>-Write exponential functions from descriptions, tables, and graphs.</li> <li>-Synthesize key features</li> </ul>	<p>LEARNING GOALS/STANDARDS</p> <ul style="list-style-type: none"> <li>-Add and subtract polynomials and identify degrees.</li> <li>-Multiply a monomial by a polynomial.</li> <li>-Multiply binomials and polynomials using the distributive property and box method.</li> <li>-Recognize and apply</li> </ul>												

<p>-Solve and graph absolute value inequalities.</p> <p>-Graph linear inequalities in two variables on the coordinate plane.</p>	<p>multiplication to align coefficients.</p> <p>-Solve systems of linear inequalities by graphing and interpret solutions.</p>	<p>expressions with positives.</p> <p>-Rewrite expressions involving rational exponents using radicals and vice versa.</p> <p>-Simplify radical expressions including variables and higher roots.</p> <p>-Simplify radical expressions including variables and higher roots.</p> <p>-Add, subtract, and multiply radical expressions.</p> <p>-Solve simple exponential equations using properties of exponents.</p>	<p>of exponential functions to model real-world scenarios.</p> <p>-Recognize and write geometric sequences and relate them to exponential functions.</p> <p>-Write and evaluate recursive formulas for geometric sequences.</p>	<p>patterns of special products (e.g., square of a binomial).</p> <p>-Use the distributive property to simplify polynomial expressions.</p> <p>-Factor trinomials of the form <math>ax^2 + bx + c</math>.</p> <p>-Factor perfect square trinomials and differences of squares.</p>
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**Algebra**

**Focus:** How can we...

<p><b>8 Days</b></p> <p>Unit 11:</p>	<p><b>6 Days</b></p> <p>Unit 12:</p>			
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THE FOCUS OF THE STORY

**Quadratic functions, solving methods, and modeling**

THE FOCUS OF THE STORY

**Statistical analysis and data interpretation**

THE FOCUS OF THE STORY

THE FOCUS OF THE STORY

THE FOCUS OF THE STORY

LEARNING GOALS/STANDARDS

- Graph quadratic functions in standard form and identify key features.
- Identify and apply transformations of quadratic functions.
- Solve quadratic equations by interpreting graphs.
- Solve quadratic equations using factoring methods.
- Solve quadratic equations using factoring methods.
- Solve quadratic equations by completing the square.

LEARNING GOALS/STANDARDS

- Calculate and interpret measures of center for one-variable data.
- Create and interpret data displays including histograms, dot plots, and box plots.
- Interpret and compare data using context.
- Calculate and interpret measures of spread, including range and interquartile range.
- Describe shape and distribution of data sets using statistical measures.
- Compare two or more data sets using

LEARNING GOALS/STANDARDS

LEARNING GOALS/STANDARDS

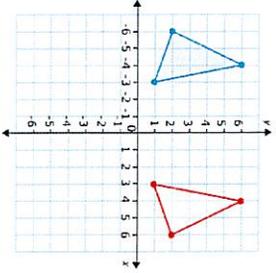
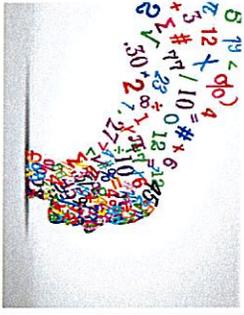
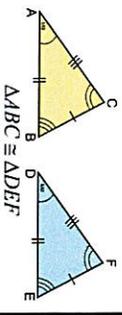
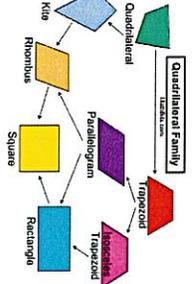
LEARNING GOALS/STANDARDS

<ul style="list-style-type: none"><li>-Use the quadratic formula to find real and complex solutions.</li><li>-Solve systems that include linear and quadratic equations graphically and algebraically.</li><li>-Use quadratic models to represent and analyze real-world data.</li><li>-Combine functions using operations and evaluate the results.</li></ul>	<p>measures of center and spread.</p> <ul style="list-style-type: none"><li>-Summarize and interpret categorical data using frequency tables and relative frequency.</li></ul>			
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# Geometry

Focus:

How can we...

<p><b>10 days</b></p> <p><b>Unit 1: Prerequisites &amp; Transformations</b></p> 	<p><b>9 days</b></p> <p><b>Unit 2: Tools of Geometry</b></p> 	<p><b>10 days</b></p> <p><b>Unit 3: Logical Arguments</b></p> 	<p><b>11 days</b></p> <p><b>Unit 4: Triangle Congruence &amp; Relationships</b></p> 	<p><b>10 Days</b></p> <p><b>Unit 5: Quadrilaterals &amp; Area</b></p> 
<p><b>THE FOCUS OF THE STORY</b></p> <p>Review basic algebra skills, such as graphing, solving equations/inequalities, simplifying square roots, and graphing transformations in the coordinate plane.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>An introduction to the basic concepts of points, lines, planes, distance, midpoint, angles, angle bisectors, perpendicular, polygons, etc.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Investigate and apply different logical thinking patterns to justify (prove) mathematical arguments.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Understand and apply properties of congruent triangles. Apply theorems to prove triangles are congruent.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Understand and apply the properties of different quadrilaterals. Compare and contrast the properties of different quadrilaterals.</p>

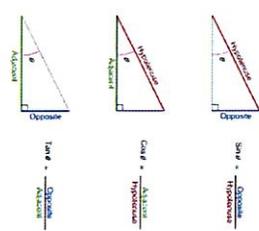
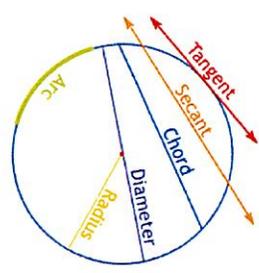
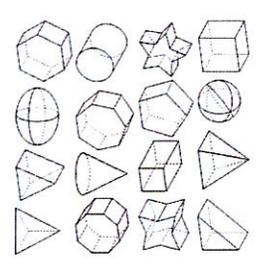
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- Choose the best unit of measure – length, capacity, mass/weight in customary or metric units.</li> <li>- Convert units of measure in the same system.</li> <li>- Convert units of measure between the customary and metric systems.</li> <li>- Use the order of operations to evaluate algebraic expressions – PEMDAS, positive/negatives, absolute value, fractions.</li> <li>- Use algebra to solve linear equations – involving variables on one or both sides of the equation, fractions, distributive property, positive/negatives.</li> <li>- Use algebra to solve linear inequalities – involving variables on one or both sides of the inequality, fractions, positive/negatives.</li> <li>- Evaluate square roots and simplify radical expressions – individual radicands, multiply two radicands, fraction as radicand, rationalizing the denominator.</li> <li>- Calculate the slope of a line.</li> <li>- Classify lines as parallel, perpendicular, or neither by comparing the equations of the lines.</li> <li>- Classify lines as parallel, perpendicular, or neither by comparing the slopes of the lines.</li> <li>- Identify rigid transformations (isometries) of reflection, translation, and rotation.</li> <li>- Calculate/determine the coordinates of the vertices of</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- Name and graph points in the coordinate plane.</li> <li>- Identify and model points, lines, and planes. (symbolism)</li> <li>- Identify intersecting lines and planes.</li> <li>- Identify segments.</li> <li>- Calculate with lengths. (create equations)</li> <li>- Find the distance between two points on a number line and on a coordinate plane. (distance formula)</li> <li>- Use the Pythagorean Theorem to find unknown lengths.</li> <li>- Calculate with lengths related to a midpoint and a segment bisector. (create equations)</li> <li>- Find the midpoint of a segment on a number line and on a coordinate plane. (midpoint formula)</li> <li>- Identify rays and opposite rays.</li> <li>- Measure and classify angles. (use protractor, terminology)</li> <li>- Identify and use congruent angles.</li> <li>- Use the bisector of an angle to find angle measures. (create equations)</li> <li>- Identify and use special pairs of angles. (adjacent, linear pair, vertical, complementary, supplementary)</li> <li>- Identify perpendicular lines.</li> <li>- Identify, describe, and name polygons. (terminology)</li> <li>- Find perimeter, circumference, and area of two-dimensional figures. (formulas)</li> <li>- Find probabilities by using</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- Write and analyze conjectures by using inductive reasoning. (picture patterns, number patterns)</li> <li>- Disprove conjectures by using counterexamples.</li> <li>- Write the negation of a statement.</li> <li>- Write compound statements (conjunction, disjunction) and determine truth values of compound statements (and, or)</li> <li>- Write conditional statements and determine the truth values of conditional statements.</li> <li>- Identify the hypothesis and conclusion of a conditional statement.</li> <li>- Write the converse, inverse, and contrapositive of a conditional statement.</li> <li>- Determine logically equivalent statements.</li> <li>- Write a biconditional statement and determine the truth value.</li> <li>- Determine the type of reasoning (inductive vs. deductive)</li> <li>- Use the Law of Detachment.</li> <li>- Use the Law of Syllogism.</li> <li>- Analyze figures to identify and use postulates about points, lines, and planes.</li> <li>- Create an algebraic proof and justify each step. (properties)</li> <li>- Identify the properties of reflexive, symmetric, and transitive (equality or congruence)</li> <li>- Analyze and construct viable arguments in several proof formats.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- Apply the Triangle Angle-Sum Theorem.</li> <li>- Apply the Exterior Angle Theorem.</li> <li>- Apply the Third Angles Theorem.</li> <li>- Name and use corresponding parts of congruent polygons.</li> <li>- Prove triangles congruent using the definition of congruence.</li> <li>- CPCTC</li> <li>- Use the SSS Postulate to test for triangle congruence.</li> <li>- Use the SAS Postulate to test for triangle congruence.</li> <li>- Use the SSS or SAS Postulate to prove triangles congruent.</li> <li>- Use ASA or AAS to test for triangle congruence.</li> <li>- Use the ASA Postulate to prove triangles congruent.</li> <li>- Use the AAS Theorem to prove triangles congruent.</li> <li>- Use LL, HA, LA, and HL Theorems to identify and prove right triangles congruent.</li> <li>- Use properties of isosceles triangles.</li> <li>- Use properties of equilateral triangles.</li> <li>- Identify and use perpendicular bisectors in triangles. (circumcenter)</li> <li>- Identify and use angle bisectors in triangles. (incenter)</li> <li>- Identify and use medians in triangles. (centroid)</li> <li>- Identify and use altitudes in triangles. (orthocenter)</li> <li>- Recognize and apply properties of inequalities to</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- Find and use the sum of the measures of the interior angles of a polygon.</li> <li>- Find and use the sum of the measures of the exterior angles of a polygon.</li> <li>- Find the measure of each interior or exterior angle of a regular polygon.</li> <li>- Find the number of sides on a regular polygon, given the interior or exterior angle.</li> <li>- Recognize and apply the properties of the sides and angles of parallelograms.</li> <li>- Recognize and apply the properties of the diagonals of parallelograms.</li> <li>- Write proofs when given parallelograms.</li> <li>- Recognize the conditions that ensure a quadrilateral is a parallelogram.</li> <li>- Prove that a set of points forms a parallelogram in the coordinate plane. (slope, distance)</li> <li>- Recognize and apply properties of rectangles. (sides, diagonals, angles)</li> <li>- Determine whether parallelograms are rectangles, including coordinate geometry.</li> <li>- Recognize and apply the properties of rhombi. (sides, diagonals, angles)</li> <li>- Recognize and apply the properties of squares. (both rectangle and rhombus)</li> <li>- Determine whether quadrilaterals are rectangles, rhombi, or squares, including coordinate geometry.</li> <li>- Recognize and apply properties of trapezoids and</li> </ul>
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<p>images after reflections, translations, and rotations given the coordinates of the preimage.</p> <ul style="list-style-type: none"> <li>- Given a geometric figure and a reflection, draw the transformed figure.</li> <li>- Describe the effects of reflections on the coordinate plane – identify the line of reflection.</li> <li>- Given a geometric figure and a translation, draw the transformed figure in the coordinate plane—translation could be given by translation vector notation or coordinate notation.</li> <li>- Given a geometric figure and an angle of rotation, draw the transformed figure in the coordinate plane.</li> <li>- Draw glide reflections and other compositions of isometries in the coordinate plane.</li> <li>- Draw compositions of reflections in parallel lines in the coordinate plane.</li> <li>- Use line symmetry to describe the reflections that carry a figure onto itself—determine the number of lines of symmetry.</li> <li>- Use rotational symmetry to describe the rotations that carry a figure onto itself – describe order of symmetry and magnitude of symmetry.</li> </ul>	<p>length, area, and angles.</p> <ul style="list-style-type: none"> <li>- Constructions: congruent segments, bisect a segment/midpoint, congruent angles, bisect an angle</li> </ul>	<ul style="list-style-type: none"> <li>- Write (or complete) proofs involving segment addition or segment congruence.</li> <li>- Write (or complete) proofs involving supplementary, complementary, congruent, and right angles.</li> <li>- Find angle measures by applying the Angle Addition Postulate.</li> <li>- Find angle measures involving supplementary and complementary angles, congruent and right angles, linear pairs and vertical angles.</li> <li>- Name angle pairs formed by lines and transversals.</li> <li>- Use theorems to determine the relationships between specific pairs of angles.</li> <li>- Find the angle measures in diagrams with parallel lines and transversals.</li> <li>- Identify parallel lines, skew lines, and parallel planes.</li> <li>- Recognize angle pairs that occur creating parallel lines. (converse postulate/theorems)</li> <li>- Find the value that will make two lines parallel and identify the postulate or theorem used.</li> </ul>	<p>the relationships between the angles and sides of a triangle.</p> <ul style="list-style-type: none"> <li>- Use the Triangle Inequality Theorem to identify possible triangles.</li> <li>- Use the Converse of the Pythagorean Theorem and the Pythagorean Inequality Theorems to classify triangles as right, acute or obtuse.</li> <li>- Apply the Hinge Theorem or its converse to make comparisons in two triangles.</li> </ul>	<p>isosceles trapezoids.</p> <ul style="list-style-type: none"> <li>- Apply properties of the midsegment of a trapezoid.</li> <li>- Recognize and apply properties of kites.</li> <li>- Find perimeters and areas of parallelograms.</li> <li>- Find perimeters and areas of triangles.</li> <li>- Use the Pythagorean Theorem to find missing measurements.</li> <li>- Find areas of trapezoids.</li> <li>- Find areas of rhombi and kites.</li> <li>- Find perimeters and areas of squares.</li> <li>- Find perimeters and areas of rectangles.</li> </ul>
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# Geometry

Focus:

How can we...

<p><b>11 Days</b></p> <p><b>Unit 6: Similarity &amp; Trigonometric Ratios</b></p> 	<p><b>9 days</b></p> <p><b>Unit 7: Circles &amp; Areas</b></p> 	<p><b>9 days</b></p> <p><b>Unit 8: 3-D Solids</b></p> 	<p><b>THE FOCUS OF THE STORY</b></p> <p>Understand and apply properties of similar polygons. Know the difference between congruence and similarity. Apply trigonometric ratios in right triangles to find missing measures.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Understand and apply properties of circles to find missing measures.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Understand and apply properties of 3-D solids, including calculating surface area and volume.</p>		
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LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS		
<ul style="list-style-type: none"> <li>- Draw dilations.</li> <li>- Draw dilations in the coordinate plane.</li> <li>- Determine the scale factor of a dilation drawing.</li> <li>- Use the definition of similarity to identify similar polygons.</li> <li>- Use the definition of similar polygons to list congruent angles and proportional sides.</li> <li>- Solve problems by using the properties of similar polygons to find side lengths and angle measures.</li> <li>- Find the perimeter of similar polygons.</li> <li>- Use the AA similarity criterion to determine/prove similar triangles.</li> <li>- Solve problems by using the properties of similar triangles, including shadows.</li> <li>- Use the SSS similarity criterion to determine similar triangles.</li> <li>- Use the SAS similarity criterion to determine similar triangles.</li> <li>- Use proportional parts within triangles to find missing lengths or determine whether a line is parallel to a side of the triangle.</li> <li>- Use proportional parts with parallel lines to find missing lengths.</li> <li>- Recognize and use proportional relationships of corresponding segments of similar triangles, i.e. altitudes, medians, angle bisector lengths</li> <li>- Use the Triangle Angle Bisector Theorem.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify and use parts of circles.</li> <li>- Solve problems involving the circumference of a circle.</li> <li>- Identify central angles, major arcs, minor arcs, and semicircles, and find their measures.</li> <li>- Find arc lengths.</li> <li>- Recognize and use relationships between arcs and chords.</li> <li>- Recognize and use relationships between arcs, chords, and diameters.</li> <li>- Find the lengths of segments on intersecting chords.</li> <li>- Find measures of inscribed angles.</li> <li>- Find measures of angles of inscribed polygons.</li> <li>- Use properties of tangents.</li> <li>- Solve problems involving circumscribed polygons.</li> <li>- Find measures of angles formed by lines intersecting on or inside a circle.</li> <li>- Find measures of angles formed by lines intersecting outside the circle.</li> <li>- Write the equation of a circle.</li> <li>- Graph a circle on the coordinate plane.</li> <li>- Find the areas of circles.</li> <li>- Find areas of sectors of circles.</li> <li>- Find areas of regular polygons.</li> <li>- Find areas of composite figures.</li> </ul>	<ul style="list-style-type: none"> <li>- Identify and name three-dimensional figures.</li> <li>- Identify polyhedra.</li> <li>- Determine the number of vertices, faces, and edges of a polyhedron.</li> <li>- Identify three-dimensional figures from two-dimensional nets.</li> <li>- Find surface areas of prisms and cylinders.</li> <li>- Find surface areas of pyramids and cones.</li> <li>- Identify cross sections of three-dimensional figures.</li> <li>- Identify solids of revolution.</li> <li>- Calculate distance and midpoint in a three-dimensional space.</li> <li>- Find volumes of prisms.</li> <li>- Find volumes of cylinders.</li> <li>- Find volumes of pyramids.</li> <li>- Find volumes of cones.</li> <li>- Find surface areas of spheres and hemispheres.</li> <li>- Find volumes of spheres and hemispheres.</li> <li>- Find the surface area and volume of combination solids.</li> <li>- Identify similar solids.</li> <li>- Find surface areas, volumes, and linear measurements of similar solids by using scale factor ratios.</li> <li>- Compute the density of a solid.</li> </ul>		

<ul style="list-style-type: none"><li>- Find the geometric mean between two numbers.</li><li>- Use the Pythagorean Theorem.</li><li>- Identify and use Pythagorean Triples.</li><li>- Use the properties of <math>45^\circ</math>-<math>45^\circ</math>-<math>90^\circ</math> triangles to determine side lengths.</li><li>- Use the properties of <math>30^\circ</math>-<math>60^\circ</math>-<math>90^\circ</math> triangles to determine side lengths.</li><li>- Find trigonometric ratios using right triangles.</li><li>- Determine the fractional form for trigonometric ratios involving special right triangles.</li><li>- Use trigonometric ratios to find angle measures in right triangles.</li><li>- Solve a right triangle by finding all side lengths and all angle measures.</li><li>- Solve problems involving angles of elevation and depression.</li><li>- Use angles of elevation and depression to find the distance between two objects.</li><li>- Find areas of similar figures by using scale factors.</li></ul>				
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# Intermediate Algebra

Focus:

How can we...

Week 1 - 2

Chapter 1  
Basic Concepts



THE FOCUS OF THE STORY

Chapter 1 begins with looking at the basic sets of numbers and explores the union and intersection of sets. It then goes into evaluating absolute values and adding, subtracting, multiplying and dividing real numbers. The chapter then goes into exponents and all the rules for exponents with multiply, dividing, and things like power to a power. Finally, the chapter concludes with writing numbers in scientific notation and

Week 3 - 4

Chapter 2  
Equations and Inequalities



THE FOCUS OF THE STORY

Chapter 2 begins by exploring the properties of reflexive, symmetric, and transitive and then extending these concepts into solving equations and inequalities and eventually for variables. It also includes verbal and algebraic expressions and concepts of the idea of solutions on a number line, in interval notation, or solution set form. It then extends to more complicated concepts of compound inequalities and

Week 5 - 6

Chapter 3  
Graphs and Functions

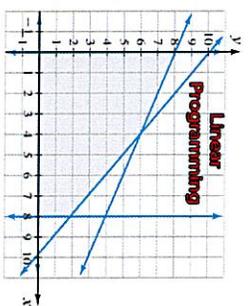


THE FOCUS OF THE STORY

Chapter 3 focuses on graphing by starting with plotting points, to understanding functions, to graphing lines. It then goes into slope and writing equations in slope-intercept for and point-slope form. It examines the differences between parallel and perpendicular and then students learn about the sum, difference, product, and quotient of functions. Finally, the chapter concludes with graphing

Week 7 - 8

Chapter 4  
Systems of Equations and Inequalities

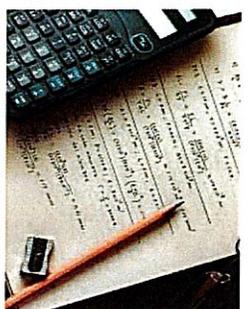


THE FOCUS OF THE STORY

Chapter 4 is all about solving systems of equations. It starts by solving algebraically, and then using the substitution and elimination method before moving to more advanced three variable systems. Students learn to then apply these skills to real world application like story problems. Next the chapter shifts to solve using augmented matrices and then using Cramer's Rule and the determinant of matrices to help solve

Week 9 - 10

Mid-Term Review  
& Final

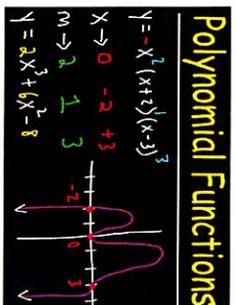
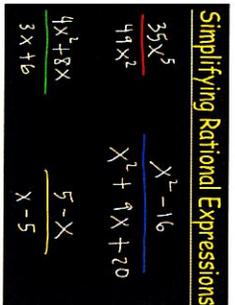
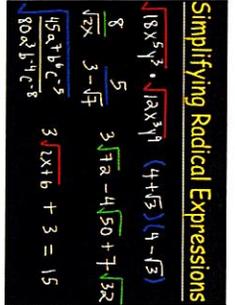
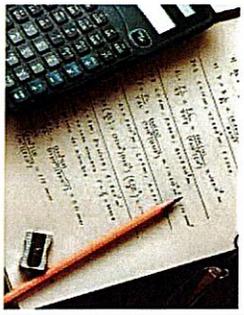


THE FOCUS OF THE STORY

Review key algebra concepts from the first half of the course, including basic concepts like exponents and combining like terms, solving equations and inequalities, graphing lines and writing equations in slope-intercept form, and solving systems of equations. The goal of the mid-term is to review and strengthen your understanding of both foundational and advanced skills to prepare for the

<p>solving problems using scientific notation.</p>	<p>solving equations and inequalities that include absolute values.</p>	<p>linear inequalities in two variables.</p>	<p>systems of equations. Finally, the chapter explores systems of inequalities with shading and applying this to linear programming problems.</p>	<p>second half of the class and Algebra II.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Identify sets.</li> <li>* Identify and use inequalities.</li> <li>* Use set builder notation.</li> <li>* Find the union and intersection of sets.</li> <li>* Identify important sets of numbers.</li> <li>* Evaluate absolute values.</li> <li>* Add, Subtract, Multiply, and Divide real numbers.</li> <li>* Use the properties of real numbers.</li> <li>* Evaluate exponential expressions.</li> <li>* Evaluate square and higher roots.</li> <li>* Evaluate expressions using the order of operations.</li> <li>* Evaluate expressions containing variables.</li> <li>* Use the product and quotient rule for exponents.</li> <li>* Use the zero exponent and</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Identify the reflexive, symmetric, and transitive properties.</li> <li>* Combine like terms.</li> <li>* Solve linear equations.</li> <li>* Solve equations containing fractions.</li> <li>* Identify conditional equations, contradictions, and identities.</li> <li>* Understand the concepts to solve equations and use the problem solving procedure.</li> <li>* Solve for a variable in an equation or formula.</li> <li>* Translate a verbal statement into an algebraic expression or equation.</li> <li>* Solve inequalities.</li> <li>* Graph solutions to inequalities on a number line, interval notation, and solution sets.</li> <li>* Solve compound inequalities involving <i>and</i> and <i>or</i>.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Plot points in the Cartesian coordinate system.</li> <li>* Draw graphs by plotting points.</li> <li>* Graph nonlinear equations.</li> <li>* Interpret graphs.</li> <li>* Understand relations.</li> <li>* Recognize functions.</li> <li>* Use the vertical line test.</li> <li>* Understand function notation.</li> <li>* Applications of functions in daily life.</li> <li>* Graph linear functions.</li> <li>* Graph linear functions using intercepts.</li> <li>* Graph equations of the form <math>x = a</math> and <math>y = b</math>.</li> <li>* Study applications of functions.</li> <li>* Understand translations of graphs.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Solve systems of linear equations graphically.</li> <li>* Solve systems of linear equations by substitution.</li> <li>* Solve systems of linear equations using the addition method.</li> <li>* Solve systems of linear equations in three variables.</li> <li>* Recognize inconsistent and dependent systems.</li> <li>* Use systems of equations to solve applications.</li> <li>* Use linear systems in three variables to solve applications.</li> <li>* Write an augmented matrix.</li> <li>* Evaluate the determinant of a <math>2 \times 2</math> matrix.</li> <li>* Use Cramer's rule.</li> <li>* Evaluate the determinant of a <math>3 \times 3</math> matrix.</li> <li>* Use Cramer's rule with systems in three variables.</li> <li>* Solve systems of linear</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p>

<p>negative exponent rule.</p> <ul style="list-style-type: none"> <li>* Use the exponent rule of power to a power, product to a power, and quotient to a power.</li> <li>* Write numbers in scientific notation.</li> <li>* Change numbers in scientific notation to decimal form.</li> <li>* Use scientific notation in problem solving.</li> </ul>				
		<ul style="list-style-type: none"> <li>* Understand absolute value on the number line.</li> <li>* Solve equations of the form <math> x  = a</math> and <math> x  &lt; a</math>, when <math>a &gt; 0</math></li> <li>* Solve inequalities of the form <math> x  &lt; a</math> or <math> x  &gt; a</math>, <math>a &lt; 0</math>.</li> <li>* Solve inequalities of the form <math> x  &lt; 0</math>, <math> x  \leq 0</math>, <math> x  &gt; 0</math>, or <math> x  \geq 0</math>.</li> <li>* Solve equations of the form <math> x  =  y </math>.</li> </ul>		
		<ul style="list-style-type: none"> <li>* Determine the slope of a line.</li> <li>* Recognize slope as a rate of change.</li> <li>* Write linear equations in slope-intercept form.</li> <li>* Graph linear equations using the slope and the y-intercept.</li> <li>* Use the slope-intercept form to construct models from graphs.</li> <li>* Understand the point-slope form of a linear equation.</li> <li>* Use the point-slope form to construct models from graphs.</li> <li>* Recognize parallel and perpendicular lines.</li> <li>* Determine the sum, difference, product, and quotient of functions.</li> <li>* Graph the sum of functions.</li> <li>* Graph linear inequalities in two variables.</li> </ul>		
				<p>inequalities.</p> <ul style="list-style-type: none"> <li>* Graph linear programming constraints.</li> <li>* Solve systems of linear inequalities containing absolute value.</li> </ul>

<p><b>Week 11 - 12</b></p> <p>Chapter 5 Polynomials and Polynomial Functions</p>	<p><b>Polynomial Functions</b></p> 
<p><b>Week 13 - 14</b></p> <p>Chapter 6 Rational Expressions and Equations</p>	<p><b>Simplifying Rational Expressions</b></p> 
<p><b>Week 15 - 17</b></p> <p>Chapter 7 Roots, Radicals, and Complex Numbers</p>	<p><b>Simplifying Radical Expressions</b></p> 
<p><b>Week 18</b></p> <p>Chapter 8 Quadratic Functions</p>	<p><b>THE QUADRATIC FORMULA</b></p> <p>If <math>ax^2 + bx + c = 0</math> with <math>a \neq 0</math></p> <p>then <math>x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}</math></p> <p><b>DISCRIMINANT</b></p> <p><math>\Rightarrow b^2 - 4ac &gt; 0</math> two real solutions  <math>\Rightarrow b^2 - 4ac = 0</math> one real solution  <math>\Rightarrow b^2 - 4ac &lt; 0</math> zero real solutions</p>
<p><b>Week 19</b></p> <p>Mid-Term Review &amp; Final</p>	
<p><b>THE FOCUS OF THE STORY</b></p>	<p>Chapter 5 focuses on polynomials and begins by finding the degree and evaluating polynomials before shifting to adding and subtracting polynomials. Students then learn how to multiply polynomials and then divide polynomials using synthetic division. Finally, the chapter allows students to learn all the factoring techniques of polynomials and then apply these skills to solve equations.</p>
<p><b>THE FOCUS OF THE STORY</b></p>	<p>Chapter 6 analyzes rational functions and begins with simplifying rational expressions and then multiplying and dividing rational expressions. Then students learn how to combine rational expressions with like denominators before learning how to find the least common denominator to combine rational expressions and simplifying complex fractions. Finally, students apply these skills to learn how to solve rational equations and real world problems.</p>
<p><b>THE FOCUS OF THE STORY</b></p>	<p>Chapter 7 begins by evaluating radical expressions like square and cube roots and then moves into rewriting as exponents or in radical form. Students then learn to apply exponent rules to simplify expressions before adding, subtracting, and multiplying radicals. When students learn to divide radicals, then learn key skills with rationalizing the denominator. Students then learn to apply the skills in the chapter to solve radical equation. Finally, students learn all about complex numbers and how to add, subtract,</p>
<p><b>THE FOCUS OF THE STORY</b></p>	<p>Chapter 8 focuses on solving quadratic equations and begins with using the square root property. Students then learn how to complete the square and then use the quadratic formula to solve quadratic equations. Finally, students use the skills in the chapter to solve real world problems that deal with quadratic equations.</p>
<p><b>THE FOCUS OF THE STORY</b></p>	<p>Review key algebra concepts from the second half of the course, including simplifying polynomial expressions, simplifying rational expressions and solving rational equations, simplifying radical expressions and learning to rationalize the denominator, and solving quadratic equations. The goal of the mid-term is to review and strengthen your understanding of both foundational and advanced skills to prepare for Algebra II.</p>

		multiply, and divide complex numbers.	
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LEARNING GOAL/STANDARDS	LEARNING GOAL/STANDARDS	LEARNING GOAL/STANDARDS	LEARNING GOAL/STANDARDS	LEARNING GOAL/STANDARDS
<ul style="list-style-type: none"> <li>* Find the degree of a polynomial.</li> <li>* Evaluate polynomial functions.</li> <li>* Understand graphs of polynomial functions.</li> <li>* Add and subtract polynomials.</li> <li>* Multiply a monomial by a polynomial.</li> <li>* Multiply a binomial by a binomial.</li> <li>* Multiply a polynomial by a polynomial.</li> <li>* Determine the square of a binomial.</li> <li>* Determine the product of the sum and difference of the same two terms.</li> <li>* Determine the product of polynomial functions.</li> <li>* Divide a polynomial by a monomial and binomial</li> <li>* Divide polynomials using synthetic division.</li> <li>* Use the Remainder Theorem.</li> </ul>	<ul style="list-style-type: none"> <li>* Determine the domains of rational functions.</li> <li>* Simplify rational expressions.</li> <li>* Multiply and divide rational expressions.</li> <li>* Add and subtract expressions with a common denominator.</li> <li>* Determine the least common denominator (LCD).</li> <li>* Add and subtract expressions with different denominators.</li> <li>* Study an application of rational expressions.</li> <li>* Recognize complex fractions.</li> <li>* Simplify complex fractions by multiplying by the LCD.</li> <li>* Simplify complex fractions by simplifying the numerator and denominator.</li> <li>* Solve rational equations.</li> <li>* Solve proportions.</li> <li>* Solve problems involving rational functions.</li> </ul>	<ul style="list-style-type: none"> <li>* Determine square and cube roots.</li> <li>* Understand odd and even roots.</li> <li>* Evaluate radicals using absolute value.</li> <li>* Change a radical expression to an exponential expression.</li> <li>* Simplify radical expressions.</li> <li>* Apply the rules of exponents to rational and negative exponents.</li> <li>* Understand perfect powers.</li> <li>* Simplify radicals using the product and quotient rule for radicals.</li> <li>* Add, subtract, and multiply radicals.</li> <li>* Rationalize denominators and by using the conjugate.</li> <li>* Understand when a radical is simplified.</li> <li>* Divide radical expressions with different indices.</li> <li>* Solve equations containing one radical and two radicals.</li> </ul>	<ul style="list-style-type: none"> <li>* Use the square root property to solve equations.</li> <li>* Understand perfect square trinomials.</li> <li>* Solve quadratic equations by completing the square.</li> <li>* Use the quadratic formula to solve equations.</li> <li>* Determine a quadratic equation given its solutions.</li> <li>* Use the discriminant to determine the number of real solutions to a quadratic equation.</li> <li>* Study applications that use quadratic equations.</li> </ul>	

<ul style="list-style-type: none"> <li>* Determine the greatest common factor.</li> <li>* Factor a monomial from a polynomial.</li> <li>* Factor out a common factor.</li> <li>* Factor by grouping.</li> <li>* Factor trinomials of the form <math>x^2 + bx + c</math>.</li> <li>* Factor trinomials of the form <math>ax^2 + bx + c</math>.</li> <li>* Factor the difference of two squares.</li> <li>* Factor perfect square trinomials.</li> <li>* Factor the sum and difference of two cubes.</li> <li>* Factor polynomials using a combination of techniques.</li> <li>* Use the zero-factor property to solve equations.</li> <li>* Use factoring to solve equations.</li> <li>* Use factoring to solve applications.</li> <li>* Use factoring to find the x-intercepts of a quadratic function.</li> </ul>	<ul style="list-style-type: none"> <li>* Solve applications using rational expressions.</li> <li>* Solve for a variable in a formula containing rational expressions.</li> <li>* Solve work, number, and motion problems.</li> </ul>	<ul style="list-style-type: none"> <li>* Solve equations containing two radical terms and a nonradical term.</li> <li>* Solve applications using radical equations.</li> <li>* Solve for a variable in a radicand.</li> <li>* Recognize a complex number.</li> <li>* Add, subtract, multiply, and divide complex numbers.</li> <li>* Find powers of <math>i</math>.</li> </ul>		
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# Algebra II

Focus:

How can we...

Algebra II			
Focus:		How can we...	
<p><b>Week 1</b></p> <p>Review of Algebra I</p>	<p><b>Week 2 - 3</b></p> <p>Module 1 Relations &amp; Functions</p>	<p><b>Week 4 - 5</b></p> <p>Module 2 Linear Equations, Inequalities, and Systems</p>	<p><b>Week 6</b></p> <p>Matrix Module</p>
<p><b>Week 7 - 8</b></p> <p>Module 3 Quadratic Functions</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Explore the world of quadratic functions and equations by learning how to graph, factor, and solve them using multiple methods. Investigate the role of complex numbers, complete the square, and use the quadratic formula and discriminant to find solutions. Apply these skills to solve</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Strengthen algebra skills by solving linear and absolute value equations and inequalities. Explore equations of linear functions, arithmetic sequences, and systems of equations through both graphical and algebraic methods. Dive into systems of inequalities, linear</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Work with matrices to organize and solve mathematical problems. Practice adding, subtracting, and multiplying matrices, applying scalar multiplication, and using matrices to solve systems of equations with methods like Cramer's Rule.</p>
<p><b>THE FOCUS OF THE STORY</b></p> <p>Review key Algebra 1 concepts, such as identifying domain and range, using the distributive property, performing operations with polynomials, factoring expressions, applying congruency and the Pythagorean Theorem, and analyzing data using measures of center and standard</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Explore the foundational concepts of functions and relations, including analyzing graphs, identifying continuity, intercepts, and symmetry. Examine extrema and end behavior, sketch and compare graphs, and graph linear functions and inequalities. Work with special functions</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>THE FOCUS OF THE STORY</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>THE FOCUS OF THE STORY</p>

**Algebra**  
 standard  
 exponential  
 inequality  
 formula  
 operations  
 slope  
 linear  
 rational  
 y-intercept  
 quadratic  
 binomial  
**Review**

**Relations and Functions**

**LINEAR EQUATIONS**

**Cramer's Rule - 3x3**

$$\begin{matrix} a_1x + b_1y + c_1z = d_1 \\ a_2x + b_2y + c_2z = d_2 \\ a_3x + b_3y + c_3z = d_3 \end{matrix} \quad D = \begin{vmatrix} a_1 & b_1 & c_1 \\ a_2 & b_2 & c_2 \\ a_3 & b_3 & c_3 \end{vmatrix}$$

$$x = \frac{D_x}{D} \quad y = \frac{D_y}{D} \quad z = \frac{D_z}{D}$$

**Graphing Quadratic Functions**

$$y = x^2 + 6x + 3$$

$$0 = (x+3)(x-1)$$

$x = -3$   
 $x = 1$

$R(-1, 2)$   
 $\Delta(-6, 9)$

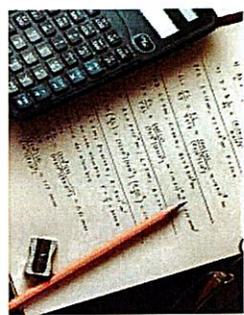
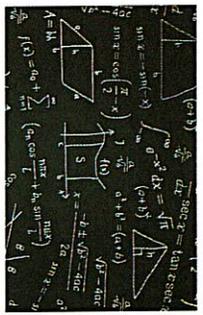
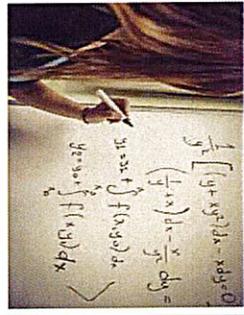
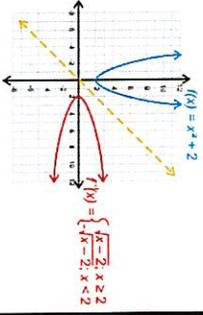
$x = 2$

<p>deviation. Distinguish between relations and functions using various representations.</p>	<p>like piecewise-defined functions, and apply transformations to functions using tables, graphs, and technology.</p>	<p>programming, and systems in three variables, and learn to solve absolute value equations by graphing.</p>		<p>quadratic inequalities and systems involving linear and quadratic functions.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Identify the domain and range of a function or relation.</p> <p>Use the distributive property to simplify algebraic expressions.</p> <p>Perform operations (add, subtract, multiply) with polynomials.</p> <p>Factor expressions using a variety of methods (e.g., GCF, trinomials, difference of squares).</p> <p>Understand and apply the concept of congruency in geometric contexts.</p> <p>Use the Pythagorean Theorem to find missing side lengths in right triangles.</p> <p>Calculate and interpret measures of center: mean, median, mode, and range.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Analyze functions graphically and describe their key features.</p> <p>Define and distinguish between functions and relations.</p> <p>Identify and interpret intercepts, symmetry, and continuity in graphs.</p> <p>Determine extrema and describe end behavior of linear and quadratic functions.</p> <p>Use technology to compare and sketch graphs of functions.</p> <p>Graph linear functions and inequalities, including shading solution sets.</p> <p>Use tables to graph piecewise functions and analyze their behavior.</p> <p>Apply transformations to</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Solve linear equations and inequalities and compare their solutions.</p> <p>Solve absolute value equations and inequalities algebraically and graphically.</p> <p>Write and interpret equations of linear functions, including arithmetic sequences.</p> <p>Solve systems of linear equations using graphing and algebraic techniques (substitution and elimination).</p> <p>Solve and graph systems of inequalities and identify feasible regions.</p> <p>Apply linear programming methods to find optimal solutions.</p> <p>Solve systems of equations in</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Add and subtract matrices of the same dimensions.</p> <p>Multiply matrices when dimensions are compatible.</p> <p>Apply scalar multiplication to a matrix.</p> <p>Use matrices to represent and solve systems of equations.</p> <p>Apply Cramer's Rule to solve systems of linear equations using determinants.</p> <p>Interpret real-world situations using matrix operations.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Graph quadratic functions and identify key features such as vertex, axis of symmetry, and direction of opening.</p> <p>Solve quadratic equations by graphing and interpreting the roots.</p> <p>Understand and operate with complex numbers, including imaginary units.</p> <p>Solve quadratic equations using factoring, completing the square, and the quadratic formula.</p> <p>Use the discriminant to determine the number and type of solutions.</p> <p>Solve quadratic inequalities and represent their solutions graphically.</p> <p>Solve systems involving both linear and quadratic equations.</p>

Understand and compute standard deviation. Distinguish between relations and functions using sets, graphs, and mappings.	functions and predict how graphs will change.	three variables and interpret their solutions in three dimensions. Use technology and graphs to support problem-solving with systems and absolute value equations.	Apply multiple solution strategies to quadratic equations in real-world contexts.
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# Algebra II

**Focus:** How can we...

<b>Week 9</b> Probability Module 	<b>Week 10</b> Mid-Term Review & Final 	<b>Week 11</b> Module 4 Polynomials and Polynomials Functions 	<b>Week 12 - 13</b> Module 5 Polynomial Equations 	<b>Week 14</b> Module 6 Inverse and Radical Functions 
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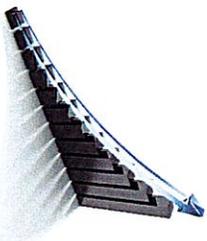
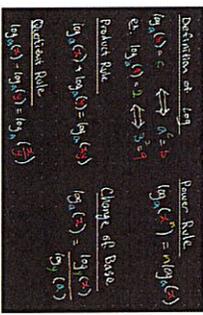
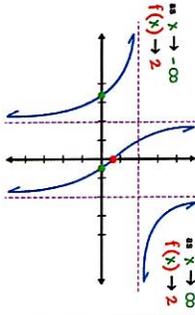
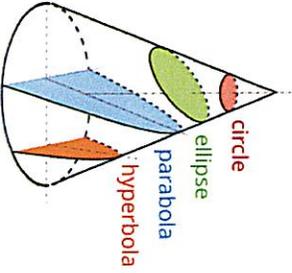
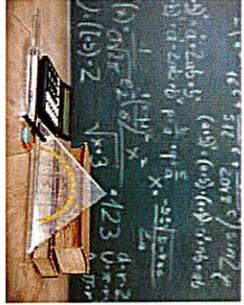
THE FOCUS OF THE STORY Explore the basics of probability, including how to count	THE FOCUS OF THE STORY Review key algebra and probability concepts from the	THE FOCUS OF THE STORY Explore polynomial functions by identifying key features, performing	THE FOCUS OF THE STORY Build on your understanding of polynomials by solving polynomial	THE FOCUS OF THE STORY Extend your understanding of functions by exploring operations on
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<p>outcomes using the fundamental counting principle. Understand the difference between independent events, and learn when to use permutations or combinations. Use addition and multiplication rules to calculate probabilities and interpret odds in real-world situations.</p>	<p>first half of the course, including functions, systems of equations, matrices, quadratics, and probability. Revisit topics like graphing, solving equations, factoring, matrix operations, and analyzing data. Strengthen your understanding of both foundational and advanced skills to prepare for the midterm exam.</p>	<p>operations, and analyzing their graphs. Learn how to multiply and divide polynomials, expand binomials, and recognize the behavior of power functions. Build fluency in simplifying and interpreting polynomial expressions in a variety of forms.</p>	<p>equations through graphing and algebraic methods. Explore how to prove polynomial identities, apply the Remainder and Factor Theorems, and find the roots and zeros of polynomial functions to deepen your problem-solving toolkit.</p>	<p>functions, inverse relations, and rational exponents. Learn to work with radical expressions and graph radical functions. Apply your knowledge to solve radical equations and connect algebraic concepts to real-world problem solving.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Apply the fundamental counting principle to determine total outcomes.</p> <p>Distinguish between independent and dependent events.</p> <p>Use permutations and combinations to count possible outcomes.</p> <p>Calculate probabilities using addition and multiplication rules.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Review and reinforce understanding of functions, relations, and transformations.</p> <p>Solve linear, absolute value, and quadratic equations using multiple methods.</p> <p>Graph and interpret linear, quadratic, and piecewise functions and inequalities.</p> <p>Perform matrix operations including addition, subtraction, multiplication, and use Cramer's Rule to</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Identify and describe the characteristics of polynomial and power functions.</p> <p>Analyze and interpret the graphs of polynomial functions.</p> <p>Perform operations with polynomials, including addition, subtraction, and multiplication.</p> <p>Divide polynomials using long division and algebra tiles.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Solve polynomial equations by graphing and interpreting their solutions.</p> <p>Solve polynomial equations algebraically using factoring and other techniques.</p> <p>Prove and apply polynomial identities in problem-solving contexts.</p> <p>Use the Remainder Theorem to evaluate polynomials.</p> <p>Apply the Factor Theorem to</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Perform operations on functions, including addition, subtraction, multiplication, and division.</p> <p>Identify and find inverse relations and functions.</p> <p>Simplify and evaluate expressions with rational exponents and <math>n</math>th roots.</p> <p>Graph and analyze radical functions, including square root and cube root functions.</p>

Interpret and compute the odds of an event occurring. Solve real-world problems involving probability and counting methods.	solve systems. Solve systems of equations and inequalities, including those in three variables. Apply probability rules and counting strategies to real-world problems. Demonstrate mastery of key algebraic skills and concepts in preparation for the midterm assessment.	Expand powers of binomials using the Binomial Theorem or patterns. Model real-world situations using polynomial expressions and equations.	determine if a binomial is a factor of a polynomial. Identify and interpret the roots and zeros of polynomial functions, including multiplicity. Connect solutions of polynomial equations to their graphs.	Simplify radical expressions using properties of radicals. Solve radical equations and check for extraneous solutions. Use technology to support graphing and analyzing function behavior.
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# Algebra II

**Focus:** How can we...

<p><b>Week 15 - 16</b></p> <p>Module 7</p> <p>Exponential Functions</p> 	<p><b>Week 17</b></p> <p>Module 8</p> <p>Logarithmic Functions</p> 	<p><b>Week 18</b></p> <p>Module 9</p> <p>Rational Functions</p> 	<p><b>Week 19</b></p> <p>Conic Sections Module</p> 	<p><b>Week 20</b></p> <p>Semester Final</p> 
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THE FOCUS OF THE STORY				
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<p>Explore exponential functions by learning how to graph them, solve equations and inequalities, and model real-world data. Investigate special exponential functions involving the number <math>e</math>, and understand geometric sequences and series, including how to find the sum of a finite geometric series.</p>	<p>Discover the power of logarithms and how they connect to exponential functions. Learn how to evaluate, transform, and apply properties of logarithms, including common and natural logarithms. Use these tools to solve real-world problems and model data with exponential and logarithmic functions.</p>	<p>Work with rational expressions and functions by learning how to simplify, multiply, divide, add, and subtract them. Explore how to graph reciprocal and rational functions, understand variation, and solve rational equations and inequalities with real-world applications.</p>	<p>Explore the geometry of conic sections by working with distance and midpoint formulas, and analyzing equations of circles, parabolas, ellipses, and hyperbolas. Learn to rewrite equations into standard form, graph each conic, and determine the type of conic section represented by a given equation.</p>	<p>Review major algebraic and geometric concepts from the second half of the semester, including polynomial functions, radicals, exponentials, logarithms, rational expressions, and conic sections. Reflect on the different ways equations can model real-world behavior and how graphs reveal important patterns. Prepare to demonstrate a comprehensive understanding of advanced algebra skills through problem solving, graphing, and equation analysis.</p>
<p><b>LEARNING GOAL/STANDARDS</b></p> <p>Graph exponential functions and describe their growth or decay behavior.</p> <p>Solve exponential equations and inequalities algebraically and with technology.</p>	<p><b>LEARNING GOAL/STANDARDS</b></p> <p>Define and evaluate logarithmic functions and their relationship to exponentials.</p> <p>Apply transformations to logarithmic functions and interpret their graphs.</p>	<p><b>LEARNING GOAL/STANDARDS</b></p> <p>Multiply and divide rational expressions and simplify complex fractions.</p> <p>Add and subtract rational expressions using common</p>	<p><b>LEARNING GOAL/STANDARDS</b></p> <p>Use the distance and midpoint formulas to analyze relationships in the coordinate plane.</p> <p>Identify and graph circles, parabolas, ellipses, and</p>	<p><b>LEARNING GOAL/STANDARDS</b></p> <p>Analyze, perform operations on, and solve polynomial functions and equations.</p> <p>Simplify and solve radical expressions and equations.</p>

<p>Understand and apply the value of <math>e</math> in exponential functions.</p> <p>Identify and use explicit and recursive formulas for geometric sequences.</p> <p>Find the sum of a finite geometric series.</p> <p>Model real-world situations involving exponential growth and decay.</p> <p>Interpret exponential models in context and analyze their long-term behavior.</p>	<p>Use properties of logarithms to simplify expressions and solve equations.</p> <p>Work with common logarithms (base 10) and natural logarithms (base <math>e</math>).</p> <p>Analyze real-world data using scatter plots and logarithmic models.</p> <p>Solve problems using both exponential and logarithmic equations in applied contexts.</p>	<p>and least common denominators.</p> <p>Graph and analyze reciprocal functions, including transformations and asymptotes.</p> <p>Graph rational functions and interpret their key features such as holes, asymptotes, and intercepts.</p> <p>Understand and apply concepts of direct, inverse, and joint variation.</p> <p>Solve rational equations and inequalities and identify restrictions on the domain.</p> <p>Apply rational expressions and equations to model and solve real-world problems.</p>	<p>hyperbolas.</p> <p>Rewrite conic section equations into standard form by completing the square.</p> <p>Determine the type of conic section from its equation.</p> <p>Understand key features of conic sections, including center, vertex, focus, axis of symmetry, and directrix where applicable.</p> <p>Solve real-world and mathematical problems involving conic sections.</p>	<p>Graph and solve exponential and logarithmic functions using properties and inverse relationships.</p> <p>Model real-world situations with exponential growth, decay, and logarithmic functions.</p> <p>Perform operations with rational expressions and solve rational equations and inequalities.</p> <p>Graph and identify conic sections (circles, parabolas, ellipses, hyperbolas) from equations and rewrite them in standard form.</p> <p>Synthesize algebraic techniques and graphing skills to interpret and solve a variety of complex problems.</p>
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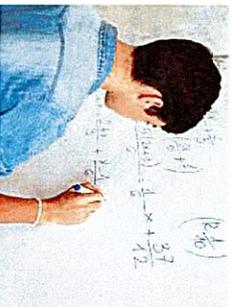
# College Algebra

Focus:

How can we...

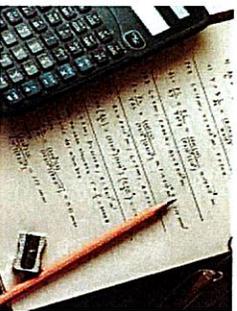
1-2 Weeks

Unit 1: Equations and Inequalities



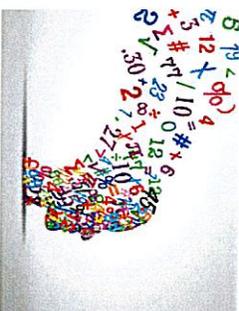
1-2 Weeks

Unit 2: Graphs



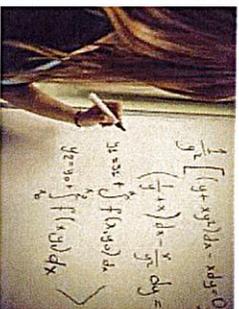
1-2 Weeks

Unit 3: Functions and Their Graphs



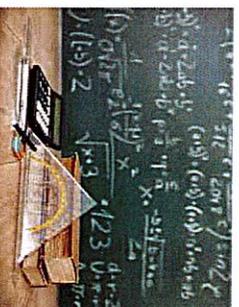
1 Week

Unit 4: Linear and Quadratic Functions



1-2 Weeks

Unit 5: Polynomial and Rational Functions



## THE FOCUS OF THE STORY

In this course, I will develop the ability to solve linear equations and strengthen my understanding of quadratic equations by using methods such as factoring, completing the square, and applying the quadratic formula. I will also learn to factor all types of polynomials efficiently. Additionally, I will work on solving equations that involve radicals, as well as inequalities and equations that include absolute value. These skills will build a strong foundation for more advanced algebraic concepts.

## THE FOCUS OF THE STORY

In this unit, I will use the distance and midpoint formulas to analyze relationships between points in the coordinate plane. I will graph equations by plotting points, find intercepts from both graphs and equations, and test equations for symmetry. I will calculate and interpret the slope of a line, write equations of lines, and accurately graph them. Additionally, I will write and work with the equation of a circle in standard form and use that to graph circles effectively.

## THE FOCUS OF THE STORY

In this unit, I will determine whether a relation represents a function and find the value of a function. I will perform operations with functions, including forming the sum, difference, product, and quotient of two functions. I will identify the graph of a function and extract key information from it. Additionally, I will classify functions as even or odd using both their graphs and equations. I will use graphs to locate maximum and minimum values as well as identify intervals where the function is increasing or decreasing. I will also identify and graph a variety of

## THE FOCUS OF THE STORY

In this unit, I will identify and graph linear functions, determining whether each function is increasing, decreasing, or constant. I will also draw and interpret scatter diagrams to analyze relationships between variables and use a graphing utility to find the line of best fit. In addition to working with linear functions, I will graph quadratic functions and identify their key features. I will also learn how to build quadratic models based on given data and verbal descriptions, helping to connect mathematical concepts to real-world

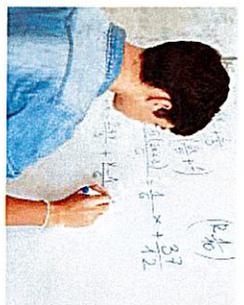
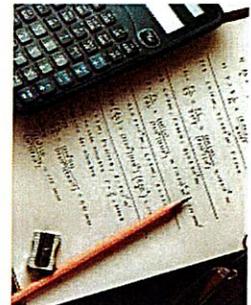
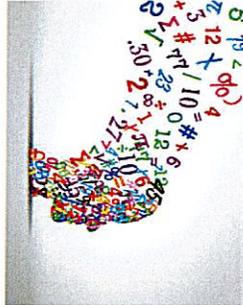
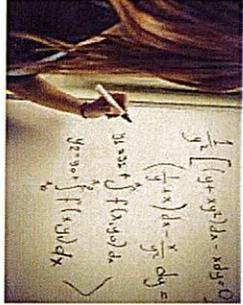
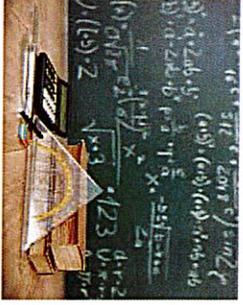
## THE FOCUS OF THE STORY

I will identify and graph polynomial functions, paying close attention to their degree, and analyze their graphs to understand their behavior. I will solve polynomial equations by applying various properties and theorems related to polynomials. Using the Conjugate Pairs Theorem, I will find polynomial functions that have specific zeros. Additionally, I will determine the domain, vertical asymptotes, and horizontal asymptotes of rational functions. Finally, I will analyze the graphs of rational functions to interpret their characteristics and behavior.

		<p>functions, including piecewise-defined functions. Finally, I will graph functions using transformations such as vertical and horizontal shifts, compressions, stretches, and reflections across the x-axis and y-axis.</p>	<p>applications.</p>	
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will solve linear equations.</li> <li>- I will solve quadratic equations by factoring, completing the square, and using quadratic formula</li> <li>- I will factor all polynomials</li> <li>- I will solve equations dealing with radicals.</li> <li>- I will solve inequalities and equations with absolute value.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will use the distance and midpoint formulas.</li> <li>- I will graph equations by plotting points. I will find intercepts from a graph and an equation.</li> <li>- I will test an equation for symmetry.</li> <li>- I will calculate and interpret the slope of a line.</li> <li>- I will write equations of line and graph lines.</li> <li>- I will write and work with the equation of a circle in standard form.</li> <li>- I will graph a circle.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will determine whether a relation represents a function.</li> <li>- I will find the value of a function. I will form sum, difference, product, and quotient of two functions.</li> <li>- I will identify the graph of a function and obtain information from the graph.</li> <li>- I will identify even and odd functions from both a graph and equation.</li> <li>- I will use a graph to locate max and mins, increasing and decreasing intervals.</li> <li>- I will identify and graph a variety of functions including piecewise functions.</li> <li>- I will graph functions using vertical and horizontal shifts, compressions and stretches, and reflections about the x-axis and y-axis.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will identify and graph linear functions.</li> <li>- I will determine whether a linear function is increasing, decreasing, or constant.</li> <li>- I will draw and interpret scatter diagrams.</li> <li>- I will use a graphing utility to find the line of best fit.</li> <li>- I will graph and identify features of quadratic functions.</li> <li>- I will build quadratic models from data and verbal descriptions.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will identify and graph polynomial functions and their degree.</li> <li>- I will analyze the graph of polynomial functions.</li> <li>- I will solve polynomial equations by using various properties and theorems of polynomials.</li> <li>- I will use the Conjugate Pairs Theorem to find a polynomial functions with specific zeros.</li> <li>- I will find the domain, vertical asymptotes, horizontal asymptotes of rational functions.</li> <li>- I will analyze the graphs of rational functions.</li> </ul>

**College Algebra**

**Focus:**      **How can we...**

<p><b>2 Weeks</b></p> <p><b>Unit 6: Exponential and Logarithmic Functions</b></p> 	<p><b>3 Weeks / Quarter 2</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 3</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 4</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 4</b></p> <p>Title of Lesson Here:</p> 
<p><b>THE FOCUS OF THE STORY</b></p> <p>I will form composite functions and determine their domains. I will find the inverses of functions and identify whether a function is one-to-one. I will evaluate, graph, and solve exponential functions. Using the definition of a logarithm, I will convert between exponential and logarithmic statements. Additionally, I will evaluate, solve, and graph logarithmic functions. I will also work with the properties of logarithms and solve both logarithmic and exponential equations.</p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>- I will form a composite function and find the domain</p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>

of a composite function.  
 - I will find inverses of functions and determine whether the function is One-to-One.  
 - I will evaluate, graph, and solve exponential functions.  
 - I will use the definition of a logarithm to change exponential statements to logarithmic statements and vice versa.  
 - I will evaluate, solve, and graph logarithmic functions.  
 - I will work with properties of logarithms.  
 - I will solve logarithmic and exponential equations.



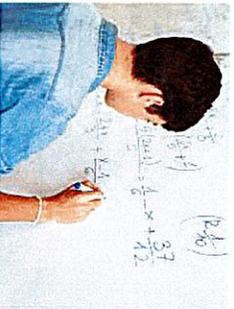
# College Algebra

Focus:

How can we...

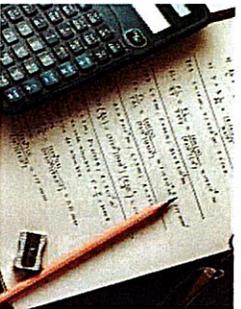
3 Weeks / Quarter 1

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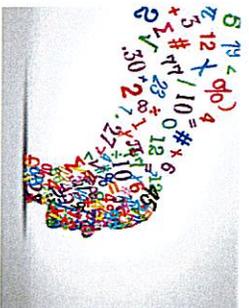
3 Weeks / Quarter 2

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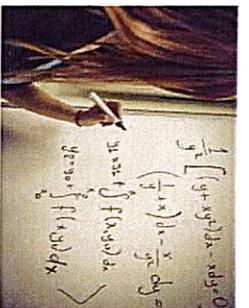
3 Weeks / Quarter 3

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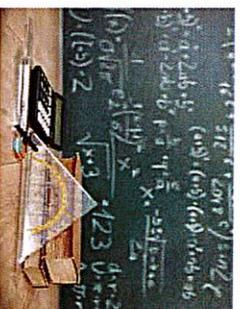
3 Weeks / Quarter 4

Title of Lesson Here:



3 Weeks / Quarter 4

Title of Lesson Here:



THE FOCUS OF THE STORY

LEARNING GOAL/STANDARDS				

# Data Analysis

Focus:

How can we...

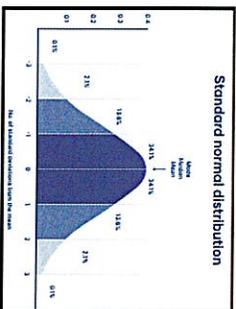
Week 1 - 2

Unit 1  
Part I  
Data Analysis



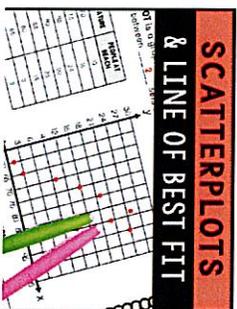
Week 3

Unit 1  
Part II  
Modeling Distributions  
of Quantitative Data



Week 4

Unit 2  
Exploring Two-Variable  
Data



Week 5 - 6

Unit 3  
Collecting Data



Week 7 - 8

Unit 4  
Part I  
Probability



## THE FOCUS OF THE STORY

Unit 1 presents the principles and tools of basic data analysis. We introduce categorical and quantitative variables and the idea of a distribution, and then summarize the distribution of a categorical variable with a frequency table. We then graph and describe the distribution of a categorical variable and compare the distribution of a categorical variable between groups. Finally, the unit focuses on graphing and summarizing

## THE FOCUS OF THE STORY

Unit 1 Part II continues exploring distributions of quantitative variables. It focuses on ways to describe an individual's position within a distribution. We begin by learning two different ways to measure an individual's location in a distribution: percentiles and standardized scores (z-scores). This leads to a discussion of how various transformations affect the characteristics of a distribution. Then we turn

## THE FOCUS OF THE STORY

Unit 2 explores relationships between two categorical variables. We use two-way tables to summarize the data and bar graphs to display the relationship between these variables visually. We then consider relationships between two quantitative variables and use a scatterplot to display the relationship between two variables, correlation to measure the strength and direction of a linear association, and a

## THE FOCUS OF THE STORY

Unit 3 introduces the difference between a population and a sample and how observational studies and experiments differ. Then it teaches the techniques and concepts behind random sampling and surveys and the different methods for sampling. Samples that are not chosen by a chance process are often prone to bias. Two sampling methods that are usually biased are convenience samples and voluntary

## THE FOCUS OF THE STORY

Unit 4 Part I explores the idea of probability. It includes the law of large numbers and the process for running a simulation. It then goes into the basics of probability which includes sample space, finding a probability and the complement. It also discusses the inclusive and mutually exclusive events and the general addition rule for both scenarios. Two-way tables

<p>distributions of a single quantitative variable.</p>	<p>our attention to distributions of quantitative variables that are mound-shaped, symmetric, and have a single peak. These distributions can often be modeled by a special mathematical curve called a normal curve. We learn how to use normal curves to find position values by looking at areas under a normal curve. Then, we'll reverse the process: given areas under normal curves, the corresponding values in the distribution can be identified.</p>	<p>least-squares regression line to model a linear relationship. Finally, we consider departures from linearity and look at curved relationships.</p>	<p>response samples. Other issues with bias include undercoverage, nonresponse and consistently underestimate or overestimate the value we want to know. Finally, this unit establishes the principles and practices of good statistical experiments such as creating groups as similar as possible and using control variables or control groups. This unit also discusses the use of placebos or blocking and the concept of blind or double-blind in an experiment and concludes with ethical issues related to collecting data.</p>	<p>to display the sample space and Venn diagrams are helpful ways to organize information and calculate probabilities. Finally, this unit discusses conditional probabilities in which an event has already occurred and how tree diagrams are best when the problem describes a random process with multiple stages. It also explains independent events when using the multiplication rule for multiple events.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Identify the individuals and variables in a set of data, and classify the variables as categorical or quantitative.</li> <li>* Make and interpret a frequency table or a relative distribution of data.</li> <li>* Make and interpret bar graphs of categorical data.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Calculate and interpret a percentile in a distribution of quantitative data.</li> <li>* Calculate and interpret a standardized score (z-score) in a distribution of quantitative data.</li> <li>* Use percentiles or standardized scores (z-scores) to compare the relative positions of individual</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Identify the explanatory and response variables in a given setting.</li> <li>* Calculate statistics for two categorical variables.</li> <li>* Display the relationship between two categorical variables.</li> <li>* Describe the relationship between two categorical</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Identify the population and sample in a statistical study.</li> <li>* Distinguish between an observational study and an experiment.</li> <li>* Determine what inferences are appropriate from an observational study.</li> <li>* Describe how to select a simple random sample.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Interpret probability as a long-run relative frequency.</li> <li>* Estimate probabilities using simulation.</li> <li>* Give a probability model for a random process with equally likely outcomes and use it to find the probability of an event.</li> <li>* Calculate probabilities using</li> </ul>

<ul style="list-style-type: none"> <li>* Compare distributions of categorical data.</li> <li>* Identify what makes some graphs of categorical data misleading.</li> <li>* Make and interpret dotplots of quantitative data.</li> <li>* Describe the shape of a distribution of quantitative data.</li> <li>* Describe the distribution of a quantitative variable.</li> <li>* Compare distributions of quantitative data.</li> <li>* Make and interpret stemplots of quantitative data.</li> <li>* Make and interpret histograms of quantitative data.</li> <li>* Find the median of a distribution of quantitative data.</li> <li>* Calculate the mean of a distribution of quantitative data.</li> <li>* Find the range of a distribution of quantitative data.</li> </ul>	<ul style="list-style-type: none"> <li>* Use a cumulative relative frequency graph to estimate percentiles and individual values in a distribution of quantitative data.</li> <li>* Analyze the effect of adding, subtracting, multiplying by, or dividing by a constant on the shape, center, and variability of a distribution of quantitative data.</li> <li>* Calculate and interpret a percentile in a distribution of quantitative data.</li> <li>* Calculate and interpret a standardized score (<math>z</math>-score) in a distribution of quantitative data.</li> <li>* Use percentiles or standardized scores (<math>z</math>-scores) to compare the relative positions of individual values in distributions of quantitative data.</li> <li>* Use a cumulative relative frequency graph to estimate percentiles and individual values in a distribution of quantitative data.</li> <li>* Analyze the effect of adding, subtracting, multiplying by, or dividing by a constant on the shape, center, and variability</li> </ul>	<ul style="list-style-type: none"> <li>variables.</li> <li>* Make a scatterplot to display the relationship between two quantitative variables.</li> <li>* Describe the direction, form, and strength of a relationship displayed in a scatterplot and identify unusual features.</li> <li>* Interpret the correlation for a linear relationship between two quantitative variables.</li> <li>* Distinguish correlation from causation.</li> <li>* Calculate the correlation for a linear relationship between two quantitative variables.</li> <li>* Make a scatterplot to display the relationship between two quantitative variables.</li> <li>* Describe the direction, form, and strength of a relationship displayed in a scatterplot and identify unusual features.</li> <li>* Interpret the correlation for a linear relationship between two quantitative variables.</li> <li>* Distinguish correlation from causation.</li> <li>* Calculate the correlation for a linear relationship between two quantitative variables.</li> </ul>	<ul style="list-style-type: none"> <li>* Describe other random sampling methods: stratified, cluster, systematic; explain the advantages and disadvantages of each method.</li> <li>* Identify voluntary response sampling and convenience sampling, and explain how these sampling methods can lead to bias.</li> <li>* Explain how undercoverage, nonresponse, question wording, and other aspects of a sample survey can lead to bias.</li> <li>* Explain the concept of confounding and how it limits the ability to make cause-and-effect conclusions.</li> <li>* Identify the experimental units and treatments in an experiment.</li> <li>* Explain the purpose of a control group in an experiment.</li> <li>* Describe the placebo effect and explain the purpose of blinding in an experiment.</li> <li>* Describe how to randomly assign treatments in an experiment and explain the purpose of random assignment.</li> </ul>	<ul style="list-style-type: none"> <li>the complement rule.</li> <li>* Use the addition rule for mutually exclusive events to find probabilities.</li> <li>* Use a two-way table to find probabilities.</li> <li>* Calculate probabilities with the general addition rule.</li> <li>* Give a probability model for a random process with equally likely outcomes and use it to find the probability of an event.</li> <li>* Calculate probabilities using the complement rule.</li> <li>* Use the addition rule for mutually exclusive events to find probabilities.</li> <li>* Use a two-way table to find probabilities. Calculate probabilities with the general addition rule.</li> </ul>
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<ul style="list-style-type: none"> <li>* Calculate and interpret the standard deviation of a distribution of quantitative data.</li> <li>* Find the interquartile range (IQR) of a distribution of quantitative data.</li> <li>* Choose appropriate measures of center and variability to summarize a distribution of quantitative data.</li> <li>* Identify outliers in a distribution of quantitative data.</li> <li>* Make and interpret boxplots of quantitative data.</li> <li>* Use boxplots and summary statistics to compare distributions of quantitative data.</li> </ul>	<p>of a distribution of quantitative data.</p>	<ul style="list-style-type: none"> <li>* Make a scatterplot to display the relationship between two quantitative variables.</li> <li>* Describe the direction, form, and strength of a relationship displayed in a scatterplot and identify unusual features.</li> <li>* Interpret the correlation for a linear relationship between two quantitative variables.</li> <li>* Distinguish correlation from causation.</li> <li>* Calculate the correlation for a linear relationship between two quantitative variables.</li> </ul>	<ul style="list-style-type: none"> <li>* Explain the purpose of controlling other variables in an experiment.</li> <li>* Describe a randomized block design for an experiment and explain the benefits of blocking in an experiment.</li> <li>* Describe a matched pairs design for an experiment.</li> <li>* Explain the meaning of statistically significant in the context of an experiment.</li> <li>* Identify when it is appropriate to make an inference about a population and when it is appropriate to make an inference about cause and effect.</li> </ul>	
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**Week 9**

**Unit 4  
Part II  
Random Variables and  
Probability Distributions**



**Binomial Distribution**  
*(Discrete -  $n$  trials -  $0$  to  $n$  trials)*

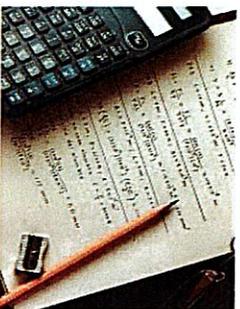
The likelihood of observing a certain outcome when performing a series of tests for which there are only two possible outcomes, such as getting heads or tails in a coin toss.

**THE FOCUS OF THE STORY**

Unit 4 Part II explores the probability distribution of a random variable and describes its possible values and their probabilities. It focuses on discrete and continuous and finding the shape, center, and variability of a probability distribution. Later in the unit, students learn how linear transformations of a random variable affect the shape, center, and variability of its probability distribution. Finally, this unit discusses two common types of discrete random variables: binomial and geometric. Binomial random variables count the

**Week 10**

**Review & Mid-Term  
Final**



**THE FOCUS OF THE STORY**

Review key concepts from the first half of the course like summarizing data into tables and graphs and finding key features of quantitative data like mean, median, standard deviation and position. Students need to understand Normal distribution and solve problems using normal distribution with z scores. Students also learned about two variable data and scatter plots and finding the correlation coefficient and line of best fit. Next, students should know how to survey, experiment, and collect data. Finally, students should have a good

number of successes in a fixed number of trials ( $n$ ) of the same random process, whereas geometric random variables count the number of trials needed to get one success.

understanding of probability and use two-way tables, venn diagrams, and binomial and geometric probabilities to solve problems. All of these skills will be helpful for taking AP Statistics at a later time.

**LEARNING GOALS/STANDARDS**

\* Calculate probabilities involving a discrete random variable.

\* Display the probability distribution of a discrete random variable with a histogram and describe its shape.

\* Calculate and interpret the mean, or expected value, of a discrete random variable.

\* Calculate and interpret the standard deviation of a discrete random variable.

\* Calculate probabilities involving a discrete random variable.

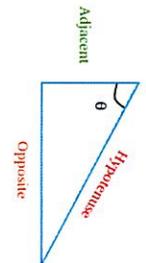
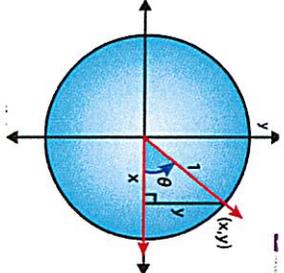
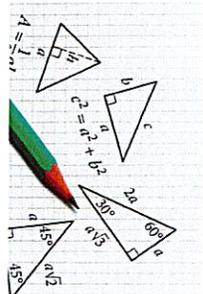
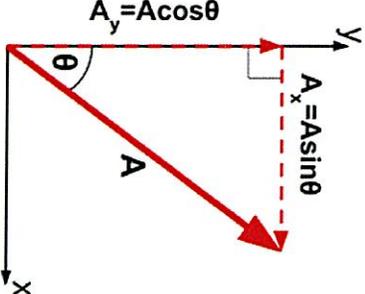
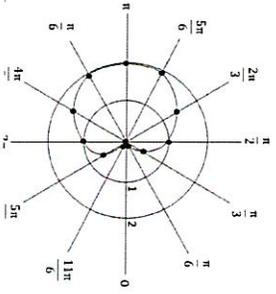
\* Display the probability distribution of a discrete random variable with a

<p>histogram and describe its shape.</p> <ul style="list-style-type: none"><li>* Calculate and interpret the mean, or expected value, of a discrete random variable.</li><li>* Calculate and interpret the standard deviation of a discrete random variable.</li><li>* Calculate probabilities involving a discrete random variable.</li><li>* Display the probability distribution of a discrete random variable with a histogram and describe its shape.</li><li>* Calculate and interpret the mean, or expected value, of a discrete random variable.</li><li>* Calculate and interpret the standard deviation of a discrete random variable.</li></ul>				
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# Trigonometry

**Focus:**

How can we...

<p><b>Weeks 1-3</b></p> <p>Foundations of Trigonometry</p> 	<p><b>Weeks 4-5</b></p> <p>Graphing Sinusoidal Functions</p> 	<p><b>Weeks 6-7</b></p> <p>Solving Non-Right Triangles</p> 	<p><b>Weeks 8-9</b></p> <p>Analytic Trigonometry and Vectors</p> 	<p><b>Week 10</b></p> <p>Polar Graph</p> 
<p>THE FOCUS OF THE STORY</p> <p>Explore the foundations of trigonometry through the right triangle approach. Learn how to represent angles in both degrees and radians, convert between decimal</p>	<p>THE FOCUS OF THE STORY</p> <p>Dive deeper into trigonometry using the unit circle approach. Learn how to find terminal points for any real number and evaluate all six trig functions using coordinates and</p>	<p>THE FOCUS OF THE STORY</p> <p>Apply trigonometry beyond right triangles by using the Law of Sines and Law of Cosines to solve for unknown sides and angles in any triangle. Learn how to find the area of a triangle</p>	<p>THE FOCUS OF THE STORY</p> <p>Build fluency in simplifying and solving trigonometric expressions using fundamental identities and equations. Explore powerful tools like sum and difference formulas,</p>	<p>THE FOCUS OF THE STORY</p> <p>Discover the beauty of mathematics through polar coordinates and graphing. Learn how to plot polar equations by hand and with technology, identify symmetry, and convert between polar</p>

<p>degrees and degrees—minutes—seconds, and analyze motion using angular and linear speed. Use the six trigonometric ratios to solve right triangles, evaluate trig functions using reference angles, and apply inverse trig functions to find missing angle measures.</p>	<p>identities. Explore the periodic nature of sine, cosine, and tangent graphs, and apply transformations to model real-world motion. Finish by graphing inverse trig functions and using sinusoidal functions to represent harmonic motion.</p>	<p>using Hero's Formula and recognize situations that lead to the ambiguous case. Practice selecting the most appropriate method to solve a triangle based on the given information.</p>	<p>as well as double- and half-angle identities. Then apply your understanding of direction and magnitude to vectors in two dimensions, bridging algebra and geometry in motion and force.</p>	<p>and Cartesian systems. Revisit key algebra skills—like domain, range, and inequalities—as you create mathematical art using Desmos with both Cartesian and polar graphs.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Draw angles in standard position and identify initial and terminal sides.</p> <p>Convert between decimal degrees and degrees—minutes—seconds (DMS).</p> <p>Define and use degree and radian measures, coterminal angles, and reference angles.</p> <p>Calculate arc length, sector area, linear speed, and angular</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Find reference angles and terminal points for any real number using the unit circle.</p> <p>Evaluate sine, cosine, tangent, and reciprocal trig functions using terminal points.</p> <p>Determine the sign and domain of trig functions based on quadrant location.</p> <p>Use reciprocal, Pythagorean, and even-odd identities to simplify expressions.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Use the Law of Sines to solve non-right triangles and understand when the ambiguous case arises.</p> <p>Recognize when a triangle has one, two, or no solutions based on given measurements.</p> <p>Apply the Law of Cosines to solve triangles when given two sides and the included angle or all three sides.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Simplify and verify trigonometric expressions using known identities.</p> <p>Prove trigonometric identities through algebraic manipulation and substitution.</p> <p>Derive and apply sum and difference formulas for sine, cosine, and tangent.</p> <p>Use cofunction identities to relate angles within a unit circle.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>Graph polar equations by hand and using technology (e.g., Desmos).</p> <p>Identify and describe symmetry in polar graphs (e.g., about the origin, axis, or pole).</p> <p>Convert between polar and Cartesian coordinates.</p> <p>Review and apply algebraic concepts such as domain, range, intercepts, and inequalities.</p>

<p>speed.</p> <p>Use sine, cosine, tangent, and their reciprocal functions to solve right triangles.</p> <p>Apply trigonometric ratios to special right triangles (30-60-90 and 45-45-90).</p> <p>Use inverse trig functions to find angle measures.</p> <p>Evaluate composite functions involving trig and inverse trig operations.</p> <p>Apply trigonometry to real-world problems involving angles of elevation, depression, and inclination.</p> <p>Use Pythagorean identities to solve for missing values and compute the area of triangles.</p>	<p>Sketch and interpret sine and cosine graphs, including amplitude, phase shift, and period.</p> <p>Graph and analyze tangent, cotangent, secant, and cosecant functions with asymptotes and transformations.</p> <p>Define and graph inverse trig functions including arcsin, arccos, and arctan.</p> <p>Apply sinusoidal functions to model real-world scenarios like simple harmonic motion.</p> <p>Interpret frequency, midline, and phase shift in sinusoidal models.</p>	<p>Use Hero's Formula to calculate the area of a triangle given all side lengths.</p> <p>Solve triangle problems involving bearings and directional measurements.</p> <p>Determine and justify the most appropriate method (Law of Sines, Law of Cosines, or basic trig ratios) to solve a given triangle.</p>	<p>Derive and use double-angle and half-angle formulas to solve and simplify expressions.</p> <p>Solve basic trigonometric equations algebraically.</p> <p>Distinguish between vectors and scalars in real-world applications.</p> <p>Represent vectors graphically and algebraically using magnitude and direction.</p> <p>Resolve vectors into horizontal and vertical components.</p> <p>Calculate velocity, heading, and resultant force using vector addition and subtraction.</p>	<p>Graph piecewise, absolute value, and other algebraic functions to support creative graphing.</p> <p>Use inequalities to restrict or shape functions in Desmos.</p> <p>Create a visual project using a combination of polar and Cartesian graphs to model an image.</p> <p>Reflect on how mathematical concepts can be used for creative and visual expression.</p>
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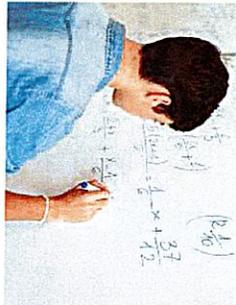
# Pre Calculus

Focus:

How can we...

2 Weeks

Unit 1: Functions  
(Chapter 2)



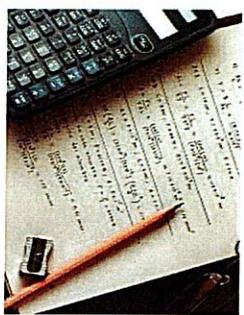
THE FOCUS OF THE STORY

I will analyze the properties of functions, including their domain and range, to better understand their behavior. I will represent functions in multiple ways—verbally, visually, algebraically, and numerically—to deepen my comprehension and flexibility. I will also graph functions and identify whether a relation is a function based on its graph.

Additionally, I will transform functions both algebraically and graphically by applying shifts, stretches, and reflections. I will develop my skills in factoring polynomials

2 Weeks

Unit 2: Polynomial and Rational Functions  
(Chapter 3)

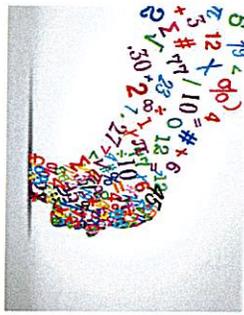


THE FOCUS OF THE STORY

In this unit, I will investigate the properties of polynomial functions and use these properties to accurately graph them. I will perform polynomial division using both long division and synthetic division techniques. I will apply the Rational Zeros Theorem to find the zeros of a polynomial, and I will calculate their multiplicities while also examining the role of complex zeros. Additionally, I will graph rational functions by analyzing and applying their key properties.

2 Weeks

Unit 3: Exponential and Logarithmic Functions  
(Chapter 4)

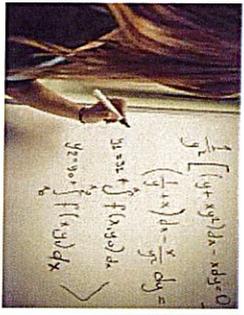


THE FOCUS OF THE STORY

In this unit, I will identify whether a function is exponential, power, quadratic, or linear by analyzing its graph, and I will write the corresponding equation algebraically. I will apply the properties of exponential functions and use those properties to graph them accurately. I will also apply the properties of logarithmic functions, including the change of base property, and use these properties to graph logarithmic functions. Finally, I will solve exponential and logarithmic equations by applying their respective

1 Week

Unit 4: Probability  
(Chapter 14)

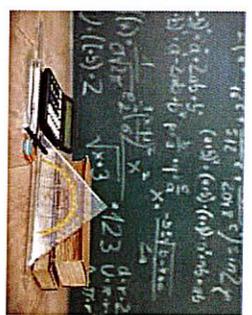


THE FOCUS OF THE STORY

In this unit, I will find the number of possibilities for an event by using both permutations and combinations. I will also use permutations and combinations to calculate probabilities, applying these methods to a variety of real-world and mathematical scenarios.

2 Weeks

Unit 5: Sequences and Series  
(Chapter 12)



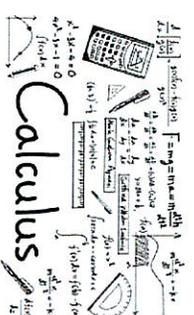
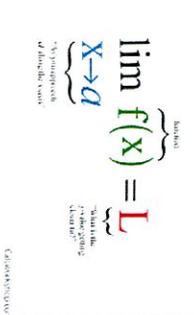
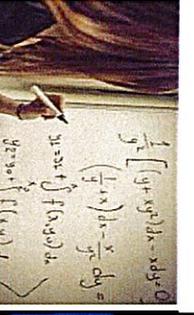
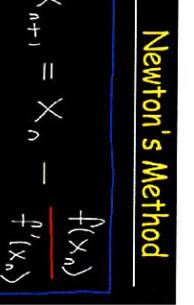
THE FOCUS OF THE STORY

In this unit, I will apply the properties of arithmetic and geometric sequences and series to solve problems and analyze patterns. I will find the  $n$ th term of a sequence and calculate the limit of the terms of an infinite sequence to determine their behavior as they progress. Additionally, I will use the Binomial Theorem to expand binomial expressions efficiently and accurately.

<p>and composing functions, working with both graphical and algebraic representations. Furthermore, I will investigate the properties of one-to-one functions and learn how to find inverses of functions, ensuring I can verify when an inverse is itself a function.</p>		<p>properties.</p>		
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will analyze properties of functions, including domain and range of functions.</li> <li>- I will represent a function verbally, visually, algebraically, and numerically.</li> <li>- I will graph functions.</li> <li>- I will identify functions based upon their graphs</li> <li>- I will transform functions algebraically and graphically by shifting, stretching, and reflecting.</li> <li>- I will factor polynomials</li> <li>- I will compose functions graphically and algebraically.</li> <li>- I will investigate properties of one-to-one functions.</li> <li>- I will find inverses for functions and verify the inverse is a function.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will investigate properties of polynomial functions.</li> <li>- I will graph polynomial functions based upon their properties.</li> <li>- I will divide polynomials by using long division and synthetic division.</li> <li>- I will use the Rational Zeros Theorem to find zeros of a polynomial.</li> <li>- I will calculate multiplicities of polynomials and observe complex zeros in polynomials.</li> <li>- I will graph rational functions using properties of rational functions.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will identify whether a function is exponential, power, quadratic or linear, given a graph. I will write the particular equation algebraically for the graph.</li> <li>- I will apply properties of exponential functions</li> <li>- I will graph exponential functions using their properties.</li> <li>- I will apply properties of logarithmic functions</li> <li>- I will graph logarithmic functions using their properties.</li> <li>- I will apply properties of logarithmic functions including the change of base property.</li> <li>- I will solve exponential and logarithmic equations using their properties.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will find the number of possibilities for an event by using permutations and combinations.</li> <li>- I will find probabilities by using permutations and combinations</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will apply properties of arithmetic and geometric sequences and series.</li> <li>- I will find the <math>n</math>th term of a sequence. I will calculate the limit of the terms of an infinite sequence.</li> <li>- I will use the Binomial Theorem to expand binomial expressions.</li> </ul>

# AP Calc

**Focus:** How can we...

<p><b>2 Weeks</b></p> <p><b>Unit 1: Overview of Calculus</b></p> 	<p><b>2 Weeks</b></p> <p><b>Unit 2: Limits</b></p> 	<p><b>2-3 Weeks</b></p> <p><b>Unit 3: Derivatives and Their Properties</b></p> 	<p><b>2-3 Weeks</b></p> <p><b>Unit 4: Derivatives (more properties)</b></p> 	<p><b>1-2 Weeks</b></p> <p><b>Unit 5: Related Rates and Newton's Method</b></p> <p><b>Newton's Method</b></p> 	<p><b>THE FOCUS OF THE STORY</b></p> <p>I will calculate rates of change using graphs, tables, and algebraic methods. I will also estimate the area under a curve by counting squares and by using trapezoids to approximate the total area.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>I will estimate limits using both numerical and graphical approaches, and I will study and apply the formal definition of a limit. I will evaluate limits by using properties of limits as well as the Squeeze Theorem. Additionally, I will determine continuity at a specific point and across intervals, including analyzing one-sided limits and applying the Intermediate Value Theorem. I will also find infinite limits from the left and right sides, as well as evaluate finite and infinite limits as the variable approaches infinity. Finally, I will determine limits for various types of functions, including trigonometric and rational functions.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>I will find the slope of the tangent line to a curve at a point and use the definition of a derivative to find the derivative of a function. I will apply the constant rule, power rule, and sum/difference rule to find derivatives, as well as differentiate sine and cosine functions. I will find the derivative of composite functions using the Chain Rule and simplify the results using algebraic techniques. Additionally, I will determine functions by taking derivatives and solve problems involving these rates of change. I will also write and derive sinusoidal functions based on</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>I will find the derivative of a function using the Product Rule and Quotient Rule, as well as compute higher order derivatives. I will also find the derivatives of all six trigonometric functions and use these derivatives to solve more complex problems. Additionally, I will apply implicit differentiation to find derivatives of functions, including those involving inverse trigonometric functions. I will differentiate inverse trigonometric functions specifically and understand the important relationship between differentiability and continuity.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>I will learn how to find related rates and apply them to solve real-world problems. Additionally, I will approximate zeros of functions using Newton's Method.</p>
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		real-world information, and I will derive both logarithmic and exponential functions.		
LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS
<ul style="list-style-type: none"> <li>- I will calculate rates of change with graphs, tables, and algebraically.</li> <li>- I will estimate the area under a curve by counting squares.</li> <li>- I will estimate the area under a curve by adding trapezoids.</li> </ul>	<ul style="list-style-type: none"> <li>- I will estimate a limit using numerical and graphical approaches.</li> <li>- I will study and use the definition of a limit.</li> <li>- I will evaluate a limit using properties of limits. I will evaluate a limit using the Squeeze Theorem.</li> <li>- I will determine continuity at a point and on an interval.</li> <li>- I will determine one-sided limits.</li> <li>- I will use the Intermediate Value Theorem.</li> <li>- I will determine infinite limits from the left &amp; right.</li> <li>- I will determine finite and infinite limits at infinity.</li> <li>- I will determine limits of "Other" functions (trigonometric, rational)</li> </ul>	<ul style="list-style-type: none"> <li>- I will find the slope of the tangent line to a curve at a point. I will use the definition of a derivative to find the derivative of a function.</li> <li>- I will find the derivative of a function using the constant rule, power rule, sum/difference rule.</li> <li>- I will find the derivative of sine and cosine functions.</li> <li>- I will find the derivative of a composite functions using the Chain Rule. I will simplify the derivative of a function using Algebra.</li> <li>- I will find the functions for velocity and acceleration using derivative. I will answer problems using the found velocity and acceleration.</li> <li>- I will write and derive the sinusoidal function given real-world information.</li> <li>- I will derive both Logarithmic and Exponential Functions</li> </ul>	<ul style="list-style-type: none"> <li>- I will find the derivative of a function using the Product Rule and Quotient Rule.</li> <li>- I will find higher order derivatives of a function. I will find derivatives of all trigonometric functions.</li> <li>- I will find the derivative for all six trigonometric ratios and use those derivatives to derive more complex problems.</li> <li>- I will use implicit differentiation to find the derivative of a function</li> <li>- I will use Implicit differentiation to find the derivative for all inverse trigonometric functions.</li> <li>- I will differentiate an inverse trigonometric function.</li> <li>- I will understand the relationship between differentiability and continuity.</li> </ul>	<ul style="list-style-type: none"> <li>- I will find a related rate. I will use related rates to solve real-world problems</li> <li>- I will approximate a zero for a function using Newton's Method</li> </ul>

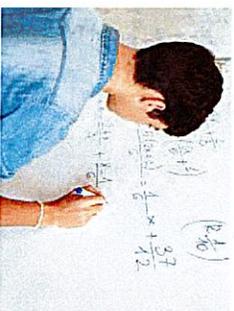
## AP Calc

**Focus:**

How can we...

**3 Weeks**

**Unit 6: Maximums & Minimums (with Applications)**

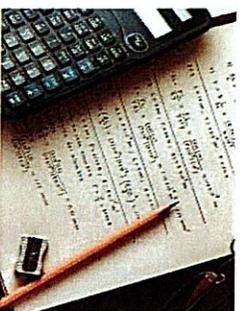


**THE FOCUS OF THE STORY**

I will find extrema on a closed interval and apply Rolle's Theorem and the Mean Value Theorem to various problems. I will determine the intervals on which a function is increasing or decreasing and use the First Derivative Test to identify relative extrema. Additionally, I will determine where a function is concave up or concave down, find points of inflection, and apply the Second Derivative Test to locate relative extrema. I will analyze and sketch the graph of a function, and I will solve applied minimum and maximum problems.

**3 Weeks**

**Unit 7: Integration**

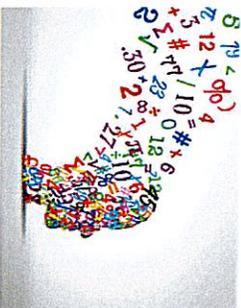


**THE FOCUS OF THE STORY**

I will use basic integration rules to find antiderivatives and find particular solutions to differential equations. I will apply the U-Substitution method to determine the antiderivative of a function. I will write and evaluate sums using sigma notation. I will understand and use Rolle's Theorem as well as the Mean Value Theorem. Additionally, I will comprehend the definition of a Riemann sum and use it to approximate integrals. I will evaluate definite integrals by applying the Fundamental Theorem of Calculus and understand how to use the Second Fundamental Theorem of Calculus. Finally, I will find the average value of a function over a closed interval.

**2 Weeks**

**Unit 8: Logarithmic, Exponential, & Other Transcendental Functions**

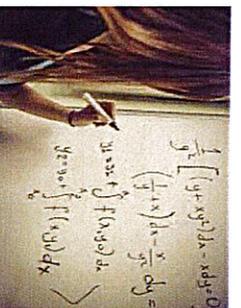


**THE FOCUS OF THE STORY**

I will find derivatives of functions involving the natural logarithmic function and understand the definition of the number  $e$ . I will use the method of logarithmic differentiation to find derivatives for more complex problems. I will apply the logarithmic rule for integration to integrate rational functions and will integrate all trigonometric functions. Additionally, I will use properties of natural exponential functions to both derive and integrate, and I will differentiate and integrate exponential functions with bases other than  $e$ . Finally, I will recognize when limits produce indeterminate forms and apply L'Hospital's Rule to evaluate those limits.

**2 Weeks**

**Unit 9: Area and Volume**



**THE FOCUS OF THE STORY**

I will find the area of a region between two curves by using integration techniques. I will also determine the volume of an enclosed region rotated around an axis by applying the Disk and Washer Methods. Additionally, I will calculate the volume of an enclosed region rotated around an axis using the Shell Method. Furthermore, I will find the volume of an object by analyzing and integrating various cross sections.

**1-2 Weeks**

**Unit 10: Differential Equations**

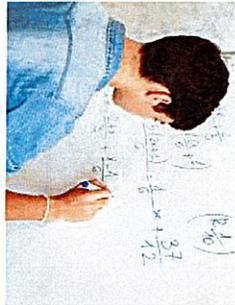
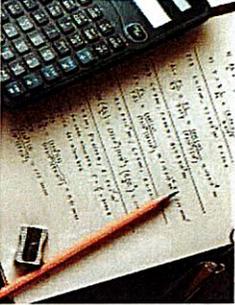
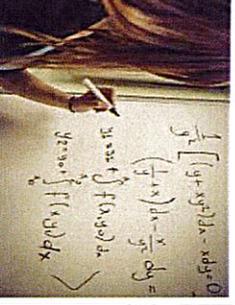
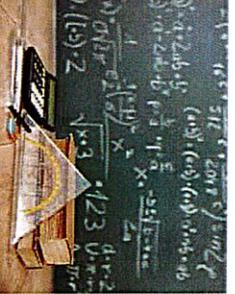


**THE FOCUS OF THE STORY**

I will use separation of variables to solve differential equations and apply this method to solve growth and decay problems. I will recognize and solve differential equations that are suitable for separation of variables, using these techniques to model and solve real-world applied problems. Additionally, I will use slope fields to approximate solutions of differential equations and apply initial conditions to find particular solutions.

<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will find extremas on a closed interval.</li> <li>- I will apply and use Rolle's Theorem and Mean Value Theorem to various problems.</li> <li>- I will determine intervals on which a function is increasing and decreasing.</li> <li>- I will apply the 1st Derivative Test to find relative extrema.</li> <li>- I will determine intervals on which a function is concave up or down.</li> <li>- I will find points of inflection of the function.</li> <li>- I will apply the Second Derivative Test to find relative extrema.</li> <li>- I will analyze and sketch the graph of a function</li> <li>- I will solve applied minimum and maximum problems.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will use basic integration rules to find antiderivatives.</li> <li>- I will find particular solutions to a differential equation.</li> <li>- I will use U-Substitution method to find the antiderivative of a function</li> <li>- I will use sigma notation to write and evaluate a sum.</li> <li>- I will understand and use Rolle's Theorem and the Mean Value Theorem.</li> <li>- I will understand the definition of a Riemann sum.</li> <li>- I will approximate and evaluate a definite integral by using Riemann sums.</li> <li>- I will evaluate definite integrals using the Fundamental Theorem of Calculus.</li> <li>- I will understand and use the Second Fundamental Theorem of Calculus.</li> <li>- I will find the average value of a function over a closed interval.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will find derivatives of functions involving the natural logarithmic function.</li> <li>- I will use the method of Logarithmic Differentiation to find Derivatives for more complex problems.</li> <li>- I will use the Logarithmic Rule for Integration to integrate rational functions.</li> <li>- I will integrate all trigonometric functions.</li> <li>- I will use properties of natural exponential functions to derive and integrate.</li> <li>- I will differentiate and integrate exponential functions that have bases other than e.</li> <li>- I will recognize lines that produce indeterminate form.</li> <li>- I will apply L'Hospital's Rule to evaluate limits.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will find the area of a region between two curves using integration.</li> <li>- I will find the volume of an enclosed region rotated around an axis using the Disk/Washer Method</li> <li>- I will find the volume of an enclosed region rotated around an axis using the Shell Method.</li> <li>- I will find the volume of an object by using various cross sections.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>- I will use separation of variables to solve differential equations. I will solve growth and decay problems using differential equations.</li> <li>- I will recognize and solve differential equations that can be solved by separation of variables. I will use differential equations to model and solve applied problems.</li> <li>- I will use slope fields to approximate solutions of differential equations. I will use initial conditions to find particular solutions of differential equations.</li> </ul>

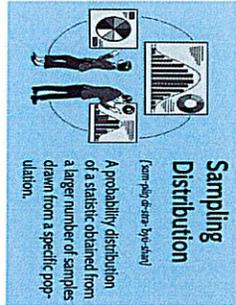
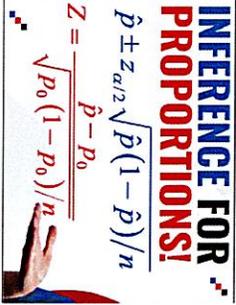
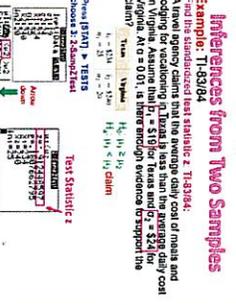
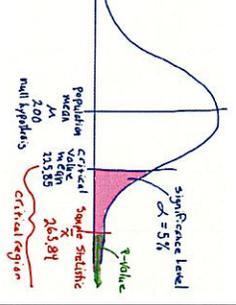
<h1 style="text-align: center; margin: 0;">AP Calc</h1>	<p style="text-align: center; margin: 0;"><b>Focus:</b></p>	<p style="text-align: center; margin: 0;">How can we...</p>
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<p><b>2 Weeks</b></p> <p>Unit 11 : Misc Topics</p> 	<p><b>3 Weeks / Quarter 2</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 3</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 4</b></p> <p>Title of Lesson Here:</p> 	<p><b>3 Weeks / Quarter 4</b></p> <p>Title of Lesson Here:</p> 
<p><b>THE FOCUS OF THE STORY</b></p> <p>I will find the arc length of a curve and calculate the work done by both constant and variable forces using integration. I will apply the method of integration by Parts to find antiderivatives, including using the Rapid Repeated Integration by Parts technique for more complex problems. I will evaluate improper integrals, determining whether they converge or diverge. Additionally, I will calculate the distance and displacement of an object given its velocity or acceleration, and find the average value for a variety of functions.</p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>	<p><b>THE FOCUS OF THE STORY</b></p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>- I will find the arc length of a</p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>	<p><b>LEARNING GOALS/STANDARDS</b></p>

<ul style="list-style-type: none"><li>- I will find the work done by a constant and variable force using integration.</li><li>- I will antiderive by using the method of integration by Parts.</li><li>- I will antiderive by using the Rapid Repeated Integration by Parts method.</li><li>- I will evaluate an improper integrals that both converge and diverge</li><li>- I will calculate the distance and displacement of an object given velocity or acceleration.</li><li>- I will calculate the average value for a variety of functions</li></ul>				
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# AP Stats

**Focus:** How can we ...

<p>Week 1 - 2</p> <p>Unit 5 Sampling Distributions</p>	 <p><b>Sampling Distribution</b> <i>(Sample - In - Pop - Stat)</i></p> <p>A probability distribution of a statistic obtained from a larger number of samples drawn from a specific population.</p>
<p>Week 3</p> <p>Unit 6 Part I Inference for Proportions</p>	<p><b>INFERENCE FOR PROPORTIONS!</b></p> $\hat{p} \pm z_{\alpha/2} \sqrt{\hat{p}(1-\hat{p})/n}$ $Z = \frac{\hat{p} - p_0}{\sqrt{p_0(1-p_0)/n}}$ 
<p>Week 4</p> <p>Unit 6 Part II Inference for Two Samples</p>	<p><b>Inferences from Two Samples</b></p> <p>Example 11.4.32 Find the standardized test statistic z. Test H<sub>0</sub>: μ = 14.520. A travel agency claims that the average daily cost of meals and lodging for vacationing in Texas is less than the average daily cost in Virginia. At α = 0.01, is there enough evidence to support the claim?</p> <p>Population Mean = 14.520 Sample Mean = 14.300 Population SD = 2.500 Sample SD = 2.500 n = 25 n = 25</p> <p>Test Statistic: z = -1.96</p> 
<p>Week 5 - 6</p> <p>Unit 7 Inference for Means</p>	 <p>Population Mean: μ = 2.00 Population SD: σ = 22.85 Sample Mean: <math>\bar{x}</math> = 26.581 Sample SD: s = 26.581 n = 30 Significance Level: α = 5% Critical Value: z* = 1.96 Critical Region: z &gt; 1.96</p>
<p>Week 7</p> <p>Unit 8 Goodness of Fit Test</p>	<p><b>Chi-Square (χ<sup>2</sup>) Statistic</b> <i>(Parameter - In - Fit)</i></p> <p>A test that measures how a model compares to actual observed data.</p> 
<p><b>THE FOCUS OF THE STORY</b></p> <p>Unit 5 introduces sampling distributions and begins with the idea of area under the curves. Knowing the sampling distribution of a statistic tells us how far we can expect a statistic to vary from the parameter value and what values of the statistic should be considered unusual. It then goes on how to describe a sampling distribution as in shape, center, and variability. If the center</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Unit 6 Part I begins with determining a point estimator and how to create confidence interval. The confidence level C describes the percentage of confidence intervals that we expect to capture the value of the parameter in repeated sampling. It then goes into constructing and interpret confidence intervals for a population proportion and using the four-step process (State,</p>
<p><b>THE FOCUS OF THE STORY</b></p> <p>Unit 6 Part II explores how to construct confidence intervals for a difference between two population proportions. A confidence interval for a difference between two proportions provides an interval of plausible values for the difference in the population proportions. It then goes into performing a significance tests for a difference between two proportions. When</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>Unit 7 begins with constructing confidence intervals for a population mean by finding critical t values and checking the conditions. Then students learn to apply these skills to develop a significance test for a population mean with critical p values. Finally, these skills allow students to develop confidence intervals and do a significance test for a difference in population</p>
<p><b>THE FOCUS OF THE STORY</b></p> <p>Unit 8 focuses on using categories of data and comparing the observed counts to the expected counts in order to perform the chi squared test for the goodness of fit.</p>	<p><b>THE FOCUS OF THE STORY</b></p>

<p>(mean) of the sampling distribution is the same as the value of the parameter being estimated, then the statistic is called an unbiased estimator. It then goes into the sampling distribution of a sample proportion <math>p^{\wedge}</math> and sample mean and standard deviation of each. You can use a normal distribution to calculate probabilities involving the sampling distribution of <math>x_{-}</math> if the population distribution is approximately normal or the sample size is at least 30.</p>	<p>Plan, Do, Conclude). Next, it presents the basic ideas of significance testing by starting with the hypothesis and alternative hypothesis and making sure to check the conditions first. In a significance test, we evaluate by assuming the null hypothesis is true and calculating the probability of getting evidence for the alternative hypothesis as strong as or stronger than the observed data. This probability is called a P-value. To determine if the P-value is small enough to reject <math>H_0</math>, compare it to a predetermined significance level such as <math>\alpha = 0.05</math>. If the P-value <math>\leq \alpha</math>, reject <math>H_0</math> — there is convincing evidence that the alternative hypothesis is true. However, if the P-value <math>&gt; \alpha</math>, fail to reject <math>H_0</math> — there is not convincing evidence that the alternative hypothesis is true. Finally, this unit concludes with helping you draw a conclusion and because conclusions are based on sample data, there is a possibility that the conclusion to a</p>	<p>conditions are met, P-values can be obtained from the standard normal distribution. A significance test for a difference between two proportions uses the same logic as the significance test for one population proportion.</p>	<p>means in the same way.</p>	
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	<p>significance test will be incorrect. You can make two types of errors: A Type I error occurs if you find convincing evidence for the alternative hypothesis when, in reality, the null hypothesis is true. A Type II error occurs when you don't find convincing evidence that the alternative hypothesis is true when, in reality, the alternative hypothesis is true.</p>			
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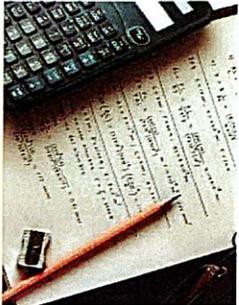
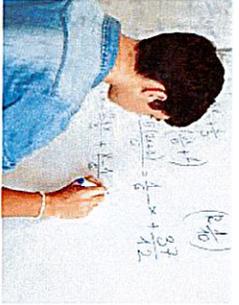
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Calculate probabilities and percentiles involving normal random variables.</li> <li>* Find probabilities involving a sum, a difference, or another linear combination of independent, normal random variables.</li> <li>* Distinguish between a parameter and a statistic.</li> <li>* Create a sampling distribution using all possible samples from a small population.</li> <li>* Use the sampling distribution</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Interpret a confidence interval in context.</li> <li>* Use a confidence interval to make a decision about the value of a parameter.</li> <li>* Interpret a confidence level in context.</li> <li>* Check the conditions for calculating a confidence interval for a population proportion.</li> <li>* Calculate a confidence interval for a population proportion.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Check the conditions for calculating a confidence interval about a difference between two population proportions.</li> <li>* Calculate a confidence interval for a difference between two population proportions.</li> <li>* Construct and interpret a two-sample <math>z</math> interval for a difference in proportions.</li> <li>* State appropriate hypotheses for performing a test about a difference between two population proportions.</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* Determine the critical value <math>t^*</math></li> <li>* For calculating a confidence interval for a population mean.</li> <li>* Check the conditions for calculating a confidence interval for a population mean.</li> <li>* Calculate a confidence interval for a population mean.</li> <li>* Construct and interpret a one-sample <math>t</math> interval for a mean.</li> <li>* In the special case of paired data, construct and interpret a confidence interval for a</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>* State appropriate hypotheses for a test about the distribution of a categorical variable.</li> <li>* Calculate expected counts for a test about the distribution of a categorical variable.</li> <li>* Check the conditions for a test about the distribution of a categorical variable.</li> <li>* Calculate the test statistic and <math>P</math>-value for a test about the distribution of a categorical variable.</li> <li>* Perform a chi-square test for</li> </ul>
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<ul style="list-style-type: none"> <li>* of a statistic to evaluate a claim about a parameter.</li> <li>* Determine if a statistic is an unbiased estimator of a population parameter.</li> <li>* Describe the relationship between sample size and the variability of an estimator.</li> <li>* Calculate and interpret the mean and standard deviation of the sampling distribution of a sample proportion <math>p^{\wedge}</math>.</li> <li>* Determine if the sampling distribution of <math>p^{\wedge}</math> is approximately normal.</li> <li>* If appropriate, use a normal distribution to calculate probabilities involving sample</li> </ul>	<ul style="list-style-type: none"> <li>* Construct and interpret a one-sample z interval for a proportion.</li> <li>* Describe how the sample size and confidence level affect the margin of error.</li> <li>* Determine the sample size required to obtain a confidence interval for a population proportion with a specified margin of error.</li> <li>* State appropriate hypotheses for a significance test about a population parameter.</li> <li>* Interpret a P-value in context.</li> <li>* Make an appropriate conclusion for a significance test.</li> <li>* State appropriate hypotheses for a significance test about a population parameter.</li> <li>* Interpret a P-value in context.</li> <li>* Make an appropriate conclusion for a significance test.</li> </ul>	<ul style="list-style-type: none"> <li>* Check the conditions for performing a test about a difference between two population proportions.</li> <li>* Calculate the standardized test statistic and P-value for a test about a difference between two population proportions.</li> <li>* Perform a two-sample z test for a difference in proportions.</li> </ul>	<ul style="list-style-type: none"> <li>population mean difference.</li> <li>* State appropriate hypotheses and check the conditions for performing a test about a population mean.</li> <li>* Calculate the standardized test statistic and P-value for a test about a population mean.</li> <li>* Perform a one-sample t test for a mean.</li> <li>* In the special case of paired data, perform a significance test about a population mean difference and interpret a confidence interval for a population mean difference.</li> <li>* Check the conditions for calculating a confidence interval for a difference between two population means.</li> <li>* Calculate a confidence interval for a difference between two population means.</li> <li>* Construct and interpret a two-sample t interval for a difference in means.</li> <li>* State appropriate hypotheses and check the conditions for performing a test about a difference between two population means.</li> </ul>	<p>goodness of fit.</p>
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<p>means.</p> <p>* Describe the shape, center, and variability of the sampling distribution of a difference in sample means <math>\bar{x}_1 - \bar{x}_2</math>.</p>			<p>* Calculate the standardized test statistic and <math>P</math>-value for a test about a difference between two population means.</p> <p>* Perform a two-sample <math>t</math> test for a difference in means.</p> <p>* Determine when it is appropriate to use paired <math>t</math> procedures versus two-sample <math>t</math> procedures.</p>	
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**AP Stats**

**Focus:** How can we...

<p><b>Week 8</b></p> <p>Review &amp; Mid-Term Final</p> 	<p><b>Week 9</b></p> <p>Final Project</p> 			
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<p>THE FOCUS OF THE STORY</p>	<p>THE FOCUS OF THE STORY</p>			
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<p>Review key concepts from units 5 - 8 which involves an in depth look at sampling means and then creating confidence intervals and tests for proportions, means, and differences in means and proportion, as well as using the chi squared for the goodness of fit test.</p>	<p>Students will collect data and apply one of the significance tests they learned about in order to write a paper and present a powerpoint that summarizes how they collected their data and went about testing their hypothesis.</p>			
<p>LEARNING GOAL/STANDARDS _____</p>	<p>LEARNING GOAL/STANDARDS _____</p>			

		<ul style="list-style-type: none"> <li>• <ul style="list-style-type: none"> <li>• Recognize different contexts in which volume calculations are applicable.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between the dimensions of 3D shapes and their volumes.</li> <li>• The practical applications of volume in various fields (e.g., engineering, cooking, packaging).</li> <li>•</li> </ul> </li> </ul>	
<p><b>8.D.1</b></p>	<p>Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Formulating statistical investigative questions.</li> <li>• Collecting relevant data.</li> <li>• Organizing and displaying data effectively.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding different types of data (qualitative and quantitative).</li> <li>• Familiarity with various data collection methods (surveys, experiments, observational studies).</li> </ul>	

		<ul style="list-style-type: none"> <li>• Knowledge of how to use graphs and charts to organize data.</li> <li>• <b>Concepts:</b></li> <li>• The scientific method and its application in statistical investigations.</li> <li>• The importance of data integrity and ethical considerations in data collection.</li> <li>•</li> </ul>	
	No additional indicator(s) at this level.		
<b>8.D.2</b>	<p>Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Collecting data</li> <li>• Organizing data into charts or graphs</li> <li>• Analyzing data to identify patterns or trends</li> <li>• Interpreting results to draw conclusions</li> <li>• <b>Knowledge:</b></li> <li>• Understanding different types of data (qualitative vs. quantitative)</li> <li>• Familiarity with data representation methods (charts, graphs, tables)</li> <li>• Knowledge of statistical measures (mean, median, mode)</li> </ul>	

		<ul style="list-style-type: none"> <li>● <b>Concepts:</b></li> <li>● Data representation</li> <li>● Data analysis</li> <li>● Interpretation of results in relation to a hypothesis or research question</li> </ul>	
<b>8.D.2.a</b>	Represent and interpret bivariate data (e.g., ordered pairs) using scatter plots.	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>● <b>Skills:</b></li> <li>● Create and interpret scatter plots.</li> <li>● Identify relationships between two variables.</li> <li>● Analyze trends and patterns in bivariate data.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding of ordered pairs and their representation.</li> <li>● Familiarity with axes on a graph (x-axis and y-axis).</li> <li>● Concepts of correlation (positive, negative, and no correlation).</li> <li>● <b>Concepts:</b></li> <li>● Bivariate data and its significance in real-world contexts.</li> </ul>	<b>Topic 4:</b> Lesson 4-1, pp. 219-224; Let's Investigate: Snack Attack, Get a Grip; Lesson 4-2, pp. 225-230; Lesson 4-3, pp. 231-236; Mid-Topic Checkpoint, pp. 237-238; 3-Act Math: Reach Out, pp. 251-254; Topic Review, pp. 255-257

		<ul style="list-style-type: none"> <li>• The role of scatter plots in visualizing data.</li> </ul>	
	<p>Describe patterns such as positive or negative association, linear or nonlinear association, clustering, and outliers when bivariate data is represented on a coordinate plane.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Skills: Identifying and describing patterns in bivariate data.</li> <li>• Knowledge: Understanding concepts of positive and negative association, linear and nonlinear associations, clustering, and outliers.</li> <li>• Concepts: Coordinate plane representation of data, bivariate relationships.</li> </ul> </li> </ul>	<p><b>Topic 4:</b> Lesson 4-1, pp. 219-224; Let's Investigate: Snack Attack, Get a Grip; Lesson 4-2, pp. 225-230; Lesson 4-3, pp. 231-236; Mid-Topic Checkpoint, pp. 237-238; 3-Act Math: Reach Out, pp. 251-254; Topic Review, pp. 255-257</p>
<p><b>8.D.2.c</b></p>	<p>Draw an informal line of best fit based on the closeness of the data points to the line.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Skills: Drawing a line of best fit, interpreting data points, understanding correlation.</li> <li>• Knowledge: Concepts of linear relationships, data representation on a graph, the meaning of "best fit."</li> <li>• Concepts: Closeness of data points to the line, how to visually analyze data.</li> </ul> </li> </ul>	<p><b>Topic 4:</b> Lesson 4-1, pp. 219-224; Let's Investigate: Snack Attack, Get a Grip; Lesson 4-2, pp. 225-230; Lesson 4-3, pp. 231-236; Mid-Topic Checkpoint, pp. 237-238; 3-Act Math: Reach Out, pp. 251-254; Topic Review, pp. 255-257</p>

	<ul style="list-style-type: none"> <li>•</li> </ul>	
<p><b>8.D.2.d</b></p> <p>Use a linear model to make predictions and interpret the rate of change and y-intercept in context.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Creating linear models from data.</li> <li>• Making predictions using linear equations.</li> </ul> </li> <li>• Interpreting the slope (rate of change) and y-intercept in real-world contexts.</li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding linear relationships.</li> <li>• Familiarity with the equation of a line in the form <math>(y = mx + b)</math>, where <math>(m)</math> is the slope and <math>(b)</math> is the y-intercept.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The meaning of slope as a rate of change.</li> <li>• The significance of the y-intercept in a linear model.</li> </ul> </li> <li>• Application of linear models to solve real-world problems.</li> </ul> </li> </ul>	<p><b>Topic 4:</b>  Lesson 4-1, pp. 219-224; Let's Investigate: Snack Attack, Get a Grip; Lesson 4-2, pp. 225-230; Lesson 4-3, pp. 231-236; Mid-Topic Checkpoint, pp. 237-238; 3-Act Math: Reach Out, pp. 251-254; Topic Review, pp. 255-257</p>
<p><b>8.D.3</b></p> <p>Probability: Students will interpret and apply concepts of probability.</p>	<p><b>Key Components:</b></p>	

		<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Understanding basic probability concepts (e.g., experiments, outcomes, events).</li> <li>• Calculating probabilities of simple and compound events.</li> <li>• Interpreting results of probability experiments.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Definitions of key terms (probability, sample space, event).</li> <li>• Different types of events (independent, dependent, mutually exclusive).</li> <li>• Probability rules and formulas.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Theoretical vs. experimental probability.</li> <li>• Use of probability in real-life situations.</li> <li>• The law of large numbers.</li> </ul> </li> </ul>	
	No additional indicator(s) at this level.		

High School State Standards		Unwrap the Standard	Algebra 1	Geometry	Algebra 2
HS.N.1	<p>Estimation and Technology: Students will use estimation strategies and technology to reason, to solve problems, and to make connections within mathematics and across disciplines.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Use estimation strategies to approximate solutions.</li> <li>• Apply technology effectively to support mathematical reasoning.</li> <li>• Solve real-world problems using mathematical concepts.</li> <li>• Make interdisciplinary connections using mathematics.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding different estimation techniques (e.g., rounding, compatible numbers).</li> <li>• Familiarity with various technological tools (e.g., graphing calculators, software).</li> <li>• Knowledge of mathematical concepts relevant to problem-solving.</li> <li>• <b>Concepts:</b></li> <li>• The role of estimation in mathematics and daily life.</li> <li>• How technology enhances mathematical understanding and problem-solving.</li> <li>• Interdisciplinary applications of mathematics (e.g., in science, economics).</li> </ul>	1-6	2-7 Explore 2-7	2-1, 2-2, 2-4, 2-5, 3-1, 3-2, 3-6, 8-2, 8-3, 8-4, 9-1, 9-4, 11-7, 12-1
HS.N.1a	<p>Select, apply, and explain the method of computation when problem solving using real numbers (e.g., models, mental computation,</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Selecting appropriate computation methods, applying methods in problem-solving, explaining chosen methods, determining the need for approximation or exact value.</li> <li>• <b>Knowledge:</b> Understanding real numbers and the various methods of computation (models, mental computation, paper-pencil, technology).</li> </ul>			

	paper-pencil, technology).	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Contextual problem-solving, the difference between approximation and exact values, the importance of method selection based on the problem.</li> </ul>			
<b>HS.N.1.b</b>	Determine if the context of a problem calls for an approximation or an exact value.	<ul style="list-style-type: none"> <li>• Evaluate the context of mathematical problems.</li> <li>• Distinguish between approximation and exact values.</li> <li>• Apply critical thinking to real-world scenarios.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of rational numbers, irrational numbers, and their representations.</li> <li>• Familiarity with mathematical operations and their implications on precision.</li> <li>• Awareness of contexts where approximation is suitable (e.g., measurements, estimates) versus contexts that require exact values (e.g., calculations in algebra).</li> <li>• <b>Concepts:</b></li> <li>• Definitions of approximation and exact values.</li> <li>• The significance of precision in mathematical calculations.</li> <li>• Contextual reasoning in problem-solving.</li> </ul>	1-6	2-7 Explore	1-3, 2-1, 2-3, 2-4, 3-2, 7-2, 7-3, 7-5, 8-2, 8-3, 8-5, 11-2, 12-3
<b>HS.N.1.c</b>	Determine the rounding convention to be used based on the context of a problem.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Understanding different rounding conventions (e.g., round up, round down, round to the nearest).</li> <li>• Identifying the context of a problem to determine appropriate rounding.</li> </ul>		2-7 Explore	2-1, 2-3, 2-4, 3-6, 7-2, 8-2, 9-2, 11-2, 12-3

		<ul style="list-style-type: none"> <li>Applying rounding conventions to solve problems accurately.</li> </ul>			
	<p>Estimate a value using the concept of betweenness by bounding above and below (e.g., since <math>\log(10) = 1</math> and <math>\log(1,000) = 3</math> we know <math>\log(500)</math> is between 1 and 3).</p>	<ul style="list-style-type: none"> <li><b>Key Components:</b> <ul style="list-style-type: none"> <li>Understanding the concept of logarithms.</li> <li>Applying the concept of betweenness in estimation.</li> <li>Recognizing upper and lower bounds for logarithmic values.</li> </ul> </li> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Estimating values based on known logarithmic values.</li> <li>Applying properties of logarithms to find bounds.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Definition and properties of logarithms.</li> <li>Understanding the relationship between logarithmic values and their corresponding numbers.</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>The concept of betweenness in mathematical estimation.</li> <li>The significance of bounding to determine approximate values.</li> </ul> </li> </ul>			1-4, 2-2, 2-6, 3-2, 6-1, 8-4
<b>HS.N.1.d</b>	Determine the tolerance interval and percent of error in measurement. HS.N.1.f	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Calculate tolerance intervals.</li> <li>Determine percent of error in measurements.</li> <li>Convert rates between different units (e.g., miles per hour to feet per second).</li> </ul> </li> <li><b>Knowledge:</b></li> </ul>			
<b>HS.N.1.e</b>	Convert equivalent rates (e.g., miles per		2-7 Explore 2-7		

	hour to feet per second).	<ul style="list-style-type: none"> <li>Understanding the concept of tolerance in measurements.</li> <li>Familiarity with the formula for percent of error.</li> <li>Knowledge of unit conversion methods.</li> <li><b>Concepts:</b></li> <li>The importance of precision and accuracy in measurements.</li> <li>The relationship between different units of measurement.</li> </ul>			
	Determine whether extremely large or extremely small quantities can be reasonably represented by a calculator or graphing utility.	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Analyze the limitations of calculators and graphing utilities.</li> <li>Compare large and small quantities in practical contexts.</li> <li><b>Knowledge:</b></li> <li>Understand scientific notation and its applications.</li> <li>Recognize the capabilities of calculators and graphing utilities for various ranges of numbers.</li> <li><b>Concepts:</b></li> <li>The concept of scale in mathematics.</li> <li>The importance of precision in representation.</li> </ul>			7-1, 7-2, 7-3, 7-5
<b>HS.N.1.g</b>					
	Use scientific notation to appropriately represent large and small quantities.	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Understanding the concept of scientific notation.</li> <li>Converting between standard form and scientific notation.</li> <li>Performing arithmetic operations with numbers in scientific notation.</li> <li><b>Knowledge:</b></li> </ul>	See Reveal Math Course 3 © 2022 1-5, 1-6	See Reveal Math Course 3 © 2022 1-5, 1-6	See Reveal Math Course 3 © 2022 1-5, 1-6
<b>HS.N.1.h</b>					

		<ul style="list-style-type: none"> <li>• The structure of scientific notation (e.g., <ul style="list-style-type: none"> <li>• <math>a \times 10^n</math></li> <li>• <math>a \times 10^n</math></li> <li>• <math>a \times 10^n</math> where <math>n</math> is an integer).</li> </ul> </li> <li>• The significance of the exponent in representing large and small quantities.</li> <li>• <b>Concepts:</b></li> <li>• The usefulness of scientific notation in science and mathematics.</li> <li>• Comparing and ordering numbers in scientific notation.</li> </ul>			
<b>HS.N.2</b>	<p>Sets and Operations: Students will use number sets and operations to reason and to solve problems.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and work with different types of number sets (natural numbers, whole numbers, integers, rational numbers, and irrational numbers).</li> <li>• Perform operations (addition, subtraction, multiplication, division) on these sets.</li> <li>• Apply properties of operations (commutative, associative, distributive) in problem-solving.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the definitions and characteristics of various number sets.</li> <li>• Recognize how operations affect different sets.</li> <li>• Grasp the importance of order of operations.</li> <li>• <b>Concepts:</b></li> <li>• Set theory and notation.</li> <li>• The relationship between different number sets.</li> <li>• Problem-solving strategies using number sets.</li> </ul>			6-3, 6-5

HS.N.2.a	Extend the properties of exponents to rational numbers.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Apply the properties of exponents to rational numbers.</li> <li>• Simplify expressions using exponents.</li> <li>• Convert between radical and exponent forms.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of basic exponent rules (product, quotient, power).</li> <li>• Familiarity with rational numbers and their representation.</li> <li>• Insight into how exponents behave with positive and negative rational numbers.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between exponents and roots.</li> <li>• The definition of rational numbers (fractions).</li> <li>• The extension of exponent rules beyond integers to rational numbers.</li> </ul>			6-3, 6-5
HS.N.2.b	Use properties of rational and irrational numbers.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and differentiate between rational and irrational numbers; apply properties of numbers in various contexts; perform operations with rational and irrational numbers.</li> <li>• <b>Knowledge:</b> Understand the definitions of rational and irrational numbers; recognize examples of both; comprehend the significance of the properties of numbers (e.g., closure, commutative, associative).</li> <li>• <b>Concepts:</b> Number classifications, operations with numbers, properties of numbers, and their real-world applications.</li> </ul>	Expand 8-6		3-3, 6-3, 6-5, 6-6

	<p>Demonstrate, represent, and show relationships among the subsets of real numbers and the complex number system.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Ability to identify and define subsets of real numbers (e.g., natural numbers, whole numbers, integers, rational numbers, and irrational numbers).</li> <li>• Ability to represent complex numbers and understand their components (real and imaginary parts).</li> <li>• Ability to demonstrate relationships between these subsets and the complex number system.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of the number line and its subdivisions.</li> <li>• Familiarity with the properties and operations of real and complex numbers.</li> <li>• Awareness of how subsets of real numbers relate to complex numbers.</li> <li>• <b>Concepts:</b></li> <li>• Subsets of real numbers.</li> <li>• The structure of the complex number system.</li> <li>• Visual representation of numbers on a number line and in the complex plane.</li> </ul>		<p>2-7 Explore 2-7</p>	<p>2-1, 2-3, 2-4, 3-6, 7-2, 8-2, 9-2, 11-2, 12-3</p>
<p><b>HS.N.2.c</b></p>	<p>Compute with subsets of the complex number system including imaginary, rational, irrational, integers, whole, and natural numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understanding and identifying different subsets of the complex number system.</li> <li>• Performing operations (addition, subtraction, multiplication, division) with various types of numbers (imaginary, rational, irrational, integers, whole, and natural).</li> <li>• <b>Knowledge:</b></li> <li>• Definitions and properties of each subset of numbers.</li> <li>• The relationship between subsets within the complex number system.</li> </ul>	<p>2-5, 2-7</p>	<p>2-7, 2-8, 9-7, 9-8</p>	<p>1-4, 2-1, 3-6</p>
<p><b>HS.N.2.d</b></p>					

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The structure of the number system, including how complex numbers are formed.</li> <li>• Understanding how to convert between different types of numbers.</li> </ul> </li> </ul>			
<b>HS.N.3</b>	<p>Interpretation and Sense Making:</p> <p>Students will reason abstractly and quantitatively using units to solve problems and interpret results in context.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Reasoning abstractly</li> <li>• Quantitative reasoning</li> <li>• Problem-solving using units</li> <li>• Interpretation of results</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of units of measure</li> <li>• Familiarity with mathematical concepts and principles</li> <li>• Ability to analyze and interpret data</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between quantities</li> <li>• Contextual understanding of mathematical problems</li> <li>• Application of mathematical reasoning in real-world scenarios</li> </ul> </li> </ul>	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7
<b>HS.N.3.a</b>	<p>Understand roundoff error and why roundoff error accumulates when rounding occurs prior to the last step in a computation.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Analyze and evaluate the effects of rounding on numerical computations.</li> <li>• Perform calculations involving rounding.</li> <li>• Identify situations where roundoff error may occur.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the concept of roundoff error.</li> <li>• Recognize the implications of rounding on accuracy and precision.</li> </ul> </li> </ul>	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7	See Reveal Math Course 1 © 2022 1 -6, 1-7, 2-7

		<ul style="list-style-type: none"> <li>Comprehend how errors can accumulate in multi-step calculations.</li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>Rounding rules (e.g., rounding up and rounding down).</li> <li>The difference between exact and approximate values.</li> <li>The significance of maintaining precision in calculations.</li> </ul> </li> </ul>			
	<p>Use estimation methods to check the reasonableness of real number computations and decide if the problem calls for an approximation (including appropriate rounding) or an exact number.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Estimation methods for computations</li> <li>Understanding when to use approximation versus exact numbers</li> <li>Rounding techniques</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Properties of real numbers</li> <li>Techniques for estimating sums, differences, products, and quotients</li> <li>Rounding rules and their application</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>Reasonableness of answers</li> <li>Contextual understanding of problems to determine the need for approximation</li> </ul> </li> </ul>	1-6	2-7 Explore 2-7	1-5, 2-1, 2-4, 2-6, 3-6, 3-7, 3-8, 4-2, 5-1, 6-1, 6-6, 8-5, 9-3, 9-4, 9-6, 11-3
<b>HS.N.3.c</b>	<p>Use units to assess the validity of an answer in the context of a problem.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Analyzing units of measurement</li> <li>Comparing units to validate answers.</li> <li>Adjusting calculations based on unit consistency.</li> </ul> </li> <li><b>Knowledge:</b></li> </ul>	3-1, 3-2, 4-1, 4-7, 9-1, 11-1 Explore 3-1, 3-2,		1-1, 1-2, 1-3, 3-1, 4-1, 4-2, 5-5, 7-1, 8-1, 11-4, 11-5, 11-6

		<ul style="list-style-type: none"> <li>Understanding different units of measurement (e.g., length, mass, time).</li> <li>Recognizing the importance of dimensional analysis.</li> <li><b>Concepts:</b></li> <li>The relationship between units and physical quantities.</li> <li>The concept of validity in mathematical solutions.</li> </ul>	4-1, 4-7, 9-1, 11-1		
	<p>Communicate the meaning of an answer in the context of a problem.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Analyzing problems.</li> <li>Articulating answers clearly.</li> <li>Relating answers to the problem context.</li> <li><b>Knowledge:</b></li> <li>Understanding problem scenarios and their implications.</li> <li>Familiarity with mathematical concepts and operations relevant to the problems.</li> <li><b>Concepts:</b></li> <li>The relationship between mathematical solutions and real-world applications.</li> <li>The importance of reasoning and justification in mathematics.</li> </ul>	2-5, 2-7	2-7, 2-8, 9-7, 9-8	1-4, 2-1, 3-6
<b>HS.A.1</b>	<p>Algebraic Relationships: Students will demonstrate and represent relationships with functions.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b></li> <li>Identify and represent functions in various forms (e.g., graphs, tables, equations).</li> <li>Analyze the relationships between different functions.</li> <li>Apply transformations to functions (translations, reflections, stretches, and compressions).</li> <li><b>Knowledge:</b></li> </ul>	3-1, 3-2 Explore 3-1, 3-2		1-1

		<ul style="list-style-type: none"> <li>• Understanding of function notation and terminology (domain, range).</li> <li>• Familiarity with linear, quadratic, and exponential functions.</li> <li>• Comprehension of how to interpret and analyze graphs.</li> <li>• <b>Concepts:</b></li> <li>• The concept of a function as a relationship between inputs and outputs.</li> <li>• The impact of changes in one variable on another in a function.</li> </ul>		
<b>HS.A.1.a</b>	Demonstrate that functions are a well mapped subdomain of relations.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and classify functions and relations; analyze mappings between sets.</li> <li>• <b>Knowledge:</b> Understand the definition of functions and relations; recognize the characteristics that distinguish functions from other types of relations.</li> <li>• <b>Concepts:</b> Explore the concept of ordered pairs, domain, range, and the vertical line test to determine if a relation is a function.</li> </ul>	3-1, 3-2 Explore 3-1, 3-2	1-1
<b>HS.A.1.b</b>	Analyze a relation to determine if it is a function given mapping diagrams, function notation (e.g., $f(x)=x^2$ ), a table, or a graph.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying relations from various representations (mapping diagrams, tables, graphs).</li> <li>• Determining if a relation is a function.</li> <li>• Understanding and using function notation.</li> <li>• <b>Knowledge:</b></li> <li>• Definition of a function.</li> <li>• Characteristics of functions (e.g., vertical line test).</li> <li>• <b>Concepts:</b></li> </ul>	3-1, 3-2 Explore 3-1, 3-2	1-1, 1-2, 3-1, 4-1, 4-2, 5-5, 7-1, 8-1, 9-4, 11-4, 11-5

		<ul style="list-style-type: none"> <li>The difference between a relation and a function.</li> <li>How to interpret mapping diagrams, tables, and graphs.</li> </ul>		
	<p>Classify a function given its mapping diagram, function notation, table, or graph as a linear, quadratic, absolute value, exponential, or other function.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> Identify and classify different types of functions based on various representations (mapping diagrams, function notation, tables, graphs).</li> <li><b>Knowledge:</b> Understand the characteristics of linear, quadratic, absolute value, exponential, and other types of functions.</li> <li><b>Concepts:</b> Functions and their classifications; relationships between input and output values; function behavior and properties.</li> </ul>	<p>3-1, 3-2, 4-1, 4-7, 9-1, 11-1 Explore 3-1, 3-2, 4-1, 4-7, 9-1, 11-1</p>	<p>1-1, 1-2, 1-3, 3-1, 4-1, 4-2, 5-5, 7-1, 8-1, 11-4, 11-5, 11-6</p>
<b>HS.A.1.c</b>		<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Analyze functions to identify their domain and range.</li> <li>Evaluate if a function is one-to-one.</li> <li>Determine if a function has an inverse function.</li> <li>Use algebraic methods for analysis.</li> <li>Use graphical methods for analysis.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understanding of domain and range.</li> <li>Definition of one-to-one functions.</li> <li>Characteristics of inverse functions.</li> <li>Graphical representations of functions.</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>Function notation and properties.</li> <li>Horizontal line test for one-to-one determination.</li> <li>Algebraic manipulation to find inverses.</li> </ul> </li> </ul>		
<b>HS.A.1.d</b>	<p>Analyze a function's domain and range to determine if it is one-to-one and has an inverse function both algebraically and graphically.</p>		<p>4-2 Explore 4-2</p>	<p>2-3, 2-4</p>

	<p>Define, interpret, and analyze linear, quadratic, absolute value, and exponential functions using the points of interest of the functions and graphing technology.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Define various types of functions (linear, quadratic, absolute value, exponential).</li> <li>• Interpret points of interest (intercepts, vertices, asymptotes).</li> <li>• Analyze the behavior of functions using graphing technology.</li> <li>• <b>Knowledge:</b></li> <li>• Characteristics of linear, quadratic, absolute value, and exponential functions.</li> <li>• Understanding of how to use graphing technology (graphing calculators or software).</li> <li>• <b>Concepts:</b></li> <li>• Function notation and representation.</li> <li>• The relationship between algebraic expressions and their graphical representations.</li> </ul>	<p>4-1, 4-3, 9-1, 9-3, 11-1 Explore 4-1, 4-3, 9-1, 9-3, 11-1</p>		<p>1-2, 1-5, 1-6, 3-1, 7-1</p>
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	<p>Identify, analyze, and apply transformations of existing functions (including translation and dilation). HS.A.1.g</p> <p>Interpret logarithmic equations as exponential equations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify transformations (translation, dilation), analyze functions, apply transformations to functions, interpret logarithmic equations.</li> <li>• <b>Knowledge:</b> Understanding of functions, transformations of functions, properties of logarithmic and exponential equations.</li> <li>• <b>Concepts:</b> The relationship between logarithmic and exponential forms, how transformations affect the graph of a function.</li> </ul>	5-2 Explore	3-8 Explore	2-4
HS.A.1.f	<p>Describe arithmetic sequences using tables of values and functions in explicit and recursive forms. HS.A.1.i</p> <p>Describe geometric sequences using tables of values and functions in explicit and recursive forms.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and describe arithmetic and geometric sequences.</li> <li>• Create and interpret tables of values for sequences.</li> <li>• Write explicit and recursive formulas for both types of sequences.</li> <li>• <b>Knowledge:</b> Understand the definitions of arithmetic and geometric sequences.</li> <li>• Recognize the differences between explicit and recursive forms.</li> <li>• <b>Concepts:</b> Sequences as functions.</li> <li>• The relationship between terms in a sequence.</li> </ul>	11-4 Explore	11-3, 11-4	3-2, 3-4, 4-1, 4-2, 5-5
HS.A.1.h					

		<ul style="list-style-type: none"> <li>The role of common difference (arithmetic) and common ratio (geometric).</li> </ul>			
	<p>Algebraic Processes:</p> <p>Students will apply the operational properties when evaluating rational expressions and solving linear and quadratic equations, and inequalities.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Evaluate rational expressions.</li> <li>Solve linear equations and inequalities.</li> <li>Solve quadratic equations.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understand operational properties (associative, commutative, distributive).</li> <li>Recognize rational expressions and their components.</li> <li>Identify types of equations (linear and quadratic).</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>The relationship between variables and constants in equations.</li> <li>The significance of inequalities in mathematical expressions.</li> <li>The impact of operational properties on solving equations.</li> </ul> </li> </ul>	<p>2-2, 2-3, 6-1, 6-2, 6-3, 7-1, 7-2, 7-3, 7-4, 7-5, 11-3, 11-4, 11-5, 11-6, 11-7</p> <p>Explore</p>		<p>2-1, 2-4, 2-5, 2-6, 3-1, 3-2, 3-4, 3-5, 3-6, 3-7, 9-6</p>
<b>HS.A.2</b>	<p>Analyze and explain the properties used in solving equations, inequalities, systems of linear equations, systems of linear inequalities, and literal equations.</p>	<ol style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Analyzing properties of equations and inequalities.</li> <li>Solving systems of linear equations and inequalities.</li> <li>Manipulating and solving literal equations.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understanding properties of equality and inequality (e.g., addition, subtraction, multiplication, division).</li> <li>Familiarity with linear equations and their characteristics.</li> </ul> </li> </ol>			
<b>HS.A.2.a</b>					

		<ul style="list-style-type: none"> <li>Recognizing different forms of equations (slope-intercept, standard form).</li> </ul> <p>3. <b>Concepts:</b></p> <ul style="list-style-type: none"> <li>The relationship between equations and inequalities.</li> <li>Graphical representation of systems of equations and inequalities.</li> <li>The significance of solutions in context.</li> </ul>			
	<p>Generate expressions in equivalent forms by using algebraic properties to make different characteristics or features visible.</p>	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Generate algebraic expressions.</li> <li>Manipulate expressions using algebraic properties.</li> <li>Identify equivalent forms of expressions.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understanding of algebraic properties (associative, commutative, distributive).</li> <li>Familiarity with different forms of expressions (factored form, expanded form).</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>Equivalence in algebra.</li> <li>The role of properties in simplifying and transforming expressions.</li> </ul> </li> </ul>	<p>1-4, 5-1, 5-2, 9-3</p> <p>Explore</p> <p>1-4, 5-1, 5-2, 9-3</p>	<p>3-2, 3-4, 3-5, 5-5, 6-5, 6-6, 8-2, 8-3, 8-4, 8-5</p>	
<b>HS.A.2.b</b>	Analyze equations and inequalities to determine and apply efficient methods to solve and use	<ul style="list-style-type: none"> <li><b>Skills:</b> Analyzing equations and inequalities, determining efficient methods for solving, applying technology in problem-solving.</li> <li><b>Knowledge:</b> Understanding different types of equations (linear, quadratic, etc.), inequalities, and their properties.</li> </ul>	<p>2-2, 2-3, 6-1, 6-2, 6-3, 11-3, 11-4, 11-5, 11-6</p> <p>Explore</p> <p>2-2, 2-3,</p>	<p>2-3, 2-4</p>	
<b>HS.A.2.c</b>					

	appropriate technology as needed.	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between equations and inequalities, the use of technology (graphing calculators, software), and strategies for efficient problem-solving.</li> </ul>	6-1, 6-2, 6-3, 11-3, 11-4, 11-5, 11-6		
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Identifying coordinate points.</li> <li>• Interpreting graphs.</li> <li>• Analyzing tables of values.</li> <li>• Calculating slope using the formula.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the concept of slope as a rate of change.</li> <li>• Familiarity with linear equations and their graphical representations.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The relationship between two variables represented in different formats (coordinate points, graphs, tables).</li> <li>• The formula for slope: <ul style="list-style-type: none"> <li>• <math>m = \frac{y_2 - y_1}{x_2 - x_1}</math></li> <li>• <math>m =</math></li> <li>• <math>x</math></li> <li>• <math>2</math></li> <li>• <math>-x</math></li> <li>• <math>1</math></li> <li>• <math>y</math></li> <li>• <math>2</math></li> <li>• <math>-y</math></li> <li>• <math>1</math></li> </ul> </li> </ul> </li> </ul>			
<b>HS.A.2.d</b>	Calculate the slope (rate of change) of a line given coordinate points, a graph, or a table of values.		4-2 Explore 4-2	3-8	2-3, 2-4

	<p>Write and graph equations of functions (linear, absolute value, quadratic, and exponential) using the points of interest of the function.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Writing equations for different types of functions (linear, absolute value, quadratic, exponential).</li> <li>• Graphing these functions accurately.</li> <li>• Identifying and using points of interest (e.g., intercepts, vertices, asymptotes).</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the characteristics of each type of function.</li> <li>• Familiarity with the standard forms of the equations.</li> <li>• Ability to determine points of interest from the equations.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between algebraic expressions and their graphical representations.</li> <li>• The significance of points of interest in understanding the behavior of functions.</li> </ul>	<p>4-1, 4-3, 9-1, 9-3, 11-1 Explore 4-1, 4-3, 9-1, 9-3, 11-1</p>	<p>3-8 Explore 3-8</p>	<p>1-1, 1-2, 1-3, 3-1, 4-1, 4-2, 5-5, 7-1</p>
<p>HS.A.2.e</p>	<p>Given a line, write the equation of a line that is parallel or perpendicular to it.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Understanding the concept of parallel lines and their slopes.</li> <li>• Understanding the concept of perpendicular lines and their slopes.</li> <li>• Writing the equation of a line in slope-intercept form (<math>y=mx+b</math>).</li> <li>• <math>y=mx+d</math>.</li> <li>• Manipulating equations to find parallel or perpendicular lines.</li> </ul>	<p>5-2 Explore 5-2</p>	<p>3-8 Explore 3-8</p>	<p>2-4</p>
<p>HS.A.2.f</p>					

	Perform and explain operations such as addition, subtraction, multiplication, division, and factoring on polynomials.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Perform addition, subtraction, multiplication, division, and factoring on polynomials.</li> <li>• <b>Knowledge:</b> Understand the structure of polynomials.</li> <li>• Recognize like terms and how to combine them.</li> <li>• Identify different methods of factoring polynomials (e.g., grouping, using the quadratic formula).</li> <li>• <b>Concepts:</b> The relationship between coefficients and variables in polynomials.</li> <li>• The properties of operations with polynomials.</li> </ul>	10-1, 10-2, 10-3, 10-4, 10-5, 10-6, 10-7 Explore		3-4, 4-3, 4-4, 4-5
<b>HS.A.2.g</b>	Explain the connection between the factors of a polynomial and the zeros of a polynomial.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify factors of polynomials, recognize zeros of polynomials, understand the relationship between factors and zeros.</li> <li>• <b>Knowledge:</b> Definition of polynomials, understanding of what factors and zeros are, polynomial equations.</li> <li>• <b>Concepts:</b> The Factor Theorem, the relationship between roots (zeros) and factors, how to factor polynomials.</li> </ul>	11-4 Explore		3-2, 3-4, 4-1, 4-2, 5-5
<b>HS.A.2.i</b>	Combine functions by composition and perform operations on functions.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding function composition, performing operations on functions (addition, subtraction, multiplication, division).</li> <li>• <b>Knowledge:</b> Definitions and properties of functions, notation for composition (<math>f(g(x))</math> and <math>f(g(x))</math>), and operations on functions.</li> </ul>	11-9 Explore		3-2, 3-4, 4-1, 4-2, 5-5

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between functions, how to manipulate functions algebraically, and the significance of function composition in real-world contexts.</li> </ul>			
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Identify and interpret nonlinear functions.</li> <li>• Utilize nonlinear functions to model real-world situations.</li> <li>• Solve problems involving nonlinear equations.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the characteristics of nonlinear functions (e.g., quadratic, exponential, logarithmic).</li> <li>• Familiarity with graphing techniques for nonlinear functions.</li> <li>• Comprehension of the context in which nonlinear functions are applicable.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The concept of modeling real-life situations with mathematical functions.</li> <li>• The difference between linear and nonlinear functions.</li> <li>• The use of technology (graphing calculators, software) to explore nonlinear functions.</li> </ul> </li> </ul>	<p>Applications: Students will solve authentic problems using nonlinear functions.</p>	1-5, 5-3, 5-5, 11-3, 11-4, 11-5, 11-6, 11-8 Explore 11-3, 11-4, 11-5, 11-6, 11-8	3-4, 3-5, 3-6, 3-8, 4-2, 7-2, 7-3, 7-4, 7-5, 8-3, 8-4, 8-5, 10-3
<b>HS.A.3.a</b>	Analyze and model authentic situations using various representations and appropriate technology.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Analyzing situations, modeling scenarios, using various representations (graphs, charts, tables), and employing technology effectively.</li> <li>• <b>Knowledge:</b> Understanding different types of representations and technology tools, and recognizing authentic situations that can be modeled.</li> </ul>			

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Real-world applications of mathematical concepts, the relationship between different representations, and the role of technology in problem-solving.</li> </ul>			
<b>HS.A.3.b</b>	Identify, interpret, relate, and graph the factors, x-intercepts, roots, and zeros of polynomial functions using algebraic and graphing methods.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify factors of polynomial functions.</li> <li>• Interpret the significance of x-intercepts, roots, and zeros.</li> <li>• Relate the algebraic expressions to their graphical representations.</li> <li>• Graph polynomial functions accurately.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding polynomial functions and their forms.</li> <li>• Familiarity with the relationship between factors and their roots.</li> <li>• Knowledge of graphing techniques for polynomials.</li> <li>• <b>Concepts:</b></li> <li>• The concept of x-intercepts, roots, and zeros in relation to polynomial functions.</li> <li>• The Factor Theorem and Remainder Theorem.</li> <li>• The Fundamental Theorem of Algebra.</li> </ul>			3-1, 3-2, 3-6, 4-1, 4-2
<b>HS.A.3.c</b>	Identify and predict appropriate solutions to equations given context and domain/range (e.g., extraneous solutions,	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Skills: Identifying solutions to equations, predicting types of solutions, understanding context and domain/range.</li> </ul>	11-3 Explore 11-3		2-2, 3-4, 6-3, 6-4, 6-5, 6-6, 7-1

# 5th Grade Math

Focus:

How can we...

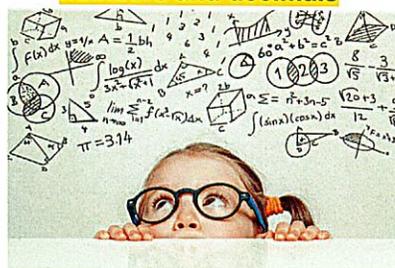
3 Weeks / Quarter 2

## Understanding Place Value



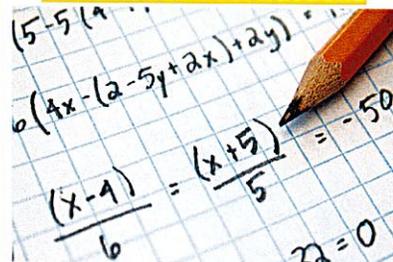
3 Weeks / Quarter 3

## Using Models to add, subtract, multiply, and divide whole numbers and decimals



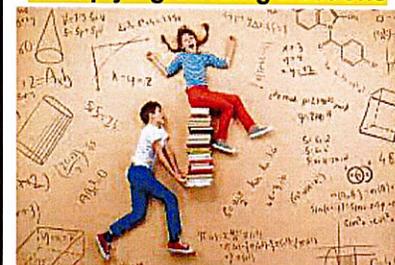
3 Weeks / Quarter 4

## Using equivalent fractions to add and subtract fractions



3 Weeks / Quarter 4

## Apply understanding of multiplying/dividing fractions



### THE FOCUS OF THE STORY

In Topic 1, students expand their understanding of the place value system for whole numbers and decimals. They read, write, and compare decimals to thousandths.

### THE FOCUS OF THE STORY

In Topics 2-6, students extend their understanding of multi-digit multiplication and division with whole numbers. They develop an understanding of operations with decimals.

### THE FOCUS OF THE STORY

In Topic 7, students use equivalent fractions as a strategy to add and subtract fractions with unlike denominators.

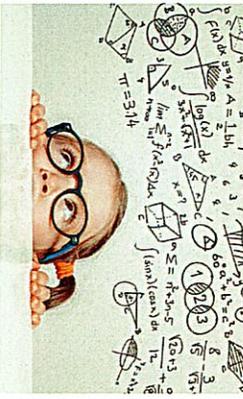
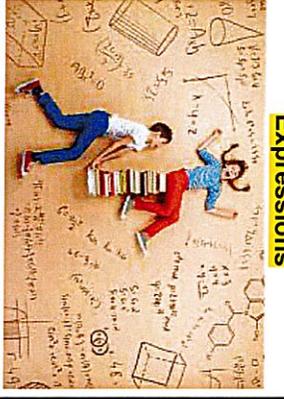
### THE FOCUS OF THE STORY

In Topics 8-9, students extend their understanding of multiplication with fractions. They are introduced to division of fractions by dividing with unit fractions.

LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS
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**5th Grade Math**

**Focus:** How can we...

<p><b>3 Weeks / Quarter 3</b></p> <p><b>Represent and Interpret Data</b></p> 	<p><b>3 Weeks / Quarter 3</b></p> <p><b>Understand Volume Concepts</b></p> 	<p><b>3 Weeks / Quarter 4</b></p> <p><b>Convert Measurements</b></p> 	<p><b>3 Weeks / Quarter 4</b></p> <p><b>Write and Interpret Numerical Expressions</b></p> 
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<p><b>THE FOCUS OF THE STORY</b></p> <p>In Topic 10, students represent and interpret data on a line plot, with an emphasis on data involving fractions. They apply their understanding of line plots and operations with fractions to solve problems</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>In Topic 11, students explore concepts of volume measurement for rectangular prisms and some composite solid figures. They relate volume to multiplication and addition.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>In Topic 12, students convert measurements within a measurement system and solve problems using measurement conversions.</p>	<p><b>THE FOCUS OF THE STORY</b></p> <p>In Topic 13, students use the order of operations to evaluate, write, and interpret numerical expressions with grouping symbols.</p>
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LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS	LEARNING GOALS/STANDARDS

**5th Grade Math**

**Focus:** How can we...

<p>3 Weeks / Quarter 2</p> <p><b>Graph Points on the Coordinate Plane</b></p>	<p>3 Weeks / Quarter 3</p> <p><b>Algebra: Analyze Patterns and Relationships</b></p>	<p>3 Weeks / Quarter 4</p> <p><b>Geometric Measurement: Classify Two-Dimensional Figures</b></p>	<p>3 Weeks / Quarter 4</p> <p><b>(INSERT LESSON TITLE)</b></p>
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<p>THE FOCUS OF THE STORY</p> <p>In Topic 14, students develop an understanding of the coordinate system. They graph ordered</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 15, student generate and analyze numerical. They identify a relationship between</p>	<p>THE FOCUS OF THE STORY</p> <p>In Topic 16, students classify triangles and quadrilaterals by their properties. They learn that</p>	<p>THE FOCUS OF THE STORY</p>
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<p>pairs in the first quadrant of the coordinate plane to solve problems.</p>	<p>two patterns and graph the relationship on the coordinate plane.</p>	<p>the properties of a two-dimensional shape also belong to all subcategories of that shape.</p>	
<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>	<p>LEARNING GOALS/STANDARDS</p>

Grade 5 State Standards	Unwrap the Standard	Connection to instructional materials
<p>5.N.1</p> <p>Numeric Relationships: Students will understand the place value system.</p>	<p><b>Break Down Standard:</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Skills: Understanding and applying concepts of numbers and operations.</li> <li>• Knowledge: Familiarity with place value, addition, subtraction, multiplication, and division.</li> <li>• Concepts: The relationship between numbers, the properties of operations, and the use of equations.</li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>• Understand the place value system and how it applies to whole numbers and decimals.</li> <li>• Perform operations (addition, subtraction, multiplication, and division) with whole numbers and decimals.</li> <li>• Recognize and apply the properties of operations (commutative, associative, and distributive properties).</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify and explain the place value of digits in multi-digit whole numbers and decimals.</li> <li>2. Students will perform addition and subtraction of multi-digit whole numbers with accuracy.</li> <li>3. Students will apply multiplication and division strategies to solve problems involving multi-digit numbers.</li> <li>4. Students will demonstrate the use of properties of operations to simplify expressions.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b></li> </ul>	<p><b>Topic 1:</b>  Pick a Project, p. 3; 3-Act Math: Buzz In, p. 4; Lesson 1-3, pp. 13-16; Lesson 1-3, pp. 17-20; Lesson 1-7, pp. 29-32; Reteaching: pp. 35-36  Sets C, F</p>

		<p><b>Summarize:</b></p> <p>The standard 5.N.1 focuses on students' understanding of numbers and operations through skills in place value and performing mathematical operations. Students are expected to identify place values, accurately perform operations with whole numbers and decimals, and apply properties of operations. Effective teaching strategies include the use of visual aids, hands-on activities, and collaborative discussions, while assessment can involve quizzes and performance tasks to gauge understanding and application of concepts.</p> <ul style="list-style-type: none"> <li>• <b>Assessment Ideas:</b></li> <li>• Quizzes on place value identification and operations.</li> <li>• Performance tasks where students demonstrate their ability to solve real-world problems using the four operations.</li> <li>• Group projects that involve creating and solving equations using the properties of operations.</li> </ul>	
	<p>Can you provide examples of effective visual aids for teaching place value? What are some engaging games for practicing multiplication and division?</p>		

<p><b>5.N.1.a</b> Read, write, and demonstrate multiple equivalent representations for multi-digit whole numbers and decimals through the thousands place using standard form and expanded form.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying the concept of place value, comparing and ordering numbers, and performing operations involving whole numbers.</li> <li>• <b>Knowledge:</b> Recognizing the significance of digits in a number based on their position (place value), understanding how to read and write large numbers, and grasping the concepts of greater than, less than, and equal to.</li> <li>• <b>Concepts:</b> The base-ten number system, the relationship between different place values, and the use of numerical symbols to represent quantities.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Identify the value of each digit in a multi-digit whole number.</li> <li>• Compare and order multi-digit whole numbers using place value understanding.</li> <li>• Demonstrate the ability to explain their reasoning when comparing and ordering numbers.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify the value of each digit in numbers up to 1,000,000 (e.g., in the number 345,678, the value of '4' is 40,000).</li> <li>2. Students will compare two multi-digit whole numbers using greater than, less than, or equal to symbols.</li> <li>3. Students will order a set of multi-digit whole numbers from least to greatest and vice versa.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b></li> </ul>	

	<ul style="list-style-type: none"> <li>• Use base-ten blocks or place value charts to visually represent numbers.</li> <li>• Engage students in group activities where they compare and order numbers using cards with different values.</li> <li>• Incorporate games that involve place value and number comparison, such as "Place Value War" with playing cards.</li> </ul> <ul style="list-style-type: none"> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>• Have students complete a worksheet where they identify the value of digits in various numbers and compare pairs of numbers.</li> <li>• Conduct a quiz that requires students to order a list of multi-digit numbers.</li> <li>• Use exit tickets where students explain their reasoning for ordering or comparing two numbers.</li> </ul> </li> </ul> <p><b>Summarize:</b>  The standard 5.N.1.a focuses on students understanding place value and applying this knowledge to compare and order multi-digit whole numbers. Students are expected to identify the value of digits, use comparison symbols correctly, and demonstrate their reasoning in these processes. Effective teaching strategies include hands-on activities, collaborative learning, and engaging games, while assessments can include worksheets, quizzes, and reflective exit tickets to gauge understanding.</p> <p>copy  dit  xport  ead Aloud  ore</p> <p>Can you suggest some additional games for teaching place value?  What are some effective ways to assess students' understanding of this standard?</p>	
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<p><b>5.N.1.b</b> Recognizing a digit in one place represents 1/10 of what it represents in the place to its left.</p>	<p> <ul style="list-style-type: none"> <li>• <b>Standard:</b> 5.N.1.b</li> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding of place value, comparing and ordering decimals.</li> <li>• <b>Knowledge:</b> Concepts of decimal notation and its relationship to fractions.</li> <li>• <b>Concepts:</b> Decimal place value system, comparison symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>), and ordering decimals.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should be able to:</p> <ul style="list-style-type: none"> <li>• Recognize and use decimal place value to compare and order decimals.</li> <li>• Understand how to express decimals in relation to whole numbers and fractions.</li> <li>• Apply comparison symbols correctly when discussing decimals.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will compare decimals to the thousandths place using appropriate symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>).</li> <li>2. <b>Target 2:</b> Students will order a set of decimals from least to greatest.</li> <li>3. <b>Target 3:</b> Students will explain the relationship between decimals and their equivalent fraction forms.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>• Use visual aids like number lines and place value charts to illustrate decimal placement.</li> <li>• Incorporate hands-on activities such as decimal card games to practice comparing and ordering decimals.</li> </ul> </li> </ul> </p>	<p><b>Topic 1:</b> 3-Act Math: Buzz In, p. 4; Lesson 1-2, pp. 9-12; Lesson 1-3, pp. 13-16; Reteaching: p. 35 Sets B, C</p> <p><b>Topic 3:</b> 3-Act Math: Morning Commute; p. 80; Lesson 3-1, pp. 81-84; Reteaching: p. 119 Set A</p>

		<ul style="list-style-type: none"> <li>• Discuss real-life examples where decimals are used, such as money and measurements.</li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>• Provide worksheets that require students to compare and order decimals in various scenarios.</li> <li>• Create a quiz where students must write the correct comparison symbol between pairs of decimals.</li> <li>• Have students explain their reasoning in writing when ordering decimals in a given set.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.N.1.b focuses on students' understanding of comparing and ordering decimals up to the thousandths place. The key components include skills in place value and comparison, knowledge of decimal and fractional relationships, and concepts surrounding the decimal system. Learning targets involve comparing decimals, ordering them, and explaining their relationships to fractions. Instruction can include visual aids and real-life examples; while assessments may focus on worksheets, quizzes, and written explanations.</p> <p>copy dit xport Read Aloud ore</p> <p>Can you provide examples of real-life applications for teaching decimals? What are some effective assessment methods for these learning targets?</p>	
5.N.1.c	Use whole number exponents to denote powers of 10.	<p><b>Key Components:</b></p>	<p><b>Topic 1:</b> Lesson 1-1, pp. 5-8; Retaching: p. 35 Set A</p> <p><b>Topic 3:</b></p>

	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying the concept of fractions, comparing fractions, and performing operations with fractions.</li> <li>• <b>Knowledge:</b> Recognizing equivalent fractions, understanding the relationship between fractions and whole numbers, and using visual models to represent fractions.</li> <li>• <b>Concepts:</b> The concept of part-to-whole relationships, the number line representation of fractions, and the idea of equivalence in fractions.</li> </ul> <p><b>Define Expectations:</b> Students should be able to:</p> <ul style="list-style-type: none"> <li>• Compare and order fractions with like and unlike denominators.</li> <li>• Identify and create equivalent fractions.</li> <li>• Use visual models (such as number lines and fraction bars) to demonstrate their understanding of fractions.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ul style="list-style-type: none"> <li>• <b>Target 1:</b> Students will be able to compare two fractions with like denominators and determine which is greater or if they are equal.</li> <li>• <b>Target 2:</b> Students will be able to create and identify at least three equivalent fractions for a given fraction.</li> <li>• <b>Target 3:</b> Students will be able to use a number line to accurately place fractions and compare their sizes.</li> </ul> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>• Use visual aids, such as fraction circles or bars, to help students understand equivalent fractions.</li> <li>• Incorporate hands-on activities where students can manipulate physical fractions (e.g., cutting up paper).</li> <li>• Provide guided practice with comparing fractions using number lines.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>• Create a quiz where students must compare pairs of fractions and explain their reasoning.</li> </ul> </li> </ul>	<p>Lesson 3-1, pp. 81–84; Reteaching: p. 119 Set A <b>Topic 4:</b></p> <p>Lesson 4-1, pp. 129–132; Reteaching: p. 167 Set A <b>Topic 6:</b></p> <p>Lesson 6-1, pp. 229–232; Reteaching: p. 255 Set A <b>Topic 7:</b></p> <p>Pick a Project, p. 267, 3-Act Math: The Gift Recipe, p. 268</p> <p><b>Topic 12:</b></p> <p>Lesson 12-4, pp. Lesson 12-4, pp. 501–504; Lesson 12-5, pp. 505–508; Lesson 12-6, pp. 509–512; Reteaching: pp. 527–528 Sets D–F</p>
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		<ul style="list-style-type: none"> <li>• Have students demonstrate their understanding by creating a poster that shows equivalent fractions using visual models.</li> <li>• Use exit tickets where students write down one fraction and two equivalent fractions to assess their learning.</li> </ul> <p><b>Summarize:</b>  The standard 5.N.1.c focuses on students' understanding and application of fractions, including comparing, ordering, and finding equivalent fractions. Key learning targets include the ability to compare fractions, identify equivalent fractions, and represent fractions on a number line. Effective instruction can include visual aids and hands-on activities, while assessments can consist of quizzes, creative projects, and quick checks for understanding to evaluate student progress.</p> <p>copy  dit  xport  ead Aloud  ore  <b>Actions</b></p>	
5.N.2	Fractions and Decimals: Students will extend understanding of fraction and decimal equivalence and ordering.	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying place value concepts, performing operations with multi-digit whole numbers.</li> <li>• <b>Knowledge:</b> Recognizing the relationship between digits in a number based on their position, understanding the value of digits, and applying these concepts to solve problems.</li> </ul>	

	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Place value system, the base-10 number system, operations such as addition, subtraction, multiplication, and division with multi-digit numbers.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Identify the value of each digit in a multi-digit whole number.</li> <li>• Use place value to perform operations with these numbers accurately.</li> <li>• Explain how the position of a digit affects its value.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will accurately identify the value of digits in numbers up to 1,000,000.</li> <li>2. <b>Target 2:</b> Students will demonstrate the ability to add and subtract multi-digit whole numbers using the standard algorithm.</li> <li>3. <b>Target 3:</b> Students will multiply multi-digit numbers by one-digit numbers and explain the process using place value.</li> <li>4. <b>Target 4:</b> Students will divide multi-digit numbers by one-digit numbers and interpret the remainder in the context of the problem.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>• Use base-10 blocks or place value charts to visually demonstrate the value of digits.</li> <li>• Implement guided practice with word problems to contextualize operations.</li> <li>• Incorporate games and interactive activities focusing on place value and operations.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>• Create a quiz with multiple-choice and open-ended questions assessing place value recognition and operations.</li> </ul> </li> </ul>	
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	<ul style="list-style-type: none"> <li>• Use performance tasks where students solve real-world problems involving multi-digit numbers and explain their thinking.</li> <li>• Conduct peer assessments where students explain their problem-solving processes to each other.</li> </ul> <p><b>Summarize:</b> The standard 5.N.2 focuses on understanding place value and performing operations with multi-digit whole numbers. Students should learn to identify the value of digits, perform addition, subtraction, multiplication, and division accurately, and explain their reasoning. Through targeted learning goals and a variety of instructional and assessment strategies, educators can effectively support students in mastering these essential mathematical concepts.</p>	
<p>5.N.2.a Generate equivalent forms of commonly used fractions and decimals (e.g., halves, fourths, fifths, tenths).</p>	<p><b>Break Down Standard: 5.N.2a</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and performing operations with decimals and fractions.</li> <li>• <b>Knowledge:</b> Knowledge of the place value system, equivalence of fractions, and the ability to compare and order decimal numbers.</li> <li>• <b>Concepts:</b> The concept of decimal notation, fraction notation, and how they relate to each other in terms of value.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Understand the relationship between fractions and decimals.</li> <li>• Compare and order decimals and fractions.</li> <li>• Convert between fractions and decimals.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to convert a fraction to its decimal equivalent.</li> <li>2. Students will compare two decimal numbers and determine which is greater or lesser.</li> </ol>	<p>Teachers have the opportunity to address this standard, please see: <b>Topic 1:</b> Lesson 1-4, pp. 17-20; Let's Investigate: Go the Distance; Lesson 1-5, pp. 21-24; Lesson 1-6, pp. 25-28</p>

		<p>3. Students will order a set of decimal numbers from least to greatest.</p> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids like number lines to show the relationship between fractions and decimals.</li> <li>○ Incorporate hands-on activities, such as using fraction tiles or decimal grids for comparison.</li> <li>○ Engage students in group discussions to explain their reasoning when comparing or ordering numbers.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Provide students with a variety of fractions to convert to decimals and assess their accuracy.</li> <li>○ Create a quiz that includes comparing and ordering both fractions and decimals.</li> <li>○ Use exit tickets where students must demonstrate one skill learned in class.</li> </ul> </li> </ul> <p><b>Summarize:</b> Standard 5.N.2a focuses on students' ability to understand and manipulate decimals and fractions. Key components include skills in conversion and comparison, knowledge of the place value system, and the concept of equivalence between the two forms. Learning targets emphasize conversion, comparison, and ordering, with suggested instructional methods and assessments designed to reinforce and evaluate these skills effectively.</p>	
5.N.2b	<p>Represent and justify comparisons of whole numbers, fractions, mixed numbers, and decimals through the thousandths place using number lines, reasoning strategies, and/or equivalence.</p>	<p><b>Break Down Standard: 5.N.2b</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> Understanding and applying place value concepts, comparing and ordering numbers.</li> <li>○ <b>Knowledge:</b> Recognizing the value of digits in multi-digit whole numbers, understanding the relationship between adjacent places.</li> </ul> </li> </ul>	<p><b>Topic 1:</b> 3-Act Math: Buzz In, p. 4; Let's Investigate: Go the Distance; Lesson 1-5, pp. 21-24; Lesson 1-7, pp. 29-32; Reteaching: p. 36 Sets D, F <b>MDIS:</b> H10, H11, H21, H22</p>

	<ul style="list-style-type: none"> <li>○ <b>Concepts:</b> The concept of magnitude, the significance of a digit's position in a number.</li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>● Understand the value of each digit in a multi-digit number.</li> <li>● Compare and order multi-digit whole numbers based on their place value.</li> <li>● Use the correct symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>) to represent comparisons.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Place Value Understanding:</b> <ul style="list-style-type: none"> <li>○ Students will be able to identify the value of each digit in a multi-digit whole number up to 1,000,000.</li> </ul> </li> <li>2. <b>Comparison of Numbers:</b> <ul style="list-style-type: none"> <li>○ Students will be able to compare two multi-digit whole numbers and use the correct symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>) to represent their relationship.</li> </ul> </li> <li>3. <b>Ordering Numbers:</b> <ul style="list-style-type: none"> <li>○ Students will be able to order a set of multi-digit whole numbers from least to greatest and vice versa.</li> </ul> </li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>● <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids such as place value charts or blocks.</li> <li>○ Engage students in group activities where they compare numbers using real-life examples (e.g., distances, populations).</li> <li>○ Incorporate games that involve placing numbers in order or identifying place values.</li> </ul> </li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create worksheets where students must identify and label the place value of digits in given numbers.</li> </ul> </li> </ul>	
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	<ul style="list-style-type: none"> <li>○ Design a matching game where students match numbers with their correct comparisons.</li> <li>○ Administer quizzes that involve ordering numbers and using comparison symbols.</li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.N.2b focuses on students' understanding of place value and their ability to compare and order multi-digit whole numbers. Students are expected to recognize digit values, use comparison symbols accurately, and effectively order numbers. Teaching strategies include visual aids, group activities, and engaging games, while assessments may involve worksheets, matching games, and quizzes to measure student understanding.</p>	
<p><b>5.N.3</b></p> <p>Operations with Fractions and Decimals: Students will apply and extend previous understandings of whole number operations to add, subtract, multiply and divide fractions and decimals.</p>	<p><b>Break Down Standard: 5.N.3</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Understand and apply the concept of fractions.</li> <li>○ Compare and order fractions with unlike denominators.</li> <li>○ Simplify fractions.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Recognize equivalent fractions.</li> <li>○ Understand the relationship between fractions and whole numbers.</li> <li>○ Know how to find a common denominator.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ The concept of parts of a whole.</li> <li>○ The idea of fraction equivalency and comparison.</li> <li>○ The application of fractions in real-life scenarios.</li> </ul> </li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Identify and create equivalent fractions.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Compare and order fractions with different denominators.</li> <li>• Simplify fractions effectively.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to identify and generate equivalent fractions for given fractions.</li> <li>2. <b>Target 2:</b> Students will compare two fractions with unlike denominators and determine which is greater or if they are equal.</li> <li>3. <b>Target 3:</b> Students will simplify fractions to their lowest terms.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids such as fraction bars or pie charts to illustrate equivalent fractions.</li> <li>○ Engage students in hands-on activities where they can manipulate fraction pieces.</li> <li>○ Implement group discussions and problem-solving scenarios involving real-life examples of fractions.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz that includes comparing and simplifying fractions.</li> <li>○ Use performance tasks where students demonstrate their understanding of fractions through projects or presentations.</li> <li>○ Conduct a formative assessment using exit tickets that require students to solve fraction problems.</li> </ul> </li> </ul> <p><b>Summarize:</b>  The standard 5.N.3 focuses on students' ability to understand and manipulate fractions. Key components include recognizing equivalent fractions, comparing fractions with unlike denominators, and simplifying fractions. Learning targets are set for identifying equivalent fractions, comparing two fractions, and simplifying them. Instruction may include visual aids and hands-on activities, with assessments ranging from quizzes to performance tasks.</p>	
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<p><b>5.N.3.a</b></p> <p>Interpret a fraction as division of the numerator by the denominator.</p>	<p><b>Break Down Standard: 5.N.3.a</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>◦ <b>Skills:</b> Identify, compare, and analyze patterns in numerical data.</li> <li>◦ <b>Knowledge:</b> Understanding of how to represent and interpret data using various methods (e.g., graphs, charts).</li> <li>◦ <b>Concepts:</b> Recognition of numerical relationships and the ability to solve problems based on these relationships.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>• Recognize and interpret patterns in numerical data.</li> <li>• Use appropriate tools to represent data visually.</li> <li>• Analyze data to draw conclusions and make predictions.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identify Patterns:</b> <ul style="list-style-type: none"> <li>◦ Students will be able to identify patterns in numerical data sets with 80% accuracy.</li> </ul> </li> <li>2. <b>Graphical Representation:</b> <ul style="list-style-type: none"> <li>◦ Students will create at least two types of graphs (bar graph, line graph) to represent given data sets.</li> </ul> </li> <li>3. <b>Data Analysis:</b> <ul style="list-style-type: none"> <li>◦ Students will analyze data to draw conclusions by answering at least three questions about the data presented.</li> </ul> </li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use interactive activities such as data collection from surveys or experiments.</li> <li>◦ Incorporate technology by using graphing software or online tools to create visual representations of data.</li> </ul> </li> </ul>	<p><b>Topic 9:</b>  3-Act Math: Slime Time, p. 384;  Lesson 9-1, pp. 85–388; Lesson  9-2, pp. 389–392; Reteaching: p.  419 Set A</p>
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	<ul style="list-style-type: none"> <li>○ Facilitate group discussions to compare different representations of the same data set.</li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Have students present their graphs and explain the patterns they observed.</li> <li>○ Create a quiz that includes interpreting graphs and solving problems based on data sets.</li> <li>○ Conduct a project where students collect real-world data, represent it graphically, and analyze it.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>Standard 5.N.3a focuses on developing students' abilities to identify and analyze patterns in numerical data. Students will learn to create and interpret various graphical representations of data, enhancing their analytical skills. The learning targets emphasize identifying patterns, creating graphs, and analyzing data, supported by interactive teaching strategies and assessments to ensure understanding.</p>	
<p><b>5.N.3.b</b></p> <p>Multiply a whole number by a fraction or a fraction by a fraction, including mixed numbers, using visual fraction models and properties of operations.</p>	<p><b>Break Down Standard: 5.N.3b</b></p> <ul style="list-style-type: none"> <li>● <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Understanding and applying the concept of fractions.</li> <li>○ Comparing and ordering fractions with like denominators.</li> <li>○ Using visual models to represent fractions.</li> </ul> </li> <li>○ <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Knowledge of numerator and denominator.</li> <li>○ Understanding equivalent fractions.</li> <li>○ Familiarity with the concept of greater than, less than, and equal to.</li> </ul> </li> <li>○ <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ Fractions as parts of a whole.</li> <li>○ The relationship between the size of fractions and their values.</li> </ul> </li> <li>○ The importance of a common denominator in comparison.</li> </ul> </li> </ul>	<p><b>Topic 8:</b> Pick a Project, pp. 331-332; Lesson 8-1, pp. 333-336; Lesson 8-2, pp. 337-340; Lesson 8-3, pp. 341-344; Lesson 8-4, pp. 345-348; Lesson 8-5, pp. 349-352; Lesson 8-6, pp. 353-356; Let's Investigate: Photo Enlargement; Lesson 8-7, pp. 357-360; Lesson 8-8, pp. 361-364; Lesson 8-9, pp. 365-368; Reteaching: pp. 371-374 Sets A-H</p> <p><b>Topic 9:</b> 3-Act Math: Slime Time, p. 384</p> <p><b>Topic 10:</b> Let's Investigate: Geckos</p>

		<p><b>Define Expectations:</b></p> <p>Students should learn to compare and order fractions that have the same denominators. They should be able to recognize which fraction is larger or smaller, and articulate why that is the case using mathematical reasoning and visual models.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to compare two fractions with like denominators and determine which is greater, using at least one visual model (e.g., fraction strips or circles).</li> <li>2. <b>Target 2:</b> Students will be able to order a set of fractions with the same denominator from least to greatest with 80% accuracy.</li> <li>3. <b>Target 3:</b> Students will explain their reasoning verbally or in writing when comparing fractions.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use visual aids such as fraction circles and bars to help students understand fraction sizes and relationships.</li> <li>◦ Implement group activities where students can collaborate to compare and order fractions.</li> <li>◦ Utilize number lines to demonstrate where fractions fall in relation to each other.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Create a quiz where students compare and order given fractions.</li> <li>◦ Assign a project where students create their own fraction models and explain comparisons.</li> <li>◦ Conduct a performance task where students must justify their comparisons in front of the class.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.N.3b focuses on students comparing and ordering fractions with like denominators. Key components include understanding the structure of fractions, the concept of equivalent fractions, and the application of comparison skills. Learning targets emphasize the ability to compare and order fractions, with</p>	
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	<p>accompanying instructional strategies that include visual models and collaborative activities. Assessment ideas incorporate quizzes, projects, and presentations to ensure students can demonstrate their understanding effectively.</p>	
<p><b>5.N.3.c</b> Divide a unit fraction by a whole number and a whole number by a unit fraction using visual fraction models and properties of operations.</p>	<p><b>Break Down Standard: 5.N.3c</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>◦ <b>Skills:</b> Understand and apply properties of operations with fractions.</li> <li>◦ <b>Knowledge:</b> Recognize equivalent fractions, simplify fractions, and perform operations on fractions.</li> <li>◦ <b>Concepts:</b> Relationships between fractions, the concept of a whole, and the use of fractions in real-world contexts.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>• Identify and generate equivalent fractions.</li> <li>• Simplify fractions to their simplest form.</li> <li>• Add and subtract fractions with like denominators.</li> <li>• Multiply and divide fractions.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Equivalent Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will be able to identify at least three equivalent fractions for a given fraction.</li> </ul> </li> <li>2. <b>Simplifying Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will simplify fractions to their lowest terms with 90% accuracy.</li> </ul> </li> <li>3. <b>Operations with Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will add and subtract fractions with like denominators in word problems with 80% accuracy.</li> </ul> </li> </ol>	<p><b>Topic 9:</b> Lesson 9-3, pp. 393–396; Lesson 9-4, pp. 397–400; Let’s Investigate: For the Dogs; Lesson 9-5, pp. 401–404; Lesson 9-6, pp. 405–408; Lesson 9-7, pp. 409–412; Reteaching: pp. 419–420 Sets B–D</p>

		<ul style="list-style-type: none"> <li>○ Students will multiply fractions and represent the product visually.</li> </ul> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>● <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids like fraction strips and pie charts to demonstrate equivalent fractions and operations.</li> <li>○ Engage students in group activities where they create and simplify fractions using everyday items (e.g., pizza slices).</li> <li>○ Implement math games that focus on fraction operations to reinforce learning.</li> </ul> </li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Quizzes that include identifying equivalent fractions and simplifying.</li> <li>○ Word problems that require adding and subtracting fractions.</li> <li>○ Group presentations where students explain their understanding of fractions through real-life examples.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.N.3c emphasizes students' understanding of fractions, focusing on equivalent fractions, simplification, and operations. The learning targets require students to identify equivalent fractions, simplify them, and perform addition and subtraction with like denominators. Instructional strategies include visual aids and hands-on activities, while assessments will measure students' abilities through quizzes and real-life applications.</p>	
5.N.3.d	Solve authentic problems involving addition, subtraction, and multiplication of fractions and mixed numbers with like and unlike denominators.	<p><b>Break Down Standard:</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Understanding and applying properties of operations, using mathematical reasoning, and making connections between various representations of numbers.</li> </ul>	<p><b>Topic 7:</b></p> <p>3-Act Math: The Gift Recipe, p. 268; Lesson 7-1, pp. 269–272; Let's Investigate: Resale Mall Space; Lesson 7-2, pp. 273–276; Lesson 7-3, pp. 277–280; Lesson 7-4, pp. 281–284; Lesson 7-5, pp. 285–288; Lesson 7-6, pp. 289–292; Lesson 7-7, pp. 293–296; Lesson 7-8, pp. 297–300; Lesson 7-9,</p>

	<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Familiarity with the concept of fractions, understanding the process of addition and subtraction of fractions, and recognizing equivalent fractions.</li> <li>• <b>Concepts:</b> The relationship between fractions and whole numbers, the importance of common denominators, and the role of the number line in representing fractions.</li> </ul> <p><b>Define Expectations:</b> Students should learn to add and subtract fractions with like denominators and be able to interpret the results in real-world contexts. They should also understand how to find equivalent fractions to facilitate these operations.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to add fractions with like denominators and simplify the results when necessary.</li> <li>2. <b>Target 2:</b> Students will be able to subtract fractions with like denominators and express the answer in simplest form.</li> <li>3. <b>Target 3:</b> Students will demonstrate the ability to identify and create equivalent fractions to assist in addition and subtraction.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use visual aids such as fraction strips and number lines to illustrate the addition and subtraction of fractions.</li> <li>◦ Provide hands-on activities where students can manipulate fraction pieces to reinforce the concepts.</li> <li>◦ Engage students in group work to solve real-world problems involving fractions.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Create a quiz with problems requiring the addition and subtraction of fractions.</li> <li>◦ Use performance tasks where students must solve a word problem involving fractions and explain their reasoning.</li> <li>◦ Implement exit tickets that ask students to create equivalent fractions and solve a fraction addition or subtraction problem.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.N.3d focuses on students' understanding of adding and</p>	<p>pp. 301–304; Lesson 7-10, pp. 305–308; Lesson 7-11, pp. 309–312; Lesson 7-12, pp. 313–316; Reteaching: pp. 319–322 Sets A–H <b>Topic 8:</b> Lesson 8-1, pp. 333–336; Lesson 8-2, pp. 337–340; Lesson 8-5, pp. 349–352; Lesson 8-6, pp. 353–356; Let's Investigate: Photo Enlargement: 8-7, pp. 357–360; Lesson 8-9, pp. 365–368, Reteaching: pp. 371–374 Sets A, B, D-F, H</p>
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	<p>subtracting fractions with like denominators. Key components include skills in mathematical reasoning, knowledge of fractions, and concepts of relationships between fractions and whole numbers. Learning targets emphasize the ability to add, subtract, and find equivalent fractions. Instruction and assessment strategies include visual aids, hands-on activities, and various assessment methods to ensure comprehension and application of the standard.</p>	
<p><b>5.N.3.e</b> Add and subtract fractions and mixed numbers with unlike denominators without simplifying.</p>	<p><b>Break Down Standard: 5.N.3.e</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying the concept of volume, measuring volume in cubic units, and solving problems involving volume.</li> <li>• <b>Knowledge:</b> Knowledge of the formula for volume of rectangular prisms (length <math>\times</math> width <math>\times</math> height) and the concept of cubic units.</li> <li>• <b>Concepts:</b> Understanding the relationship between the dimensions of a shape and its volume, as well as how to apply this knowledge in real-world contexts.</li> </ul> <p><b>Define Expectations:</b> Students should learn to calculate the volume of rectangular prisms using the formula. They should be able to interpret problems that involve volume and demonstrate their understanding through practical applications.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to calculate the volume of rectangular prisms using the formula <math>V = l \times w \times h</math>.</li> <li>2. Students will be able to solve word problems that involve finding the volume of various objects and interpret the results in context.</li> <li>3. Students will understand and explain the concept of cubic units in measuring volume.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use hands-on activities where students build rectangular prisms using unit cubes to visualize volume.</li> </ul> </li> </ul>	<p><b>Topic 7:</b> 3-Act Math: The Gif Recipe, p. 268, Lesson 7-1, pp. 269–272; Let’s Investigate: Resale Mall Space; Lesson 7-2, pp. 273–276; Lesson 7-3, pp. 277–280; Lesson 7-4, pp. 281–284; Lesson 7-5, pp. 285–288; Lesson 7-6, pp. 289–292; Lesson 7-7, pp. 293–296; Lesson 7-8, pp. 297–300; Lesson 7-9, pp. 301–304; Lesson 7-10, pp. 305–308; Lesson 7-11, pp. 309–312; Reteaching: pp. 319–322 Sets A–G</p>

	<ul style="list-style-type: none"> <li>○ Incorporate real-life examples, such as calculating the volume of a box or container.</li> <li>○ Group discussions to solve word problems collaboratively, allowing peer learning.</li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz with a mix of calculation problems and word problems related to volume.</li> <li>○ Assign a project where students measure objects in the classroom and calculate their volumes.</li> <li>○ Use exit tickets where students explain their understanding of volume and how to calculate it.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.N.3e focuses on the concept of volume, specifically for rectangular prisms. Students are expected to learn how to calculate volume using the formula <math>V = l \times w \times h</math>, solve related word problems, and understand cubic units. Effective teaching strategies include hands-on activities and real-life applications, while assessments can be conducted through quizzes, projects, and exit tickets to gauge student understanding.</p>	
<p><b>5.N.3.f</b></p> <p>Solve authentic problems involving division of unit fractions by whole numbers and division of whole numbers by unit fractions.</p>	<p><b>Break Down Standard: 5.N.3f</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Understanding and applying operations with fractions, including addition, subtraction, multiplication, and division.</li> <li>● <b>Knowledge:</b> Recognizing equivalent fractions, understanding the concept of a fraction as a division of a whole, and knowing how to find common denominators.</li> <li>● <b>Concepts:</b> The relationship between fraction operations and whole numbers, and the ability to represent and solve problems involving fractions.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>● Add and subtract fractions with like denominators.</li> <li>● Multiply fractions by whole numbers.</li> </ul>	<p><b>Topic 9:</b> Pick a Project, p. 383; Lesson 9-3, pp. 393–396; Lesson 9-4, pp. 397–400; Lesson 9-5, pp. 401–404; Lesson 9-6, pp. 405–408; Lesson 9-7, pp. 409–412; Reteaching: pp. 419–420 Sets B–D</p>

	<ul style="list-style-type: none"> <li>• Understand the concept of dividing a whole number by a fraction.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Addition and Subtraction of Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will be able to add and subtract fractions with like denominators. (e.g., )</li> </ul> </li> <li>2. <b>Multiplication of Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will understand how to multiply a fraction by a whole number. (e.g., )</li> </ul> </li> <li>3. <b>Division of Whole Numbers by Fractions:</b> <ul style="list-style-type: none"> <li>◦ Students will demonstrate how to divide a whole number by a fraction. (e.g., <math>4 \div \frac{1}{2} = 8</math>)</li> </ul> </li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use visual aids such as fraction strips or pie charts to demonstrate addition and subtraction.</li> <li>◦ Incorporate real-life scenarios where students can apply multiplication and division of fractions (e.g., cooking, dividing items).</li> <li>◦ Engage students in hands-on activities like fraction games.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Administer quizzes that include problems requiring students to add, subtract, multiply, and divide fractions.</li> <li>◦ Use project-based assessments where students create a recipe that requires fraction calculations.</li> <li>◦ Provide worksheets with word problems that involve fraction operations for practice.</li> </ul> </li> </ul> <p><b>Summarize:</b>  The standard 5.N.3f focuses on equipping 5th-grade students with the skills to perform operations involving fractions. Key components include understanding the addition, subtraction, multiplication, and division of fractions. Learning targets are established for each operation, with instructional strategies emphasizing</p>	
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	<p>hands-on activities and real-world applications. Assessment methods will ensure students can demonstrate their understanding through various formats.</p>	
<p>5.N.3.8</p> <p>Add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or algorithms.</p>	<p>June version was updated to include multiply and divide</p> <p><b>Break Down Standard: 5.N.3g</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Recognizing and representing multiplication and division of fractions.</li> <li>• <b>Knowledge:</b> Understanding the concepts of fractions, including numerators and denominators, as well as the operations of multiplication and division.</li> <li>• <b>Concepts:</b> The relationship between multiplication and division, and how to apply these operations to fractions.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Understand how to multiply and divide fractions.</li> <li>• Represent multiplication and division of fractions visually and numerically.</li> <li>• Solve real-world problems involving multiplication and division of fractions.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to multiply two fractions and simplify the result.</li> <li>2. <b>Target 2:</b> Students will be able to divide a fraction by a whole number and represent the solution.</li> <li>3. <b>Target 3:</b> Students will be able to solve word problems that involve the multiplication and division of fractions, demonstrating their understanding through appropriate models or equations.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids (like fraction bars or circles) to demonstrate multiplication and division of fractions.</li> </ul> </li> </ul>	<p><b>Topic 2:</b> Pick a Project, pp. 43-44; Lesson 2-1, pp. 45-48; Lesson 2-2, pp. 49-52; Lesson 2-3, pp. 53-56; Let's Investigate: Go the Distance; Lesson 2-4, 57-60; Lesson 2-5, pp. 61-64; Lesson 2-6, pp. 65-68; Reteaching: pp. 71-72 Sets A-E</p> <p><b>Topic 4:</b> Pick a Project, pp. 127-128; Lesson 4-1, pp. 129-132; Lesson 4-2, pp. 133-136; Lesson 4-3, pp. 137-140; Lesson 4-4, pp. 141-144; Lesson 4-5, pp. 145-148; Let's Investigate: Big Growing Areas; Lesson 4-6, pp. 149-152; Lesson 4-7, pp. 153-156; Lesson 4-8, pp. 157-160; Lesson 4-9, pp. 161-164; Reteaching: pp. 167-170 Sets A-F</p> <p><b>Topic 6:</b> Lesson 6-1, pp. 229-232; Lesson 6-2, pp. 233-236; Lesson 6-3, pp. 237-240; Let's Investigate: Lenca Cloth; Lesson 6-4, pp. 241-244; Lesson 6-5, 245-248; Lesson 6-6, pp. 249-252; Reteaching: pp. 255-258 Sets A-F</p>

		<ul style="list-style-type: none"> <li>○ Engage students in hands-on activities, such as using recipes to practice multiplying and dividing fractions.</li> <li>○ Incorporate technology, such as interactive fraction games, to reinforce concepts.</li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz that includes problems requiring multiplication and division of fractions.</li> <li>○ Assign a project where students solve real-world fraction problems and present their findings.</li> <li>○ Use exit tickets where students must explain their understanding of how to multiply or divide fractions.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.N.3g focuses on students' ability to multiply and divide fractions. Key components include recognizing the operations and understanding the concepts behind them. Learning targets emphasize students' skills in performing these operations and applying them to real-world problems. Teaching strategies involve visual aids and hands-on activities, while assessments will evaluate students' understanding through quizzes and projects.</p>	
5.A.1	Operations and Algebraic Thinking: Students will extend understanding of division and apply operational properties to solve problems involving order of operations.	<p><b>Break Down Standard: 5.A.1</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Analyze data, interpret results, communicate findings.</li> <li>● <b>Knowledge:</b> Understanding data collection methods, types of data, and basic statistical measures.</li> <li>● <b>Concepts:</b> The role of data in decision-making, how to represent data visually (graphs, charts).</li> </ul> <p><b>Define Expectations:</b> Students should learn to collect, analyze, and interpret data effectively. They should be able to create visual representations of data and communicate their findings clearly.</p> <p><b>Formulate Learning Targets:</b></p>	

		<ol style="list-style-type: none"> <li>1. <b>Data Collection:</b> Students will be able to gather data using surveys or experiments.</li> <li>2. <b>Data Analysis:</b> Students will analyze the collected data to identify trends or patterns.</li> <li>3. <b>Data Representation:</b> Students will create appropriate graphs or charts to represent their data visually.</li> <li>4. <b>Communication:</b> Students will present their findings to peers, explaining their data analysis process and results.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities to collect data (e.g., class surveys, experiments).</li> <li>○ Incorporate technology (spreadsheets, graphing software) for data analysis and representation.</li> <li>○ Facilitate group discussions for students to share their findings.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Have students submit a project that includes data collection, analysis, and visual representation.</li> <li>○ Conduct presentations where students explain their data and findings to the class.</li> <li>○ Use quizzes to assess understanding of data concepts and methods.</li> </ul> </li> </ul> <p><b>Summarize:</b> Standard 5.A.1 focuses on students' ability to collect, analyze, and interpret data. Key components include skills in data management and knowledge of data types and representation. Learning targets emphasize practical application through hands-on projects and presentations. Teaching methods should encourage collaboration and use of technology, while assessments should evaluate both individual understanding and group communication skills.</p>	
5.A.1.a	Multiply multi-digit whole numbers using an algorithm.	Break Down Standard: 5.A.1.a	<p><b>Topic 3:</b> 3-Act Math: Morning Commute, p. 80; Lesson 3-2, pp. 85-88; Lesson 3-3, pp. 89-92; Let's Investigate: Growing</p>

	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying scientific concepts related to the natural world.</li> <li>• <b>Knowledge:</b> Knowledge of the properties of matter and how they interact.</li> <li>• <b>Concepts:</b> The concept of matter, its states, and changes in states.</li> </ul> <p><b>Define Expectations:</b> Students should learn to identify different states of matter (solid, liquid, gas) and understand how matter can change from one state to another through processes such as melting, freezing, condensation, and evaporation.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identify States of Matter:</b> Students will be able to list and describe the three states of matter.</li> <li>2. <b>Demonstrate Changes in States:</b> Students will observe and explain examples of matter changing states.</li> <li>3. <b>Conduct Simple Experiments:</b> Students will conduct experiments to demonstrate changes in states of matter (e.g., ice melting).</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use visual aids (charts, videos) to illustrate states of matter.</li> <li>◦ Conduct hands-on experiments to observe changes in states (e.g., ice to water).</li> <li>◦ Discuss real-life examples of matter changes (e.g., water cycle).</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Create a simple quiz where students match states of matter with their properties.</li> <li>◦ Have students write a short paragraph explaining a change in state they observed during experiments.</li> <li>◦ Use a group project to demonstrate different states of matter with presentations.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.A.1.a focuses on understanding matter and its states. Fifth</p>	<p>Areas: Lesson 3-4, pp. 93-96; Lesson 3-5, pp. 97-100; Lesson 3-6, pp. 101-104; Lesson 3-7, pp. 105-108; Lesson 3-8, pp. 109-112; Lesson 3-9, pp. 113-116; Reteaching: pp. 119-120 Sets B-G</p>
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	<p>5th graders are expected to identify and describe the three states of matter, demonstrate changes in states through observation and experimentation, and apply their knowledge in practical scenarios. Instruction strategies include hands-on activities and visual aids, with assessments designed to evaluate understanding through quizzes and projects.</p>	
<p><b>5.A.1.b</b></p> <p>Divide four-digit whole numbers by a two-digit divisor, with and without remainders, using strategies based on place value.</p>	<p><b>Break Down Standard: 5.A.1.b</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> Analyze information, evaluate evidence, interpret data.</li> <li>○ <b>Knowledge:</b> Understanding of historical events, concepts of cause and effect, and the significance of various perspectives.</li> <li>○ <b>Concepts:</b> Change over time, historical significance, and the relationships among different groups and events.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to analyze historical information by evaluating evidence and interpreting data to make informed conclusions about historical events and their impact. They should be able to identify cause and effect relationships and understand the significance of different perspectives in history.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Analyze Information:</b> <ul style="list-style-type: none"> <li>○ Students will be able to analyze historical texts and artifacts to extract relevant information.</li> </ul> </li> <li>2. <b>Evaluate Evidence:</b> <ul style="list-style-type: none"> <li>○ Students will evaluate the credibility of sources and the evidence presented in historical accounts.</li> </ul> </li> <li>3. <b>Interpret Data:</b> <ul style="list-style-type: none"> <li>○ Students will interpret data from historical charts, graphs, or maps to draw conclusions about historical events.</li> </ul> </li> </ol>	<p><b>Topic 5:</b>  Pick a Project, p. 179, 3-Act Math: Flapjack Stack, p. 180; Lesson 5-1, pp. 181–184; Lesson 5-2, pp. 185–188; Lesson 5-3, pp. 189–192; Lesson 5-4, pp. 193–196; Let's Investigate: Group Hike; Lesson 5-5, pp. 197–200; Lesson 5-6, pp. 201–204; Lesson 5-7, pp. 205–208; Lesson 5-8, pp. 209–212; Reteaching: pp. 215–218 Sets A–H</p>

		<p><b>4. Identify Cause and Effect:</b></p> <ul style="list-style-type: none"> <li>○ Students will identify cause and effect relationships in historical narratives.</li> </ul> <p><b>5. Understand Perspectives:</b></p> <ul style="list-style-type: none"> <li>○ Students will understand the significance of various perspectives in interpreting historical events.</li> </ul> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>● <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use primary and secondary sources in the classroom to provide students with hands-on analysis opportunities.</li> <li>○ Incorporate group discussions to explore different perspectives on historical events.</li> <li>○ Introduce graphic organizers to help students visualize cause and effect relationships.</li> </ul> </li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a project where students analyze a historical event and present their findings, highlighting various perspectives.</li> <li>○ Develop quizzes or reflective journals where students evaluate sources and evidence related to historical topics.</li> <li>○ Use maps and charts for students to interpret data and answer related questions.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.A.1.b focuses on developing students' skills in analyzing historical information, evaluating evidence, and interpreting data. Through targeted learning objectives, students will understand cause and effect relationships and appreciate diverse perspectives in history. Instruction and assessment strategies such as source analysis, group discussions, and projects will support these learning targets, ensuring that students engage deeply with historical events and concepts.</p>	
5.A.1.c	Justify the reasonableness of computations involving whole numbers, fractions, and decimals.	<p><b>Break Down Standard: 5.A.1.c</b></p>	<p><b>Topic 2:</b> Lesson 2-2, pp. 49-52. Reteaching: p. 71 Set B Topic</p>

	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>◦ <b>Skills:</b> Analyze, interpret, and explain information presented in different formats (text, graphs, charts).</li> <li>◦ <b>Knowledge:</b> Understanding of data representation and the ability to draw conclusions based on that data.</li> <li>◦ <b>Concepts:</b> The relationship between data and its representation, including how to read and understand different forms of data presentation.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>• Analyze data from various sources.</li> <li>• Interpret the information presented in graphs, charts, and text.</li> <li>• Explain their understanding and conclusions drawn from the data.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Skill Target:</b> Students will be able to analyze a given graph or chart to identify key trends and information.</li> <li>2. <b>Knowledge Target:</b> Students will demonstrate an understanding of how different types of data representations convey information.</li> <li>3. <b>Concept Target:</b> Students will explain how the format of data (graph, chart, text) affects the interpretation of the information.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use real-world examples (e.g., weather data, sports statistics) to illustrate how data is presented in different formats.</li> <li>◦ Incorporate group activities where students create their own graphs or charts based on collected data.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Have students analyze a provided chart and write a brief report explaining the data trends.</li> <li>◦ Create a quiz where students must match different types of data representations to their corresponding explanations.</li> </ul> </li> </ul>	<p><b>3:</b> Lesson 3-2, pp. 85-88; Reteaching: p. 119 Set B <b>Topic</b></p> <p><b>4:</b> Lesson 4-2, pp. 133-136; Reteaching: p. 167 Set A <b>Topic 5:</b> Lesson 5-2, pp. 185-188; Reteaching: p. 215 Set B <b>Topic 6:</b> Lesson 6-2, pp. 233-236; Reteaching: p. 255 Set B <b>Topic 7:</b> Lesson 7-1, pp. 269-272; Lesson 7-6, pp. 289-292; Reteaching: pp. 319-320 Sets A, D</p>
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	<p><b>Summarize:</b></p> <p>The standard 5.A.1.c focuses on developing students' skills in analyzing and interpreting data from various formats. Expectations include understanding data representation and drawing conclusions. Learning targets emphasize analysis, comprehension of data formats, and interpretation. Effective instruction should involve real-world examples and collaborative activities, with assessments that test analysis and explanation skills.</p>	
<p><b>5.A.1.d</b></p> <p>Simplify authentic numerical or algebraic expressions using order of operations (excluding exponents).</p>	<p><b>Break Down Standard: 5.A.1.d</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> Analyze and interpret data, make inferences based on evidence.</li> <li>○ <b>Knowledge:</b> Understanding of data representation and statistical measures.</li> <li>○ <b>Concepts:</b> The relationship between data and its representation; how data can be used to draw conclusions.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to collect data, represent it visually (e.g., through graphs or charts), and analyze this data to make inferences or predictions based on the information gathered.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Data Collection:</b> Students will be able to gather data through surveys or experiments.</li> <li>2. <b>Data Representation:</b> Students will create different types of graphs (bar graphs, line graphs, pie charts) to represent collected data.</li> <li>3. <b>Data Analysis:</b> Students will analyze the data to make inferences and conclusions, explaining their reasoning based on the evidence.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Engage students in hands-on data collection activities (e.g., class surveys).</li> </ul> </li> </ul>	<p><b>Topic 13:</b></p> <p>Pick a Project, p. 535; Lesson 13-1, pp. 537–540; Let's Investigate: Different Expressions; Lesson 13-2, pp. 541–544; Lesson 13-4, pp. 549–552; Reteaching: pp. 555–556 Sets A, B, D</p>

		<ul style="list-style-type: none"> <li>○ Use technology tools for creating graphs (e.g., spreadsheet software).</li> <li>○ Facilitate group discussions on data interpretations and inferences.</li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Have students present their data findings and graphs in a class presentation.</li> <li>○ Create a project where students must analyze a dataset and write a conclusion based on their findings.</li> <li>○ Use quizzes that require students to interpret graphs and draw conclusions from them.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.A.1.d focuses on students' ability to collect, represent, and analyze data. Expectations include gathering data, creating visual representations, and making inferences based on that data. Learning targets are set to ensure students can effectively collect data, represent it visually, and analyze it for conclusions. Instructional strategies include hands-on activities and technology use, while assessments may involve presentations and quizzes to gauge understanding.</p>	
5.G.1	<p>Shapes and Their Attributes: Students will classify two and three-dimensional figures into categories based on their properties.</p>	<p><b>Break Down Standard: 5.G.1</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Understanding the properties of geometric figures, classifying two-dimensional shapes, and analyzing the relationships between shapes.</li> <li>● <b>Knowledge:</b> Recognizing and describing attributes of various two-dimensional shapes (triangles, quadrilaterals, etc.), understanding geometric terms (angles, sides), and identifying parallel and perpendicular lines.</li> <li>● <b>Concepts:</b> The concept of classification based on attributes, the relationship between different shapes, and the use of geometric reasoning to solve problems.</li> </ul>	

	<p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>• Identify and classify two-dimensional shapes based on their attributes.</li> <li>• Understand the properties of different shapes, including angles and sides.</li> <li>• Describe how two-dimensional shapes can be related to one another.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to identify and classify at least three different types of quadrilaterals (e.g., squares, rectangles, rhombuses) based on their attributes.</li> <li>2. <b>Target 2:</b> Students will demonstrate the ability to describe the properties of triangles, including the differences between scalene, isosceles, and equilateral triangles.</li> <li>3. <b>Target 3:</b> Students will be able to identify parallel and perpendicular lines in various two-dimensional shapes and justify their classifications.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with shape manipulatives to help students explore and classify shapes.</li> <li>○ Incorporate visual aids, such as charts or diagrams, to illustrate properties of different shapes.</li> <li>○ Engage students in group discussions to encourage peer learning and reasoning about shapes.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a classification quiz where students categorize shapes based on their attributes.</li> <li>○ Use a project where students draw and label different types of triangles and quadrilaterals, explaining their properties.</li> <li>○ Conduct a scavenger hunt where students find and photograph examples of parallel and perpendicular lines in their environment.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.G.1 emphasizes the identification and classification of two-dimensional shapes based on their properties. Students are expected to learn</p>	
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	<p>about various shapes, understand their attributes, and analyze relationships between them. The learning targets provide specific goals for students to achieve, while the suggested teaching methods and assessment strategies offer practical ways for educators to facilitate learning and measure student understanding.</p>	
<p><b>5.G.1.a</b></p> <p>Identify and describe faces, edges, and vertices of rectangular prisms.</p>	<p><b>Break Down Standard: 5.G.1a</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding of geometric shapes and their attributes, ability to analyze and compare shapes, and application of knowledge in problem-solving.</li> <li>• <b>Knowledge:</b> Familiarity with different types of geometric shapes (triangles, quadrilaterals, polygons) and their properties (sides, angles).</li> <li>• <b>Concepts:</b> The concept of classification of shapes based on their properties and the relationship between two-dimensional and three-dimensional shapes.</li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to identify, classify, and compare two-dimensional shapes based on their attributes, such as the number of sides, angles, and symmetry. They should also understand how these concepts relate to real-world applications.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify various two-dimensional shapes including triangles, quadrilaterals, and other polygons.</li> <li>2. Students will be able to classify shapes based on their properties (e.g., number of sides and angles).</li> <li>3. Students will be able to compare and contrast different shapes in terms of their attributes.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids such as shape cards and interactive whiteboards to display different shapes.</li> </ul> </li> </ul>	<p><b>MDIS: 111</b></p>

		<ul style="list-style-type: none"> <li>○ Incorporate hands-on activities where students can create shapes using manipulatives (e.g., straws, clay).</li> <li>○ Utilize group discussions to encourage students to explain their reasoning when classifying and comparing shapes.</li> </ul> <ul style="list-style-type: none"> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz where students identify and classify shapes based on provided attributes.</li> <li>○ Ask students to create a poster that showcases different shapes and their properties, requiring written explanations for each shape.</li> <li>○ Implement a group project where students design a simple building using specific geometric shapes and present their work, explaining the shapes used.</li> </ul> </li> </ul> <p><b>Summarize:</b> Standard 5.G.1a focuses on students' ability to identify, classify, and compare two-dimensional shapes based on their properties. The learning targets include recognizing various shapes, classifying them based on attributes, and comparing their characteristics. Instructional strategies involve visual aids and hands-on activities, while assessments can include quizzes, posters, and group projects to evaluate students' understanding and application of geometric concepts.</p>	
5.G.1b	Recognize volume as an attribute of solid figures that is measured in cubic units.	<p><b>Break Down Standard: 5.G.1b</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Students will use coordinate systems to identify and describe the location of points in two-dimensional space.</li> <li>● <b>Knowledge:</b> Understanding of the Cartesian coordinate system (x-axis and y-axis), ordered pairs (coordinates), and how to plot points on a grid.</li> <li>● <b>Concepts:</b> The concept of location in a plane, the relationship between coordinates and their graphical representation.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p>	<p><b>Topic 1:</b> 3-Act Math: Fill'er Up, p. 456; Lesson 11-1, pp. 457-460; Let's Investigate: Shipping Blocks; Lesson 11-2, pp. 461-464; Lesson 11-3, pp. 465-468; Lesson 11-4, pp. 469-472; Lesson 11-5, pp. 473-476; Reteaching: pp. 479-480 Sets A-D</p>

	<ul style="list-style-type: none"> <li>• Identify and plot points in the first quadrant of the coordinate plane using ordered pairs.</li> <li>• Understand the significance of the x-axis and y-axis in determining the location of points.</li> <li>• Describe the relationship between points and their coordinates.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will be able to plot points in the first quadrant of the coordinate plane using ordered pairs.</li> <li>2. <b>Target 2:</b> Students will be able to identify coordinates of given points on a coordinate plane.</li> <li>3. <b>Target 3:</b> Students will understand how to describe the location of points using the x and y coordinates.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Introduce the Cartesian coordinate system through interactive activities, such as using graph paper for plotting points.</li> <li>○ Use visual aids, like coordinate grids, to help students visualize the relationship between the axes and points.</li> <li>○ Engage students in group activities where they can collaborate to plot points and create shapes on the coordinate plane.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz where students must plot given coordinates on a graph.</li> <li>○ Assign a project where students must find real-life examples of coordinate systems (like maps) and present their findings.</li> <li>○ Use formative assessments through exit tickets where students describe the coordinates of points plotted on a board.</li> </ul> </li> </ul> <p><b>Summarize:</b>  The standard 5.G.1b focuses on students' ability to use the Cartesian coordinate system to identify and describe the location of points in a two-dimensional space. Expectations include plotting points using ordered pairs, understanding the axes, and describing the relationship between coordinates and their graphical representation. Learning targets are formulated to ensure that students can not</p>	
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	<p>only plot but also understand and communicate the significance of their findings. Effective instruction includes hands-on activities and visual aids, while assessments can range from quizzes to collaborative projects.</p>	
<p>5.G.1.c</p>	<p><b>Break Down Standard: 5.G.1c</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>Understand the concept of volume.</li> <li>Identify and calculate the volume of rectangular prisms.</li> <li>Use appropriate units of measurement (cubic units).</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>Recognize volume as a measurable attribute of three-dimensional shapes.</li> <li>Calculate the volume of rectangular prisms using the formula.</li> <li>Apply knowledge of volume in real-world contexts.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>Students will be able to define volume and explain its significance.</li> <li>Students will calculate the volume of rectangular prisms using the formula <math>V = l \times w \times h</math>, where <math>l</math> is length, <math>w</math> is width, and <math>h</math> is height.</li> <li>Students will interpret the results in context, translating their calculated volume into real-world applications.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li><b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>Use manipulatives (cubes) to visually demonstrate volume.</li> <li>Provide guided practice with various rectangular prism dimensions.</li> <li>Incorporate problem-solving activities that relate volume to real-life scenarios (e.g., filling a box with items).</li> </ul> </li> </ul>	<p><b>Topic 16:</b> Pick a Project, pp. 619–620; Lesson 16-1, pp. 621–624; Let's Investigate: Patch It Together; Lesson 16-2, pp. 625–628; Lesson 16-3, pp. 629–632; Lesson 16-4, pp. 633–636; Reteaching: pp. 639–640 Sets A–D</p>
	<p>Justify the classification of two-dimensional figures in a hierarchy based on their properties.</p>	

	<ul style="list-style-type: none"> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Quizzes with different rectangular prisms requiring volume calculations.</li> <li>○ Group projects where students create their own rectangular prisms and calculate their volumes.</li> <li>○ Real-world math problems that require volume calculations, allowing students to justify their answers.</li> </ul> </li> </ul> <p><b>Summary:</b> The standard 5.G.1c emphasizes understanding and calculating the volume of rectangular prisms. Students will learn to define volume, apply the volume formula, and relate their findings to real-world situations. Instruction should include hands-on activities and contextual problems, while assessments can take various forms, ensuring students can demonstrate their understanding effectively.</p>	
<p><b>5.G.2</b></p> <p>Coordinate Geometry: Graph points on the coordinate plane to solve authentic problems.</p>	<p><b>Break Down Standard: 5.G.2</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Recognizing and drawing geometric shapes; understanding the properties of two-dimensional shapes.</li> <li>● <b>Knowledge:</b> Familiarity with the classification of shapes based on their attributes (e.g., number of sides, angles).</li> <li>● <b>Concepts:</b> Understanding symmetry, congruence, and the relationship between different geometric figures.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>● Recognize and classify two-dimensional shapes based on their properties.</li> <li>● Create and identify shapes with specific attributes (e.g., triangles with certain angles, quadrilaterals with specific side lengths).</li> <li>● Understand the concept of symmetry and how it applies to shapes.</li> </ul> <p><b>Formulate Learning Targets:</b></p>	

		<ol style="list-style-type: none"> <li>1. Students will be able to classify triangles based on their angles (acute, right, obtuse).</li> <li>2. Students will create quadrilaterals that meet given criteria (e.g., a rectangle, a parallelogram).</li> <li>3. Students will identify lines of symmetry in various two-dimensional shapes.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with geometric shapes to explore attributes.</li> <li>○ Incorporate technology, such as geometry software or apps, for shape exploration.</li> <li>○ Engage in group discussions and collaborative projects to encourage peer learning.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Use a rubric to evaluate students' drawings of shapes based on specified criteria.</li> <li>○ Administer quizzes that include identifying and classifying shapes.</li> <li>○ Implement performance tasks where students create and present shapes that demonstrate understanding of symmetry.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.G.2 focuses on students' ability to recognize, classify, and create two-dimensional shapes based on their properties. Expectations include understanding the classification of triangles and quadrilaterals, as well as recognizing symmetry. Learning targets emphasize skills in classification, creation, and identification of geometric figures. Effective instruction and assessment strategies involve hands-on activities, technology integration, and performance tasks that promote engagement and understanding.</p>	
5.G.2.a	Identify the origin, x axis, and y axis of the coordinate plane.	<p><b>Break Down Standard: 5.G.2a</b></p> <p><b>Key Components:</b></p>	<p><b>Topic 14:</b> Lesson 14-1, pp. 565–568; Reteaching: p. 583 Set A</p>

	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and describe geometric shapes, understand properties of shapes, classify shapes based on their attributes.</li> <li>• <b>Knowledge:</b> Understanding of two-dimensional shapes (e.g., triangles, quadrilaterals) and their characteristics (e.g., angles, sides).</li> <li>• <b>Concepts:</b> Spatial reasoning, classification of shapes, and the relationship between shape attributes and their classifications.</li> </ul> <p><b>Define Expectations:</b>  Students should learn to recognize, describe, and classify two-dimensional shapes based on their properties. They should be able to differentiate between shapes such as triangles and quadrilaterals and understand how sides and angles influence shape classification.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identify Shapes:</b> Students will be able to identify and name various two-dimensional shapes (triangles, quadrilaterals, etc.).</li> <li>2. <b>Describe Properties:</b> Students will describe the properties (sides, angles) of these shapes.</li> <li>3. <b>Classify Shapes:</b> Students will classify shapes into categories based on their attributes (e.g., number of sides, types of angles).</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids (posters, models) to introduce different shapes.</li> <li>○ Engage students in hands-on activities using shape cutouts to explore properties.</li> <li>○ Implement interactive games that involve shape identification and classification.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz where students identify and classify shapes based on given properties.</li> <li>○ Use a project where students create a poster showcasing different shapes and their properties.</li> <li>○ Conduct a group activity where students classify shapes using a sorting task.</li> </ul> </li> </ul>	
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		<p><b>Summarize:</b> The standard 5.G.2a focuses on students identifying, describing, and classifying two-dimensional geometric shapes based on their properties. The learning targets are aimed at ensuring students can recognize various shapes, articulate their properties, and classify them accordingly. Instructional strategies include the use of visual aids and hands-on activities, while assessments can include quizzes and projects that reinforce these concepts.</p>	
<p><b>5.G.2.b</b></p>	<p>Graph and name points in the first quadrant of the coordinate plane using ordered pairs of whole numbers.</p>	<p><b>Break Down Standard: 5.G.2b</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Recognizing and identifying attributes of two-dimensional figures.</li> <li>○ Understanding relationships between different shapes.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Familiarity with geometric terms such as parallel, perpendicular, and congruent.</li> <li>○ Understanding the properties of two-dimensional shapes, including angles and sides.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ The concept of symmetry and how it applies to two-dimensional figures.</li> <li>○ Understanding the classification of shapes based on their properties.</li> </ul> </li> </ul> <p><b>Define Expectations:</b> Students should learn to identify and describe the attributes of two-dimensional figures, including how to distinguish between different shapes based on these attributes. They should be able to use geometric terms correctly and understand how shapes relate to one another in terms of their properties.</p> <p><b>Formulate Learning Targets:</b></p>	<p><b>Topic 14:</b> Pick a Project, pp. 563–564; Lesson 14-1, pp. 565-568; Lesson 14-2, pp. 569–572; Let's Investigate: Rainy Days; Lesson 14-3, pp. 573–576; Lesson 14-4, pp. 577–580; Reteaching: pp. 583–584</p> <p><b>Sets A-C Topic 15:</b> 3-Act Math: Speed Stacks, p. 592; Lesson 15-3, pp. 601–604; Let's Investigate: Shipping Blocks; Reteaching: p. 612 Set C</p>

		<ol style="list-style-type: none"> <li>1. Students will be able to identify and classify two-dimensional shapes based on their attributes (sides, angles, symmetry).</li> <li>2. Students will be able to use geometric vocabulary such as parallel, perpendicular, and congruent in context.</li> <li>3. Students will demonstrate an understanding of symmetry in two-dimensional figures.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids and manipulatives to explore different two-dimensional shapes.</li> <li>○ Conduct group activities where students classify and compare shapes based on their properties.</li> <li>○ Integrate technology with interactive geometry software to explore shapes and their attributes.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a shape classification project where students categorize a variety of two-dimensional figures and explain their reasoning.</li> <li>○ Use quizzes that include identifying shapes and defining attributes using geometric vocabulary.</li> <li>○ Design a symmetry art project where students create symmetrical designs and explain the concept of symmetry.</li> </ul> </li> </ul> <p><b>Summarize:</b>  The standard 5.G.2b focuses on recognizing and describing attributes of two-dimensional figures. Students are expected to classify shapes based on their properties and use appropriate geometric terms. Learning targets include identifying and using geometric vocabulary related to shapes, understanding symmetry, and classifying figures effectively. Instructional strategies should include hands-on activities, collaborative group work, and technology integration, while assessments can involve projects, quizzes, and creative tasks to demonstrate understanding.</p>	
5.G.2.c	Form ordered pairs from authentic problems involving rules or patterns and graph the ordered pairs in the first	<p><b>Break Down Standard: 5.G.2c</b></p>	<p><b>Topic 14:</b>  Pick a Project, pp. 563–564; Lesson 14-2,</p>

<p>quadrant on a coordinate plane and interpret coordinate values in the context of the situation.</p>	<ul style="list-style-type: none"> <li>● <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> Understanding and applying geometric concepts, specifically related to the properties of two-dimensional figures.</li> <li>○ <b>Knowledge:</b> Knowledge of how to classify two-dimensional figures based on their properties (sides, angles, and symmetry).</li> <li>○ <b>Concepts:</b> Concepts of attributes of shapes, including congruence and symmetry in two-dimensional figures.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <ul style="list-style-type: none"> <li>● <b>What students should learn and achieve:</b> <ul style="list-style-type: none"> <li>○ Students should be able to identify and classify two-dimensional shapes based on their properties.</li> <li>○ They should understand the characteristics that define specific types of figures (e.g., triangles, quadrilaterals) and be able to compare them.</li> <li>○ Students should demonstrate the ability to recognize congruent shapes and understand the concept of symmetry.</li> </ul> </li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identify and Classify Shapes:</b> <ul style="list-style-type: none"> <li>○ Students will be able to identify and classify triangles based on their sides and angles (e.g., equilateral, isosceles, scalene).</li> </ul> </li> <li>2. <b>Properties of Quadrilaterals:</b> <ul style="list-style-type: none"> <li>○ Students will classify quadrilaterals (e.g., squares, rectangles, parallelograms) based on their properties and explain the differences between them.</li> </ul> </li> <li>3. <b>Congruence and Symmetry:</b> <ul style="list-style-type: none"> <li>○ Students will recognize and describe congruent shapes and identify lines of symmetry in various two-dimensional figures.</li> </ul> </li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>● <b>Teaching Methods:</b></li> </ul>	<p>pp. 569–572; Lesson 14-3, pp. 573–576; Lesson 14-4, pp. 577–580; Reteaching: pp. 583–584 Sets B, C</p> <p><b>Topic 15:</b>  Pick a Project, p. 591; 3-Act Math: Speed Stacks, p. 592; Let's Investigate: Cube Patterns; Lesson 15-1, pp. 593-596; Lesson 15-2, pp. 597-600; Lesson 15-3, pp. 601-604; Lesson 15-4, pp. 605-608; Reteaching: pp. 611-612 Sets A-D</p>
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		<ul style="list-style-type: none"> <li>○ Use hands-on activities with shape manipulatives to allow students to explore and classify shapes.</li> <li>○ Incorporate technology by using interactive geometry software or apps to visualize and manipulate shapes.</li> <li>○ Engage students in group discussions where they compare and contrast different shapes based on their properties.</li> </ul> <ul style="list-style-type: none"> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz that includes identifying and classifying various two-dimensional figures.</li> <li>○ Assign a project where students create a poster showcasing different shapes, their properties, and examples of symmetry.</li> <li>○ Use exit tickets where students must classify a set of shapes and describe their reasoning.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The unpacked standard 5.G.2c focuses on students' ability to identify and classify two-dimensional figures based on their properties, including sides, angles, and symmetry. Learning targets include recognizing different types of triangles and quadrilaterals, understanding congruence, and identifying symmetry in shapes. Instructional strategies involve hands-on activities and technology integration, while assessments will evaluate students' classification skills and understanding of geometric properties.</p>	
5.G.3	<p>Measurement: Generate conversions within the customary and metric systems of measurement to solve authentic problems.</p>	<p><b>Break Down Standard: 5.G.3</b></p> <ul style="list-style-type: none"> <li>● <b>Key Components:</b> <ul style="list-style-type: none"> <li>○ <b>Skills:</b> Understanding and using the concepts of volume, calculating the volume of rectangular prisms.</li> <li>○ <b>Knowledge:</b> Familiarity with the formula for volume and the ability to identify the dimensions of a rectangular prism.</li> <li>○ <b>Concepts:</b> The relationship between the dimensions (length, width, height) and how they contribute to the total volume.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p>	

	<ul style="list-style-type: none"> <li>• Calculate the volume of rectangular prisms using the formula <math>V = l</math> times <math>w</math> times <math>h</math>, where <math>l</math> is length, <math>w</math> is width, and <math>h</math> is height.</li> <li>• Understand how volume relates to real-world situations, such as packing or storage.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will accurately calculate the volume of given rectangular prisms.</li> <li>2. Students will be able to explain the formula for volume and the significance of each dimension involved.</li> <li>3. Students will apply their understanding of volume to solve real-world problems.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids (e.g., 3D models of rectangular prisms) to demonstrate volume.</li> <li>○ Incorporate hands-on activities where students fill boxes with unit cubes to find volume.</li> <li>○ Create group activities where students design a box for a specific volume requirement.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Administer quizzes where students calculate the volume of various rectangular prisms.</li> <li>○ Assign a project where students create a real-life scenario involving volume calculation, such as designing a container.</li> <li>○ Use exit tickets where students explain the steps to calculate volume.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.G.3 focuses on students understanding and calculating the volume of rectangular prisms. Key components include the skills of volume calculation, knowledge of the volume formula, and concepts relating to real-world applications. Learning targets highlight the ability to calculate volume, explain the formula, and apply the concept to practical problems. Instructional strategies</p>	
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	<p>Include hands-on activities and group work, with assessments designed to evaluate students' understanding and application of volume calculations.</p>	
<p><b>5.G.3.a</b></p> <p>Generate conversions in authentic mathematical situations from larger units to smaller units and smaller units to larger units, within the customary and metric systems of measurement.</p>	<p><b>Break Down Standard: 5.G.3a</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and classify two-dimensional shapes based on their properties.</li> <li>• <b>Knowledge:</b> Understand the characteristics of various two-dimensional shapes, including angles, sides, and symmetry.</li> <li>• <b>Concepts:</b> Grasp the relationship between different shapes and how their properties define them.</li> </ul> <p><b>Define Expectations:</b> Students should learn to recognize, describe, and categorize two-dimensional shapes such as triangles, quadrilaterals, pentagons, hexagons, and circles based on their defining properties (number of sides, angles, and symmetry).</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify and classify at least five different two-dimensional shapes.</li> <li>2. Students will describe the properties of each shape, including the number of sides and angles.</li> <li>3. Students will demonstrate the ability to sort shapes based on their properties through hands-on activities.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use interactive shape sorters or manipulatives to allow students to physically categorize shapes.</li> <li>○ Incorporate technology by using shape identification apps or online games that reinforce properties of shapes.</li> <li>○ Facilitate group discussions where students share their observations and classifications of shapes.</li> </ul> </li> </ul>	<p><b>Topic 12:</b> Pick a Project, pp. 487–488; Lesson 12-1, pp. 489–492; Let's Investigate: Gardening Tips; Lesson 12-2, pp. 493–496; Lesson 12-3, pp. 497–500; Lesson 12-4, pp. 501–504; Lesson 12-5, pp. 505–508; Lesson 12-6, pp. 509–512; Lesson 12-7, pp. 513–516; Lesson 12-8, pp. 517–520; Lesson 12-9, pp. 521–524; Reteaching: pp. 527–528 Sets A–H</p> <p><b>Topic 13:</b> 3-Act Math: Measure Me! p. 536</p>

		<ul style="list-style-type: none"> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz where students match shapes to their properties.</li> <li>○ Use a performance task where students create a poster displaying different two-dimensional shapes with their characteristics.</li> <li>○ Conduct a practical assessment where students sort a collection of shapes and explain their reasoning.</li> </ul> </li> </ul> <p><b>Summarize:</b> Standard 5.G.3a focuses on students identifying and classifying two-dimensional shapes based on their properties. The key components include skills in recognition, knowledge of characteristics, and understanding concepts related to shapes. Learning targets emphasize classification and description of at least five shapes, while instructional strategies involve hands-on sorting and technology integration. Assessment ideas include quizzes, performance tasks, and practical sorting activities to gauge understanding.</p>	
5.G.4	Area and Volume: Students will extend area problems for rectangles to include fractions and build meaning for measuring volume.	<p><b>Break Down Standard: 5.G.4</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying the concept of volume, calculating volume of rectangular prisms, using formulas, and interpreting real-world applications.</li> <li>• <b>Knowledge:</b> Familiarity with three-dimensional shapes, specifically rectangular prisms, and the formula for calculating volume.</li> <li>• <b>Concepts:</b> Volume as a measure of space, units of measurement, and the relationship between length, width, height, and volume.</li> </ul> <p><b>Define Expectations:</b> Students should learn to calculate the volume of rectangular prisms using the formula <math>V = l \times w \times h</math> (where <math>l</math> is length, <math>w</math> is width, and <math>h</math> is height). They should also be able to apply this knowledge to real-world scenarios, such as determining how much space a box can hold.</p> <p><b>Formulate Learning Targets:</b></p>	

		<ol style="list-style-type: none"> <li>1. Students will correctly use the formula <math>V = l \times w \times h</math> to calculate the volume of rectangular prisms.</li> <li>2. Students will solve real-world problems involving the volume of rectangular prisms.</li> <li>3. Students will demonstrate an understanding of the units of volume (cubic units).</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with physical rectangular prisms (e.g., boxes) to visualize volume.</li> <li>○ Integrate visual aids and graphic organizers to help illustrate volume calculations.</li> <li>○ Implement group work for collaborative problem-solving involving real-world volume scenarios.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Quizzes where students calculate the volume of given rectangular prisms.</li> <li>○ Projects where students create a model and present a real-life problem involving volume.</li> <li>○ Exit tickets where students explain the formula for volume in their own words.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.G.4 focuses on understanding and calculating volume of rectangular prisms. Students are expected to learn and apply the formula <math>V = l \times w \times h</math> and solve real-world problems involving volume. Effective teaching strategies include hands-on activities, group work, and visual aids, while assessments can involve quizzes, projects, and reflective exit tickets to gauge understanding.</p>	
5.G.4.a	Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the fraction side lengths and show that the area is the same as would be found by multiplying the side lengths.	<p><b>Break Down Standard: 5.G.4a</b></p> <p><b>Key Components:</b></p>	<p><b>Topic 8:</b> Pick a Project, pp. 331–332; Lesson 8-6, pp. 353–356; Reteaching: p. 372 Set E</p>

		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and apply properties of geometric shapes, particularly focusing on the classification of two-dimensional shapes based on their properties.</li> <li>• <b>Knowledge:</b> Understanding of the characteristics of polygons, including sides, angles, and symmetry.</li> <li>• <b>Concepts:</b> Classification of shapes, properties of geometric figures, and spatial reasoning.</li> </ul> <p><b>Define Expectations:</b> Students should be able to:</p> <ul style="list-style-type: none"> <li>• Recognize and classify two-dimensional shapes based on their attributes.</li> <li>• Explain the reasoning behind the classification of these shapes.</li> <li>• Differentiate between various types of polygons (triangles, quadrilaterals, etc.) and their specific properties.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identification:</b> Students will be able to identify and name at least five different types of polygons.</li> <li>2. <b>Classification:</b> Students will classify polygons based on their properties (number of sides, angles, etc.) with 90% accuracy.</li> <li>3. <b>Explanation:</b> Students will articulate the reasoning behind their classification choice for at least three different shapes.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use visual aids (posters, interactive whiteboards) to display various geometric shapes.</li> <li>○ Incorporate hands-on activities with shape sorting or creating shapes using crafts.</li> <li>○ Use technology (like geometry software or apps) that allows students to manipulate and explore shapes digitally.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a quiz where students classify shapes and explain their reasoning.</li> </ul> </li> </ul>	
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		<ul style="list-style-type: none"> <li>○ Have students complete a project where they create a booklet of different polygons, including definitions and illustrations.</li> <li>○ Conduct a group activity where students present their classification of shapes to the class.</li> </ul> <p><b>Summarize:</b> The unpacked standard 5.G.4a focuses on students' ability to identify and classify two-dimensional geometric shapes based on their properties. Key components include the skills of classification, knowledge of polygon characteristics, and concepts of spatial reasoning. Learning targets aim for students to identify, classify, and articulate their reasoning about polygons. Instructional strategies involve visual aids, hands-on activities, and technology, while assessments include quizzes, projects, and presentations.</p>	
5.G.4b	<p>Multiply fractional side lengths to find areas of rectangles and represent fraction products as rectangular areas.</p>	<p><b>Break Down Standard: 5.G.4b</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying the concept of volume using unit cubes.</li> <li>• <b>Knowledge:</b> Recognizing the relationship between volume and the dimensions of a rectangular prism.</li> <li>• <b>Concepts:</b> Volume as a measure of space within a three-dimensional object and how to calculate it.</li> </ul> <p><b>Define Expectations:</b> Students should learn to calculate the volume of rectangular prisms by using the formula for volume, which is <math>V = l \times w \times h</math> (where <math>l</math> is length, <math>w</math> is width, and <math>h</math> is height). They should also understand how to visualize and manipulate unit cubes to build prisms and comprehend the concept of volume.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to calculate the volume of rectangular prisms using the formula <math>V = l \times w \times h</math>.</li> <li>2. Students will demonstrate the ability to model volume using unit cubes.</li> </ol>	<p><b>Topic 8:</b> Pick a Project, pp. 331–332; Lesson 8-6, pp. 353–356; Reteaching: p. 372 Set E</p>

		<p>3. Students will explain the relationship between the dimensions of a prism and its volume.</p> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with unit cubes to build rectangular prisms and measure their dimensions.</li> <li>○ Provide visual aids such as diagrams showing the dimensions of prisms and how to calculate volume.</li> <li>○ Incorporate technology, such as interactive volume calculators or virtual manipulatives.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a project where students build a rectangular prism from unit cubes and calculate its volume.</li> <li>○ Use quizzes that include word problems requiring students to find the volume of given dimensions.</li> <li>○ Conduct group discussions where students explain their reasoning for volume calculations to reinforce understanding.</li> </ul> </li> </ul> <p><b>Summarize:</b> The unpacked components of the standard 5.G.4b emphasize the calculation of volume in rectangular prisms using the formula <math>V = l \times w \times h</math>. The learning targets focus on students' ability to calculate volume, model it with unit cubes, and articulate the relationship between dimensions and volume. Instructional strategies include hands-on activities, visual aids, and technology, while assessments involve practical projects and quizzes to gauge understanding.</p>	
5.G.4.c	Use concrete models to measure the volume of rectangular prisms by counting cubic units.	<p><b>Break Down Standard:</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Understanding and applying concepts of volume, including calculation and measurement.</li> <li>• <b>Knowledge:</b> Familiarity with cubic units, volume formulas, and the relationship between dimensions and volume.</li> </ul>	<p><b>Topic 11:</b> 3-Act Math: Filler Up, p. 456; Lesson 11-1, pp. 457-460; Let's Investigate: Shipping Blocks; Lesson 11-2, pp. 461-464; Lesson 11-5, pp. 473-476</p>

	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Volume as a measure of space, using rectangular prisms and cubes.</li> </ul> <p><b>Define Expectations:</b> Students should learn how to calculate the volume of rectangular prisms and cubes using the appropriate formulas. They should understand how the dimensions of an object relate to its volume and be able to apply this understanding in practical situations.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Target 1:</b> Students will accurately calculate the volume of a rectangular prism using the formula <math>V = l \times w \times h</math>.</li> <li>2. <b>Target 2:</b> Students will explain the concept of volume as the amount of space an object occupies.</li> <li>3. <b>Target 3:</b> Students will apply their understanding of volume to solve real-world problems involving rectangular prisms.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use hands-on activities with physical objects (like boxes) to measure dimensions and calculate volume.</li> <li>◦ Integrate visual aids, such as diagrams and videos, to illustrate how volume is determined.</li> <li>◦ Incorporate group work where students can collaborate to solve volume-related problems.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Quizzes where students calculate the volume of given shapes.</li> <li>◦ Project-based assessments where students create a model of a rectangular prism and calculate its volume.</li> <li>◦ Real-world problem-solving scenarios where students must apply volume calculations to everyday situations.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.G.4c focuses on students' skills in calculating the volume of rectangular prisms and understanding the concept of volume. By setting specific learning targets, educators can guide students to measure, calculate, and apply</p>	
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	<p>volume-related knowledge through engaging instruction and varied assessment methods.</p>	
<p>Find the volume of a rectangular prism with whole-number side lengths by modeling with unit cubes and show that the volume can be additive and is the same as would be found by multiplying the area of the base times height.</p>	<p><b>Break Down Standard: 5.G.4d</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Understand and identify geometric shapes.</li> <li>○ Analyze and compare the attributes of shapes.</li> <li>○ Apply knowledge to solve problems involving shapes.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Familiarity with different types of geometric shapes (e.g., triangles, quadrilaterals, polygons).</li> <li>○ Understanding of properties such as angles, sides, symmetry, and area.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ Geometric relationships and classifications.</li> <li>○ The concept of congruence and similarity in shapes.</li> <li>○ The role of geometric shapes in real-world contexts.</li> </ul> </li> </ul> <p><b>Define Expectations:</b>  Students should learn to identify, compare, and classify geometric shapes based on their attributes. They should be able to use this knowledge to solve problems related to the properties of shapes.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to identify and classify at least five different types of geometric shapes based on their properties.</li> <li>2. Students will compare the attributes of various shapes to determine congruence or similarity.</li> <li>3. Students will apply their understanding of shapes to solve at least three real-world problems involving geometry.</li> </ol>	<p><b>Topic 11:</b>  3-Act Math: Filler Up, p. 456; Lesson 11-1, pp. 457-460; Let's Investigate: Shipping Blocks; Lesson 11-2, pp. 461-464; Lesson 11-3, pp. 465-468; Lesson 11-4, pp. 469-472; Lesson 11-5, pp. 473-476; Reteaching: pp. 479-480 Sets A-D</p>
<p>5.G.4.d</p>		

		<p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with shape manipulatives to explore and compare various geometric shapes.</li> <li>○ Incorporate visual aids and diagrams to demonstrate the properties of shapes.</li> <li>○ Engage students in group discussions to analyze real-world applications of geometry.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a shape classification quiz where students categorize shapes based on their attributes.</li> <li>○ Assign a project where students design a simple structure using specific geometric shapes and explain their choices.</li> <li>○ Use exit tickets where students write down one new thing they learned about geometric shapes.</li> </ul> </li> </ul> <p><b>Summarize:</b> The standard 5.G.4d focuses on students identifying, comparing, and classifying geometric shapes based on their attributes. Students are expected to understand properties of shapes and apply this knowledge in problem-solving. Learning targets include identifying various shapes, comparing attributes, and solving real-world geometry problems. Teaching strategies involve hands-on activities and visual aids, while assessments can include quizzes and projects.</p>	
5.G.4.e	Solve authentic problems by applying the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of rectangular prisms with whole number edge lengths.	<p><b>Break Down Standard: 5.G.4e</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Identify and describe geometric shapes.</li> <li>○ Understand the properties of geometric figures.</li> <li>○ Apply knowledge of geometric shapes in real-world contexts.</li> </ul> </li> <li>• <b>Knowledge:</b></li> </ul>	<p><b>Topic 11:</b> 3-Act Math: Filler Up, p. 456; Lesson 11-1, pp. 457-460; Let's Investigate: Shipping Blocks: Lesson 11-2, pp. 461-464; Lesson 11-3, pp. 465-468; Lesson 11-4, pp. 469-472; Lesson 11-5, pp. 473-476; Reteaching: pp. 479-480 Sets A-D</p>

	<ul style="list-style-type: none"> <li>○ Characteristics of two-dimensional shapes (e.g., triangles, quadrilaterals, pentagons).</li> <li>○ Understanding of symmetry, angles, and congruency.</li> </ul> <ul style="list-style-type: none"> <li>● <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ The relationship between different geometric shapes.</li> <li>○ How to classify shapes based on their properties.</li> </ul> </li> </ul> <p><b>Define Expectations:</b>  Students should learn to identify, describe, and classify two-dimensional shapes based on their properties, including angles, sides, and symmetry. They should also be able to apply this understanding to solve problems involving geometric shapes in real-world situations.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Identify Shapes:</b> Students will be able to identify and name various two-dimensional shapes (triangles, quadrilaterals, etc.) with 90% accuracy.</li> <li>2. <b>Describe Properties:</b> Students will describe the properties of these shapes, such as the number of sides and angles, using correct terminology.</li> <li>3. <b>Classify Shapes:</b> Students will classify shapes into categories (e.g., triangles, rectangles) based on their properties with 80% accuracy.</li> <li>4. <b>Apply Knowledge:</b> Students will apply their understanding of geometric shapes to solve at least three real-world problems involving area or perimeter.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>● <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use hands-on activities with shape sorting and classification.</li> <li>○ Incorporate technology through interactive geometry software or apps.</li> <li>○ Engage in group discussions about the properties of shapes.</li> </ul> </li> <li>● <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create an assessment that includes identifying and classifying shapes.</li> <li>○ Have students draw and label shapes based on given properties.</li> </ul> </li> </ul>	
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		<ul style="list-style-type: none"> <li>○ Use a project where students create a shape-based model of a real-world object.</li> </ul> <p><b>Summarize:</b> The standard 5.G.4e focuses on students learning to identify, describe, and classify two-dimensional geometric shapes based on their properties. The expectations include being able to articulate the characteristics of these shapes and applying this knowledge to real-world situations. Learning targets emphasize identification, description, classification, and application of geometric concepts, supported by varied teaching and assessment strategies.</p>	
5.D.1	<p>Data Collection: Students will formulate questions to collect, organize, and represent data.</p>	<p><b>Break Down Standard: 5.D.1</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>● <b>Skills:</b> Analyze information, identify and describe the elements of a situation, and draw conclusions.</li> <li>● <b>Knowledge:</b> Understand the context and components of a given scenario, including the role of various factors.</li> <li>● <b>Concepts:</b> Recognize cause-and-effect relationships, make predictions based on data, and evaluate the effectiveness of different approaches.</li> </ul> <p><b>Define Expectations:</b> Students should learn to:</p> <ul style="list-style-type: none"> <li>● Analyze a specific situation or problem.</li> <li>● Identify key components and their relationships.</li> <li>● Draw logical conclusions based on their analysis.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Component Analysis:</b> Students will be able to identify the key components of a given scenario with 90% accuracy.</li> <li>2. <b>Cause and Effect:</b> Students will demonstrate understanding of cause-and-effect relationships by providing examples in their analysis.</li> <li>3. <b>Conclusion Drawing:</b> Students will draw logical conclusions from their analysis and justify their reasoning in a written format.</li> </ol>	

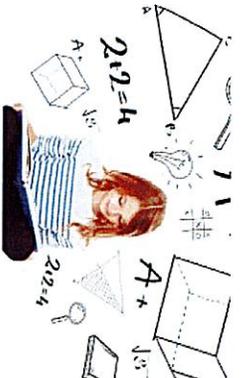
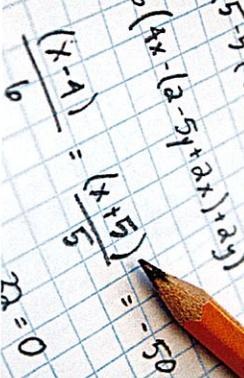
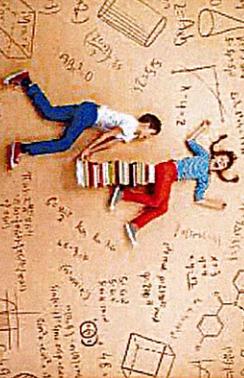
	<p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>○ Use real-world scenarios for analysis.</li> <li>○ Facilitate group discussions to explore different perspectives.</li> <li>○ Encourage students to present their findings to the class.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>○ Create a rubric for evaluating the identification of components and the quality of conclusions.</li> <li>○ Use exit tickets where students summarize what they learned about the scenario.</li> <li>○ Incorporate peer assessments to encourage collaborative learning.</li> </ul> </li> </ul> <p><b>Summarize:</b>  Standard 5.D.1 focuses on students developing analytical skills by examining scenarios, identifying key components, and understanding relationships. The learning targets emphasize component analysis, understanding cause and effect, and drawing conclusions. Instruction should involve practical, real-world examples, while assessments can include rubrics, exit tickets, and peer evaluations to gauge students' understanding and analytical abilities.</p>	
	<p>No additional indicators at this level.</p>	
<p><b>5.D.2</b></p>	<p>Analyze Data and Interpret Results:  Students will analyze the data and interpret the results.</p>	<p><b>Break Down Standard: 5.D.2</b></p> <p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Analyze and interpret data from various sources.</li> <li>○ Use mathematical reasoning to solve problems.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Understand concepts of data representation (graphs, charts, tables).</li> <li>○ Recognize patterns and trends in data.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>◦ Data collection methods.</li> <li>◦ The importance of accuracy and reliability in data analysis.</li> </ul> </li> </ul> <p><b>Define Expectations:</b> Students should learn to collect, analyze, and interpret data from different sources. They should be able to present their findings in various formats and explain the significance of the data they analyze.</p> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to collect data using surveys or experiments.</li> <li>2. Students will interpret data presented in graphs, charts, and tables.</li> <li>3. Students will identify trends and patterns in datasets.</li> <li>4. Students will communicate their findings clearly using appropriate terminology.</li> </ol> <p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use real-life data collection (e.g., class surveys) to engage students.</li> <li>◦ Introduce visual data representation tools (bar graphs, pie charts).</li> <li>◦ Conduct group discussions to analyze data patterns.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Create a project where students collect data and present their findings.</li> <li>◦ Use quizzes with graphs and tables for students to interpret.</li> <li>◦ Peer reviews of data presentations to encourage constructive feedback.</li> </ul> </li> </ul> <p><b>Summarize:</b> Standard 5.D.2 emphasizes the importance of data analysis for 5th graders. Key components include skills in interpreting and analyzing data, knowledge of data representation, and understanding data collection methods. Learning targets focus on data collection, interpretation, identifying trends, and effective communication of findings. Instructional strategies involve practical data collection</p>	
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	<p>and use of visual tools, while assessments include projects and quizzes to evaluate understanding.</p>	
<p><b>5.D.2.a</b></p> <p>Represent, analyze, and solve authentic problems using information presented in one or more tables or line plots including whole numbers and fractions.</p>	<p><b>Break Down Standard: 5.D.2a</b></p> <ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>◦ Skills: Analyze and interpret data from various sources.</li> <li>◦ Knowledge: Understand how data can be represented and the importance of data in making decisions.</li> <li>◦ Concepts: Grasp the concept of data collection, organization, and representation.</li> </ul> </li> </ul> <p><b>Define Expectations:</b></p> <p>Students should learn to:</p> <ul style="list-style-type: none"> <li>• Collect data from different sources.</li> <li>• Organize data in a meaningful way (e.g., tables, charts).</li> <li>• Analyze the data to identify trends or patterns.</li> <li>• Interpret the findings and communicate their significance.</li> </ul> <p><b>Formulate Learning Targets:</b></p> <ol style="list-style-type: none"> <li>1. <b>Data Collection:</b> <ul style="list-style-type: none"> <li>◦ Students will be able to collect data using surveys or experiments.</li> </ul> </li> <li>2. <b>Data Organization:</b> <ul style="list-style-type: none"> <li>◦ Students will organize collected data into tables and graphs.</li> </ul> </li> <li>3. <b>Data Analysis:</b> <ul style="list-style-type: none"> <li>◦ Students will analyze organized data to find trends or patterns.</li> </ul> </li> <li>4. <b>Data Interpretation:</b> <ul style="list-style-type: none"> <li>◦ Students will interpret the analyzed data and present their conclusions.</li> </ul> </li> </ol>	<p><b>Topic 10:</b>  Pick a Project, pp. 427-428; Lesson 10-1, pp. 429-432; Let's Investigate: Geckos for Sale; Lesson 10-2, pp. 433-436; Lesson 10-3, pp. 437-440; Lesson 10-4, pp. 441-444; Reteaching: pp. 447-448 Sets A-C</p>

	<p><b>Instruction and Assessment Strategies:</b></p> <ul style="list-style-type: none"> <li>• <b>Teaching Methods:</b> <ul style="list-style-type: none"> <li>◦ Use hands-on activities such as conducting surveys and experiments.</li> <li>◦ Incorporate technology (e.g., spreadsheets) to create graphs and charts.</li> <li>◦ Facilitate group discussions to analyze and interpret data collaboratively.</li> </ul> </li> <li>• <b>Assessment Ideas:</b> <ul style="list-style-type: none"> <li>◦ Have students present their findings from a data collection project.</li> <li>◦ Create a rubric that evaluates data collection, organization, analysis, and interpretation.</li> <li>◦ Use quizzes that test understanding of data representation techniques.</li> </ul> </li> </ul> <p><b>Summarize:</b></p> <p>The standard 5.D.2a emphasizes the importance of data analysis and interpretation in decision-making. Students are expected to collect, organize, analyze, and interpret data effectively. Learning targets focus on practical skills in data handling, while instruction and assessment strategies encourage engagement through hands-on activities and collaborative learning.</p>	
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<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will...           <ul style="list-style-type: none"> <li>-fluently add, subtract, and multiply decimals.</li> <li>-fluently divide whole numbers and decimals.</li> <li>-multiply fractions</li> <li>-understand division with fractions</li> <li>-divide fractions by fractions</li> <li>-divide mixed numbers</li> <li>-solve problems with rational numbers</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will...           <ul style="list-style-type: none"> <li>-understand integers</li> <li>-represent rational numbers on the number line</li> <li>-find absolute values of rational numbers</li> <li>-represent rational numbers on the coordinate plane</li> <li>-find distances on the coordinate plane</li> <li>-represent polygons on the coordinate plane</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will...           <ul style="list-style-type: none"> <li>-understand and represent exponents</li> <li>-find GCF &amp; LCM</li> <li>-write and evaluate numerical expressions</li> <li>-write algebraic expressions</li> <li>-evaluate algebraic expressions</li> <li>-generate equivalent expressions</li> <li>-simplify algebraic expressions</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will...           <ul style="list-style-type: none"> <li>-understand equations and solutions</li> <li>-apply properties of equality</li> <li>-write and solve addition and subtraction equations</li> <li>-write and solve multiplication and division equations</li> <li>-write and solve equations with rational numbers</li> <li>-understand and write inequalities</li> <li>-solve inequalities</li> <li>-understand independent and dependent variables</li> <li>-use patterns to write and solve equations</li> <li>-relate tables, graphs, and equations</li> </ul> </li> </ul>
<p><b>6th Grade Math</b></p> <p><b>Focus:</b> How can we...</p>			
<p><b>Quarter 3</b></p> <p><b>(Topic 5-Understand and Use Ratio and Rate)</b></p> 	<p><b>Quarter 3</b></p> <p><b>(Topic 6-Understand and Use Percent)</b></p> 	<p><b>Quarter 3/4</b></p> <p><b>(Topic 7-Solve Area, Surface Area, and Volume Problems)</b></p> 	<p><b>Quarter 4</b></p> <p><b>(Topic 8-Display, Describe, and Summarize Data)</b></p> 

THE FOCUS OF THE STORY	THE FOCUS OF THE STORY	THE FOCUS OF THE STORY	THE FOCUS OF THE STORY
<p>Understand ratio concepts and use ratio reasoning to solve problems.</p>	<p>Understand ratio concepts and use ratio reasoning to solve problems.</p>	<p>Solve real-world and mathematical problems involving area, surface area, and volume.</p>	<p>Develop understanding of statistical variability. Summarize and describe distributions.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will... <ul style="list-style-type: none"> <li>-understand ratios</li> <li>-generate equivalent ratios</li> <li>-compare ratios</li> <li>-represent and graph ratios</li> <li>-understand rates and unit rates</li> <li>-compare unit rates</li> <li>-solve unit rate problems</li> <li>-ratio reasoning: convert customary units</li> <li>-ratio reasoning: convert metric units</li> <li>-relate customary and metric units</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will... <ul style="list-style-type: none"> <li>-understand percents</li> <li>-relate fractions, decimals, and percents</li> <li>-represent percents greater than 100 or less than 1</li> <li>-estimate to find percent</li> <li>-find the percent of a number</li> <li>-find the whole given a part and the percent</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will... <ul style="list-style-type: none"> <li>-find areas of parallelograms</li> <li>-solve triangle area problems</li> <li>-find areas of trapezoids</li> <li>-find areas of polygons</li> <li>-represent solid figures using nets</li> <li>-find surface areas of prisms</li> <li>-find volume with fractional edge lengths</li> </ul> </li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <ul style="list-style-type: none"> <li>The learner will... <ul style="list-style-type: none"> <li>-recognize statistical questions</li> <li>-summarize data using mean, median, mode</li> <li>-display data in box plots</li> <li>-display data in frequency tables and histograms</li> <li>-summarize data using measures of variability</li> <li>-choose appropriate statistical measures</li> <li>-summarize data distributions</li> </ul> </li> </ul>

Grade 6 State Standards	Unwrap the Standard	Connection to Instructional materials
<p><b>6.N.1</b></p> <p>Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions, decimals, percents, and integers within the base-ten number system.</p>	<ul style="list-style-type: none"> <li>• Understanding and manipulating fractions, decimals, percents, and integers.</li> <li>• Converting between fractions, decimals, and percents.</li> <li>• Comparing and ordering fractions, decimals, and percents.</li> <li>• <b>Knowledge:</b></li> <li>• Base-ten number system fundamentals.</li> <li>• Relationships between different numeric forms (e.g., how a fraction can represent the same value as a decimal).</li> <li>• <b>Concepts:</b></li> <li>• The meaning of fractions, decimals, and percents.</li> <li>• The concept of equivalence among fractions, decimals, and percents.</li> <li>• The role of integers in representing whole numbers in various contexts.</li> </ul>	
<p><b>6.N.1.a</b></p> <p>Determine common factors and common multiples.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and list factors and multiples of given numbers, determine common factors and common multiples between sets of numbers.</li> </ul>	<p><b>Topic 3:</b> Let's Investigate: Dance Numbers; Lesson 3-2, pp. 129-136; Mid-Topic Checkpoint, p. 143; Topic Review, p. 174</p>

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Understanding of factors (numbers that divide evenly into another number) and multiples (products of a number and integers).</li> <li>• <b>Concepts:</b> The relationship between factors and multiples, prime factorization, and the concepts of greatest common factor (GCF) and least common multiple (LCM).</li> </ul>	
<b>6.N.1.b</b>	Determine prime factorization of numbers with and without exponents.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify prime numbers, perform prime factorization, and understand the concept of exponents.</li> <li>• <b>Knowledge:</b> Recognize prime and composite numbers, understand how to break down a number into its prime factors, and grasp the role of exponents in representing repeated factors.</li> <li>• <b>Concepts:</b> The relationship between numbers and their prime factors, the significance of prime factorization in simplifying fractions and finding least common multiples (LCM) and greatest common divisors (GCD).</li> </ul>	<p><b>Topic 3:</b> Let's Investigate: Dance Numbers, Lesson 3-2, pp. 129-136; Topic Review, p. 174</p>
<b>6.N.1.c</b>	Model integers using drawings, words, number lines, models and symbols.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Creating and interpreting drawings that represent integers.</li> </ul>	<p><b>Topic 2:</b> Let's Investigate: Garden Plot, Lesson 2-2, pp. 75-80; Mid-Topic Checkpoint, p. 87; Topic Review, p. 112</p>

		<ul style="list-style-type: none"> <li>• Using number lines to show the position of integers.</li> <li>• Applying models (like counters or blocks) to visualize integers.</li> <li>• Writing and explaining integers using words.</li> <li>• Utilizing symbols to represent integers in mathematical expressions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding what integers are (whole numbers that can be positive, negative, or zero).</li> <li>• Recognizing how to represent integers in various forms.</li> <li>• Knowing the relationship between positive and negative integers on a number line.</li> <li>• <b>Concepts:</b></li> <li>• The concept of opposites in integers.</li> <li>• The concept of absolute value.</li> <li>• The significance of zero in the integer number system.</li> </ul>	
6.N.1.d	Determine absolute value of rational numbers.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Comparing numbers (fractions, decimals, integers)</li> <li>• Ordering numbers (fractions, decimals, integers)</li> <li>• Understanding absolute values</li> </ul>	<p><b>Topic 2:</b> Lesson 2-3, pp, 81-86; Mid-Topic Checkpoint, p, 87; Topic Review, p. 113</p>

		<ul style="list-style-type: none"> <li>• Locating numbers on a number line</li> <li>• Knowledge: <ul style="list-style-type: none"> <li>• Definitions and properties of fractions, decimals, integers, and absolute values</li> <li>• The concept of a number line and its structure</li> </ul> </li> <li>• Concepts: <ul style="list-style-type: none"> <li>• The relationships between different types of numbers</li> <li>• The significance of absolute value in determining distance from zero</li> </ul> </li> </ul>	
<p><b>6.N.1.e</b></p>	<p>Compare and order numbers including non-negative fractions and decimals, integers, and absolute values and locate them on the number line.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Comparison of numbers</li> <li>• Ordering of numbers</li> <li>• Non-negative fractions</li> <li>• Decimals</li> <li>• Integers</li> <li>• Absolute values</li> <li>• Number line representation</li> </ul> </li> </ul>	<p><b>Topic 2:</b>  Lesson 2-1, pp. 69-74; Let's Investigate: Garden Plot;  Lesson 2-2, pp. 75-80; Lesson 2-3, pp. 81-86; Mid Topic Checkpoint, p. 87; Topic Review, p. 112</p>

		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Adding, subtracting, multiplying, and dividing fractions and decimals.</li> <li>• Converting between fractions and decimals.</li> <li>• Simplifying fractions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of fractions and decimals.</li> <li>• Recognizing equivalent fractions and decimal representations.</li> <li>• Knowing the order of operations when dealing with fractions and decimals.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between fractions and decimals.</li> <li>• The importance of precision in computation.</li> <li>• Real-world applications of fractions and decimals in everyday situations.</li> </ul>	
<p><b>6.N.2</b></p>	<p>Operations: Students will compute with fractions and decimals accurately.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Dividing multi-digit whole numbers.</li> <li>• Dividing decimals.</li> <li>• Applying algorithms for division.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding place value.</li> <li>• Familiarity with division concepts and terminology (dividend, divisor, quotient, remainder).</li> </ul>	<p><b>Topic 1:</b> Lesson 1-2, pp. 15-20, Mid-Topic Checkpoint, p. 27; 3-Act Math: Stocking Up, pp. 29-32; Topic Review, p. 58</p>
<p><b>6.N.2.a</b></p>	<p>Divide multi-digit whole numbers and decimals using an algorithm.</p>		

		<ul style="list-style-type: none"> <li>• Application of the standard algorithm for division.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between multiplication and division.</li> <li>• Estimation of division outcomes.</li> <li>• Recognizing patterns in division.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Dividing non-negative fractions and mixed numbers; understanding reciprocal relationships.</li> <li>• <b>Knowledge:</b> Understanding of fractions, mixed numbers, and the concept of division as finding how many times one number is contained within another.</li> <li>• <b>Concepts:</b> The relationship between multiplication and division; the concept of the reciprocal; the process of converting mixed numbers to improper fractions.</li> </ul>	<p><b>Topic 1:</b> Lesson 1-4, pp. 33-36; Lesson 1-5, pp. 39-44; Lesson 1-6, pp. 45-50; Topic Review, p. 59</p>
<b>6.N.2.b</b>	Divide non-negative fractions and mixed numbers.		
<b>6.N.2.c</b>	Evaluate numerical expressions including absolute value and/or positive exponents with respect to order of operations.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Evaluate numerical expressions, apply order of operations, compute absolute value, understand positive exponents.</li> </ul>	<p><b>Topic 3:</b> Lesson 3-1, pp. 123-128; Lesson 3-3, pp. 137-142; Mid-Topic Checkpoint, p. 143; Topic Review, p. 175</p>

		<ul style="list-style-type: none"> <li>● <b>Knowledge:</b> Properties of operations (addition, subtraction, multiplication, division), absolute value concept, rules for exponents.</li> <li>● <b>Concepts:</b> Order of operations (PEMDAS/BODMAS), the meaning of absolute value, the role of positive exponents in expressions.</li> </ul>	
<p><b>6.R.1</b></p>	<p>Ratios and Rates: Students will understand the concept of ratios and unit rates, use language to describe the relationship between two quantities, and use ratios and unit rates to solve authentic situations.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b> <ul style="list-style-type: none"> <li>● Identify and create ratios.</li> <li>● Calculate unit rates.</li> <li>● Describe relationships between quantities using appropriate language.</li> <li>● Apply knowledge of ratios and unit rates in real-world scenarios.</li> </ul> </li> <li>● <b>Knowledge:</b> <ul style="list-style-type: none"> <li>● Understanding the definition of a ratio and unit rate.</li> <li>● Recognizing when to use ratios and unit rates.</li> <li>● Familiarity with equivalent ratios and rates.</li> </ul> </li> <li>● <b>Concepts:</b> <ul style="list-style-type: none"> <li>● The relationship between two quantities.</li> <li>● Proportional reasoning.</li> <li>● Problem-solving in context.</li> </ul> </li> </ul>	

	Determine ratios from concrete models, drawings, and/or words.	<ul style="list-style-type: none"> <li>● <b>Skills:</b> Identifying and determining ratios using various representations.</li> <li>● <b>Knowledge:</b> Understanding the concept of ratios and how they can be expressed in different forms (e.g., fractions, decimals, or words).</li> <li>● <b>Concepts:</b> Relationships between quantities, comparison of two or more amounts, and the application of ratios in real-life contexts.</li> </ul>	<p><b>Topic 5:</b> Lesson 5-1, pp. 167-272; Lesson 5-2, pp. 273-278; Lesson 5-3, pp. 279-284; Let's Investigate: Playing Fair; Lesson 5-4, pp. 285-290; Mid-Topic Checkpoint, p. 291; Topic Review, pp. 333-338</p>
6.R.1.a	Determine ratios from concrete models, drawings, and/or words.	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Calculate unit rates from given ratios.</li> <li>● Compare unit rates to make decisions.</li> <li>● <b>Knowledge:</b></li> <li>● Understand ratios and rates.</li> <li>● Recognize the concept of a unit rate as a ratio with a denominator of 1.</li> <li>● <b>Concepts:</b></li> <li>● The relationship between quantities.</li> <li>● The significance of unit rates in real-world contexts.</li> </ul>	<p><b>Topic 5:</b> Lesson 5-5, pp. 293-298; Let's Investigate: Rate That Scooter; Lesson 5-6, pp. 299-304; Lesson 5-7, pp. 305-310; 3-Act Math: Get in Line, p. 311; Topic Review, pp. 333-338</p>
6.R.1.b	Explain and determine unit rates.		
6.R.1.c	Find a percent of a quantity as a rate per 100 and solve problems involving finding the whole, given a part and the percent.	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Finding a percent of a quantity.</li> </ul>	<p><b>Topic 6:</b> Lesson 6-4, pp. 367-372; Let's Investigate: Per Sense; Lesson 6-5, pp. 373-378; Lesson 6-6, pp. 379-384; Topic Review, pp.</p>

		<ul style="list-style-type: none"> <li>• Solving problems involving finding the whole when given a part and the percent.</li> <li>• Converting among fractions, decimals, and percents.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding the concept of percent as a rate per 100.</li> <li>• Recognizing the relationships between fractions, decimals, and percents.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The formula for calculating percent: <math>\text{percent} = \frac{\text{part}}{\text{whole}} \times 100</math></li> <li>• <math>\text{percent} =</math></li> <li>• whole</li> <li>• part</li> <li>• <math>\times 100.</math></li> <li>• The inverse relationship of finding the whole from a part and a percent.</li> </ul>	389-392
<b>6.R.1.d</b>	Convert among fractions, decimals, and percents using multiple representations.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Converting fractions to decimals, decimals to percents, fractions to percents, and vice versa.</li> </ul>	<p><b>Topic 6:</b> Let's Investigate: Straight from the Headlines; Lesson 6-2, pp. 353-358, Mid-Topic Checkpoint,</p>

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Understanding the relationship between fractions, decimals, and percents; knowing how to use mathematical operations to perform conversions.</li> <li>• <b>Concepts:</b> The concept of equivalence among fractions, decimals, and percents; understanding how to represent the same quantity in different forms.</li> </ul>	<p>p. 365; Topic Review, pp. 390-391</p>
<p><b>6.R.1.e</b></p>	<p>Solve authentic problems using ratios, unit rates, and percents.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate ratios and unit rates.</li> <li>• Convert between fractions, decimals, and percents.</li> <li>• Apply ratios, unit rates, and percents to real-world problems.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the concept of ratio as a comparison of two quantities.</li> <li>• Understanding unit rates as a ratio with a denominator of one.</li> <li>• Understanding percent as a way to express a number as a fraction of 100.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Real-life applications of ratios, unit rates, and percents.</li> </ul> </li> </ul>	<p><b>Topic 5:</b> Lesson 5-1, pp. 267-272, Lesson 5-2, pp. 273-278; Lesson 5-3, pp. 279-284; Let's Investigate: Playing Fair; Lesson 5-4, pp. 285-290; Mid-Topic Checkpoint, pp. 291-292; Lesson 5-5, pp. 293-298; Let's Investigate: Rate That Scooter; Lesson 5-6, pp. 299-304; Lesson 5-7, pp. 305-310; 3-Act Math: Get in Line, pp. 311-314; Topic Review, pp. 333-338</p> <p><b>Topic 6:</b> Lesson 6-1, pp. 347-352; Lesson 6-3, pp. 359-364; Lesson 6-4, pp. 367-372; Let's Investigate: Per Sense; Lesson 6-5, pp. 373-378; Lesson 6-6, pp. 379-384; 3-Act Math: Ace the Test, pp. 385-388; Topic Review, pp. 389-392</p>

		<ul style="list-style-type: none"> <li>• Problem-solving strategies to apply mathematical concepts to everyday situations.</li> </ul>	
6.R.1.f	<p>Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understanding ratios and their applications.</li> <li>• Converting between different measurement units.</li> <li>• Performing multiplication and division with units.</li> <li>• <b>Knowledge:</b></li> <li>• Familiarity with common measurement units (length, weight, volume, etc.).</li> <li>• Understanding of how to set up ratios for conversions.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between different measurement units.</li> <li>• The process of unit conversion using ratios.</li> </ul>	<p><b>Topic 5:</b>  Lesson 5-8, pp. 315-320;  Lesson 5-9, pp. 321-326;  Lesson 5-10, pp. 327-332;  Topic Review, pp. 337-338</p>
6.R.2	<p>Represent: Students will represent ratios and rates on the coordinate plane.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and create ratios and rates.</li> <li>• Plot points on the coordinate plane.</li> <li>• Understand the relationship between ratios/rates and their graphical representation.</li> <li>• <b>Knowledge:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Concepts of ratios and rates.</li> <li>• Coordinate plane structure (x-axis and y-axis).</li> <li>• Understanding of ordered pairs (x, y).</li> <li>• <b>Concepts:</b></li> <li>• The visual representation of ratios and rates.</li> <li>• The relationship between numerical values and their graphical representation.</li> </ul>	
6.R.2.a	Identify the ordered pair of a given point in the coordinate plane.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Plotting points on a coordinate plane.</li> <li>• Identifying and interpreting ordered pairs.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of the x-axis and y-axis.</li> <li>• Familiarity with the concept of coordinates.</li> <li>• <b>Concepts:</b></li> <li>• The Cartesian coordinate system.</li> <li>• The significance of the order of numbers in an ordered pair.</li> </ul>	<p><b>Topic 2:</b> Lesson 2-4, pp. 89-94; Topic Review, p. 113</p>
6.R.2.b	Plot the location of an ordered pair in the coordinate plane.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify ordered pairs (coordinates).</li> <li>• Plot points on the coordinate plane.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the structure of the coordinate plane, including the x-axis and y-axis.</li> <li>• Recognize the significance of the first and second numbers in an ordered pair.</li> </ul>	<p><b>Topic 2:</b> Lesson 2-4, pp. 89-94; Topic Review, p. 113</p>

		<ul style="list-style-type: none"> <li>● <b>Concepts:</b></li> <li>● The concept of positive and negative numbers in relation to the axes.</li> <li>● Quadrants of the coordinate plane.</li> </ul>	
		<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Recognize and label the x-axis and y-axis.</li> <li>● Identify the origin (0, 0).</li> <li>● Determine in which quadrant a point is located.</li> <li>● Use ordered pairs to represent points.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding of the coordinate plane structure.</li> <li>● Familiarity with positive and negative numbers.</li> <li>● Knowledge of quadrants (I, II, III, IV).</li> <li>● <b>Concepts:</b></li> <li>● The relationship between ordered pairs and their locations.</li> <li>● The significance of the axes and origin in the coordinate plane.</li> </ul>	<p><b>Topic 2:</b> Lesson 2-4, pp. 89-94; Topic Review, p. 113</p>
<b>6.R.2.c</b>	Identify the location of a given point in the coordinate plane (e.g., axis, origin, quadrant).		
<b>6.R.2.d</b>	Make tables of equivalent ratios relating quantities with whole number measurements.	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Identify and create tables of equivalent ratios.</li> <li>● Understand the concept of ratios and how they relate to whole number measurements.</li> <li>● <b>Knowledge:</b></li> </ul>	<p><b>Topic 5:</b> Lesson 5-2, pp. 273-278; Lesson 5-3, pp. 279-284; Let's Investigate: Playing Fair: Lesson 5-4, pp. 285-290; Topic Review, pp. 334-335</p>

		<ul style="list-style-type: none"> <li>Understanding ratios and their representations.</li> <li>Knowledge of whole numbers and their relationships.</li> <li><b>Concepts:</b></li> <li>The idea of equivalence in ratios.</li> <li>The relationship between quantities in a ratio format.</li> </ul>	
<b>6.R.2.e</b>	Use the constant of proportionality to find the missing value in ratio tables.	<ul style="list-style-type: none"> <li>Understanding of ratios and proportional relationships.</li> <li>Ability to identify and use the constant of proportionality.</li> <li>Skills in creating and interpreting ratio tables.</li> <li>Application of proportional reasoning to find missing values.</li> </ul>	<p><b>Topic 5:</b> Let's Investigate: Rate That Scooter; Lesson 5-6, pp. 299-304; Lesson 5-7, pp. 305-310; 3-Act Math: Get in Line, pp. 311-314</p> <p>The term, "constant of proportionality" is introduced in enVision Mathematics Grade 7. Please see: <b>Topic 2:</b> Lesson 2-4, pp. 107-112</p>
<b>6.R.2.f</b>	Plot the pair of values from a ratio table on the coordinate plane.	<ul style="list-style-type: none"> <li>Skills: Understanding and using ratio tables, plotting points on a coordinate plane, and interpreting coordinate pairs.</li> <li>Knowledge: Familiarity with the concepts of ratios, coordinates, and the structure of the coordinate plane.</li> </ul>	<p><b>Topic 5:</b> Let's Investigate: Playing Fair; Lesson 5-4, pp. 285-290; Topic Review, p. 334</p>

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between ratios and coordinates, the x-axis and y-axis, and the importance of accuracy in plotting points.</li> </ul>	
	<p>Explain what a point <math>(x, y)</math> on the graph of a proportional relationship means in terms of the situation.</p>	<ul style="list-style-type: none"> <li>• Understanding of a point as an ordered pair <math>(x, y)</math></li> <li>• <math>(x, y)</math>.</li> <li>• Recognition of proportional relationships.</li> <li>• Ability to interpret the meaning of <math>x</math></li> <li>• <math>x</math> and <math>y</math></li> <li>• <math>y</math> in a real-world context.</li> </ul>	<p><b>Topic 5:</b> Let's Investigate: Playing Fair; Lesson 5-4, pp. 285-290; Topic Review, p. 334</p>
<b>6.R.2.8</b>		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Evaluating expressions, solving equations and inequalities, applying operational properties (associative, commutative, distributive).</li> <li>• <b>Knowledge:</b> Understanding of algebraic expressions, operations (addition, subtraction, multiplication, division), and the order of operations (PEMDAS).</li> </ul>	
<b>6.A.1</b>	<p>Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations and inequalities.</p>		

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between numbers and operations, properties of equality, and inequalities. <ul style="list-style-type: none"> <li>•</li> </ul> </li> </ul>	
	<p>Recognize and generate equivalent algebraic expressions involving the distributive property and combining like terms.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Application of the distributive property.</li> <li>• Combining like terms in algebraic expressions.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of algebraic expressions.</li> <li>• Recognition of equivalent expressions.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The distributive property:</li> <li>• <math>a(b+c)=ab+ac</math></li> <li>• <math>a(b+c)=ab+ac</math>.</li> </ul> </li> <li>• Like terms: terms that have the same variable raised to the same power.</li> </ul>	<p><b>Topic 3:</b> Let's Investigate: Equal-ite; Lesson 3-6, pp. 161-166; Lesson 3-7, pp. 167-172; Topic Review, p. 176</p>
<b>6.A.1.a</b>	<p>Given the value of the variable, evaluate algebraic expressions with non-negative rational numbers with respect to order of operations, which may include absolute value.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Evaluating algebraic expressions, applying the order of operations, understanding absolute value.</li> <li>• <b>Knowledge:</b> Knowledge of algebraic expressions, rational numbers, the concept of order of</li> </ul>	<p><b>Topic 3:</b> Lesson 3-5, pp. 151-156; Topic Review, p. 175</p>
<b>6.A.1.b</b>	<p>Given the value of the variable, evaluate algebraic expressions with non-negative rational numbers with respect to order of operations, which may include absolute value.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Evaluating algebraic expressions, applying the order of operations, understanding absolute value.</li> <li>• <b>Knowledge:</b> Knowledge of algebraic expressions, rational numbers, the concept of order of</li> </ul>	<p><b>Topic 3:</b> Lesson 3-5, pp. 151-156; Topic Review, p. 175</p>

		<p>operations (PEMDAS/BODMAS), and absolute value.</p> <ul style="list-style-type: none"> <li>• <b>Concepts:</b> The relationship between variables and expressions, the importance of order in mathematical operations, and the meaning of absolute value.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understand the concept of substitution.</li> <li>• Evaluate expressions by substituting values for variables.</li> <li>• Analyze and determine the truth of equations and inequalities.</li> <li>• <b>Knowledge:</b></li> <li>• Familiarity with variables and constants.</li> <li>• Understanding of equations and inequalities.</li> <li>• Knowledge of the equality and inequality symbols.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between variables and their corresponding values.</li> <li>• How substituting a value can either satisfy or not satisfy an equation or inequality.</li> </ul>	<p><b>Topic 4:</b> Lesson 4-1, pp. 185-190; Mid-Topic Checkpoint, p. 217; Topic Review, p. 253</p>
<b>6.A.1.c</b>	Use substitution to determine if a given value for a variable makes an equation or inequality true.		
<b>6.A.1.d</b>	Solve one-step equations with non-negative rational numbers	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Solving one-step equations</li> </ul>	<p><b>Topic 4:</b> Let's Investigate: Operation Equation; Lesson 4-2, pp. 191-196; Lesson 4-3, pp.</p>

	using addition, subtraction, multiplication, and division.	<ul style="list-style-type: none"> <li>Using addition, subtraction, multiplication, and division</li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understanding of non-negative rational numbers</li> <li>Comprehension of the properties of equality</li> </ul> </li> <li><b>Concepts:</b> <ul style="list-style-type: none"> <li>Equations as mathematical statements</li> <li>Inverse operations</li> </ul> </li> </ul>	<p>197-202; Lesson 4-4, pp. 203-208; Let's Investigate: The Write Way; Lesson 4-5, pp. 209-216; Mid-Topic Checkpoint, p. 217; Topic Review, pp. 254-255</p>
	Solve one-step inequalities with whole numbers using addition, subtraction, multiplication, and division and represent solutions on a number line (e.g., graph $3x > 3$ ).	<ul style="list-style-type: none"> <li><b>Skills:</b> Solving one-step inequalities, representing solutions graphically on a number line.</li> <li><b>Knowledge:</b> Understanding inequalities, operations (addition, subtraction, multiplication, division), and number lines.</li> <li><b>Concepts:</b> The meaning of inequalities, how to manipulate them, and how to visually represent their solutions.</li> </ul>	<p><b>Topic 4:</b> Lesson 4-6, pp. 219-224; Lesson 4-7, pp. 225-230; Topic Review, p. 256</p>
<b>6.A.2</b>	Applications: Students will solve authentic problems with algebraic expressions, equations, and inequalities.	<ul style="list-style-type: none"> <li><b>Skills:</b> <ul style="list-style-type: none"> <li>Ability to manipulate algebraic expressions.</li> <li>Solve equations and inequalities.</li> <li>Apply concepts to real-world problems.</li> </ul> </li> <li><b>Knowledge:</b> <ul style="list-style-type: none"> <li>Understanding of algebraic concepts (variables, constants, coefficients).</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• Familiarity with operations involving expressions and equations.</li> <li>• <b>Concepts:</b></li> <li>• Relationship between expressions, equations, and inequalities.</li> <li>• The significance of problem-solving in mathematics.</li> </ul>	
<p><b>6.A.2.a</b></p>	<p>Create algebraic expressions (e.g., one operation, one variable as well as multiple operations, one variable) from word phrases.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identifying operations (addition, subtraction, multiplication, division).</li> <li>• Recognizing and using variables.</li> <li>• Translating word phrases into algebraic expressions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the meaning of mathematical operations.</li> <li>• Knowing how to represent a variable in an equation.</li> <li>• Familiarity with common phrases that indicate mathematical operations (e.g., "sum", "difference", "product", "quotient").</li> <li>• <b>Concepts:</b></li> <li>• The relationship between words and mathematical symbols.</li> <li>• The structure of algebraic expressions.</li> </ul>	<p><b>Topic 3:</b> Lesson 3-4, pp. 145-150; 3-Act Math: The Field Trip, pp. 157-160; Topic Review, p. 175</p>

<b>6.A.2.b</b>	Write equations (e.g., one operation, one variable) to represent authentic situations involving non-negative rational numbers.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Understanding and writing equations.</li> <li>• Identifying variables in word problems.</li> <li>• Using non-negative rational numbers in equations.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Concepts of equations and their components (variables, constants).</li> <li>• The relationship between real-life situations and mathematical expressions.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Authentic situations that can be modeled with equations.</li> <li>• Non-negative rational numbers and their properties.</li> </ul> </li> </ul>	<p><b>Topic 4:</b>  Lesson 4-3, pp. 197-202;  Lesson 4-4, pp. 203-208; Let's Investigate: The Write Way;  Lesson 4-5, pp. 209-216;  Mid-Topic Checkpoint, p. 217;  Mid-Topic Performance Task, p. 218; Topic Review, p. 255</p>
<b>6.A.2.c</b>	Write inequalities (e.g., one operation, one variable) to represent authentic situations involving whole numbers.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Writing inequalities</li> <li>• Understanding authentic situations</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Whole numbers</li> <li>• The concept of inequalities</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Real-world applications of inequalities</li> </ul> </li> </ul>	<p><b>Topic 4:</b>  Lesson 4-6, pp. 219-224;  Lesson 4-7, pp. 225-230; 3-Act Math: Checking a Bag; pp. 231-234; Topic Review, p. 256</p>

		<ul style="list-style-type: none"> <li>• Variables in mathematical expressions</li> </ul>	
6.G.1	Attributes: Students will identify and describe geometric attributes of two-dimensional shapes.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and describe geometric attributes (sides, angles, vertices, symmetry).</li> <li>• <b>Knowledge:</b> Understanding of two-dimensional shapes (triangles, quadrilaterals, circles, etc.).</li> <li>• <b>Concepts:</b> Properties of shapes, classification based on attributes, relationships between attributes.</li> </ul>	
6.G.1.a	Identify and create nets to represent two-dimensional drawings of prisms and pyramids.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify different types of prisms and pyramids.</li> <li>• Create nets for prisms and pyramids.</li> <li>• <b>Knowledge:</b> Understand the properties of three-dimensional shapes.</li> <li>• Recognize the relationship between 3D shapes and their 2D representations.</li> <li>• <b>Concepts:</b> The concept of nets and how they relate to surface area.</li> </ul>	<p><b>Topic 7:</b> Let's Investigate: Nothing But Net; Lesson 7-5, pp. 427-432; 3-Act Math: That's a Wrap, pp. 433-436; Let's Investigate: On the Surface; Lesson 7-6, pp. 437-442; Lesson 7-7, pp. 443-448</p>

		<ul style="list-style-type: none"> <li>• The different faces, edges, and vertices of prisms and pyramids.</li> </ul>	
<p><b>6.G.2</b></p>	<p>Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Plotting points on the coordinate plane.</li> <li>• Identifying coordinates of given points.</li> <li>• Understanding the concept of the x-axis and y-axis.</li> <li>• Determining the distance between points.</li> <li>• Recognizing relationships between points (e.g., collinearity).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the coordinate plane and its quadrants.</li> <li>• Familiarity with positive and negative numbers.</li> <li>• Comprehending the concept of ordered pairs (x, y).</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The properties of the coordinate plane.</li> <li>• The significance of the origin (0,0).</li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• The relationship between points, lines, and shapes in the plane.</li> </ul>	
	<p>SEE WORK WITH COORDINATE PLANES IN RATIOS AND PROPORTIONS (6.R.2 - on Numbers tab)</p>		
<p><b>6.G.3</b></p>	<p>Measurement: Students identify geometric attributes that create two- and three-dimensional shapes in order to perform measurements and apply formulas to find area and volume.</p>	<ul style="list-style-type: none"> <li>• Skills: <ul style="list-style-type: none"> <li>• Identifying geometric attributes of shapes (sides, angles, faces, edges).</li> <li>• Performing measurements (using tools and units).</li> <li>• Applying formulas to calculate area and volume.</li> </ul> </li> <li>• Knowledge: <ul style="list-style-type: none"> <li>• Understanding different two-dimensional (2D) and three-dimensional (3D) shapes (e.g., squares, rectangles, cubes, spheres).</li> <li>• Familiarity with mathematical formulas for area and volume.</li> </ul> </li> <li>• Concepts: <ul style="list-style-type: none"> <li>• Relationship between shape attributes and their measurements.</li> <li>• The concept of units of measurement (square units for area, cubic units for volume).</li> </ul> </li> </ul>	

<p><b>6.G.3.a</b></p>	<p>Determine the area of quadrilaterals and triangles by composition and decomposition of these shapes, as well as applications of properties and formulas. Quadrilaterals include parallelograms and trapezoids.</p>	<p> <ul style="list-style-type: none"> <li>• Skills:</li> <li>• Composing and decomposing shapes.</li> <li>• Applying properties of quadrilaterals and triangles.</li> <li>• Using formulas to calculate area.</li> <li>• Knowledge:</li> <li>• Understanding different types of quadrilaterals (e.g., parallelograms, trapezoids).</li> <li>• Familiarity with the formulas for area (e.g., area of a triangle: <ul style="list-style-type: none"> <li>• <math>12 \times \text{base} \times \text{height}</math></li> <li>• 2</li> <li>• 1</li> </ul> </li> <li>• <math>\text{xbase} \times \text{height}</math>, area of a parallelogram:</li> <li>• <math>\text{base} \times \text{height}</math></li> <li>• <math>\text{base} \times \text{height}</math>, area of a trapezoid: <ul style="list-style-type: none"> <li>• <math>12 \times (\text{base} 1 + \text{base} 2) \times \text{height}</math></li> <li>• 2</li> <li>• 1</li> </ul> </li> <li>• <math>\text{x}(\text{base}</math></li> <li>• 1</li> <li>• <math>+\text{base}</math></li> <li>• 2</li> <li>• <math>) \times \text{height}</math>.</li> <li>• Concepts:</li> </ul> </p>
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**Topic 7:**  
Lesson 7-1, pp. 401-406;  
Lesson 7-2, pp. 407-412;  
Lesson 7-3, pp. 413-418;  
Lesson 7-4, pp. 419-424;  
Mid-Topic Review, p. 425;  
Topic Review, pp. 456-458

		<ul style="list-style-type: none"> <li>• Relationships between shapes and their areas.</li> <li>• The process of breaking down complex shapes into simpler ones.</li> </ul>	
<p><b>6.G.3.b</b></p>	<p>Determine the surface area of rectangular prisms and triangular prisms using nets as well as application of formulas.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Identifying and creating nets for rectangular and triangular prisms.</li> <li>• Applying formulas to calculate surface area.</li> <li>• Visualizing and manipulating three-dimensional shapes.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding the properties of rectangular and triangular prisms.</li> <li>• Knowing how to find the area of rectangles and triangles.</li> <li>• Recognizing how to use nets to represent three-dimensional objects in two dimensions.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Surface area as a measure of the total area of the surfaces of a three-dimensional shape.</li> </ul> </li> </ul>	<p><b>Topic 7:</b>  Let's Investigate: Nothing But Net; Lesson 7-5, pp. 427-432; 3-Act Math: That's a Wrap, pp. 433-436; Let's Investigate: On the Surface; Lesson 7-6, pp. 437-442; Lesson 7-7, pp. 443-448, Topic Review, p. 459</p>

		<ul style="list-style-type: none"> <li>• Relationship between two-dimensional shapes and their three-dimensional counterparts.</li> </ul>	
6.G.3.c	Apply volume formulas for triangular prisms.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate the volume of triangular prisms using formulas.</li> <li>• Understand and apply the concept of area in relation to volume.</li> <li>• <b>Knowledge:</b></li> <li>• Knowledge of triangular shapes and their properties.</li> <li>• Understanding of volume as a measure of space.</li> <li>• <b>Concepts:</b></li> <li>• The formula for the volume of a prism.</li> <li>• The relationship between the base area and the height of the prism.</li> </ul>	<p><b>Topic 7:</b> Lesson 7-8, pp. 449-454; Topic Review, p. 460</p>
6.D.1	<p>Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Formulating investigative questions.</li> <li>• Collecting data through various methods.</li> <li>• Organizing data in appropriate formats (tables, charts, graphs).</li> <li>• <b>Knowledge:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Understanding what constitutes a statistical question.</li> <li>• Knowledge of different data collection methods (surveys, experiments, observations).</li> <li>• Familiarity with data organization techniques.</li> <li>• <b>Concepts:</b></li> <li>• The importance of asking clear and focused questions.</li> <li>• The role of data in answering questions and making decisions.</li> <li>• The significance of presenting data clearly for analysis.</li> </ul>	
	No additional indicators at this level.		
<b>6.D.2</b>	Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Collecting data</li> <li>• Organizing data</li> <li>• Analyzing data</li> <li>• Interpreting results</li> <li>• <b>Knowledge:</b></li> <li>• Understanding different types of data (qualitative and quantitative)</li> <li>• Familiarity with data representation methods (graphs, charts, tables)</li> <li>• <b>Concepts:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• The importance of data in decision making</li> <li>• How to draw conclusions from data analysis</li> </ul>	
<b>6.D.2.a</b>	Represent data using dot plots, box-and-whisker plots, and histograms.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Ability to create and interpret dot plots, box-and-whisker plots, and histograms.</li> <li>• <b>Knowledge:</b> Understanding the characteristics and uses of different data representations.</li> <li>• <b>Concepts:</b> Data distribution, central tendency, and variability.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-3, pp. 483-488; Lesson 8-4, pp. 489-494; Mid-Topic Checkpoint, pp. 495-496; Lesson 8-5, pp. 497-502; Lesson 8-7, pp. 509-514; 3-Act Math: Vocal Ranges, pp. 515-518; Topic Review, pp. 520-522</p>
<b>6.D.2.b</b>	Solve problems using information presented in dot plots, box-and-whisker plots, histograms, and circle graphs.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Analyze and interpret data presented in various graphical formats.</li> <li>• <b>Knowledge:</b> Understand the characteristics of dot plots, box-and-whisker plots, histograms, and circle graphs.</li> <li>• <b>Concepts:</b> Recognize how different types of data visualizations represent information and how to extract meaningful insights from them.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-3, pp. 483-488; Lesson 8-4, pp. 489-494; Mid-Topic Checkpoint, pp. 495-496; Lesson 8-5, pp. 497-502; Lesson 8-7, pp. 509-514; 3-Act Math: Vocal Ranges, pp. 515-518; Topic Review, pp. 520-522</p>
<b>6.D.2.c</b>	Find and interpret the mean, median, mode, and range for a set of data.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate the mean, median, mode, and range of a data set.</li> <li>• Interpret the results and understand their significance in real-world contexts.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-2, pp. 475-482; Mid-Topic Checkpoint, pp. 495-496; 3-Act Math: Vocal Ranges, pp. 515-518; Topic Review, pp. 519-522</p>

		<ul style="list-style-type: none"> <li>● <b>Knowledge:</b></li> <li>● Understand definitions and differences between mean, median, mode, and range.</li> <li>● Recognize when to use each measure of central tendency.</li> <li>● <b>Concepts:</b></li> <li>● Data sets can be represented numerically.</li> <li>● Measures of central tendency summarize data sets effectively.</li> </ul>	
<p><b>6.D.2.d</b></p>	<p>Compare the mean, median, mode, and range from two sets of data.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b></li> <li>● Calculate mean, median, mode, and range.</li> <li>● Compare statistical measures from two different data sets.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding of mean, median, mode, and range.</li> <li>● Ability to interpret data sets and their characteristics.</li> <li>● <b>Concepts:</b></li> <li>● Differences between measures of central tendency (mean, median, mode).</li> <li>● Understanding the significance of range in data sets.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-2, pp. 475-482; 3-Act Math: Vocal Ranges, pp. 515-518</p>

	<p>Compare and interpret data sets based upon their measures of central tendency and graphical representations (e.g., center, spread, shape).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Compare different data sets.</li> <li>• Interpret measures of central tendency (mean, median, mode).</li> <li>• Analyze graphical representations (e.g., histograms, box plots).</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand what measures of central tendency are.</li> <li>• Recognize different types of graphs and their purposes.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Center (mean, median, mode).</li> <li>• Spread (range, interquartile range).</li> <li>• Shape (distribution of data).</li> </ul> </li> </ul>	<p><b>Topic 8:</b>  Lesson 8-2, pp. 475-482;  Lesson 8-3, pp. 483-488;  Lesson 8-4, pp. 489-494;  Lesson 8-5, pp. 497-502;  Lesson 8-7, pp. 509-514; 3-Act Math: Vocal Ranges, pp. 515-518</p>
<p><b>6.D.2.e</b></p>	<p>Compare and interpret data sets based upon their measures of central tendency and graphical representations (e.g., center, spread, shape).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate probabilities of simple events.</li> <li>• Make predictions based on probability.</li> <li>• Interpret probability in real-world contexts.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the concept of probability as a measure of likelihood.</li> <li>• Recognize different types of probability (theoretical, experimental).</li> </ul> </li> </ul>	<p>This standard is addressed in enVision Mathematics Grade 7. Please see:  <b>Topic 7:</b>  Lesson 7-1, pp. 369-374;  Let's Investigate: Take a Spin; Lesson 7-2, pp. 375-380; Lesson 7-3, pp. 381 - 386; Lesson 7-4, pp. 387-392; 3-Act Math: Photo Finish, pp. 395-398</p>
<p><b>6.D.3</b></p>	<p>Probability: Students will interpret and apply concepts of probability.</p>		

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b></li> <li>• Events, outcomes, and sample space.</li> <li>• Probability scale (0 to 1).</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identifying outcomes, listing possibilities, understanding simple events.</li> <li>• <b>Knowledge:</b> Basic probability concepts, definitions of events and outcomes.</li> <li>• <b>Concepts:</b> Simple events in probability, the difference between outcomes and events.</li> </ul>	<p>In enVision Mathematics Grade 6, students compare the number of possible outcomes when one die or two dice are rolled. Please see:</p> <p><b>Topic 8:</b> Lesson 8-7, p. 509</p> <p>In enVision Mathematics Grade 7, students use lists of possible outcomes for a simple event to calculate theoretical probabilities. Please see:</p> <p><b>Topic 7:</b> Lesson 7-3, pp. 376-380; Lesson 7-4, pp. 387-392</p>
<b>6.D.3.a</b>	Identify a list of possible outcomes for a simple event.		
		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate theoretical probability.</li> <li>• Calculate experimental probability.</li> <li>• Convert probabilities into fractions, percentages, and decimals.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of probability concepts.</li> <li>• Familiarity with fractions, percentages, and decimals.</li> </ul>	<p>Probability skills, concepts, and applications are covered in enVision Mathematics Grade 7. Please see:</p> <p><b>Topic 7:</b> Lesson 7-4, pp. 387-392; 3-Act Math: Photo Finish, pp. 395-398</p>
<b>6.D.3.b</b>	Describe the theoretical and experimental probability of an event using a fraction, percentage, and decimal.		

		<ul style="list-style-type: none"> <li>• Difference between theoretical and experimental probability.</li> <li>• <b>Concepts:</b></li> <li>• Probability as a measure of likelihood.</li> <li>• The relationship between different forms of expressing probability.</li> </ul>	
<b>6.D.3.c</b>	Express the degree of likelihood (possible, impossible, certain, more likely, equally likely, or less likely) of simple events.	<ul style="list-style-type: none"> <li>• Skills: Understanding and expressing likelihood using appropriate terminology.</li> <li>• Knowledge: Familiarity with terms related to probability (possible, impossible, certain, more likely, equally likely, less likely).</li> <li>• Concepts: Basic understanding of events and their probabilities in real-life contexts.</li> </ul>	<p>Probability skills, concepts, and applications are covered in enVision Mathematics Grade 7.</p> <p>Please see:</p> <p><b>Topic 7:</b>  Lesson 7-1, pp. 369-374;  Let's Investigate: Take a Spin; Lesson 7-2, pp. 375-380; Lesson 7-3, pp. 381 - 386</p>
<b>6.D.3.d</b>	Compare and contrast theoretical and experimental probabilities.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Analyze and interpret data related to probability.</li> <li>• Compare theoretical and experimental probabilities.</li> <li>• Make predictions based on probability analysis.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the definitions of theoretical and experimental probability.</li> <li>• Recognize the differences between outcomes in theoretical scenarios versus experimental scenarios.</li> </ul>	<p>Probability skills, concepts, and applications are covered in enVision Mathematics Grade 7.</p> <p>Please see:</p> <p><b>Topic 7:</b>  Lesson 7-4, pp. 387-392;  3-Act Math: Photo Finish, pp. 395-398</p>

		<ul style="list-style-type: none"><li>• <b>Concepts:</b></li><li>• Theoretical probability as a calculated expectation.</li><li>• Experimental probability as an outcome based on trials or experiments.</li></ul>	
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# 7th Grade Math

Focus:

How can we...

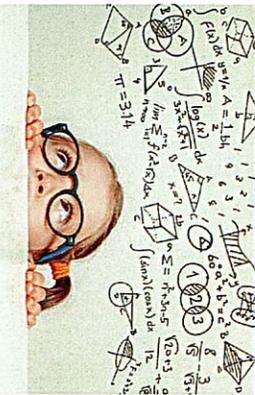
Quarter 1: Weeks 1 - 7

**Topic 1: Rational Number Operations**



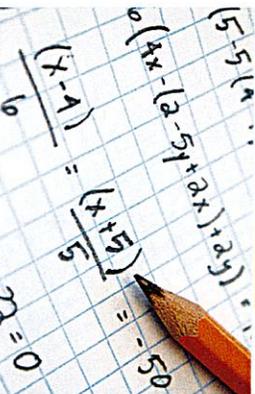
Quarter 1: Weeks 8-9

**Topic 2: Analyze and Use Proportional Relationships**



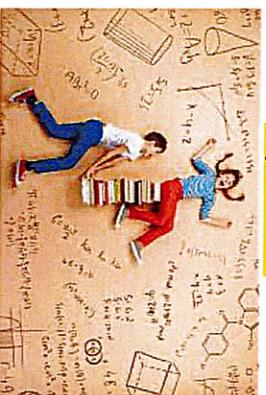
Quarter 2: Week 10

**Topic 3: Analyze and Solve Percent Problems**



Quarter 2: Week 12

**Topic 4: Generate equivalent Expressions**



THE FOCUS OF THE STORY

Reinforce their understanding of integers, absolute value, rational numbers, and decimals.

THE FOCUS OF THE STORY

Recognizing proportional relationships, identifying the constant of proportionality, representing proportional relationships with equations and understanding graphs of proportional relationships.

THE FOCUS OF THE STORY

Identifying percent, representing a proportional relationship with a percent equation, and understanding percent change.

THE FOCUS OF THE STORY

Analyzing equivalent expressions, simplifying expressions and understanding properties of operations.

LEARNING GOALS/STANDARDS

- 1 - 1 can relate integers, their opposites, and their absolute values.
- 2 - 1 can recognize rational numbers and write them in decimal form.

LEARNING GOALS/STANDARDS

- 1 - 1 can use ratio concepts and reasoning to solve multi-step problems.
- 2 - 1 can find unit rates with ratios of fractions and use them to solve

LEARNING GOALS/STANDARDS

- 1 - 1 can understand, find, and analyze percents of numbers.
- 2 - 1 can use proportions to solve percent problems.

LEARNING GOALS/STANDARDS

- 1 - 1 can write and evaluate algebraic expressions.
- 2 - 1 can write equivalent expressions for given expressions.

- 3 - 1 can add integers.
- 4 - 1 can subtract integers.
- 5 - 1 can add and subtract rational numbers.
- 6 - 1 can multiply integers.
- 7 - 1 can multiply rational numbers.
- 8 - 1 can divide integers.
- 9 - 1 can divide rational numbers.
- 10 - 1 can solve problems with rational numbers.

problems.

- 3 - 1 can test for equivalent ratios to decide whether quantities are in a proportional relationship.
- 4 - 1 can use the constant of proportionality in an equation to represent a proportional relationship.
- 5 - 1 can use a graph to determine whether two quantities are proportional.
- 6 - 1 can determine whether a relationship is proportional and use representations to solve problems.

- 3 - 1 can represent and solve percent problems using equations.
- 4 - 1 can solve problems involving percent change and percent error.
- 5 - 1 can solve problems involving percent markup and markdown.
- 6 - 1 can apply percent reasoning to solve simple interest problems.

- 3 - 1 can use properties of operations to simplify expressions.
- 4 - 1 can expand expressions using the Distributive Property.
- 5 - 1 can use common factors and the Distributive Property to factor expressions.
- 6 - 1 can add expressions that represent real-world problems.
- 7 - 1 can subtract expressions using properties of operations.
- 8 - 1 can use an equivalent expression to find new information.

# 7th Grade Math

**Focus:**

How can we...

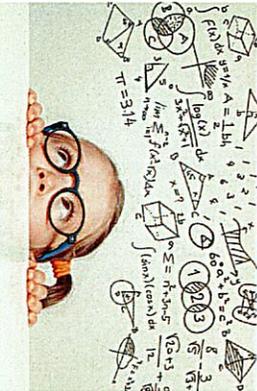
Quarter 2: Weeks 13 - 15

## Topic 5: Solve Problems Using Equations and Inequalities



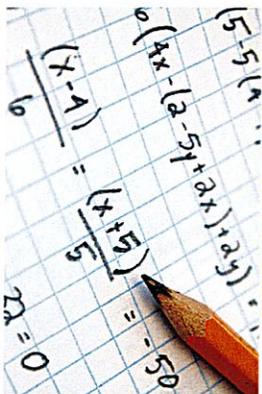
Quarter 3: Weeks 22 - 25

## Topic 6: Use Sampling to Draw Inferences about Populations



Quarter 3: Weeks 26 - 27

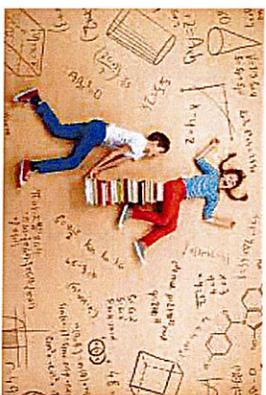
## Topic 7: Probability



Quarter 2: Week 11

Quarter 3: Weeks 16 - 21

## Topic 8: Solve Problems Involving Geometry



THE FOCUS OF THE STORY

Representing situations with models, Understanding opposite operations, solving

THE FOCUS OF THE STORY

Identifying populations and samples, making inferences, and comparing populations informally.

THE FOCUS OF THE STORY

Understanding probability, probability models, sample spaces, the difference between

THE FOCUS OF THE STORY

Identifying scale factors and the constant of proportionality, recognizing cross sections,

<p>equations and inequalities.</p>		<p>theoretical and experimental probability, and predicting outcomes.</p>	<p>finding actual lengths and areas, drawing geometric figures, recognizing side and angle relationships, and finding circumference, area of circles, surface area, and volume of prisms and composite figures.</p>
<p><b>LEARNING GOALS/STANDARDS</b></p> <p>1 - I can represent a problem with a two-step equation.  2 - I can solve a problem with a two-step equation.  3 - I can use the Distributive Property to solve equations.  4 - I can solve inequalities using addition or subtraction.  5 - I can solve inequalities using multiplication and division.  6 - I can write and solve two-step inequalities.  7 - I can solve inequalities that require multiple steps.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>1 - I can determine if a sample is representative of a population.  2 - I can make inferences about a population from a sample data set.  3 - I can draw comparative inferences about two populations using median and Interquartile range (IQR).  4 - I can compare populations using the mean, median, mode, range, interquartile range, and mean absolute deviation.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>1 - I can describe the likelihood that an event will occur.  2 - I can determine the theoretical probability of an event.  3 - I can determine the experimental probability of an event.  4 - I can use probability models to find probabilities of an event.  5 - I can find all possible outcomes of a compound event.  6 - I can find the probability of a compound event.  7 - I can simulate a compound event to approximate its probability.</p>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>1 - I can use the key in a scale drawing to find missing measurements.  2 - I can draw figures with given conditions.  3 - I can draw triangles when given information about their side lengths and angle measures.  4 - I can solve problems using angle relationships.  5 - I can solve problems involving radius, diameter, and circumference of circles.  6 - I can solve problems involving the area of a circle.  7 - I can determine what the cross section looks like when a 3D figure is sliced.  8 - I can find the area and surface area of 2-dimensional composite shapes and 3-dimensional prisms.  9 - I can use the area of the base of a 3-dimensional figure to find its volume.</p>

Grade 7 State Standards	Unwrap the Standard	Connection to instructional materials
<p><b>7.N.1</b></p> <p>Numeric Relationships: Students will demonstrate, represent, and show relationships among rational numbers within the base-ten number system.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Demonstrating understanding of rational numbers.</li> <li>• Representing relationships between rational numbers.</li> <li>• Performing operations with rational numbers in the base-ten number system.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the concept of rational numbers (e.g., fractions, decimals).</li> <li>• Familiarity with the base-ten number system and its structure.</li> <li>• <b>Concepts:</b></li> <li>• Relationships among numbers (greater than, less than, equal to).</li> <li>• The role of decimals and fractions as representations of rational numbers.</li> <li>• The use of real-world contexts to illustrate numeric relationships.</li> </ul>	

<b>7.N.2</b>	Operations: Students will compute with rational numbers accurately.	<ul style="list-style-type: none"><li>• <b>Skills:</b><ul style="list-style-type: none"><li>○ Perform addition, subtraction, multiplication, and division of rational numbers (fractions, decimals, and integers).</li><li>○ Simplify rational expressions.</li><li>○ Recognize and apply the properties of operations (associative, commutative, distributive).</li></ul></li><li>• <b>Knowledge:</b><ul style="list-style-type: none"><li>○ Understanding what rational numbers are and how to identify them.</li><li>○ Familiarity with the rules for operating with positive and negative numbers.</li><li>○ Knowledge of equivalent fractions and decimal representations of fractions.</li></ul></li><li>• <b>Concepts:</b><ul style="list-style-type: none"><li>○ The relationship between fractions, decimals, and integers.</li></ul></li><li>• The concept of absolute value and its implications when computing with negative numbers.</li></ul>	
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<p><b>7.N.2.a</b></p> <p>Add, subtract, multiply, and divide rational numbers (e.g., positive and negative fractions, decimals, and integers).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Adding rational numbers</li> <li>○ Subtracting rational numbers</li> <li>○ Multiplying rational numbers</li> <li>○ Dividing rational numbers</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>○ Understanding rational numbers, including positive and negative fractions, decimals, and integers</li> <li>○ Understanding the properties of operations (commutative, associative, and distributive)</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ Relationship between different forms of rational numbers (fractions, decimals, and integers)</li> <li>○ The concept of zero and its role in addition, subtraction, multiplication, and division</li> </ul> </li> </ul>	<p><b>Topic 1:</b>  Let's Investigate: Sum Chips; Lesson 1-3, pp. 21-26; Let's Investigate: Subtraction Action; Lesson 1-4, pp. 27-32; Lesson 1-5, pp. 33-38; Mid-Topic Checkpoint, p. 39; Lesson 1-6, pp. 41-46; Lesson 1-7, pp. 47-52; Lesson 1-8, pp. 53-58; Lesson 1-9, pp. 59-64; Topic Review, pp. 75-80</p>
<p><b>7.N.2.b</b></p> <p>Apply properties of operations (commutative, associative, distributive, identity, inverse, zero) as strategies for problem solving with rational numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>○ Identify and apply properties of operations (commutative, associative, distributive, identity, inverse, zero).</li> <li>○ Solve problems using rational numbers.</li> </ul> </li> <li>• <b>Knowledge:</b></li> </ul>	<p><b>Topic 1:</b>  Lesson 1-5, pp. 33-38; Lesson 1-7, pp. 47-52; Lesson 1-9, pp. 59-64; Lesson 1-10, pp. 65-70; 3-Act Math: Win Some, Lose Some, pp. 71-74; Topic Review, pp. 75-80</p>

		<ul style="list-style-type: none"> <li>○ Understand the definitions of each property.</li> <li>○ Recognize how properties can be used to simplify expressions and solve equations.</li> <li>● <b>Concepts:</b> <ul style="list-style-type: none"> <li>○ The relationship between operations and numbers.</li> <li>○ The role of properties in mathematical reasoning and problem-solving.</li> </ul> </li> </ul>	
<p><b>7.R.1</b></p>	<p>Proportional Relationships: Students will understand the concept of proportions, use language to describe the relationship between two quantities, and use proportions to solve authentic situations.</p>	<ul style="list-style-type: none"> <li>● <b>Skills:</b> Identifying and creating proportions, solving problems using proportions, communicating mathematical reasoning.</li> <li>● <b>Knowledge:</b> Understanding ratios and rates, recognizing equivalent ratios, understanding the concept of constant of proportionality.</li> <li>● <b>Concepts:</b> The relationship between two quantities, the application of proportions in</li> </ul>	

		<p>real-world contexts, and the difference between proportional and non-proportional relationships.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	
	<p>Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify and analyze ratios, test for proportional relationships, use tables effectively, solve real-world problems using proportions.</li> <li>• <b>Knowledge:</b> Understanding of ratios and proportions, concepts of equivalent ratios, and the ability to interpret data in tables.</li> <li>• <b>Concepts:</b> Proportional relationships, the significance of equivalent ratios, and application of proportions in various contexts.</li> </ul>	<p><b>Topic 2:</b> Let's Investigate: An Even Bigger Puzzle; Lesson 2-3, pp. 101-106; Lesson 2-4, pp. 107-112; Mid-Topic Checkpoint, pp. 113-114; Let's Investigate: Tracking Proportionality; Lesson 2-5, pp. 119-124 Topic Review, pp. 132-133</p>
<b>7.R.1.a</b>		<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and understand proportions.</li> <li>• Apply proportions to solve real-world problems.</li> </ul>	<p><b>Topic 2:</b> Let's Investigate: An Even Bigger Puzzle; Lesson 2-3, pp. 101-106; Lesson 2-4, pp. 107-112; Mid-Topic Checkpoint, pp. 113-114; 3-Act Math: Mixin' It Up, pp. 115-118; Let's Investigate: Tracking Proportionality; Lesson</p>
<b>7.R.1.b</b>	<p>Represent and solve authentic problems with proportions.</p>		

		<ul style="list-style-type: none"> <li>• Use equivalent ratios to represent relationships.</li> <li>• Knowledge:</li> <li>• Definition and properties of proportions.</li> <li>• Techniques for cross-multiplication.</li> <li>• Understanding of ratios and their applications.</li> <li>• Concepts:</li> <li>• Real-world scenarios that can be modeled with proportions.</li> <li>• The relationship between part and whole in various contexts.</li> <li>•</li> </ul>	<p>2-5, pp. 119-124; Topic Assessments, p. 135</p> <p><b>Topic 3:</b> Lesson 3-2, pp. 149-154; Mid-Topic Checkpoint, pp. 161-162</p>
<b>Z.R.1.c</b>	Use proportional relationships to solve authentic percent problems (e.g., percent change, sales tax, mark-up, discount, tip).	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Calculate percent change.</li> <li>• Determine sales tax.</li> <li>• Compute mark-up and discount.</li> <li>• Calculate tips based on total amounts.</li> <li>• <b>Knowledge:</b></li> </ul>	<p><b>Topic 2:</b> Lesson 2-6, pp. 125-130</p> <p><b>Topic 3:</b> Lesson 3-2, pp. 149-154; Lesson 3-3, pp. 155-160; Let's Investigate: Solving for Screen Time; Lesson 3-4, pp. 163-168; 3-Act Math: The Smart Shopper, pp. 169-172; Lesson 3-5, pp. 173-178; Lesson 3-6, pp. 179-184; Topic Review, pp. 187-188</p>

		<ul style="list-style-type: none"> <li>• Understanding of percentages as a part of a whole.</li> <li>• Familiarity with proportional relationships.</li> <li>• Recognition of real-life situations where percentages are applicable.</li> <li>• <b>Concepts:</b></li> <li>• Percent as a ratio (e.g., <math>(\frac{\text{part}}{\text{whole}}) \times 100</math>)).</li> <li>• The relationship between fractions, decimals, and percentages.</li> <li>• Application of percentages in everyday life (e.g., shopping, dining).</li> <li>•</li> </ul>	
<b>7.R.1.d</b>	Solve authentic problems involving scale drawings.	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Understanding and using ratios and proportions.</li> <li>• Calculating dimensions and areas of scale drawings.</li> </ul>	<p><b>Topic 8:</b> Lesson 8-1, pp. 431-436; Mid-Topic Checkpoint, p. 463; Topic Review, p. 494</p>

		<ul style="list-style-type: none"> <li>• Interpreting scale in real-world contexts.</li> <li>• <b>Knowledge:</b></li> <li>• Concepts of scale and its application in various fields (e.g., architecture, maps).</li> <li>• Relationship between real-world measurements and scaled representations.</li> <li>• <b>Concepts:</b></li> <li>• Scale factor, enlargement, and reduction.</li> <li>• Authentic problem-solving strategies.</li> <li>•</li> </ul>	
<b>7.A.1</b>	<p>Algebraic Processes: Students will apply the operational properties when evaluating expressions, and solving equations and inequalities.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Evaluating algebraic expressions.</li> <li>• Solving equations.</li> <li>• Solving Inequalities.</li> <li>• <b>Knowledge:</b></li> </ul>	

		<ul style="list-style-type: none"> <li>• Understanding operational properties (commutative, associative, distributive).</li> <li>• Recognizing variables and constants.</li> <li>• Understanding the difference between equations and inequalities.</li> <li>• <b>Concepts:</b></li> <li>• The role of operations in expressions, equations, and inequalities.</li> <li>• The importance of maintaining balance in equations when solving.</li> <li>• The concept of solution sets in inequalities.</li> <li>•</li> </ul>	
7.A.1.a	<p>Use factoring and properties of operations to create equivalent algebraic expressions (e.g., <math>2x + 6 = 2(x + 3)</math>).</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Factoring algebraic expressions.</li> </ul>	<p><b>Topic 4:</b>  Lesson 4-2, pp. 203-208; Let's Investigate: Name Game; Lesson 4-3, pp. 209-214; Let's Investigate: Expandable; Lesson 4-4, pp. 215-220; Lesson 4-5, pp. 221-226; Mid-Topic Checkpoint, pp. 227-228; 3-Act Math: I've Got You Covered, pp. 229-232;</p>

		<ul style="list-style-type: none"> <li>● Applying properties of operations (associative, distributive, and commutative).</li> <li>● <b>Knowledge:</b></li> <li>● Understanding equivalent expressions.</li> <li>● Recognizing how to manipulate expressions through factoring.</li> <li>● <b>Concepts:</b></li> <li>● The distributive property as a method for factoring.</li> <li>● The relationship between expressions and their equivalent forms.</li> <li>●</li> </ul>	Lesson 4-8, pp.
<b>7.A.1.b</b>	Given the value of the variable(s), evaluate algebraic expressions, which may include absolute value.	<ul style="list-style-type: none"> <li>● <b>Skills:</b> Evaluating algebraic expressions, understanding absolute value.</li> <li>● <b>Knowledge:</b> Recognizing variables and constants, applying order of operations, understanding the concept of absolute value.</li> </ul>	<b>Topic 4:</b> Lesson 4-1, pp. 197-202; Topic Review, p. 252

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Algebraic expressions, evaluation of expressions, the significance of absolute value in mathematics.</li> </ul>	
	<p>Solve one- and two-step equations involving rational numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and isolate variables in equations.</li> <li>• Apply inverse operations to solve equations.</li> <li>• <b>Knowledge:</b></li> <li>• Understand rational numbers (fractions, decimals).</li> <li>• Recognize the structure of one- and two-step equations.</li> <li>• <b>Concepts:</b></li> <li>• The equality principle (what you do to one side of an equation, you must do to the other).</li> <li>• The relationship between addition, subtraction, multiplication, and division in solving equations.</li> <li>•</li> </ul>	<p><b>Topic 5:</b> Let's Investigate: The Real Deal; Lesson 5-1, pp. 263-268; Lesson 5-2, pp. 269-274; Mid-Topic Checkpoint, p. 281; Topic Review, pp. 311-312</p>
<b>7.A.1.c</b>			

	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Apply the distributive property to simplify expressions.</li> <li>• Combine like terms to solve equations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of the distributive property.</li> <li>• Identification of like terms in expressions.</li> <li>• <b>Concepts:</b></li> <li>• Equations as a balance that can be manipulated.</li> <li>• The role of operations in solving equations.</li> <li>•</li> </ul>	<p><b>Topic 5:</b> Lesson 5-3, pp. 275-280; Mid-Topic Checkpoint, p. 281; Topic Review, pp. 311-312</p>
<p><b>7.A.1.d</b> Solve equations using the distributive property and combining like terms.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Identify and solve one-step inequalities.</li> <li>• Identify and solve two-step inequalities.</li> <li>• Represent solutions graphically on a number line.</li> <li>• <b>Knowledge:</b></li> </ul>	<p><b>Topic 5:</b> Lesson 5-4, pp. 283-286; Lesson 5-5, pp. 289-294; Lesson 5-6, pp. 299-304; Lesson 5-7, pp. 305-310; Topic Review, pp. 313-314</p>
<p><b>7.A.1.e</b> Solve one- and two-step inequalities involving integers and represent solutions on a number line.</p>		

		<ul style="list-style-type: none"> <li>• Understanding of inequality symbols (<math>&gt;</math>, <math>&lt;</math>, <math>\geq</math>, <math>\leq</math>).</li> <li>• Familiarity with integers and their properties.</li> <li>• Comprehension of the relationship between inequalities and their solutions.</li> <li>• <b>Concepts:</b></li> <li>• The concept of a solution set for an inequality.</li> <li>• The concept of graphing solutions on a number line.</li> </ul>	
<b>7.A.2</b>	<p>Applications: Students will solve authentic problems with algebraic expressions, equations, and inequalities.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Solving algebraic expressions, equations, and inequalities</li> <li>• Applying mathematical concepts to real-world situations</li> <li>• Critical thinking and problem-solving</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of algebraic terminology (expressions, equations, inequalities)</li> <li>• Familiarity with operations on algebraic expressions</li> </ul>	

		<ul style="list-style-type: none"> <li>• Concepts of equality and inequality</li> <li>• <b>Concepts:</b></li> <li>• The relationship between algebra and real-world problems</li> <li>• Strategies for translating word problems into algebraic form</li> <li>• Methods for checking the validity of solutions</li> <li>•</li> </ul>	
<p><b>7.A.2.a</b></p>	<p>Write one- and two-step equations involving rational numbers from words, tables, and authentic situations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Writing one-step and two-step equations.</li> <li>• Identifying rational numbers in different contexts.</li> <li>• Translating words and tables into mathematical expressions.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding what rational numbers are (fractions, decimals).</li> </ul>	<p><b>Topic 5:</b>  Let's Investigate: The Real Deal; Lesson 5-1, pp. 263-268; Lesson 5-2, pp. 269-274; Mid-Topic Performance Task, p. 282; Topic Review, pp. 311 - 312</p>

		<ul style="list-style-type: none"> <li>• Familiarity with the structure of equations.</li> <li>• Comprehension of problem-solving strategies.</li> <li>• <b>Concepts:</b></li> <li>• The relationship between words and mathematical symbols.</li> <li>• The use of equations to represent real-life situations.</li> <li>• The significance of solving equations to find unknown values.</li> <li>•</li> </ul>	
<p><b>7.A.2.b</b></p>	<p>Write one- and two-step inequalities to represent authentic situations involving integers.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Writing one-step and two-step inequalities.</li> <li>• <b>Knowledge:</b> Understanding integers and authentic situations that can be modeled with inequalities.</li> <li>• <b>Concepts:</b> The relationship between inequalities and real-world scenarios, the</li> </ul>	<p><b>Topic 5:</b>  Lesson 5-4, pp. 283-286;  Lesson 5-5, pp. 289-294; 3-Act  Math: Digital Downloads, pp.  295-298; Lesson 5-6, pp.  299-304; Lesson 5-7, pp.  305-310, Topic Review, pp.  313-314</p>

		<p>meaning of inequality symbols  <math>(&gt;, &lt;, \geq, \leq)</math>.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	
<p><b>7.G.1</b></p>	<p>Attributes: Students will identify angle relationships and apply properties to determine angle measures.</p>	<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Identify different types of angles (e.g., complementary, supplementary, vertical, and adjacent angles).</li> <li>• Apply properties of angles to solve problems.</li> <li>• Calculate unknown angle measures using relationships.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understand definitions and properties of angle relationships.</li> <li>• Recognize and interpret angle diagrams.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The relationship between angles in various configurations.</li> <li>• The significance of angle measures in geometry.</li> </ul>	

		<p><b>Skills:</b></p> <p>Identify and apply properties of adjacent, complementary, supplementary, linear pair, and vertical angles.</p> <p><b>Knowledge:</b></p> <p>Understand definitions and relationships between different types of angles.</p> <p><b>Concepts:</b></p> <p>Use angle properties to find missing angle measures.</p>	<p><b>Topic 8:</b></p> <p>Let's Investigate: What's the Angle?: Lesson 8-4, pp. 451-456; Mid-Topic Checkpoint, p. 463; Topic Review, p. 495</p>
<b>7.G.1.a</b>	Apply properties of adjacent, complementary, supplementary, linear pair, and vertical angles to find missing angle measures.		
<b>7.G.2</b>	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Plotting points on the coordinate plane</li> <li>• Identifying coordinates of points</li> <li>• Understanding the x-axis and y-axis</li> <li>• Determining distance between points</li> </ul>	

		<ul style="list-style-type: none"> <li>• Analyzing relationships between points (e.g., collinearity)</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Coordinate plane structure (quadrants, axes)</li> <li>• Positive and negative coordinates</li> <li>• The concept of ordered pairs</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• Location: Identifying where points lie in relation to each other</li> <li>• Orientation: Understanding the direction of points and shapes on the plane</li> <li>• Relationships: Exploring how points relate to one another geometrically</li> </ul>	
<b>7.G.2.a</b>	Draw polygons in the coordinate plane given coordinates for the vertices.	<b>Skills:</b>	This standard is addressed in the enVision Mathematics Grade 6. Please see:

		<ul style="list-style-type: none"> <li>• Ability to plot points accurately on a coordinate plane, connect points to form polygons.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding of coordinates (x, y), properties of polygons (sides, angles), and how to identify vertices.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The relationship between points and the shape they create, the concept of a coordinate grid.</li> </ul>	Lesson 2-3, pp. 105-110
<b>7.G.2.b</b>	Calculate vertical and horizontal distances in the coordinate plane to find perimeter and area of rectangles.	<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Calculating distances on a coordinate plane.</li> <li>• Finding the perimeter of rectangles.</li> <li>• Finding the area of rectangles.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding of coordinate plane (x and y axes).</li> <li>• Knowledge of the formula for perimeter (<math>P = 2(l + w)</math>) and area (<math>A = l \times w</math>) of rectangles.</li> </ul>	<p>This standard is addressed in the enVision Mathematics Grade 6. Please see:</p> <p><b>Topic 2:</b> Lesson 2-5, pp. 99-104</p>

		<p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The relationship between coordinates and distances.</li> <li>• How to interpret coordinates as vertices of rectangles.</li> </ul>	
	<p>Measurement: Students will identify geometric attributes that create two- and three-dimensional shapes in order to perform measurements and apply formulas to find area and volume.</p>	<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Identifying geometric attributes; performing measurements; applying formulas.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding properties of two- and three-dimensional shapes; knowledge of area and volume formulas.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• Geometric attributes (sides, angles, faces); the difference between two-dimensional and three-dimensional shapes.</li> </ul>	
<p><b>7.G.3</b></p>			

<p><b>7.G.3.a</b></p>	<p>Solve authentic problems involving perimeter and area of composite shapes made from triangles and quadrilaterals.</p>	<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Calculate the perimeter of triangles and quadrilaterals.</li> <li>• Calculate the area of triangles and quadrilaterals.</li> <li>• Break down composite shapes into simpler components (triangles and quadrilaterals).</li> <li>• Analyze and solve real-world problems involving composite shapes.</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding of the formulas for perimeter and area of triangles and quadrilaterals.</li> <li>• Familiarity with composite shapes and how to identify their components.</li> <li>• Knowledge of units of measurement for area and perimeter.</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The relationship between the dimensions of shapes and their perimeter and area.</li> </ul>
		<p>This standard is addressed in the enVision Mathematics Grade 6. Please see:</p> <p><b>Topic 7:</b>  Lesson 7-1, pp. 401-406;  Lesson 7-2, pp. 407-412;  Lesson 7-3, pp. 413-418;  Lesson 7-4, pp. 419-424</p> <p>This standard is reviewed in enVision Mathematics Grade 7. Please see:</p> <p><b>Topic 8:</b>  Lesson 8-8, pp. 481-486</p>

		<ul style="list-style-type: none"> <li>• Application of mathematical concepts to solve real-world problems.</li> <li>• Strategies for decomposing complex shapes into simpler parts for easier calculation.</li> </ul>	
<p><b>7.G.3.b</b></p>	<p>Determine surface area and volume of composite rectangular and triangular prisms.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate the surface area of composite rectangular and triangular prisms.</li> <li>• Calculate the volume of composite rectangular and triangular prisms.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the formulas for the surface area and volume of rectangular and triangular prisms.</li> <li>• Recognize composite shapes and how to separate them into individual prisms.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• Surface area as the total area of all surfaces of a 3D shape.</li> </ul> </li> </ul>	<p><b>Topic 8:</b>  Lesson 8-8, pp. 481-486  Lesson 8-9, pp. 487-492; Topic Review, pp. 497-498</p>

		<ul style="list-style-type: none"> <li>Volume as the amount of space occupied by a 3D shape.</li> </ul>	
<b>7.G.3.c</b>	Determine the area and circumference of circles both on and off the coordinate plane using 3.14 for the value of Pi.		<p><b>Topic 8:</b> Lesson 8-5, pp. 457-462; Let's Investigate: Target the Area; Lesson 8-6, pp. 465-470; 3-Act Math: Whole Lotta Dough, pp. 471-474; Topic Review, p. 496</p>
<b>7.D.1</b>	Data Collection and Statistical Methods: Students will formulate statistical investigative questions, collect data, and organize data.		
<b>7.D.1.a</b>	Create an investigative question and collect data.		<p><b>Topic 6:</b> STEM Project, p. 318; Pick a Project, pp. 321-322; Lesson 6-1, pp. 323-330; Mid-Topic Checkpoint, pp. 339-340; 3-Act Math: Raising Money, pp. 353-356</p>
<b>7.D.1.b</b>	Generate conclusions about a population based on a random sample.		<p><b>Topic 6:</b> Lesson 6-1, pp. 323-330; Let's Investigate: Good Samples Aren't Simple; Lesson 6-2, pp. 331-338; Mid-Topic Checkpoint, pp. 339-340; 3-Act Math: Raising Money, pp. 353-356; Topic Review, pp. 357-359</p>

<p><b>7.D.1.c</b></p>	<p>Identify and critique biases in various data representations.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Analyze data representations (graphs, charts, tables).</li> <li>• Identify biases or misleading information.</li> <li>• Critique the effectiveness of data representations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of different data representation types.</li> <li>• Familiarity with bias and how it can manifest in data.</li> <li>• Awareness of the importance of data accuracy.</li> <li>• <b>Concepts:</b></li> <li>• The role of bias in data interpretation.</li> <li>• The impact of visual presentation on data perception.</li> <li>• The relationship between data representation and public perception.</li> </ul>	<p><b>Topic 6:</b>  Lesson 6-1, pp. 323-330; Let's Investigate: Good Samples Aren't Simple; Lesson 6-2, pp. 331-338; Mid-Topic Checkpoint, p. 339; 3-Act Math: Raising Money, pp. 353-356; Topic Review, pp. 357-359</p>
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		<p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Collecting data</li> <li>• Organizing data using appropriate formats (e.g., tables, graphs)</li> <li>• Analyzing data to identify trends or patterns</li> <li>• Interpreting data to draw conclusions</li> <li>• <b>Knowledge:</b></li> <li>• Understanding different types of data (qualitative vs. quantitative)</li> <li>• Familiarity with data representation tools (graphs, charts)</li> <li>• Knowledge of statistical measures (mean, median, mode)</li> <li>• <b>Concepts:</b></li> <li>• The relationship between data and real-world applications</li> <li>• The importance of data accuracy and integrity</li> <li>• How to make inferences based on data analysis</li> </ul>	
<b>7.D.2</b>	<p>Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.</p>		
	<p>No additional indicator(s) at this level.</p>		
<b>7.D.3</b>	<p>Probability: Students will interpret and apply concepts of probability.</p>	<ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Interpreting probability in various contexts.</li> </ul>	

		<ul style="list-style-type: none"> <li>• Applying probability concepts to real-world situations.</li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding basic probability terms (e.g., outcome, event, sample space).</li> <li>• Knowing how to calculate probability using formulas.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The difference between theoretical and experimental probability.</li> <li>• Understanding independent and dependent events.</li> </ul> </li> </ul>	
<b>7.D.3.a</b>	Find theoretical and experimental probabilities for compound independent and dependent events.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate theoretical probabilities.</li> <li>• Calculate experimental probabilities.</li> <li>• Distinguish between independent and dependent events.</li> </ul> </li> </ul>	<p><b>Topic 7:</b>  Let's Investigate: Take a Spin; Lesson 7-2, pp. 375-380; Lesson 7-3, pp. 381-386; Lesson 7-5, pp. 399-404; Let's Investigate: Roll With It; Lesson 7-6, pp. 405-41; Lesson 7-7, pp. 411-416; Topic Review, pp. 421-422</p>

		<ul style="list-style-type: none"> <li>• Analyze compound events.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the definitions of probability, independent events, and dependent events.</li> <li>• Recognize how to set up experiments to gather data.</li> <li>• <b>Concepts:</b></li> <li>• Theoretical probability vs. experimental probability.</li> <li>• The relationship between events (independent vs. dependent).</li> <li>• The concept of compound events (combining two or more events).</li> <li>•</li> </ul>	
<b>7.D.3.b</b>	Identify complementary events and calculate their probabilities.	<ul style="list-style-type: none"> <li>• <b>Skills:</b> Identify complementary events, calculate probabilities of events.</li> <li>• <b>Knowledge:</b> Understanding of probability concepts and complementary events.</li> </ul>	<p>Teachers have the opportunity to address this standard, please see:</p> <p><b>Topic 7:</b> Lesson 7-4, pp. 389</p>

		<ul style="list-style-type: none"><li>• <b>Concepts:</b> The relationship between an event and its complement, the sum of probabilities of complementary events equals 1.</li><li>•</li></ul>	
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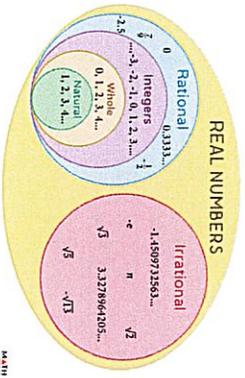
# 8th Grade Math

Focus:

How can we...

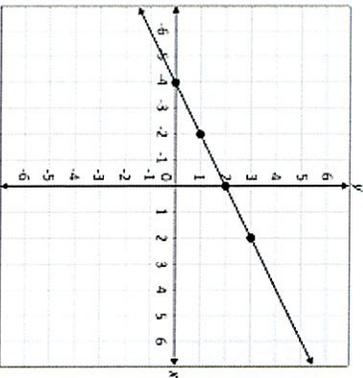
Quarter 1

**Topic 1 - Real Number**



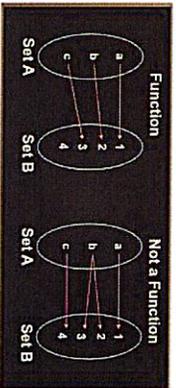
3 Weeks / Quarter 3

**Topic 2 - Analyze and Solve Linear Equations**



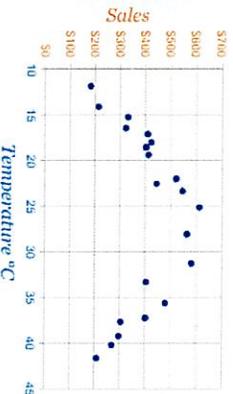
3 Weeks / Quarter 4

**Topic 3 - Use Functions to Model Relationships**



3 Weeks / Quarter 4

**Topic 4 - Investigate Bivariate Data**



THE FOCUS OF THE STORY

Work with radicals and integer exponents. Know that there are numbers that are not rational, and approximate them by rational numbers.

THE FOCUS OF THE STORY

Understand the connections between proportional relationships, lines, and linear equations. Analyze and solve simultaneous linear equations.

THE FOCUS OF THE STORY

Define, evaluate, and compare functions. Use functions to model relationships between quantities.

THE FOCUS OF THE STORY

Investigate patterns of Association in bivariate data.

<p><b>LEARNING GOALS/STANDARDS</b></p> <p>The learner will be able to...</p> <ul style="list-style-type: none"> <li>Write rational number does decimals</li> <li>Understand Irrational numbers</li> <li>Compare and Order Real Numbers</li> <li>Evaluate square roots and cube roots</li> <li>Solve equations using square roots and cube roots</li> <li>Use properties of integer exponents</li> <li>More properties of exponents</li> <li>Use power of 10 to estimate quantities</li> <li>Understand scientific notation</li> <li>Operations with numbers in scientific notation</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>The learner will be able to...</p> <ul style="list-style-type: none"> <li>Combine like terms to solve equations</li> <li>Solve equations with variables on both sides</li> <li>Solve multi-step equations</li> <li>Solve equations with no solutions or infinite many solutions</li> <li>Compare proportional relationships</li> <li>Connect proportional relationships and slope</li> <li>Analyze linear equations and slope intercept form</li> <li>Understand the y-intercept of a line</li> <li>Analyze equations and slope intercept form including the y-intercept</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>The learner will be able to...</p> <ul style="list-style-type: none"> <li>Understand relations and functions</li> <li>Connect representations of functions</li> <li>Compare linear and nonlinear functions</li> <li>Construct functions to model linear relationships</li> <li>Intervals of increase and decrease</li> <li>Sketch functions from verbal descriptions</li> </ul>	<p><b>LEARNING GOALS/STANDARDS</b></p> <p>The learner will be able to...</p> <ul style="list-style-type: none"> <li>Construct and interpret Scatter Plots</li> <li>Analyze linear associations</li> <li>Use linear models to make predictions</li> <li>Interpret two-way frequency tables</li> <li>Interpret two-way relative frequency tables</li> </ul>

# 8th Grade Math

Focus:

How can we...

<p><b>3 Weeks / Quarter 2</b></p> <p><b>Topic 5 - Analyze and Solve Systems of Linear Equations</b></p>	<p><b>3 Weeks / Quarter 3</b></p> <p><b>Topic 6 - Congruence and Similarity</b></p>	<p><b>3 Weeks / Quarter 4</b></p> <p><b>Topic 7 - Understand and Apply the Pythagorean Theorem</b></p>	<p><b>3 Weeks / Quarter 4</b></p> <p><b>Topic 8 - Solve Problems Involving Surface Area and Volume</b></p> <p><b>What Is Volume?</b></p> <p>VOLUME IS THE THREE-DIMENSIONAL SPACE OCCUPIED BY A SOLID, LIQUID, OR GAS</p>
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THE FOCUS OF THE STORY	THE FOCUS OF THE STORY	THE FOCUS OF THE STORY	THE FOCUS OF THE STORY
<p>Analyze and solve linear equations and pairs of simultaneous linear equations.</p>	<p>Understand congruence in similarity using physical models, transparencies, or geometry software.</p>	<p>Understand and apply the Pythagorean theorem.</p>	<p>Solve real-world and mathematical problems involving volume of cylinders, cones, and solve real world and mathematical problems involving volume of cylinders, cones and spheres.</p>
<p><b>LEARNING GOALS/STANDARDS</b>  The learner will be able to...  Estimate solutions by inspection  Solve systems by graphing  Solve systems by substitution  Solve systems by elimination</p>	<p><b>LEARNING GOALS/STANDARDS</b>  The learner will be able to...  Analyze translations  Analyze reflections  Analyze rotations  Compose transformations  Understand congruent figures  Describe dilations  Understand similar figures  Understand angles, lines, and transversals  Interior and exterior angles of triangles  angle-angle triangle similarity</p>	<p><b>LEARNING GOALS/STANDARDS</b>  The learner will be able to...  Understand Pythagorean theorem  Understand Converse of Pythagorean theorem  Apply Pythagorean theorem to solve problems  Find distance in a coordinate plane</p>	<p><b>LEARNING GOALS/STANDARDS</b>  The learner will be able to...  Find surface area of three Dimensional figures  Find volume of cylinders  Find volume of cones  Find volume of spheres</p>

Grade 8 State Standards	Unwrap the Standard	Connection to instructional materials
<p><b>8.N.1</b></p> <p>Numeric Relationships: Students will demonstrate, represent, and show relationships among real numbers within the base-ten number system.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Demonstrating an understanding of real numbers.</li> <li>• Representing numbers in various forms (e.g., decimals, fractions).</li> <li>• Showing relationships among numbers using mathematical operations.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding the base-ten number system.</li> <li>• Recognizing properties of operations (e.g., commutative, associative).</li> <li>• Understanding how to compare and order real numbers.</li> <li>• <b>Concepts:</b></li> <li>• Numeric relationships (e.g., addition, subtraction, multiplication, division).</li> <li>• The significance of place value in the base-ten system.</li> <li>• The concept of equivalent forms of numbers.</li> </ul>	

<p><b>8.N.1.a</b></p>	<p>Determine subsets of numbers as natural, whole, integer, rational, irrational, or real based on the definitions of these sets of numbers.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Identify and categorize different types of numbers.</li> <li>• <b>Knowledge:</b> Understand definitions of natural, whole, integer, rational, irrational, and real numbers.</li> <li>• <b>Concepts:</b> Recognize how these sets of numbers relate to each other and where they fit on the number line.</li> </ul>	<p><b>Topic 1:</b>  Lesson 1-1, pp. 9-14;  Let's Investigate:  Distinctive Decimals;  Lesson 1-2, pp. 15-20;  Let's Investigate: How  Many More from 0 to  4?; Lesson 1-3, pp.  21-26; Mid-Topic  Checkpoint, p. 39;  Topic Review, p. 76</p>
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<p><b>8.N.1.b</b></p> <p>Represent numbers with positive and negative exponents and in scientific notation.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Understanding and applying positive and negative exponents; converting numbers into scientific notation; performing operations with numbers in scientific notation.</li> <li>• <b>Knowledge:</b> The rules of exponents; the concept of base and exponent; the structure of scientific notation.</li> <li>• <b>Concepts:</b> The significance of large and small numbers; the relationship between exponents and multiplication/division; the application of scientific notation in real-world contexts.</li> </ul>	<p><b>Topic 1:</b>  Lesson 1-6, pp. 41-46;  Lesson 1-7, pp. 47-52;  Let's Investigate:  Massive Moments of  Magnitude: Lesson  1-8, pp. 53-58; Lesson  1-9, pp. 59-6; 3-Act  Math: Hard-Working  Organs, pp. 65-68;  Topic Review, p. 80</p>
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8.N.1.c	Describe the difference between a rational and irrational number.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Identify and classify numbers as rational or irrational.</li> <li>• <b>Knowledge:</b> Understand the definitions of rational and irrational numbers.</li> <li>• <b>Concepts:</b> Recognize examples of both types of numbers and their properties.</li> </ul>	<p><b>Topic 1:</b>  Lesson 1-1, pp. 9-14; Let's Investigate: Distinctive Decimals; Lesson 1-2, pp. 15-20; Mid-Topic Checkpoint, p. 39; Topic Review, p. 76</p>
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	<p>Approximate, compare, and order real numbers, both rational and irrational, and locate them on the number line.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Approximation of real numbers.</li> <li>• Comparison of rational and irrational numbers.</li> <li>• Ordering of real numbers.</li> <li>• Locating numbers on a number line.</li> <li>• <b>Knowledge:</b></li> <li>• Understanding of rational numbers (fractions, integers, and decimals).</li> <li>• Understanding of irrational numbers (e.g., <math>\sqrt{2}</math>, <math>\pi</math>).</li> <li>• Number line representation.</li> <li>• <b>Concepts:</b></li> <li>• The difference between rational and irrational numbers.</li> <li>• The density of rational numbers on the number line.</li> <li>• The concept of approximation and its significance in real-world contexts.</li> </ul>	<p><b>Topic 1:</b> Let's Investigate: How Many More from 0 to 4?; Lesson 1-3, pp. 21-26; Mid-Topic Performance Task, p. 40; 3-Act Math: Hard-Working Organs, pp. 65-68; Topic Review, p. 77</p>
<p><b>8.N.1.d</b></p>	<p>Operations: Students will compute with exponents and roots.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Compute with exponents (e.g., <math>(a^n)</math>)</li> </ul>	
<p><b>8.N.2</b></p>			

		<ul style="list-style-type: none"> <li>• Compute with roots (e.g., <math>\sqrt[n]{a}</math>)</li> <li>• Apply properties of exponents (e.g., product, quotient, power of a power)</li> </ul> <p><b>Knowledge:</b></p> <ul style="list-style-type: none"> <li>• Understanding the definition of exponents and roots</li> <li>• Recognizing perfect squares and cubes</li> <li>• Understanding how to simplify expressions involving exponents and roots</li> </ul> <p><b>Concepts:</b></p> <ul style="list-style-type: none"> <li>• The relationship between exponents and roots</li> <li>• The laws of exponents</li> <li>• Real-world applications of exponents and roots in various contexts</li> </ul>	
<p><b>8.N.2.a</b></p>	<p>Evaluate the square roots of perfect squares less than or equal to 400 and cube roots of perfect cubes less than or equal to 125.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Evaluating square roots of numbers.</li> <li>• Evaluating cube roots of numbers.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding perfect squares and perfect cubes.</li> </ul> </li> </ul> </li> </ul>	<p><b>Topic 1:</b> Lesson 1-4, pp. 27-32; Lesson 1-5, pp. 33-38; Mid Topic Checkpoint, pp. 39-40; Topic Review, pp. 77-78</p>

		<ul style="list-style-type: none"> <li>• Knowledge of the properties of square roots and cube roots.</li> <li>• <b>Concepts:</b></li> <li>• Relationship between squares and square roots.</li> <li>• Relationship between cubes and cube roots.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Understanding integer exponents and their properties.</li> <li>• Simplifying expressions involving square roots.</li> <li>• Simplifying expressions involving cube roots.</li> <li>• Recognizing the relationship between exponents and fractions.</li> <li>•</li> </ul>	<p><b>Topic 1:</b> Lesson 1-4, pp. 27-32; Lesson 1-5, pp. 33-38; Mid Topic Performance Task, p. 40; Lesson 1-6, pp. 41-46; Lessons 1-7, pp. 47-52; Let's Investigate: Massive Moments of Magnitude: Lesson 1-8, pp. 53-58; Lesson 1-9, pp. 59-64; Topic Review, pp. 78-79</p>
<b>8.N.2.b</b>	Simplify numerical expressions involving integer exponents, square roots, and cube roots (e.g., $4^2$ is the same as $1/16$ ).		
<b>8.N.2.c</b>	Evaluate numerical expressions involving absolute value.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Skills: Understanding absolute value, evaluating numerical expressions, applying order of operations.</li> </ul>	<p>Teachers have the opportunity to address this standard, please see: <b>Topic 1:</b></p>

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> Definition of absolute value, properties of absolute value, how to simplify expressions.</li> <li>• <b>Concepts:</b> Numerical expressions, the significance of absolute value in real-world contexts.</li> </ul>	<p>3-Act Math: Hard-Working Organs, pp. 65-68;</p>
<p><b>8.N.2.d</b></p>	<p>Multiply and divide numbers using scientific notation.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Multiply numbers in scientific notation.</li> <li>• Divide numbers in scientific notation.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the rules for multiplying and dividing exponents.</li> <li>• Recognize the format of scientific notation (e.g.,</li> <li>• <math>ax10^n</math></li> <li>• <math>ax10</math></li> <li>• <math>n</math></li> <li>• where ).</li> <li>• <b>Concepts:</b></li> </ul>	<p><b>Topic 1:</b> Lesson 1-10, pp. 69-74; Topic Review, p. 80</p>

		<ul style="list-style-type: none"> <li>• The significance of scientific notation in representing large and small numbers.</li> <li>• The relationship between powers of ten and the operations performed.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Evaluating expressions, solving equations, applying operational properties (commutative, associative, distributive).</li> <li>• <b>Knowledge:</b> Understanding of algebraic expressions, the concept of equations, and the properties of operations.</li> <li>• <b>Concepts:</b> The role of operational properties in simplifying and solving algebraic expressions and equations.</li> </ul>	
8.A.1	Algebraic Processes: Students will apply the operational properties when evaluating expressions and solving equations.		
8.A.1.a	Describe single variable equations as having one solution, no solution, or infinitely many solutions.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Identify types of solutions for single variable equations.</li> </ul>	<p><b>Topic 2:</b> Lesson 2-4, pp. 107-114; Mid-Topic Checkpoint, p. 115; Topic Review, p. 153</p>

		<ul style="list-style-type: none"> <li>• Analyze and solve single variable equations.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the definitions of one solution, no solution, and infinitely many solutions.</li> <li>• Recognize how different forms of equations can lead to different types of solutions.</li> <li>• <b>Concepts:</b></li> <li>• Concept of equality and what it means in the context of equations.</li> <li>• Relationship between the coefficients and constants in equations.</li> </ul>	
<b>8.A.1.b</b>	<p>Solve multi-step equations involving rational numbers with the same variable appearing on both sides of the equation.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Solving multi-step equations, working with rational numbers, isolating variables, applying inverse operations.</li> <li>• <b>Knowledge:</b> Understanding of equations, properties of equality, and how to manipulate equations to isolate the variable.</li> </ul>	<p><b>Topic 2:</b>  Let's Investigate: It All Balances Out; Lesson 2-2, pp. 95-100; Lesson 2-3, pp. 101-106; Mid-Topic Checkpoint, pp. 115-116; Topic Review, pp. 152-153</p>

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> Rational numbers, variable representation, equality in equations.</li> </ul>	
8.A.1.c	<p>Solve equations of the form <math>x^2 = k</math> (<math>k \leq 400</math>) and <math>x^3 = k</math> (<math>k \leq 125</math>), where <math>k</math> is a positive rational number, using square root and cube root symbols.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Solving equations, understanding square roots and cube roots.</li> <li>• <b>Knowledge:</b> Properties of exponents and roots, operations with rational numbers.</li> <li>• <b>Concepts:</b> The relationship between squaring, cubing, and their respective roots.</li> </ul> </li> </ul>	<p><b>Topic 1:</b> Lesson 1-5, pp. 33-38; Mid-Topic Checkpoint, p. 39; Topic Review, p. 78</p>
8.A.2	<p>Applications: Students will solve authentic problems involving multi-step equations.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Solving multi-step equations</li> <li>• Applying problem-solving strategies</li> <li>• Analyzing real-world scenarios</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of variables and constants</li> </ul> </li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>● Familiarity with operations (addition, subtraction, multiplication, division)</li> <li>● Knowledge of properties of equality</li> <li>● <b>Concepts:</b></li> <li>● Equations represent relationships</li> <li>● The process of isolating variables</li> <li>● The relevance of equations in solving real-life problems</li> </ul>	
<p><b>8.A.2.a</b></p>	<p>Write multi-step single variable equations from words, tables, and authentic situations.</p>	<ul style="list-style-type: none"> <li>● <b>Key Components:</b></li> <li>● <b>Skills:</b></li> <li>● Ability to interpret and translate words and tables into mathematical equations.</li> <li>● Solve multi-step equations.</li> <li>● <b>Knowledge:</b></li> <li>● Understanding of single variable equations.</li> <li>● Familiarity with mathematical operations (addition, subtraction, multiplication, division).</li> <li>● <b>Concepts:</b></li> <li>● Relationship between words and mathematical expressions.</li> </ul>	<p><b>Topic 2:</b>  Let's Investigate: It All Balances Out: Lesson 2-2, pp. 95-100; Lesson 2-3, pp. 101-106; Mid-Topic Checkpoint, pp. 115-116; Mid-Topic Performance Task, pp. 117-120; Topic Review, pp. 152-153</p>

		<ul style="list-style-type: none"> <li>• The concept of variables and constants in equations.</li> </ul>	
	<p>Determine and describe the rate of change for given situations through the use of tables and graphs.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Skills: Interpretation of tables and graphs, calculation of rates of change.</li> <li>• Knowledge: Understanding of rate of change concepts, familiarity with linear relationships.</li> <li>• Concepts: Representation of relationships using tables and graphs, the relationship between variables.</li> </ul> </li> </ul>	<p><b>Topic 2:</b> Lesson 2-5, pp. 121-126; Let's Investigate: Rise to the Top; Lesson 2-6, pp. 127-132; Topic Review, pp. 154-155</p>
<b>8.A.2.c</b>	<p>Graph proportional relationships and interpret the rate of change.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• Skills: Graphing proportional relationships.</li> <li>• Interpreting the rate of change from graphs.</li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of proportional relationships and their characteristics.</li> <li>• Familiarity with coordinate planes and graphing techniques.</li> </ul> </li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b></li> <li>• The concept of slope as a representation of rate of change.</li> <li>• Understanding the constant of proportionality.</li> </ul>	
		<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b> Understanding and applying properties of angles, calculating angle measures.</li> <li>• <b>Knowledge:</b> Knowledge of angle relationships (complementary, supplementary, vertical angles) and the properties of triangles (sum of interior angles).</li> <li>• <b>Concepts:</b> Angle relationships involving parallel lines and transversals, triangle angle sum theorem.</li> </ul>	
<b>8.G.1</b>	Attributes: Students will apply properties of angle relationships in triangles and with lines to determine angle measures.		
<b>8.G.1.a</b>	Determine and use the relationships of the interior angles of a triangle to solve for missing measures.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Calculate the measures of interior angles in triangles.</li> </ul>	<p><b>Topic 6:</b> Lesson 6-9, pp. 365-370; Topic Review, p. 382</p>

		<ul style="list-style-type: none"> <li>• Apply the properties of triangles to find missing angle measures.</li> <li>• <b>Knowledge:</b></li> <li>• Understand that the sum of the interior angles of a triangle is always 180 degrees.</li> <li>• Recognize different types of triangles (scalene, isosceles, equilateral) and their properties.</li> <li>• <b>Concepts:</b></li> <li>• Angle relationships within triangles (e.g., complementary angles, supplementary angles).</li> <li>• The concept of solving equations to find unknown measures.</li> </ul>	
<b>8.G.1.b</b>	<p>Identify and apply geometric properties of parallel lines cut by a transversal and the resulting corresponding same side interior, alternate interior, and alternate exterior angles to find missing measures.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Skills: Identifying geometric properties, applying properties to find measures.</li> <li>• Knowledge: Understanding parallel lines, transversal lines, and angle relationships.</li> <li>• Concepts: Corresponding angles, same-side interior angles, alternate</li> </ul>	<p><b>Topic 6:</b> Lesson 6-8, pp. 357-364; Topic Review, p. 381</p>

		interior angles, alternate exterior angles.	
		<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Plotting points on the coordinate plane.</li> <li>• Identifying and describing the location of points using coordinates.</li> <li>• Understanding the concept of orientation (horizontal and vertical).</li> <li>• Recognizing relationships between points</li> </ul> </li> </ul>	
<b>8.G.2</b>	Coordinate Geometry: Students will determine location, orientation, and relationships on the coordinate plane.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Perform transformations (rotations, translations, reflections, dilations).</li> <li>• Describe transformations and their effects on shapes.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of coordinate planes and the origin.</li> </ul> </li> </ul> </li> </ul>	<p><b>Topic 6:</b> Lesson 6-1, pp. 309-314; Let's Investigate: Copy That, Lesson 6-2, pp. 315-320; Lesson 6-3, pp. 321- 326; Mid-Topic Performance Task, pp. 345-350; Topic Review, pp. 378-380</p>
<b>8.G.2.a</b>	Perform and describe positions and orientations of shapes under single transformations including rotations in multiples of 90 degrees about the origin, translations, reflections, and dilations on and off the coordinate plane.		

		<ul style="list-style-type: none"> <li>• Properties of shapes and how they change under different transformations.</li> <li>• <b>Concepts:</b></li> <li>• Single transformations and their mathematical representations.</li> <li>• The relationship between positions and orientations of shapes before and after transformations.</li> </ul>	
	<p>Determine if two-dimensional figures are congruent or similar:</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Identify and describe properties of two-dimensional figures.</li> <li>• Use transformations (translations, rotations, reflections) to determine congruence.</li> <li>• Analyze scale factors to determine similarity.</li> <li>• <b>Knowledge:</b></li> <li>• Understand definitions of congruence and similarity.</li> <li>• Recognize corresponding sides and angles in figures.</li> <li>• Work with geometric terminology (e.g., polygons, triangles).</li> </ul>	<p><b>Topic 6:</b> Lesson 6-5, pp. 337-342; Lesson 6-7, pp. 351-356; Topic Review, pp. 380-381</p>

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b></li> <li>• Congruence means figures have the same shape and size.</li> <li>• Similarity means figures have the same shape but different sizes, related by a scale factor.</li> </ul>	
	<p>Perform and describe positions and orientations of shapes under a sequence of transformations on and off the coordinate plane.</p>	<p><b>Key Components:</b></p> <ul style="list-style-type: none"> <li>• <b>Skills:</b></li> <li>• Perform transformations such as translation, rotation, reflection, and dilation.</li> <li>• Describe and analyze the effects of transformations on shapes.</li> <li>• Understand the coordinate plane and how shapes can be represented within it.</li> <li>• <b>Knowledge:</b></li> <li>• Properties of geometric shapes and their attributes.</li> <li>• The concept of congruence and similarity in relation to transformations.</li> <li>• The rules governing transformations on the coordinate plane (e.g., how</li> </ul>	<p><b>Topic 6:</b> Lesson 6-4, pp. 327-332; Topic Review, p. 379</p>
<b>8.G.2.c</b>			

		<ul style="list-style-type: none"> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• coordinates change with each transformation).</li> <li>• The relationship between transformations and the original and resulting shapes.</li> <li>• The use of coordinate notation to describe transformations.</li> <li>• The impact of transformations on the orientation and position of shapes.</li> </ul> </li> </ul>	
<b>8.G.3</b>	<p>Measurement: Students will reason with formulas and context to determine and compare length, area, and volume.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Apply formulas for length, area, and volume.</li> <li>• Reason and draw conclusions based on measurements.</li> <li>• Compare different measurements using context.</li> </ul> </li> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understanding of formulas for calculating length, area, and volume (e.g., perimeter, area of triangles, volume of prisms).</li> </ul> </li> </ul> </li> </ul>	

		<ul style="list-style-type: none"> <li>• Familiarity with units of measurement (e.g., inches, feet, meters, square units, cubic units).</li> <li>• <b>Concepts:</b></li> <li>• The relationship between different measurements (length, area, volume).</li> <li>• How context affects the interpretation and application of measurements.</li> </ul>	
<p><b>8.G.3.a</b></p>	<p>Explain a model of the Pythagorean Theorem.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• Skills: Understanding and applying the Pythagorean Theorem, solving problems involving right triangles.</li> <li>• Knowledge: Familiarity with right triangles, properties of triangles, and the relationship between the sides of a right triangle.</li> <li>• Concepts: The Pythagorean Theorem formula</li> <li>• <math>a^2 + b^2 = c^2</math></li> <li>• <math>a</math></li> <li>• <math>2</math></li> <li>• <math>+b</math></li> <li>• <math>2</math></li> <li>• <math>=c</math></li> <li>• <math>2</math></li> </ul>	<p><b>Topic 7:</b> Lesson 7-1, pp. 395-400; Mid-Topic Checkpoint, p. 407</p>

		<ul style="list-style-type: none"> <li>• , where</li> <li>• <math>c</math></li> <li>• <math>c</math> is the hypotenuse and</li> <li>• <math>a</math></li> <li>• <math>a</math> and</li> <li>• <math>b</math></li> <li>• <math>b</math> are the other two sides.</li> </ul>	
<p><b>8.G.3.b</b></p>	<p>Apply the Pythagorean Theorem to find side lengths of triangles and to solve authentic problems.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Understanding and applying the Pythagorean Theorem.</li> <li>• Solving for unknown side lengths in right triangles.</li> <li>• Analyzing and solving real-world problems involving right triangles.</li> <li>• <b>Knowledge:</b></li> <li>• Recognizing right triangles.</li> <li>• Understanding the relationship between the sides of a right triangle (legs and hypotenuse).</li> <li>• Familiarity with the formula <math>a^2+b^2=c^2</math></li> <li>• <math>a</math></li> </ul>	<p><b>Topic 7:</b> Mid-Topic Performance Task, p. 408, Lesson 7-3, pp. 409-414, Topic Review, p. 423</p>

		<ul style="list-style-type: none"> <li>• <math>c^2</math></li> <li>• <math>a^2 + b^2</math></li> <li>• <math>c^2 = a^2 + b^2</math></li> <li>• <math>c</math>, where</li> <li>• <math>c</math> is the length of the hypotenuse and</li> <li>• <math>a</math></li> <li>• <math>a</math> and</li> <li>• <math>b</math></li> <li>• <math>a</math> and <math>b</math> are the lengths of the other two sides.</li> <li>• <b>Concepts:</b></li> <li>• The geometric interpretation of the Pythagorean Theorem.</li> <li>• The application of mathematical concepts in real-life scenarios involving right triangles.</li> </ul>	
<p><b>8.G.3.c</b></p>	<p>Find the distance between any two points on the coordinate plane using the Pythagorean Theorem.</p>	<ul style="list-style-type: none"> <li>• <b>Key Components:</b></li> <li>• <b>Skills:</b></li> <li>• Calculate the distance between two points.</li> <li>• Apply the Pythagorean Theorem.</li> </ul>	<p><b>Topic 7:</b> Lesson 7-4, pp. 415-420; Topic Review, p. 424</p>

		<ul style="list-style-type: none"> <li>• <b>Knowledge:</b> <ul style="list-style-type: none"> <li>• Understand the concept of a coordinate plane.</li> <li>• Recognize the relationship between the coordinates of points and the distances between them.</li> </ul> </li> <li>• <b>Concepts:</b> <ul style="list-style-type: none"> <li>• The Pythagorean Theorem and its formula:</li> <li>• <math>a^2+b^2=c^2</math></li> <li>• <math>a</math></li> <li>• <math>2</math></li> <li>• <math>+b</math></li> <li>• <math>2</math></li> <li>• <math>=c</math></li> <li>• <math>2</math></li> <li>• .</li> </ul> </li> <li>• The distance formula derived from the Pythagorean Theorem.</li> </ul>	
<b>8.G.3.d</b>	Determine the volume of cones, cylinders, and spheres and solve authentic problems using volumes.	<ul style="list-style-type: none"> <li>• <b>Key Components:</b> <ul style="list-style-type: none"> <li>• <b>Skills:</b> <ul style="list-style-type: none"> <li>• Calculate the volume of cones, cylinders, and spheres using the appropriate formulas.</li> </ul> </li> </ul> </li> </ul>	<b>Topic 8:</b> Let's Investigate: Shrinkflation; Lesson 8-2, pp. 439-444; Lesson 8-3, pp. 447-452; Lesson 8-4, pp. 453-458; 3-Act

		<ul style="list-style-type: none"> <li>• Apply volume calculations to solve real-world problems.</li> <li>• <b>Knowledge:</b></li> <li>• Understand the formulas for the volume of cones, cylinders, and spheres: <ul style="list-style-type: none"> <li>• Volume of a cone:</li> <li>• <math>V = \frac{1}{3}\pi r^2 h</math></li> <li>• <math>V =</math></li> <li>• 3</li> <li>• 1</li> <li>•</li> <li>• <math>\pi r</math></li> <li>• 2</li> <li>• <math>h</math></li> <li>• Volume of a cylinder:</li> <li>• <math>V = \pi r^2 h</math></li> <li>• <math>V = \pi r</math></li> <li>• 2</li> <li>• <math>h</math></li> <li>• Volume of a sphere:</li> <li>• <math>V = \frac{4}{3}\pi r^3</math></li> <li>• <math>V =</math></li> <li>• 3</li> <li>• 4</li> <li>•</li> <li>• <math>\pi r</math></li> <li>• 3</li> </ul> </li> </ul>
		<p>Math: Measure Up, pp. 459-462; Topic Review, pp. 464-466</p>

## Board of Education Regular Meeting

School District of Seward

410 South Street

Seward, NE 68434

Monday, July 14, 2025 5:30 PM

Attendance Taken at 5:31 PM.

Paul Duer: Present  
Matt Hastings: Present  
Jill Hochstein: Present  
Ryne Seaman: Present  
Danielle Shipley: Present  
Shawn Svoboda: Present

### 1. Preliminary Procedures

1.1. Call meeting to order & announce Open Meetings Act is Posted

1.2. Public Notice as publicized per board policy

The public notice was publicized in the Seward County Independent and posted at city hall, library and courthouse. The public notice was dated July 2, 2025

1.3. Roll Call

1.3.1. Action to excuse board members if necessary

1.4. Pledge of Allegiance

1.5. **1.5 Mission** Seward Public Schools - a district rooted in excellence - in cooperation with family and community members is committed to the development of the whole student and affirms that all students will have the skills to become productive, resilient, and contributing members of their community.

1.6. Approval of Agenda

Motion to approve the agenda as presented Passed with a motion by Paul Duer and a second by Jill Hochstein.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

2. Public Forum: (The Board President reserves the right to place time limits on individuals and topics.)

2.1. Public Forum on Agenda Items: This is your opportunity to speak to items on the agenda. If you are not a part of the presentation of the agenda item you need to speak now. Thank you for your participation.

Kristi Arnold spoke about the FLAG foreign exchange program. Molly Weiber is a representative from the FLAG program and explained the background of the program.

2.2. Public Forum on Any Topic: This is your opportunity to speak to any topic concerning the school district. Since it is not an agenda item the board cannot discuss or take action at this time on the matter. Future discussion can be requested as an agenda item. Thank you for your participation.

There was none.

3. Discussion Items

3.1. Flag Foreign Exchange Program

The board discussed the Flag Foreign Exchange Program and their thoughts on allowing SHS the work with the Flag Program.

3.2. JEO- Schedule and Process for Community Outreach

The board discussed the priority list and proposed schedule.

4. Reports

4.1. Superintendent's Report

Dr. Fields updated the board on meetings he had with Concordia regarding the Plum Creek Turf Project. Dr. Fields thanked all the clubs, bands, and facilities used for the Fourth of July festivities in Seward that tied back to SPS. The Pure Nebraska Special was well done at SPS. The Summer Projects of the Boiler and Hot Water Project at the high school is going well, the well project at the high school is completed, painting at the middle school is almost done, landscaping work, cleaning, and gym floors are in the works. Dr. Maher is running for the Board of Regents. The new activities scheduler will be Bound. August 26, 2025 is the York Regional NASB meeting. The Budget Board Meeting will be August 25, 2025 at 5:30p.m.. The all staff pool party is scheduled for Sunday, August 10 from 6:30-8:30 at the Seward Municipal Pool. Our Back To School Opening is August 11, with breakfast from 7-8 and convocation at

8:00. Dr. Fields discussed the federal funds that are being held back by the federal government. *Board Quicks link - July 2025 e-update*

## 5. Action Items

### 5.1. New and Revised Policies

Motion to approve the new and revised policies for the first reading Passed with a motion by Paul Duer and a second by Shawn Svoboda.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

### 5.2. Unified Track Proposal

Motion to add a unified track team at the high school for the 2025-2026 school year. Passed with a motion by Paul Duer and a second by Jill Hochstein.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

### 5.3. 2025-2026- Staff Handbooks

Motion to approve the 2025-2026 staff handbook as presented. Passed with a motion by Matt Hastings and a second by Shawn Svoboda.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

### 5.4. 2025-2026 Student Handbooks

Motion to approve the 2025-2026 student handbooks with the change as presented. Passed with a motion by Shawn Svoboda and a second by Paul Duer.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

### 5.5. Concrete Work

Motion to approve the bid from Schaeffer Concrete for \$22,333. Passed with a motion by Danielle Shipley and a second by Paul Duer.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

### 5.6. JEO Service Agreement

Motion to approve the pre-bond service agreement with JEO for \$48,000. Passed with a motion by Jill Hochstein and a second by Matt Hastings.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

## 6. Future Agenda Items

JEO

Second reading of policies

## 7. Consent Agenda

### 7.1. Approval of Minutes

### 7.2. Approval of Financial Reports

#### 7.2.1. Treasurer

#### 7.2.2. Budget

#### 7.2.3. Activities

#### 7.2.4. Athletic

### 7.3. Approval of Claims

#### 7.3.1. General Fund - \$1,866,206.96

#### 7.3.2. Special Building Fund - \$85,837.00

### 7.4. Approval of Consent Agenda

Motion to approve the consent agenda as presented Passed with a motion by Danielle Shipley and a second by Jill Hochstein.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

## 8. Adjournment

Motion to adjourn the meeting at 7:31 PM with the next regular board meeting scheduled for August 11 at 5:30 PM Passed with a motion by Matt Hastings and a second by Shawn Svoboda.

Paul Duer: Yea, Matt Hastings: Yea, Jill Hochstein: Yea, Ryne Seaman: Yea, Danielle Shipley: Yea, Shawn Svoboda: Yea

Prepared by:

Jill Hochstein

Heidi Covert

Secretary

**SCHOOL DISTRICT OF SEWARD  
TREASURER'S REPORT  
FOR THE MONTH  
ENDED JULY 31, 2025**

**GENERAL FUND (ACCOUNT NUMBER 100-172)**

Bank Balance		6,815,689.82
Seward County Treasurer--Local Taxes	191,108.74	
Butler County Treasurer--Local Taxes	3,757.07	
Seward Hot Lunch--Reimbursement	3,306.14	
Wm Henry School of Arts--Rental	50.00	
Wm Henry School of Arts--Rental	750.00	
Marroquin Driving School-Rental	565.00	
ESU--CTE Conference	900.00	
Willow Path--Transportation	800.00	
Jones Bank - Interest	7,687.37	
City of Seward--Licenses	200.00	
City of Seward--Licenses	250.00	
ESU 6 --Stipends/Mileage	1,077.97	
ESU 6--Stipend Externship Day	1,909.55	
State of Nebraska--Career Education/6200	23,555.00	
State of Nebraska--State Aid	241,308.00	
Jones Bank - Interest	2,437.45	
		<u>479,662.29</u>
Disbursements for the Month -----		7,295,352.11
Bank Balance -----		5,472,719.25
Less Outstanding Checks -----		293,942.33
Available Balance -----		<u>5,178,776.92</u>

**GENERAL FUND MONEY MARKET (ACCOUNT NUMBER 60037340)**

Beginning Balance -----	1,027,055.13
Transfer to General Fund for Cash Flow Purposes -----	0.00
Transfer from General Fund -----	0.00
Interest -----	<u>2,154.56</u>
Bank Balance -----	<u>1,029,209.69</u>

**GENERAL RESERVE FUND (ACCOUNT NUMBER 461-170)**

Beginning Balance -----	1,147,915.11
Transfer to General Fund for Cash Flow Purposes -----	0.00
Interest -----	<u>2,175.06</u>
Bank Balance -----	<u>1,150,090.17</u>

CD #45932 CNB--Interest Rate: 4.39%-Maturity Date 10/28/2025	1,500,000.00
CD #70003334-JB-Interest Rate: 4.41%--Maturity Date 9/23/2025	<u>700,771.44</u>
	2,200,771.44

**TOTAL IN GENERAL RESERVE FUND                    3,350,861.61**

**SCHOOL DISTRICT OF SEWARD  
TREASURER'S REPORT  
FOR THE MONTH  
ENDED JULY 31, 2025**

**DEPRECIATION FUND (ACCOUNT NUMBER 154-006)**

Beginning Account Balance -----	141,904.22
Deposit: Jones -----	3,290.96
Disbursements: -----	0.00
Interest-----	258.78
Bank Balance -----	<u>145,453.96</u>

CD#49403--CB--4.41% DATE DUE 8/01/2025-----	545,150.76
CD#70003335-JB--4.41% DATE DUE 9/23/2025-----	<u>300,000.00</u>

TOTAL CD'S 845,150.76

**TOTAL IN DEPRECIATION FUND ACCOUNTS                      990,604.72**

**SPECIAL BUILDING FUND (ACCOUNT NUMBER 10-074-9)**

Beginning Balance -----	114,321.13
Deposits: Seward County Treasurer--Local Taxes-----	3,265.64
Butler County Treasurer--Local Taxes-----	61.99
Disbursements -----	<u>85,837.00</u>
Interest-----	41.36
Bank Balance -----	<u>31,853.12</u>

**SPECIAL BUILDING FUND MONEY MARKET(ACCOUNT NUMBER 810304)**

Beginning Balance -----	308,031.15
Deposits: Transfer from Special Building Fund acct 100749	0.00
Interest-----	<u>620.03</u>
Bank Balance -----	<u>308,651.18</u>

**TOTAL IN SPECIAL BUILDING FUND ACCOUNTS                      340,504.30**

**UNEMPLOYMENT FUND ACCOUNT (ACCT # 473-633)**

Beginning Balance -----	21,375.42
Interest -----	13.94
Disbursements -----	0.00
Bank Balance -----	<u>21,389.36</u>

**SCHOOL DISTRICT OF SEWARD  
TREASURER'S REPORT  
FOR THE MONTH  
ENDED JULY 31, 2025**

**GIFTS AND DONATIONS (ACCT # 162036)**

Beginning Balance -----	25,010.55
Interest -----	17.47
Disbursements -----	0.00
Bank Balance -----	<u>25,028.02</u>

**QUALITY CAPITAL PURPOSE UNDERTAKING FUND (ACCT #640-822)**

Beginning Balance -----	1,132.29
Seward County Treasurer & Butler County Treasurer --Local Taxes -----	2.55
Interest -----	0.23
Disbursements -----	0.00
Bank Balance -----	<u>1,135.07</u>

**BOARD REVOLVING FUND (ACCOUNT NUMBER 159-913)**

Beginning Balance -----	14,963.03
Interest -----	5.71
Disbursements -----	995.00
Deposit: SPS -----	3,437.10
Bank Balance -----	<u>17,410.84</u>

**HOT LUNCH FUND (ACCOUNT # 10 353 5)**

Beginning Balance -----	216,588.98
Interest -----	91.62
State of NE Payments -----	1,820.41
Other Receipts -----	3,288.81
Disbursements -----	3,350.91
Bank Balance -----	218,438.91
Amount Due District -----	80,870.49
Available Balance -----	<u>137,568.42</u>

**HOT LUNCH FUND MONEY MARKET (ACCOUNT #810312)**

Beginning Balance -----	308,031.15
Interest -----	620.03
Transfer from Hot Lunch Acct 103535 -----	0.00
Available Balance -----	<u>308,651.18</u>

**TOTAL IN HOT LUNCH FUND ACCOUNTS                      446,219.60**

**SCHOOL DISTRICT OF SEWARD  
TREASURER'S REPORT  
FOR THE MONTH  
ENDED JULY 31, 2025**

**STUDENT FEE FUND (ACCOUNT #668-157)**

Beginning Balance -----	1,291.26
Receipts: -----	0.00
Interest -----	0.00
Disbursements -----	0.00
Bank Balance -----	<u>1,291.26</u>

**BOND FUND (ACCOUNT #60000586)**

Beginning Balance -----	1,177,583.02
Seward County Treasurer - Local Taxes -----	15,558.71
Butler County Treasurer - Local Taxes -----	284.39
Deposit - Jones -----	0.00
Interest -----	2,407.69
Disbursements -----	0.00
Bank Balance -----	<u>1,195,833.81</u>

CD#70003865--JNB RATE OF 4.39% DATE DUE 11/26/2025----- 232,164.68

**TOTAL IN BOND FUND ACCOUNT 1,427,998.49**

**Heidi Covert, Treasurer**

**BUDGET PRINTOUT  
RECAPITULATION  
JULY 31, 2025**

**RECEIPTS PORTION OF THE 2024-2025 BUDGET**

	AMOUNT BUDGETED	AMOUNT RECEIVED	AMOUNT REMAINING	% RECEIVED TO DATE
RECEIPTS	23,095,000.00	22,593,485.04	501,514.96	97.83%
HOT LUNCH		<u>870,486.83</u>		
TOTAL RECEIPTS		23,463,971.87	-368,971.87	

**EXPENDITURES PORTION OF THE 2024-2025 BUDGET**

CATEGORY	BUDGET	SPENT	REMAINING	% EXPENDED
REG INSTRUCTION	11,200,000.00	9,673,347.01	1,526,652.99	86.37%
SPECIAL ED	3,200,000.00	2,551,103.06	648,896.94	79.72%
SS--PUPILS	1,550,000.00	1,098,353.43	451,646.57	70.86%
SS-INSTRUCTION	700,000.00	526,767.65	173,232.35	75.25%
GENERAL ADM	475,000.00	326,936.89	148,063.11	68.83%
PRIN ADMIN	1,370,000.00	1,075,317.16	294,682.84	78.49%
GEN BUSINESS	350,000.00	269,346.60	80,653.40	76.96%
OPER/MAINT	2,280,000.00	1,833,255.55	446,744.45	80.41%
TRANSPORTATION	1,160,000.00	722,650.06	437,349.94	62.30%
FOUNDATION	0.00	5,125.00	-5,125.00	0.00%
TRANSFERS	50,000.00	39,358.39	10,641.61	78.72%
GEN FUND TOTALS	22,335,000.00	18,121,560.80	4,213,439.20	81.14%
FEDERAL FUNDS	760,000.00	622,485.41	137,514.59	81.91%
SIXPENCE		174,613.10		
GRAND TOTAL	23,095,000.00	18,918,659.31	4,176,340.69	81.92%
HOT LUNCH	1,698,291.00	869,922.12		
TOTAL	24,793,291.00	19,788,581.43		

Seward Elementary  
 Activities Account Report  
 As of June 30, 2025

Line Item:	Date:	Number:	Name:	Receipts:	Debits:	Balance:
<b>Total of All Line Items Included: Beginning Balance:</b>						
						<b>\$24,455.58</b>
<b>Activities Account Beginning Balance: (Not including Library balance.)</b>						
	6/6/25	2359	Walmart		\$133.61	<b>\$13,005.81</b>
	6/9/25	2360	Bluejay Leadership Team		\$ 35.00	\$12,872.20
	6/10/25	2358	Ideal Pure Water		\$120.00	\$12,837.20
	6/17/25	2357	Amazon Capital Services		\$235.98	\$12,717.20
	6/20/25	2361	Visa		\$ 58.99	\$12,481.22
	6/20/25	2351	Visa		\$149.27	\$12,422.23
	6/20/25	2348	Visa		\$375.12	\$12,272.96
	6/30/25		Interest	\$ 8.13		\$11,897.84
						\$11,905.97
<b>Total Of Activities Account: Ending Balance:</b>						<b>\$11,905.97</b>

Lunch Donation: (Money set aside within the activities account for lunch donations.)  
 (Not to be added to the total again.)

\$682.72

Compounded Interest included in the total balance:

\$8.13 total = \$473.78



Seward Elementary  
 Activities Account Report  
 As of July 31, 2025

Line Item:	Date:	Number:	Name:	Receipts:	Debits:	Balance:
Total of All Line Items Included: Beginning Balance:						<b>\$23,355.74</b>
Activities Account Beginning Balance: (Not including Library balance.)						<b>\$11,905.97</b>
	7/18/25	2367	Middle Creek Printing		\$893.77	\$11,012.20
	7/22/25	2365	Walmart		\$163.59	\$10,848.61
	7/25/25	2366	Janda		\$30.00	\$10,818.61
	7/30/25	2369	Walmart		\$466.76	\$10,351.85
	7/31/25		Interest	\$7.77		
<b>Total Of Activities Account: Ending Balance:</b>						<b>\$10,359.62</b>

Lunch Donation: (Money set aside within the activities account for lunch donations.)  
 (Not to be added to the total again.)

\$682.72

Compounded Interest included in the total balance:

\$7.77 total = \$481.55

Library

Line Item: \_\_\_\_\_ Date: \_\_\_\_\_ Number: \_\_\_\_\_ Name: \_\_\_\_\_ Receipts: \_\_\_\_\_ Debits: \_\_\_\_\_ Balance: \_\_\_\_\_

Elementary Library Line Item: Beginning Balance: \$11,449.77

Total of Elementary Library Line Item: Ending Balance: \$11,449.77

Total of All Line Items Included: Ending Balance: \$21,809.39

Principal: 

Date: 8/8/25

Bookkeeper: 

Date: 8/8/25

SEWARD HIGH SCHOOL

General Ledger Report

Financial Report

From Date: 7/1/2025  
To Date: 07/31/2025

From Acct: 1  
To Acct: 999999

Activity Accounts

Acct	Account Name	Beg. Bal.	Recpt / JV	Disb / JV	Transfers	End. Bal.	YTD Payables	Work Bal
100	DUAL CREDIT CLASSES	\$8,278.15	\$0.00	\$0.00	\$0.00	\$8,278.15	\$0.00	\$8,278.15
105	ALTERNATIVE SCHOOL	\$268.84	\$0.00	\$0.00	\$0.00	\$268.84	\$0.00	\$268.84
110	ACT CLASS	\$379.96	\$0.00	\$0.00	\$0.00	\$379.96	\$0.00	\$379.96
115	HONOR SOCIETY	(\$338.01)	\$385.00	\$0.00	\$0.00	\$46.99	\$0.00	\$46.99
120	ALUMNI ASSOCIATION	\$738.03	\$0.00	\$0.00	\$0.00	\$738.03	\$0.00	\$738.03
125	GUIDANCE	\$1,684.92	\$0.00	\$0.00	\$0.00	\$1,684.92	\$0.00	\$1,684.92
126	AMBASSADORS	\$407.09	\$0.00	\$0.00	\$0.00	\$407.09	\$0.00	\$407.09
127	AP EXAMS	\$5,234.50	\$0.00	\$0.00	\$0.00	\$5,234.50	\$0.00	\$5,234.50
130	CAREER ACADEMY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
135	BOWLING	\$1,734.58	\$0.00	\$0.00	\$0.00	\$1,734.58	\$0.00	\$1,734.58
137	UNIFIED BOWLING	\$1,160.87	\$0.00	\$(154.99)	\$0.00	\$1,005.88	\$0.00	\$1,005.88
140	FOOTBALL	\$187.93	\$3,602.00	\$(189.74)	\$0.00	\$3,600.19	\$0.00	\$3,600.19
142	FOOTBALL-UNIFORMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
144	GIRLS WRESTLING	\$1,009.24	\$0.00	\$0.00	\$0.00	\$1,009.24	\$0.00	\$1,009.24
145	WRESTLING	\$2,214.94	\$0.00	\$(74.78)	\$0.00	\$2,140.16	\$0.00	\$2,140.16
147	X-COUNTRY	\$465.64	\$0.00	\$0.00	\$0.00	\$465.64	\$0.00	\$465.64
149	TRACK	\$1,342.33	\$0.00	\$0.00	\$0.00	\$1,342.33	\$0.00	\$1,342.33
150	GIRLS BB CAMP	\$5,353.96	\$812.00	\$(1,070.07)	\$0.00	\$5,095.89	\$0.00	\$5,095.89
155	BOYS BB CAMP	\$10,239.25	\$0.00	\$(806.80)	\$0.00	\$9,432.45	\$0.00	\$9,432.45
160	BOYS SOCCER	\$1,869.33	\$0.00	\$0.00	\$0.00	\$1,869.33	\$0.00	\$1,869.33
165	GIRLS SOCCER	\$524.54	\$0.00	\$0.00	\$0.00	\$524.54	\$0.00	\$524.54
170	SOFTBALL	\$9,359.89	\$50.00	\$(1,753.66)	\$0.00	\$7,656.23	\$0.00	\$7,656.23
175	VOLLEYBALL	\$1,410.93	\$1,085.00	\$(1,540.44)	\$0.00	\$955.49	\$0.00	\$955.49
180	VIDEO ACCOUNT	\$4,783.31	\$0.00	\$0.00	\$0.00	\$4,783.31	\$0.00	\$4,783.31
185	BASEBALL	\$15,856.52	\$0.00	\$0.00	\$0.00	\$15,856.52	\$0.00	\$15,856.52
190	GIRLS GOLF	\$1,061.07	\$0.00	\$0.00	\$0.00	\$1,061.07	\$0.00	\$1,061.07
195	BOYS GOLF	\$1,039.35	\$0.00	\$0.00	\$0.00	\$1,039.35	\$0.00	\$1,039.35
198	POWERLIFTING	\$230.60	\$0.00	\$0.00	\$0.00	\$230.60	\$0.00	\$230.60
200	SMUTNY SCHOLARSHIP	(\$100.00)	\$0.00	\$0.00	\$100.00	\$0.00	\$0.00	\$0.00
220	COKE SCHOLARSHIPS	(\$2,000.00)	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
225	ACADEMIC CONTESTS	\$1,701.40	\$312.00	\$0.00	\$0.00	\$2,013.40	\$0.00	\$2,013.40
230	SCIP	\$342.50	\$0.00	\$0.00	\$0.00	\$342.50	\$0.00	\$342.50
240	THORELL SCHOLARSHIPS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
250	PEPSI SCHOLARSHIPS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
260	SCHOLARSHIP ACCT.	\$140.00	\$0.00	\$0.00	\$0.00	\$140.00	\$0.00	\$140.00
270	BOWMASTER SCHOLARSHIP	(\$600.00)	\$0.00	\$0.00	\$600.00	\$0.00	\$0.00	\$0.00
275	CONCESSIONS	\$7,332.35	\$0.00	\$(103.94)	\$0.00	\$7,228.41	\$0.00	\$7,228.41
300	Teacher Pop Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
310	VENDING SALES	\$8,067.52	\$51.40	\$(274.80)	\$0.00	\$7,844.12	\$0.00	\$7,844.12
315	DLC ACCOUNT	\$25.81	\$0.00	\$0.00	\$0.00	\$25.81	\$0.00	\$25.81
330	DRIVER EDUCATION	\$5,590.00	\$0.00	\$0.00	\$0.00	\$5,590.00	\$0.00	\$5,590.00
400	FBLA	(\$2,950.11)	\$4,534.00	\$0.00	\$0.00	\$1,583.89	\$0.00	\$1,583.89
410	FFA	\$25,972.73	\$1,214.00	\$(302.69)	\$0.00	\$26,884.04	\$0.00	\$26,884.04
415	FCS LAB FEES	\$9,993.35	\$0.00	\$0.00	\$0.00	\$9,993.35	\$0.00	\$9,993.35
418	DISTRICT 2 FCCLA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
420	FCCLA	\$2,447.76	\$2,312.00	\$0.00	\$0.00	\$4,759.76	\$0.00	\$4,759.76
425	DRILL TEAM/DANCE	\$2,840.87	\$0.00	\$0.00	\$0.00	\$2,840.87	\$0.00	\$2,840.87
430	SOCIAL MEDIA TEAM	\$5,776.98	\$0.00	\$0.00	\$0.00	\$5,776.98	\$0.00	\$5,776.98
440	LEADERSHIP TEAM	\$6,370.01	\$387.00	\$0.00	\$0.00	\$6,757.01	\$0.00	\$6,757.01
445	E SPORTS	\$499.49	\$0.00	\$0.00	\$0.00	\$499.49	\$0.00	\$499.49
450	MATH	\$44.46	\$0.00	\$0.00	\$0.00	\$44.46	\$0.00	\$44.46

SEWARD HIGH SCHOOL

General Ledger Report

Financial Report

From Date: 7/1/2025  
To Date: 07/31/2025

From Acct: 1  
To Acct: 999999

Activity Accounts

Acct	Account Name	Beg. Bal.	Recpt / JV	Disb / JV	Transfers	End. Bal.	YTD Payables	Work Bal
460	SCIENCE LAB FEES	\$299.07	\$0.00	\$0.00	\$0.00	\$299.07	\$0.00	\$299.07
470	KEY CLUB	\$5,336.01	\$1,302.14	\$0.00	\$0.00	\$6,638.15	\$0.00	\$6,638.15
475	SPANISH ACCOUNT	\$66.94	\$0.00	\$0.00	\$0.00	\$66.94	\$0.00	\$66.94
490	ART	\$3,885.04	\$0.00	\$0.00	\$0.00	\$3,885.04	\$0.00	\$3,885.04
495	Study Abroad	\$602.30	\$0.00	\$0.00	\$0.00	\$602.30	\$0.00	\$602.30
500	YEARBOOK	\$3,719.06	\$0.00	\$0.00	\$0.00	\$3,719.06	\$0.00	\$3,719.06
520	BAND TRIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
525	SPANISH/SCIENCE TRIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
530	SPEECH	(\$785.17)	\$2,490.82	\$0.00	\$0.00	\$1,705.65	\$0.00	\$1,705.65
535	DRAMATICS	\$4,694.42	\$0.00	\$0.00	\$0.00	\$4,694.42	\$0.00	\$4,694.42
540	LIBRARY	\$1,632.79	\$0.00	\$0.00	\$0.00	\$1,632.79	\$0.00	\$1,632.79
542	EDUCATORS RISING	\$283.76	\$600.00	\$0.00	\$0.00	\$883.76	\$0.00	\$883.76
545	ALL SCHOOL READS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
550	BAND	\$6,872.83	\$607.00	\$(1,426.00)	\$0.00	\$6,053.83	\$0.00	\$6,053.83
554	CHEERLEADERS	\$8,378.22	\$0.00	\$0.00	\$0.00	\$8,378.22	\$0.00	\$8,378.22
555	CHORUS	\$30,392.91	\$1,840.00	\$(2,357.92)	\$0.00	\$29,874.99	\$0.00	\$29,874.99
557	SKILLS/TECHNICAL SCIENCE	\$2,981.00	\$0.00	\$0.00	\$0.00	\$2,981.00	\$0.00	\$2,981.00
560	INDUSTRIAL ARTS/WOODS	\$721.95	\$0.00	\$0.00	\$0.00	\$721.95	\$0.00	\$721.95
565	TECH PREP/SKILLS USA	(\$4,682.67)	\$7,535.00	\$0.00	\$0.00	\$2,852.33	\$0.00	\$2,852.33
570	AUTO/WELDING	\$1,263.74	\$0.00	\$0.00	\$0.00	\$1,263.74	\$0.00	\$1,263.74
575	POWER DRIVE	\$76.57	\$0.00	\$0.00	\$0.00	\$76.57	\$0.00	\$76.57
580	PAY TO PLAY	\$92.17	\$0.00	\$0.00	\$0.00	\$92.17	\$0.00	\$92.17
600	PHYSICAL EDUCATION	\$34.11	\$0.00	\$0.00	\$0.00	\$34.11	\$0.00	\$34.11
615	REVOLVING ACCT	\$250.12	\$0.00	\$0.00	\$0.00	\$250.12	\$0.00	\$250.12
620	NOW ACCOUNT	\$12,195.93	\$138.63	\$0.00	\$0.00	\$12,334.56	\$0.00	\$12,334.56
700	SOCIAL STUDIES SCHOL	\$50.00	\$0.00	\$0.00	\$0.00	\$50.00	\$0.00	\$50.00
800	ATHLETICS	\$53,584.17	\$19,351.20	\$(17,283.29)	(\$700.00)	\$54,952.08	\$0.00	\$54,952.08
825	WEIGHTROOM	\$129.19	\$0.00	\$0.00	\$0.00	\$129.19	\$0.00	\$129.19
850	PRIDE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
860	AOK	\$393.91	\$0.00	\$0.00	\$0.00	\$393.91	\$0.00	\$393.91
865	HOPE SQUAD	\$162.42	\$0.00	\$0.00	\$0.00	\$162.42	\$0.00	\$162.42
870	STUDENT HELP FUND	\$474.48	\$60.00	\$0.00	\$0.00	\$534.48	\$0.00	\$534.48
900	MEMORIALS	\$70.00	\$0.00	\$0.00	\$0.00	\$70.00	\$0.00	\$70.00
950	IPAD FEES	\$5,228.41	\$0.00	\$0.00	\$0.00	\$5,228.41	\$0.00	\$5,228.41
955	HORTICULTURE	\$505.00	\$0.00	\$0.00	\$0.00	\$505.00	\$0.00	\$505.00
2015	CLASS OF 2015	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2016	CLASS OF 2016	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2017	CLASS OF 2017	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2018	CLASS OF 2018	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2019	CLASS OF 2019	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2020	CLASS OF 2020	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2021	Class of 2021	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2022	CLASS OF 2022	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2023	CLASS OF 2023	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2024	CLASS OF 2024	(\$444.00)	\$0.00	\$0.00	\$0.00	(\$444.00)	\$0.00	(\$444.00)
2025	CLASS OF 2025	(\$1,066.36)	\$2,127.95	\$0.00	\$0.00	\$1,061.59	\$0.00	\$1,061.59
2026	CLASS OF 2026	\$3,453.18	\$0.00	\$0.00	\$0.00	\$3,453.18	\$0.00	\$3,453.18
2027	CLASS OF 2027	\$3,659.00	\$0.00	\$0.00	\$0.00	\$3,659.00	\$0.00	\$3,659.00
2028	CLASS OF 2028	\$1,539.00	\$0.00	\$0.00	\$0.00	\$1,539.00	\$0.00	\$1,539.00

SEWARD HIGH SCHOOL

General Ledger Report

Financial Report

From Date: 7/1/2025  
To Date: 07/31/2025

From Acct: 1  
To Acct: 999999

Activity Accounts Grand Total	\$294,042.38	\$52,797.14	\$(27,339.12)	\$0.00	\$319,500.40	\$0.00	\$319,500.40
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GL Accounts

GL Acct	Begin Bal	Recpt / JV	Disb / JV	Transfers	End Bal	YTD Payables	Work Bal
992 CHECK ACCOUNT	\$294,042.38	\$52,797.14	\$(27,339.12)	\$0.00	\$319,500.40	\$0.00	\$319,500.40
General Ledger Grand Total	\$294,042.38	\$52,797.14	\$(27,339.12)	\$0.00	\$319,500.40	\$0.00	\$319,500.40

I have reviewed the above ledger report and attached reports for the current month. I find them accurate and complete to the best of my knowledge.

Bookkeeper: Mary Russell Date: 8/5/25  
Principal: [Signature] Date: 8/5/25

**SEWARD HIGH SCHOOL  
Bank Reconciliation Report**

Date From 7/1/2025  
Date to 07/31/2025

**Checking Account  
992**

Ending Balance on Statement Dated : 07/31/2025	\$351,409.78
Outstanding Deposits (Bank Deposits) -> +	\$0.00
Less Outstanding Checks:	\$31,909.38
Cash Balance as of : 07/31/2025	<u>\$319,500.40 ***</u>

Cash Balance for Checking as of 7/1/2025	\$294,042.38
Add: Total Deposits (Bank Deposits):	\$52,797.14
Less: Total Checks and Withdrawals:	(\$27,339.12)
Computer Cash Balance as of : 07/31/2025	<u>\$319,500.40 ***</u>

**Summary of Asset Accounts**

Gl Acct	Account Name	Begin Bal	Recpt/JV	Disb/JV	Transfer	End Bal.
992	CHECK ACCOUNT	\$294,042.38	\$52,797.14	(\$27,339.12)	\$0.00	\$319,500.40 ***
<b>Grand Total</b>		<b>\$294,042.38</b>	<b>\$52,797.14</b>	<b>(\$27,339.12)</b>	<b>\$0.00</b>	<b>\$319,500.40</b>

I have reviewed the above ledger report and attached reports for the current month. I find them accurate and complete to the best of my knowledge.

Bookkeeper: Mary Russell Date: 8/5/25  
Principal: [Signature] Date: 8/5/25

**\*\*\* Entries Must Match**

**SEWARD HIGH SCHOOL**  
**Reconciliation Activity Account Report**

**From Date:** 7/1/2025  
**To Date:** 07/31/2025

**From Acct:** 800  
**To Acct:** 800

Date	Payee Source Note	Invoice	PO	Doc Ref	Recp/JV	Disb/JV	Transfer	Balance	Offset Acct
<b>Activity Acct: 800 - ATHLETICS</b>								<b>Beginning Balance: \$53,584.17</b>	
<b>Advisor: Scott Curry</b>									
7/9/25	LINCOLN NE FCA SHS TEAM SPONSORSHIP		17581	62445	\$0.00	\$600.00	\$0.00	\$52,984.17	992
7/9/25	MENARDS - LINCOLN NOI 19496 ATHLETIC SHELVES, TOTES		17575	62446	\$0.00	\$787.80	\$0.00	\$52,196.37	992
7/9/25	ELAN FINANCIAL SERVIC STATE TRACK ROOMS		17578	62447	\$0.00	\$2,067.00	\$0.00	\$50,129.37	992
7/9/25	SEWARD COUNTY INDEP ACTIVITY PASSES 25/26	217487	17573	62451	\$0.00	\$90.00	\$0.00	\$50,039.37	992
7/11/25	RECEIPTS QZ BWL, SOCCER ENTRIES			9037	\$270.00	\$0.00	\$0.00	\$50,309.37	992
7/11/25	AMAZON CAPITAL SERVI GORILLA MOUNTING TAPE		17535	62454	\$0.00	\$86.96	\$0.00	\$50,222.41	992
7/16/25	RECEIPTS COCA-COLA CONTRACT PMNT			9045	\$13,000.00	\$0.00	\$0.00	\$63,222.41	992
7/16/25	AWARDS UNLIMITED UNIF BOWLING TROPHY PLATE	306053	17375	62463	\$0.00	\$38.50	\$0.00	\$63,183.91	992
7/16/25	AWARDS UNLIMITED AWARDS, MEDALS '25-'26	313882	17375	62463	\$0.00	\$1,012.25	\$0.00	\$62,171.66	992
7/16/25	ROGERS ATHLETIC COMP RUNNING ROPES	312234	16571	62464	\$0.00	\$250.00	\$0.00	\$61,921.66	992
7/16/25	NSAA MEMBRSH/ACTIVITY FEES 25/26		17374	62465	\$0.00	\$1,925.00	\$0.00	\$59,996.66	992
7/23/25	RECEIPTS DISTRICT REIMB - SPRING			9048	\$6,081.20	\$0.00	\$0.00	\$66,077.86	992
7/30/25	Transfer out SMUTNY SCHOLARSHIP 2025				\$0.00	\$0.00	(\$100.00)	\$65,977.86	200
7/30/25	Transfer out BOWMASTER SCHOLARSHIP 2025				\$0.00	\$0.00	(\$600.00)	\$65,377.86	270
7/30/25	BLACK SQUIRREL ENTER XC TIMING SERV - THORELL INVIT		17379	62468	\$0.00	\$1,218.40	\$0.00	\$64,159.46	992
7/30/25	BSN SPORTS BADEN SOFTBALLS	930176368	17373	62474	\$0.00	\$308.00	\$0.00	\$63,851.46	992
7/30/25	BSN SPORTS FB GEAR BAGS, SCR CAPS, BALLS	930176358	16967	62475	\$0.00	\$4,469.44	\$0.00	\$59,382.02	992
7/30/25	BSN SPORTS ADMIN JACKETS	930176369	17382	62475	\$0.00	\$483.00	\$0.00	\$58,899.02	992
7/30/25	BSN SPORTS VB SCOREBKS, BAGS, BALLS	930176365	17382	62475	\$0.00	\$3,946.94	\$0.00	\$54,952.08	992
<b>Totals</b>					<b>\$19,351.20</b>	<b>\$17,283.29</b>	<b>(\$700.00)</b>	<b>\$54,952.08</b>	
								<b>Accounts Payable</b>	<b>\$0.00</b>
								<b>Working Balance</b>	<b>\$54,952.08</b>
								<b>Currently Encumbered (PO)</b>	<b>\$0.00</b>

I have reviewed the above ledger report and attached reports for the current month. I find them accurate and complete to the best of my knowledge.

Bookkeeper: Mary Russell Date: 8/5/25  
Principal: [Signature] Date: 8/5/25

**SCHOOL DISTRICT OF SEWARD  
PROPOSED WARRANTS  
AUGUST 11, 2025**

Salaries for July	Salaries	616,239.45
Jones Bank	FIT/FICA	7,702.21
Tennessee Child Support	Garnishment	9.99
Tyler Technologies	Transportation	480.00
Pitney Bowes	Postage	2,500.00
Jones Bank	FIT/FICA	1,078.82
Jones Bank	FIT/FICA	179,785.43
Nebraska Child Support	Garnishment	583.00
ASPIRE	403b	10,610.00
Jones Bank	FIT/FICA	8,365.96
Tennessee Child Support	Garnishment	9.99
NPERS	Retirement	136,311.17
NE Dept. of Revenue	State Tax	28,154.22
Inspira Financial	Section 125	10,335.59
3D Molecular Designs	Supplies	184.00
All Road Barricades, Inc	Grounds	387.44
Allen, Jennifer	Pupil Services	2,362.06
Allo	Phone	177.00
Amazon Capital Services	Supplies	1,220.70
Ameritas	Vision Insurance	1,177.12
ASCD	Dues & Fees	119.00
Association for Middle Level Education	Dues & Fees	74.98
Barton Solvents, Inc	Maintenance	2,016.60
Bern's Body Shop Inc	Transportation	510.00
Bishop Business	Supplies	98.30
Blick Art Materials	Supplies	1,745.60
Blue Cross Blue Shield	Health Insurance	260,325.90
Boaz, Cyndi	Other	174.00
Campbells Cleaning	Services	15,968.32
CDWG	Tech. Supplies	265.74
Central Valley Ag	Fuel	24,653.50
City of Seward Utility Dept	Utilities	33,605.09
Computer Hardware	Tech. Repairs	1,513.00
Crouch's Farm & Hardware	Grounds	403.75
Culligan	Maintenance	40.00
DAS	Distance Learning	292.87
Data Center Warehouse	Subscription	36,546.78
Eakes	Supplies	886.25
Ehresman, Jady	St. Vincent Title IIA	856.25
Elan Financial Services	Staff Dev	2,455.28
ESU 6	ESU Expense	27,407.68
ESU Coordinating Council	Subscription	2,601.00
Farmers Coop	Transportation	1,610.00
Follett	Books	423.58
Gimkit	Software	1,000.00
Go Physical Therapy	Pupil Services	2,188.85
Grainger	SPED Repairs	242.36
Hampton Inn-Kearney	Travel	2,938.95
Heartland Tires & Treads	Transportation	4,050.20
Imagine Learning LLC	Subscription	4,326.00
Inspira Financial	Section 125	137.70
John Deere Financial	Maint. Of Equip	71.88

**SCHOOL DISTRICT OF SEWARD  
PROPOSED WARRANTS  
AUGUST 11, 2025**

JourneyEd.com, Inc	Software	1,500.00
Kozisek, Morgan	Phone	40.00
KSB School Law	Legal Fees	72.00
Lampe's Glen Air Specialists	Maintenance	1,123.30
Langner, Katie	Mileage/Phone	290.00
Learning Forward	Staff Dev	190.00
Lee's Refrigeration	Hot Lunch Equipment	63,562.79
Madison National Life	LTD Ins.	2,967.02
Matheson	Supplies	605.85
Meehl, Jan	Pupil Services	769.50
Menards	Maintenance	29.40
MFAC, LLC	Supplies	102.95
Middle Creek Printing	Supplies	707.00
Midwest Alarm Services	Maintenance	1,511.01
Midwest Auto Parts	Transportation	321.75
Midwest Turf & Irrigation	Maint. Of Equip	317.21
MOTE Technologies	Software	98.00
Murman, Amanda	Staff Dev	80.17
NACIA	Dues & Fees	40.00
Nebraska ASCD	Dues & Fees	40.00
Nebraska Council of School Admin	Staff Dev	4,514.00
Nebraska Safety Center UNK	Transportation	350.00
Noregon Systems, LLC	Transportation	7,499.54
NSIAAA	Dues & Fees	450.00
Omnify	Insurance	20.90
One Source	Admin. Expense	92.00
O'Reilly	Transportation	208.09
Pac N Save	Grounds	164.17
Paper Tiger	Business Support	35.00
Piskorski, Pat	Subscription	72.00
Quality Resource Group	Supplies	2,638.69
Ratkovec, Tina	Mileage	68.90
Reed Electric	Grounds Repairs	2,111.92
Region 1 Principals	Dues & Fees	225.00
Safety-Kleen	Transportation	412.10
Schaefer Concrete, LLC	Grounds Repairs	22,333.00
Scholastic	Periodicals	577.12
Seward County Independent	Advertising	1,349.25
Seward Lumber	Equipment	281.47
Seward Wellness Center	Gym	1,140.00
Sherwin Williams	Maintenance	5,871.81
SiteOne Landscape Supply	Grounds	748.16
Summit Fire Protection	Maintenance	3,458.55
Telecky, Marty	Transportation	38.68
Time Management System, Inc	Postage	61.66
Truck Center Companies	Transportation	8,923.50
Uline	Sixpence/Hot Lunch	6,513.02
Unite Private Networks	Distance Learning	3,597.43
University of Nebraska Lincoln	Staff Dev	105.00
UNUM	Life Ins.	543.60
Uribe	Services	2,647.00

**SCHOOL DISTRICT OF SEWARD  
PROPOSED WARRANTS  
AUGUST 11, 2025**

US Bank	Lease	1,209.99
Verizon	Telephone	297.36
Visa	Sixpence	107.69
Waterlink	Maintenance	5,114.31
Windstream	Phone	318.10
Zultys	Phone	2,319.75
<b>TOTAL GENERAL FUND CLAIMS</b>		<b>1,598,010.27</b>

**SCHOOL DISTRICT OF SEWARD  
PROPOSED SPECIAL BUILDING FUND CLAIMS  
AUGUST 11, 2025**

<b>FACILITY ADVOCATES</b>	<b>H.S. BOILER PROJECT</b>	<b>57,250.00</b>
	<b>TOTAL</b>	<b>57,250.00</b>

**SCHOOL DISTRICT OF SEWARD  
PROPOSED DEPRECIATION FUND CLAIMS  
AUGUST 11, 2025**

<b>STANBURY UNIFORMS INC</b>	<b>HIGH SCHOOL BAND UNIFORMS</b>	<b>74,852.42</b>
		<b>TOTAL    <u>74,852.42</u></b>