



Grade 3: **Mathematics**

Quarter 1: Curriculum & Pacing Guide

Quarter Overview

Students develop foundational understandings of multiplication and division by working with equal groups, arrays, skip-counting, and related equations. They interpret multiplication as finding a total and division as finding the number or size of equal groups, while using properties of operations to develop efficient strategies with factors of 2, 3, 4, 5, and 10.

Students then apply place-value understanding to measurement contexts involving length, mass, liquid volume, and time. They use number lines to round numbers, solve elapsed-time problems, and add and subtract within 1,000. Throughout the units, students represent and solve one- and two-step problems using models, drawings, equations, and precise mathematical language.

Essential Questions

- How can equal groups and arrays represent multiplication and division?
- What do the factors in a multiplication equation represent?
- How can division help us find the number or size of equal groups?
- How are multiplication and division related?
- How can skip-counting and known facts help us multiply and divide?
- How can the commutative and distributive properties help us solve multiplication problems?
- How can models, drawings, and equations represent multiplication and division situations?
- How can we solve problems involving measurements and elapsed time?
- How can estimation help us determine whether an answer is reasonable?
- How can place value help us estimate, add, and subtract?
- How can a number line help us round numbers to the nearest ten or hundred?
- How do we select appropriate tools and units to measure length, mass, and liquid volume?
- How can we use multiple operations to solve one- and two-step problems?
- How can we explain and justify our mathematical reasoning?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Third Grade Quarter 1: *I can statements* (1-9 Weeks)

- I can use equal groups and arrays to represent multiplication and division.
 - I can explain what the factors in a multiplication equation mean.
 - I can use division to find the number or size of equal groups.
 - I can show how multiplication and division are related.
 - I can use the commutative and distributive properties to solve multiplication problems.
 - I can use models, drawings, and equations to represent multiplication and division.
 - I can measure length, mass, and liquid volume using the right tools and units.
 - I can use a number line to round numbers to the nearest ten or hundred.
 - I can use place value to estimate, add, and subtract.
 - I can solve one- and two-step problems using multiple operations.
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Module 1 Reference — Multiplication and Division with Units of 2, 3, 4, 5, and 10 (Weeks 2–7)

Standards Addressed — Module 1

- CC.2.2.3.A.1 — Algebraic Concepts: represent and solve problems involving multiplication and division
- CC.2.2.3.A.2 — Algebraic Concepts: apply properties of operations as strategies to multiply and divide
- CC.2.2.3.A.3 — Algebraic Concepts: understand division as an unknown-factor problem
- CC.2.2.3.A.4 — Algebraic Concepts: determine the unknown whole number in a multiplication or division equation

Vocabulary

Content: commutative property of multiplication, division, divide, divided by, factor, multiplication, multiply, parentheses, (), product, quotient, rotate, size of group

Familiar: array, column, equal parts, equal shares, equal sharing, equation, estimate (noun); estimate (verb), expression, number in (or size of) each group, number of groups, repeated addition, row, skip count, unit, unit form, unknown

Academic: no new academic vocabulary introduced

Materials Needed

100-bead demonstration rekenrek · Color tiles · Colored pencils, pencils · Crackers · Dry erase markers, erasers · Whiteboards · Envelopes · Interlocking cubes · Paper plates · Scissors · Sticky notes · Wood rulers (inch and metric)

Curriculum Resources

Eureka Math² Module 1 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](#) ·
Student Learn Book — Module 1 / Teach Book

Module 2 Reference — Place Value Concepts Through Metric Measurement (Weeks 7–9, continues into Q2)

Standards Addressed — Module 2

- CC.2.4.3.A.1 — Data & Measurement: measure and estimate liquid volumes and masses of objects using standard units
- CC.2.4.3.A.2 — Data & Measurement: represent and interpret data using scaled bar graphs and other representations
- CC.2.4.3.A.4 — Data & Measurement: solve problems involving measurement and estimation
- CC.2.1.3.B.1 — Number & Operations: use place value understanding to round whole numbers to the nearest ten or hundred
- CC.2.2.3.A.4 — Algebraic Concepts: determine the unknown whole number in an equation (applied to measurement contexts)

Vocabulary

Content: capacity, gram, kilogram, liquid volume, liter, milliliter, operation, round, rounding, scaled bar graph, standard algorithm

Familiar and academic vocabulary for Module 2 continues to be introduced as the module carries into Quarter 2; see the Q2 guide for the complete list.

Materials Needed

Eureka Math² place value disks set (one to one thousand) · Eureka Math² tape measure (150 cm) · Eureka Math² whole number place value cards

Curriculum Resources

Eureka Math² Module 2 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](#) ·
Student Learn Book — Module 2 / Teach Book

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
1	Getting Started	Establish Routines & Classroom Procedures	No new content lessons this week	Set up math routines, tools, and norms for the year
2	Module 1	Multiplication and Division with Units of 2, 3, 4, 5, and 10	Lessons 1–3: Conceptual Understanding of Multiplication BOY MAP Growth	How can equal groups and arrays represent multiplication and division?
3	Module 1	Multiplication and Division with Units of 2, 3, 4, 5, and 10	Lessons 4–5: Conceptual Understanding of Multiplication Lessons 6–7: Conceptual Understanding of Division	What do the factors in a multiplication equation represent? How can division help us find the number or size of equal groups?
4	Module 1	Multiplication and Division with Units of 2, 3, 4, 5, and 10	Lessons 8–9: Conceptual Understanding of Division Lessons 10–12: Properties of Multiplication	How are multiplication and division related?
5	Module 1	Multiplication and Division with Units of 2, 3, 4, 5, and 10	Lessons 13–14: Properties of Multiplication Lessons 15–17: Two Interpretations of Division	How can the commutative and distributive properties help us solve multiplication problems? How can skip-counting and known facts help us multiply and divide?
6	Module 1	Multiplication and Division with Units of 2, 3, 4, 5, and 10	Lesson 18: Two Interpretations of Division Lessons 19–22: Applications of Multiplication and Division Concepts	How can models, drawings, and equations represent multiplication and division situations?
7	Module 1 → 2	Applications of Mult./Div.; Module 1 Review & Assessment; Begin Place Value Through Metric Measurement	Lesson 23: Applications of Multiplication and Division Concepts; Module 1 Review; Module 1 Assessment Lessons 1–2: Understanding Place Value Concepts Through Metric Measurement	How can we explain and justify our mathematical reasoning?

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
8	Module 2	Place Value Concepts Through Metric Measurement	Lessons 3–7: Understanding Place Value Concepts Through Metric Measurement	<i>How do we select appropriate tools and units to measure length, mass, and liquid volume?</i>
9	Module 2	Place Value Concepts Through Metric Measurement	Lessons 8–12: Rounding to the Nearest Ten and Hundred	<i>How can a number line help us round numbers to the nearest ten or hundred? How can place value help us estimate, add, and subtract?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Conceptual Understanding of Multiplication (Weeks 2–3)	Use equal groups of real objects (crackers, counters) before moving to arrays; use the sentence frame: "There are ___ groups of ___."	Write both a repeated-addition equation and a matching multiplication equation for the same array; solve problems with larger factors (up to 10).
Conceptual Understanding of Division (Weeks 3–4)	Use real objects to physically share into equal groups (equal sharing) before recording the equation; keep totals small and evenly divisible.	Solve division problems using both interpretations (equal groups and equal sharing) and explain how they're related; connect to a multiplication fact family.
Properties of Multiplication (Weeks 4–5)	Use arrays that can be physically rotated to show the commutative property; break apart one factor using color tiles to model the distributive property.	Use the distributive property to solve a multiplication fact by breaking apart a factor in more than one way; explain why the property works.
Two Interpretations of Division (Weeks 5–6)	Use counters to model "how many groups?" and "how many in each group?" as two separate, concrete scenarios with the same numbers.	Write word problems that require each interpretation of division and explain how to tell them apart from the problem's wording.
Applications of Multiplication and Division (Weeks 6–7)	Use the Read–Draw–Write process with a sentence frame for each step; solve one-step problems before combining into two-step problems.	Solve two-step problems using both multiplication and division; write an original multi-step word problem for a partner.
Place Value Through Metric Measurement (Weeks 7–8)	Use place value disks alongside real metric tools (rulers, scales) to connect the number to the measurement; keep measurements within familiar, round numbers.	Compare and order several measurements in different metric units; explain how place value helps read a scaled instrument precisely.
Rounding to the Nearest Ten and Hundred (Week 9)	Use a physical or drawn number line with the target numbers marked; model "which ten/hundred is it closer to" with a partner before rounding independently.	Round larger numbers to the nearest ten and hundred and explain the rule for numbers exactly halfway; use rounding to estimate sums and differences.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (counters, arrays, place value disks) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "factor," "quotient," and "commutative property" — using visuals and hands-on modeling before the whole-group lesson.
- Keep factors/quotients within a smaller, familiar range (e.g., 2s and 5s) while a strategy is new, then extend to the full set of units (2, 3, 4, 5, 10).
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on multiplication, division, or measurement tasks.
- Break two-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend multiplication/division facts beyond the units of 2, 3, 4, 5, and 10, or introduce two-step problems combining both operations.
- Ask students to justify in writing why one property (commutative, distributive) makes a problem easier to solve.
- Challenge students to represent the same multiplication fact multiple ways (array, equal groups, repeated addition, equation) and explain the connections.
- Have students create original word problems for a partner that require a specific strategy or property.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "factor," "quotient," "capacity," "estimate") with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "There are ___ groups of ___, so the total is ___." or "I rounded to ___ because ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 3: **Mathematics**

Quarter 2: Curriculum & Pacing Guide

Quarter Overview

Students strengthen place-value understanding through real-world measurement experiences involving length, mass, and liquid volume. They estimate and measure using metric units, represent measurements on number lines, round numbers to the nearest ten and hundred, and use place-value strategies to add and subtract within 1,000.

Students then extend their understanding of multiplication and division to units of 0, 1, 6, 7, 8, 9, 11, and 12. They use arrays, properties of operations, known facts, and the relationship between multiplication and division to develop efficient strategies and greater fact fluency. Throughout the units, students apply their learning to one- and two-step problems and explain their reasoning with models, drawings, equations, and mathematical language.

Essential Questions

- How does place value help us read, represent, compare, and calculate with numbers?
- How can a number line help us understand the size and value of numbers?
- How can we round numbers to the nearest ten or hundred?
- How does estimation help us determine whether an answer is reasonable?
- How do we select an appropriate metric unit and tool for measuring an object?
- How are different metric units related?
- How can we use place value to add and subtract measurements within 1,000?
- How can addition and subtraction help us solve measurement problems?
- How can known multiplication facts help us find unknown facts?
- How can arrays and equal groups represent multiplication and division?
- How are multiplication and division related?
- How can the properties of operations help us multiply and divide efficiently?
- What patterns can help us multiply and divide by 0, 1, 6, 7, 8, 9, 11, and 12?
- How can we determine which multiplication or division strategy is most efficient?
- How can we use multiple operations to solve one- and two-step problems?
- How can models, equations, and explanations communicate and justify our mathematical thinking?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically

- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Third Grade Quarter 2: *I can statements* (10-18 Weeks)

- **I can** use place value strategies to add and subtract within 1,000.
 - **I can** solve measurement problems using addition and subtraction.
 - **I can** use arrays and equal groups to represent multiplication and division.
 - **I can** use known multiplication facts to find unknown facts.
 - **I can** show how multiplication and division are related.
 - **I can** find patterns to help me multiply and divide by 0, 1, 6, 7, 8, 9, 11, and 12.
 - **I can** use properties of operations to multiply and divide efficiently.
 - **I can** choose the most efficient multiplication or division strategy for a problem.
 - **I can** multiply by multiples of 10.
 - **I can** use models, equations, and words to explain my mathematical thinking.
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Module 2 Reference — Place Value Through Metric Measurement, continued (Weeks 10–12)

Standards Addressed

- CC.2.1.3.B.1 — Number & Operations: use place value understanding to round whole numbers; add and subtract using place value strategies
- CC.2.4.3.A.1 — Data & Measurement: measure and estimate liquid volumes and masses of objects using standard units
- CC.2.4.3.A.4 — Data & Measurement: solve problems involving measurement and estimation, including addition and subtraction of measurements

Vocabulary

Content vocabulary was introduced in Quarter 1 (see the Q1 guide) — this quarter adds:

Familiar: about, addend, bar graph, benchmark, centimeters, more than, less than, about the same, compose, decompose, divide, estimate (noun); estimate (verb), exchange, bundle, unbundle, rename, halfway, heavier, lighter, horizontal, interval, measure, mental math, meters, multiply, number line, place value units, plot, simplifying strategy, temperature, tick mark, vertical, weight

Academic: determine, examine, locate

Materials Needed

2-liter containers, bottle of liquid food coloring (blue) · Clear plastic cups, containers (1L, >1L, <1L) · Thermometer, digital compact scale with 5-cup bowl · Dry erase markers, erasers · Whiteboards · Envelopes · Graduated cylinder (100 mL, 1,000 mL) · Index cards, interlocking cubes · Chart paper, sticky notes · Pencils, markers · Plastic pitchers (1.5 L or larger) · Platform scales · Resealable bags (gallon and sandwich size) · Roll of painter's tape · Syringe

Curriculum Resources

Eureka Math² Module 2 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](https://www.happy-numbers.com) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 2 / Teach Book · Eureka Math² place value disks set (one to one thousand) · Eureka Math² tape measure (150 cm) · Eureka Math² whole number place value cards

Module 3 Reference — Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9 (Weeks 13–18)

Standards Addressed

- CC.2.2.3.A.1 — Algebraic Concepts: represent and solve problems involving multiplication and division
- CC.2.2.3.A.2 — Algebraic Concepts: apply properties of operations as strategies to multiply and divide
- CC.2.2.3.A.3 — Algebraic Concepts: understand division as an unknown-factor problem
- CC.2.2.3.A.4 — Algebraic Concepts: determine the unknown whole number in a multiplication or division equation
- CC.2.1.3.B.1 — Number & Operations: use place value understanding, including patterns when multiplying/dividing by 10

Vocabulary

Content: multiple

Familiar: array, column, commutative property, distribute, divide, division, divided by, equal groups, equation, estimate (verb), estimate (noun), even number, expression, factor, multiplication, multiply, number bond, odd number, parentheses, product, quotient, row, skip count, tape diagram, unit, unit form, unknown, value

Academic: apply

Materials Needed

100-bead demonstration rekenrek · Chart paper · Colored pencils · Dry erase markers, whiteboards, erasers · Envelopes · Interlocking cubes · Pencils · Scissors · Sticky notes · Highlighters

Curriculum Resources

Eureka Math² Module 3 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](https://www.happy-numbers.com) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 3 / Teach Book · Eureka Math² numeral cards (set of 12) · Eureka Math² place value disks set (ones to thousands)

Module 4 Preview — Multiplication & Area (Begins Week 18, continues into Q3)

Standards Addressed (so far)

- CC.2.1.3.B.1 — Number & Operations: use place value understanding to support multiplication involving area
- CC.2.4.3.A.5 — Data & Measurement: relate area to the operations of multiplication and addition

Vocabulary

Content (introduced so far): area, area model, length, side length, square centimeter, square inch, square units, unit square, width

Materials & Resources

The source pacing guide references its full materials list on the Quarter 3 document, since Module 4 continues there — see the Q3 guide for the complete list.

Eureka Math² Module 4 Manual · greatminds.com website · Happy Numbers · iXL.com · Student Learn Book — Module 4 / Teach Book

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
10	Module 2	Place Value Through Metric Measurement, continued	Lessons 13–17: Simplifying Strategies to Find Sums and Differences	<i>How does place value help us read, represent, compare, and calculate with numbers?</i>
11	Module 2	Place Value Through Metric Measurement	Lessons 18–19: Simplifying Strategies to Find Sums and Differences Lessons 20–22: Two- and Three-Digit Measurement Addition and Subtraction	<i>How can we use place value to add and subtract measurements within 1,000?</i>
12	Module 2	Two- and Three-Digit Measurement Addition/Subtraction; Module 2 Review & Assessment	Lessons 23–25: Two- and Three-Digit Measurement Addition and Subtraction Module 2 Review; Module 2 Assessment	<i>How can addition and subtraction help us solve measurement problems?</i>
13	Module 3	Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	Lessons 1–5: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8	<i>How can arrays and equal groups represent multiplication and division?</i>
14	Module 3	Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	Lesson 6: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lessons 7–10: Multiplication and Division Concepts with an Emphasis on the Unit of 7	<i>How can known multiplication facts help us find unknown facts?</i>
15	Module 3	Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	Lessons 11–12: Multiplication and Division Concepts with an Emphasis on the Unit of 7 Lessons 13–15: Analysis of Patterns Using Units of 9, 0, and 1	<i>What patterns can help us multiply and divide by 0, 1, 6, 7, 8, 9, 11, and 12?</i>

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
16	Module 3	Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	Lessons 16–19: Analysis of Patterns Using Units of 9, 0, and 1	<i>How can the properties of operations help us multiply and divide efficiently?</i>
17	Module 3	Multiplication with Multiples of 10; Module 3 Review	Lesson 20: Multiplication with Multiples of 10 and Further Application of Concepts Lessons 21–25: Multiplication with Multiples of 10 and Further Application of Concepts; Module 3 Review	<i>How can we determine which multiplication or division strategy is most efficient?</i>
18	Module 3 → 4	Module 3 Assessment; MOY MAP Growth; Begin Multiplication & Area	Module 3 Assessment MOY MAP Growth Lessons 1–3: Foundations for Understanding Area	<i>How can models, equations, and explanations communicate and justify our mathematical thinking?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Simplifying Strategies to Find Sums/Differences (Weeks 10–11)	Use place value disks to model composing/decomposing a ten or hundred step by step; keep measurement numbers within a smaller, friendly range.	Add/subtract mentally using compensation or simplifying strategies without disks; explain the strategy used in writing.
Two- and Three-Digit Measurement Addition/Subtraction (Weeks 11–12)	Use place value disks alongside the standard algorithm, modeling each regrouping step explicitly before recording it.	Solve measurement addition/subtraction problems requiring two regroupings; choose between mental math and the standard algorithm and justify the choice.
Multiplication/Division with Units of 6 and 8 (Weeks 13–14)	Build on known facts (e.g., use the 5s fact plus one more group to find a 6s fact); use arrays with rows highlighted.	Derive unknown facts from known facts using the distributive property in more than one way; explain the strategy in writing.
Multiplication/Division with the Unit of 7 (Weeks 14–15)	Use a times-table chart with known facts (2s, 5s, 10s) highlighted to help derive 7s facts; use skip counting with visual support.	Solve unknown 7s facts by combining two known facts (e.g., $5 \times 7 + 2 \times 7$); explain the reasoning without a chart.
Analysis of Patterns Using Units of 9, 0, and 1 (Weeks 15–16)	Use a hundreds chart to highlight the 9s pattern (tens digit increases, ones digit decreases); use concrete examples for the 0 and 1 rules.	Explain in writing why multiplying by 0 always gives 0 and multiplying by 1 keeps the number the same; find and describe the 9s pattern independently.
Multiplication with Multiples of 10 (Week 17)	Use base-10 blocks or place value disks to model multiplying a single digit by a multiple of ten (e.g., 3×20 as 3 groups of 2 tens).	Multiply larger numbers by multiples of 10 mentally using place value patterns; explain the pattern connecting basic facts to their multiples of ten.
Foundations for Understanding Area (Week 18)	Use square tiles to physically cover a shape and count them before introducing the term "square units"; keep shapes small and rectangular.	Find area by multiplying length $\times$ width without counting individual squares; explain the connection between area and multiplication arrays.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (place value disks, measurement tools, arrays) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "multiple," "distribute," and measurement units — using visuals and hands-on modeling before the whole-group lesson.
- Anchor new multiplication/division facts to known facts (2s, 5s, 10s) rather than introducing them in isolation.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on measurement or multiplication tasks.
- Break two-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend measurement addition/subtraction problems to require two regroupings, or multiplication facts beyond the units taught this quarter.
- Ask students to justify in writing why one strategy (known-fact derivation, distributive property) is more efficient than another for a given problem.
- Challenge students to represent the same fact multiple ways (array, equal groups, equation) and explain the connections.
- Have students create original word problems for a partner that require a specific measurement or multiplication strategy.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "multiple," "distribute," "estimate," metric unit names) with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "I know $__ \times __$, so $__ \times __$ must be $__$." or "I measured using $__$ because $__$."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 3: **Mathematics**

Quarter 3: Curriculum & Pacing Guide

Quarter Overview

Students connect multiplication to area by measuring the space within rectangles using square units. They tile rectangles, create arrays, use multiplication to calculate area, and apply the distributive property to decompose complex figures and find their total area.

Students then develop an understanding of fractions as numbers by partitioning shapes and number lines into equal parts, identifying unit fractions, and representing fractions on a number line. They compare fractions, recognize equivalent fractions, and explore the relationship between the size and number of equal parts in a whole. Throughout the units, students solve real-world problems and use models, drawings, equations, and precise mathematical language to explain their reasoning.

Essential Questions

- What does area measure?
- Why is area expressed in square units?
- How are arrays, multiplication, and area connected?
- How can the dimensions of a rectangle help us determine its area?
- How can rectangles with the same area have different dimensions?
- How can we decompose a figure to find its total area?
- How does the distributive property help us solve area problems?
- How can multiplication help us solve real-world measurement problems?
- What makes the parts of a whole equal?
- What is a unit fraction, and how does it help us build other fractions?
- How can fractions be represented with shapes and on number lines?
- How does the denominator describe the size of the fractional units?
- How does the numerator describe the number of fractional units?
- How can different fractions represent the same amount?
- How can models and number lines help us compare fractions?
- What happens to the size of each part when a whole is divided into more equal parts?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Third Grade Quarter 3: *I can statements* (19-27 Weeks)

- I can explain what area measures and why it's counted in square units.
 - I can show how arrays, multiplication, and area are connected.
 - I can use the dimensions of a rectangle to find its area.
 - I can decompose a figure into smaller rectangles to find its total area.
 - I can use the distributive property to solve area problems.
 - I can partition a whole into equal parts.
 - I can identify a unit fraction and use it to build other fractions.
 - I can show fractions using shapes and number lines.
 - I can compare fractions using models or number lines.
 - I can recognize equivalent fractions that represent the same amount.
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Module 4 Reference — Multiplication & Area (Weeks 19–22)

Standards Addressed

- CC.2.2.3.A.1 — Algebraic Concepts: represent and solve problems involving multiplication, including area contexts
- CC.2.2.3.A.2 — Algebraic Concepts: apply properties of operations (including the distributive property) to find area
- CC.2.2.3.A.4 — Algebraic Concepts: determine an unknown whole number in a multiplication equation involving area
- CC.2.4.3.A.4 — Data & Measurement: solve real-world problems involving area
- CC.2.4.3.A.5 — Data & Measurement: relate area to the operations of multiplication and addition

Vocabulary

Content vocabulary (area, area model, length, side length, square centimeter, square inch, square units, unit square, width) was introduced in Quarter 2 — see the Q2 guide.

Familiar: array, attribute, break apart and distribute, line plot, parallel, polygon, quadrilateral, rectangle, right angle, square, trapezoid

Academic: observe

Materials Needed

Centimeter tiles, square · Chart paper · Color tiles · Colored paper · Colored pencils, markers, pencils · Dry erase markers, erasers · Whiteboards · Envelopes · Highlighters · Index cards · Interlocking cubes · Rulers (inch and metric) · Scissors · Sticky notes

Curriculum Resources

Eureka Math² Module 4 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](https://www.happynumbers.com) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 4 / Teach Book · Eureka Math² numeral cards

Module 5 Reference — Fractions as Numbers (Weeks 22–27)

Standards Addressed

- CC.2.1.3.C.1 — Number & Operations: understand fractions as numbers, including unit fractions and fractions on a number line
- CC.2.3.3.A.2 — Geometry: partition shapes into parts with equal areas and express each part as a unit fraction
- CC.2.4.3.A.1 — Data & Measurement: represent measurement data (including fractional units) using line plots
- CC.2.4.3.A.4 — Data & Measurement: solve problems involving measurement, including fractional quantities

Vocabulary

Content: eighths, equivalent, fifths, fraction form, fraction greater than 1, fractional unit, ninths, sixths, tenths, unit fraction

Familiar: $>$, $=$, $<$ symbols, equal parts, equal shares, fourths, fraction, half, halves, half of, one third of, one fourth of, line plot, number line, partition, plot, thirds, tick mark, unit form, whole, whole number

Academic: identify

Materials Needed

Analog clock · Blank paper, chart paper · Clay, clear plastic cups · Colored pencils, pencils, crayons · Construction paper · Containers · Dry erase markers, erasers, whiteboards · Envelopes, index cards, sticky notes · Glue sticks, highlighters · Masking tape, paper circles, rectangles, strips · Ruler (inch and metric) · Sentence strips · Spool of string · Straws · Wax craft sticks

Curriculum Resources

Eureka Math² Module 5 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 5 / Teach Book · Eureka Math² numeral cards

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
19	Module 4	Multiplication & Area	Lessons 4–5: Foundations for Understanding Area Lessons 6–8: Concepts of Area Measurement	What does area measure? Why is area expressed in square units?
20	Module 4	Multiplication & Area	Lesson 9: Concepts of Area Measurement Lessons 10–12: Applying Properties of Operations to Area Lesson 13: Application of Area	How are arrays, multiplication, and area connected? How can the dimensions of a rectangle help us determine its area?
21	Module 4	Multiplication & Area	Lessons 14–15: Application of Area Lessons 16–18: Application of Area	How can rectangles with the same area have different dimensions? How can we decompose a figure to find its total area?
22	Module 4 → 5	Application of Area; Module 4 Review & Assessment; Begin Fractions as Numbers	Lesson 19: Application of Area; Module 4 Review Module 4 Assessment Lessons 1–2: Partition a Whole Into Equal Parts	How does the distributive property help us solve area problems? What makes the parts of a whole equal?
23	Module 5	Fractions as Numbers	Lessons 3–5: Partition a Whole Into Equal Parts Lessons 6–7: Unit Fractions and Their Relationship to the Whole	What is a unit fraction, and how does it help us build other fractions?
24	Module 5	Fractions as Numbers	Lessons 8–10: Unit Fractions and Their Relationship to the Whole Lessons 11–12: Fractions on the Number Line	How does the denominator describe the size of the fractional units? How does the numerator describe the number of fractional units?

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
25	Module 5	Fractions as Numbers	Lessons 13–16: Fractions on the Number Line Lesson 17: Comparing Fractions	<i>How can fractions be represented with shapes and on number lines?</i>
26	Module 5	Fractions as Numbers	Lessons 18–21: Comparing Fractions Lesson 22: Equivalent Fractions	<i>How can models and number lines help us compare fractions?</i>
27	Module 5	Fractions as Numbers — Equivalent Fractions	Lessons 23–27: Equivalent Fractions	<i>How can different fractions represent the same amount? What happens to the size of each part when a whole is divided into more equal parts?</i>

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Foundations for Area / Concepts of Area Measurement (Weeks 19–20)	Use square tiles to physically cover a rectangle and count them before introducing "square units"; keep rectangles small.	Predict the area of a rectangle before tiling it, then check by counting; explain why area is measured in square units rather than linear units.
Applying Properties of Operations to Area (Week 20)	Use an array model to show length $\times$ width as repeated addition before introducing the multiplication equation.	Use the distributive property to break a rectangle into two smaller rectangles and find area both ways; explain why the totals match.
Application of Area — Decomposing Figures (Weeks 20–22)	Provide a composite figure with the decomposition lines already drawn; find the area of each smaller rectangle before adding.	Decompose a complex figure into rectangles independently, choosing where to split it; solve real-world area word problems with two steps.
Partition a Whole Into Equal Parts (Weeks 22–23)	Fold or cut physical shapes into equal parts hands-on before drawing; use the sentence frame: "This whole is divided into ___ equal parts."	Partition the same whole into different numbers of equal parts and compare the size of each part; explain why more parts means smaller pieces.
Unit Fractions and Their Relationship to the Whole (Weeks 23–24)	Use fraction strips or circles to build a whole from unit fractions one piece at a time, naming each piece as it's added.	Build fractions greater than 1 using unit fractions; explain how the denominator and numerator relate to the size and number of parts.
Fractions on the Number Line (Weeks 24–25)	Use a physical number line (string or tape) with endpoints and the halfway point marked; place unit fractions one at a time with teacher modeling.	Plot fractions greater than 1 on a number line independently; explain how the number line shows a fraction as a distance from zero.
Comparing Fractions (Weeks 25–26)	Compare fractions with the same denominator first using fraction strips placed side by side; use the same-numerator case next with a visual model.	Compare fractions with different numerators and denominators using benchmark fractions (e.g., $\frac{1}{2}$) or common denominators; justify comparisons in writing.
Equivalent Fractions (Weeks 26–27)	Use fraction strips or circles to physically overlay two fractions and see that they cover the same amount; start with familiar pairs ($\frac{1}{2} = \frac{2}{4}$).	Generate a set of equivalent fractions for a given fraction; explain using a number line or area model why two fractions are equivalent.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (square tiles, fraction strips, physical number lines) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "unit fraction," "equivalent," and "decompose" — using visuals and hands-on modeling before the whole-group lesson.
- Keep rectangle dimensions or fraction denominators small and familiar while a skill is new, then extend once secure.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on area or fraction tasks.
- Break multi-step area or fraction problems into smaller, sequenced steps with checkpoints.

Extension Strategies (Above Level)

- Extend area tasks to more complex composite figures, or fraction tasks to fractions greater than 1.
- Ask students to justify in writing why one strategy (decomposing a figure, using a benchmark fraction) is more efficient than another.
- Challenge students to represent the same area or fraction multiple ways (array, equation, number line, model) and explain the connections.
- Have students create original word problems (area or fractions) for a partner to solve.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "unit fraction," "equivalent," "decompose," "square units") with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "The area is ___ square units because ___." or "___ and ___ are equivalent because ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.



Grade 3: **Mathematics**

Quarter 4: Curriculum & Pacing Guide

Quarter Overview

Students apply mathematical reasoning to concepts involving time, money, geometry, perimeter, and data. They tell time to the nearest minute and use number lines to solve problems involving unknown start times, end times, and elapsed times. Students analyze, classify, draw, and compose two-dimensional shapes based on attributes such as side lengths, parallel sides, and angles.

They develop an understanding of perimeter, determine unknown side lengths, and explore relationships between area and perimeter. Students also collect, represent, and interpret categorical and measurement data using scaled picture graphs, scaled bar graphs, and line plots. Throughout the module, they apply all four operations to real-world problems and strengthen computational fluency.

Essential Questions

- How can a number line help us tell time and solve elapsed-time problems?
- How can we determine an unknown start time, end time, or amount of elapsed time?
- How can addition and subtraction help us solve problems involving time and money?
- Which attributes can be used to describe and classify two-dimensional shapes?
- How can shapes with the same name look different?
- How can polygons be composed and decomposed to create other shapes?
- What is perimeter, and how can it be measured or calculated?
- How can known side lengths help us determine unknown measurements?
- What is the relationship between area and perimeter?
- How can rectangles have the same area but different perimeters?
- How can rectangles have the same perimeter but different areas?
- How can measurement and categorical data be collected and organized?
- How can line plots represent measurements involving halves and fourths?
- How do scaled picture graphs and bar graphs represent quantities?
- How can graphs and line plots help us answer questions and solve problems?
- How can we determine which operation or strategy is most appropriate for a real-world problem?

Standards for Mathematical Practice (Used Throughout)

- MP1 — Make sense of problems and persevere in solving them
- MP2 — Reason abstractly and quantitatively
- MP3 — Construct viable arguments and critique the reasoning of others
- MP4 — Model with mathematics
- MP5 — Use appropriate tools strategically
- MP6 — Attend to precision
- MP7 — Look for and make use of structure
- MP8 — Look for and express regularity in repeated reasoning

Third Grade Quarter 4: *I can statements* (28-36 Weeks)

- I can tell time to the nearest minute.
 - I can solve problems about start time, end time, and elapsed time.
 - I can identify and classify two-dimensional shapes by their attributes.
 - I can explain how shapes with the same name can look different.
 - I can compose and decompose polygons to create new shapes.
 - I can measure or calculate the perimeter of a shape.
 - I can find an unknown side length using perimeter.
 - I can explain the relationship between area and perimeter.
 - I can collect and organize measurement and categorical data.
 - I can use scaled picture graphs, bar graphs, and line plots to answer questions.
-

Module 6 Reference — Geometry, Measurement, and Data (Weeks 28–35)

Standards Addressed

- CC.2.4.3.A.1 — Data & Measurement: represent and interpret measurement data using line plots (including halves and fourths)
- CC.2.4.3.A.2 — Data & Measurement: tell and write time to the nearest minute; solve elapsed-time problems
- CC.2.4.3.A.3 — Data & Measurement: solve problems involving addition and subtraction of time intervals
- CC.2.4.3.A.4 — Data & Measurement: represent and interpret categorical data using scaled picture graphs and scaled bar graphs
- CC.2.4.3.A.5 — Data & Measurement: solve real-world problems involving perimeter
- CC.2.4.3.A.6 — Data & Measurement: find the relationship between area and perimeter
- CC.2.3.3.A.1 — Geometry: reason about attributes of two-dimensional shapes and classify shapes by their attributes
- CC.2.2.3.A.3 — Algebraic Concepts: understand division as an unknown-factor problem (applied to perimeter/data contexts)
- CC.2.2.3.A.4 — Algebraic Concepts: determine an unknown whole number in an equation (applied to time, perimeter, and data)
- CC.2.1.3.B.1 — Number & Operations: use place value understanding (applied to data and graphing contexts)

Vocabulary

Content: diagonal, measurement data, perimeter, regular polygon, scaled picture graph

Familiar: analog clock, area, attribute, data, fraction, frequent, hexagon, octagon, key, line plot, scale, scaled bar graph, survey, parallel, parallelogram, pentagon, plot, right angle,

polygon, tangram, quadrilateral, square, quarter past, quarter to, rectangle, trapezoid, rhombus

Academic: no new academic vocabulary introduced

Materials Needed

Analog clock · Chart paper · Clear tape · Colored pencils · Dry erase markers, erasers · Whiteboards · Envelopes · Glue sticks · Highlighters · Index cards · Markers · Pencils · Rulers · Scissors · Sticky notes · String · Wax craft sticks

Curriculum Resources

Eureka Math² Module 6 Manual · [greatminds.org](https://www.greatminds.org) website · [Happy Numbers](#) · [iXL.com](https://www.ixl.com) · Student Learn Book — Module 6 / Teach Book · Time and Money Supplemental Workbook

9-Week Pacing at a Glance

Wk	Module	Focus	Lessons This Week	Guiding Question(s)
28	Module 5 → 6	Module 5 Review & Assessment; Begin Geometry, Measurement, and Data	Module 5 Review Module 5 Assessment Lessons 1–3: Tell Time and Solve Time Interval Problems	<i>How can a number line help us tell time and solve elapsed-time problems?</i>
29	Module 6	Geometry, Measurement, and Data	Lessons 4–7: Tell Time and Solve Time Interval Problems Lesson 8: Attributes of Two-Dimensional Figures	<i>How can we determine an unknown start time, end time, or amount of elapsed time? Which attributes can be used to describe and classify two-dimensional shapes?</i>
30	Module 6	Geometry, Measurement, and Data	Lessons 9–12: Attributes of Two-Dimensional Figures Lesson 13: Problem Solving with Perimeter	<i>How can shapes with the same name look different? How can polygons be composed and decomposed to create other shapes?</i>
31	Module 6	Geometry, Measurement, and Data	Lessons 14–18: Problem Solving with Perimeter	<i>What is perimeter, and how can it be measured or calculated? What is the relationship between area and perimeter?</i>
32–33	—	PSSA Assessments	No new content lessons — statewide testing window	<i>Cumulative review and standardized assessment</i>
34	Module 6	Geometry, Measurement, and Data	Lessons 19–23: Collecting and Displaying Data	<i>How can measurement and categorical data be collected and organized? How do scaled picture graphs and bar graphs represent quantities?</i>
35	Module 6	Collecting and Displaying Data; Module 6 Review & Assessment	Lessons 24–26: Collecting and Displaying Data; Review Module 6 Module 6 Assessment	<i>How can graphs and line plots help us answer questions and solve problems?</i>
36	—	End of Year Assessments	EOY MAP Growth Assessments	<i>Cumulative review and year-end growth assessment</i>

Note: Weeks 32–33 are a combined testing window (PSSA Assessments) with no new content lessons.

Differentiation Strategies by Topic

Quick supports and extensions teachers can pull from during each instructional block. Use alongside small-group time, centers, or independent work.

Topic	Support (Below Level)	Extension (Above Level)
Tell Time and Solve Time Interval Problems (Weeks 28–29)	Use a physical analog clock with the minute hand highlighted; count by 5s around the clock face together before solving elapsed-time problems.	Solve elapsed-time problems that cross the hour or involve an unknown start time; use a number line to model and explain the strategy.
Attributes of Two-Dimensional Figures (Weeks 29–30)	Sort real shape models by one attribute at a time (number of sides, parallel sides, right angles); use a simple attribute checklist with pictures.	Sort shapes by multiple attributes at once; explain how two shapes with the same name can look different, and compose new shapes from smaller ones (e.g., tangrams).
Problem Solving with Perimeter (Weeks 30–31)	Use string or a measuring tool to physically trace the perimeter of a shape, counting each side aloud before adding.	Find an unknown side length given the perimeter and other sides; solve real-world perimeter problems requiring two steps.
Relationship Between Area and Perimeter (Week 31)	Build two rectangles with the same perimeter using a fixed length of string, then compare their areas using tiles.	Find multiple rectangles with the same area but different perimeters (or vice versa); explain the relationship in writing.
Collecting and Displaying Data (Weeks 34–35)	Collect data as a class on a simple question (2–3 categories) before graphing; provide a partially completed scaled graph template.	Collect and graph a data set independently with a scale other than 1; write and answer multi-step questions using the graph or line plot.

General Differentiation Toolkit

Support Strategies (Below Level / Emerging)

- Use concrete manipulatives (analog clocks, shape models, string for perimeter, tiles for area) before moving to pictorial or abstract representations.
- Pre-teach vocabulary — especially new terms like "perimeter," "diagonal," and "regular polygon" — using visuals and hands-on modeling before the whole-group lesson.
- Keep numbers, side lengths, or data sets small and familiar while a skill is new, then extend once secure.
- Provide a completed worked example alongside a matching blank template for guided practice.
- Pair with a peer partner for turn-and-talk and modeling during hands-on time, geometry, or data tasks.
- Break multi-step word problems into smaller, sequenced steps with checkpoints using Read–Draw–Write.

Extension Strategies (Above Level)

- Extend elapsed-time, perimeter, or data tasks to two-step problems or larger/more complex data sets.
- Ask students to justify in writing why two shapes with the same perimeter can have different areas (or vice versa).
- Challenge students to compose and decompose polygons in multiple ways and explain the relationships between the pieces.
- Have students create original word problems (time, perimeter, or data) for a partner to solve.
- Have students teach a strategy to a small group or lead a turn-and-talk explaining their reasoning.

Multilingual Learner / Language Support

- Pair new vocabulary (e.g., "perimeter," "attribute," "scale," shape names) with gestures, visuals, and native-language cognates where possible.
- Use sentence frames for explaining reasoning: "The perimeter is ___ because ___." or "This shape is a ___ because it has ___."
- Allow students to show understanding through drawings, manipulatives, or hands-on modeling before requiring a verbal or written explanation.
- Preview key vocabulary in a small group before it's introduced in the whole-class lesson.