

## Education Committee - Regular School Board Meeting

Duluth Public Schools, ISD 709

### Agenda

Tuesday, April 20, 2010

District Services Center

709 Portia Johnson Dr.

Duluth, MN 55811

6:30 PM

### 1. Presentations

#### A. General Education/Special Education Co-Teach Model Presentation

5

Marci Hoff, Laura Fredrickson, Jason Crane, and Tom Tusken presented information on the development and growth towards a General Education/Special Education Co-Teach Model within the Duluth Public Schools.

Recommendation: It is recommended that this item be received as informational.

#### B. Federal Head Start Enrollment Reduction Proposal

Duluth Head Start staff have written a proposal that will decrease the number of children served in the Head Start Program while allowing money to continue to be tied to those slots. The proposal originally went to the Region V Officers in January 2010 and was returned for clarification in February 2010. On March 3, 2010 the proposal was sent back to the Region V Office clarifying any questions. Pam Rees, Director of Head Start, presented information on the resubmitted proposal that essentially will reduce federal numbers from 298 to 255, eliminating one classroom and the two staff positions tied to the classroom, which will allow for lower class sizes and increased para-professional, family advocate, and mental health time.

Recommendation: It is recommended that this item be received as informational.

#### C. Two High School, Two Middle School Transition Updates

14

Keith Dixon and Joe Hill presented updates on the two high school, two middle school model moving forward including labor/management agreements for process, programming items, operational items, staffing allocations, and strategies to close the achievement gap across the district.

Recommendation: It is recommended that this item be received as informational.

D. 2010-11 Elementary, Middle, and High School Program Structure 15

Keith Dixon and Joe Hill gave an update on the finalized elementary, middle, and high school programs as reviewed by administration and School Board representatives on March 30th and 31st.

Recommendation: It is recommended that this item be received as informational.

2. Informational Items

The following items are for informational purposes only and do not require School Board approval.

A. Grant Applications

1) Lion's Club Fund Request: Eye Charts for School Nurses 55

The Early Childhood Screening Program of Duluth Public Schools has submitted a funding proposal to the Lion's Club of Duluth, Minnesota in the amount of \$434. If awarded, these funds will be used for the purchase of fourteen (14) Mass Test HOTV Distance Charts for school nurses. The purpose of Early Childhood Screening is to detect possible health or learning concerns, so that children can get needed help before they start school. Once in school, current vision charts are necessary to meet the expectations of Minnesota's guidelines for vision screening. Marci Hoff was present to answer any questions.

Recommendation: It is recommended that this item be received as informational.

3. Action Items

A. Presentation Items Requiring Approval

1) K-8 Math Adoption 57

The K-12 Math Curriculum Review Committee has completed a three-year curriculum review process for K-12 Mathematics (including revising the Duluth Public Schools K-12 Mathematics Belief Statement, reviewing current data and research, determining the need for new materials and resources ~ checking the alignment of current materials), determining current K-12 assessments and future needs, developing a criterion tool to evaluate K-8 materials, piloting materials for K-8, and selecting instructional materials for Mathematics in K-8). As a result of this extensive review process, Patti Bambenek and members of the K-12 Math Curriculum Review Committee presented their proposal for the K-8 Math Adoption for board review and approval. The Committee is recommending the purchase of *Math Expressions* by Houghton Mifflin for K-5 and *Big Ideas Math* by Big Ideas Learning for 6-8 with the total cost not to exceed \$700,000, which

will support the purchase of required materials through school year 2015-16.

Recommendation: It is recommended that this item be accepted and approved.  
2) 2010-11 Federal Head Start Grant Application 98

The Federal Head Start Grant proposal for FY10-11, which has been approved by the Head Start Policy Council, was presented by Pam Rees, Director of Head Start, for board review and approval.

Recommendation: It is recommended that this item be accepted and approved.  
3) Federal Head Start 1.84% COLA Grant Application for 2010-11

Pam Rees, Director of Head Start, presented the Federal Head Start 1.84% COLA Grant Application for 2010-2011 for board review and approval.

Recommendation: It is recommended that this item be accepted and approved.  
4) Federal Head Start 1.84% COLA Grant Application for July 2010

Pam Rees, Director of Head Start, presented the Federal Head Start 1.84% COLA Grant Application for July 2010 for board review and approval.

Recommendation: It is recommended that this item be accepted and approved.  
5) Minnesota Partnership for School Connectedness (MPSC) 105

The MPSC is a U.S. Department of Education, Institute of Education Sciences (IES) funded initiative. The University of Minnesota is partnering with MPSC in a three-year intercollegiate, interdisciplinary initiative with five diverse school districts throughout Minnesota to increase connectedness between sixth grade teachers and students and foster student engagement in learning. Woodland and Morgan Park Middle Schools have been selected to participate in this initiative. Joe Hill presented an overview of this initiative for board review and approval.

Recommendation: It is recommended that this item be accepted and approved.  
B. Resolution E-4-10-2748 - Acceptance of Grant Awards to Duluth Public Schools 118

Attached is Resolution E-4-10-2748 - Acceptance of Grant Awards to Duluth Public Schools, to accept and approve grant awards for the following organizations:

1. Northland Foundation
2. Perpich Center for Arts Education

3. Minnesota Department of Health
4. Minnesota Department of Education

Recommendation: It is recommended that the Duluth School Board approve Resolution E-4-10-2748 - Acceptance of Grant Awards to Duluth Public Schools.

C. Extended Trip Requests 128

The following extended trip requests are submitted for approval:

Congdon Park Elementary students will be attending Wolf Ridge Environmental Learning Center in Finland, Minnesota from April 21-23, 2010. The total cost of the trip is \$13,650 and will be funded through the PTA, donations, and student fees.

Woodland Middle School seventh and eighth grade students attended the State Science Fair at the Crown Plaza Riverfront Hotel in St. Paul, Minnesota from March 26-28, 2010. The cost of the trip was \$120 per student and was funded through the PTA, donations, activity fees, and student fees.

Recommendation: It is recommended that the Duluth School Board approve the above extended field trip requests.

D. Diplomas 134

Donald E. Nelson left Denfeld High School in June of 1965 to enlist in the United States Airforce serving our country in the Philippines, VietNam, and other places from September 1965 to September 1969 and is requesting a high school diploma be granted to him dated June 10, 1965.

Recommendation: It is recommended that the Duluth School Board approve the above diploma award.

# Co-Teaching in the Duluth Public Schools

**CO-TEACHING MODELS REFERENCE SHEET**

**One Teaching/One Observing**

This model allows one teacher to teach the lesson, and the other teacher to conduct careful student observations and systematic documentation of those observations. This allows both teachers to gain a very sophisticated understanding of their students' academic, behavioral, and social functioning, relative to the lesson and the dynamics of the classroom community.

**One Lead Teach/One Support Teach**

This model encourages one teacher to assume the lead role in the teaching while the other teacher supports individual students (or small groups) in the classroom during instruction. Teachers can even trade off this role at different points in the same lesson in order for students (and teachers!) to avoid seeing one of you as the "real" teacher and one of you as the "aide."

**Station Teaching**

This model encourages the teachers to each take responsibility for planning and teaching a portion of the instructional content. Students move from one station to another for work with each teacher. Stations can also include independent work, peer tutoring, or parent-led activities. Each station constitutes its own lesson with unique goals and objectives, even if all of the stations are working together under a Big Idea (an overall learning goal that ties together all of the station lessons).

**Parallel Teaching**

In this model teachers plan and teach the same exact lesson at the same time, but to two different groups of children. This can be helpful in reducing the teacher-student ratio for lessons where you want to strengthen your ability to assess each student's understanding, for example.

**Alternative Teaching**

This model recognizes that at times some children require different instruction than the larger group. Sometimes this may mean that small(er) group instruction is used to "pre-teach" a concept, to "re-teach" a concept, to provide enrichment, or to conduct an authentic assessment. Sometimes this can *look* like parallel teaching, but is not considered as such since all of the children are not engaged in the same lesson.

**Team Teaching**

This is a more generic term that describes teachers who plan collaboratively and share in the instruction of all students. It can incorporate multiple forms of co-teaching.

Source:

[www.ped.state.nm.us/seo/library/qrtrly.04.04.coteaching.lcook.pdf](http://www.ped.state.nm.us/seo/library/qrtrly.04.04.coteaching.lcook.pdf)

## Co-teaching 2009-2010

School	Class	Teacher(s)
Morgan Park	PE	L. Puglisi/A. Ek
Morgan Park	English	C. Johnson/T. Kolenda
Morgan Park	Math 6	K. Woodfill/J. Sims
Morgan Park	English 7	K. Johnson/W. Teresi
Morgan Park	Science 7	P. Davis/B. Teresi
Morgan Park	Math 7	J. Jubenville/S. Nyback
Morgan Park	Math 8	C. Johnson/R. Starks
Morgan Park	Band	K. Sandor/M. Roermhildt
Denfeld	Algebra 1A	Cheselski/Men
Denfeld	Pre-Algebra	Plesko/Moen
Denfeld	Pre-Algebra	Plesko/Jordan
Denfeld	English 10	Priest/Harbson
Denfeld	English 9	Ransom/Stauduhar
East	English 10	J. Grombacher/C. Karich
East	Algebra 1	J. Knutsen/B. Laurila
East	American History	L. Kruger/J. Flaa
East	English 9	J. Grombacher/L. Tryggsted
East	Biology	H. Lyle/E. Holmstrom
Central	WBL Seminar	E. Stein/S. Hagge

# Team Teaching

Denfeld High  
School Pilot

# What is teaming teaching?

- Teaching that incorporates shared instruction, planning and coordinated activities.
- Based on trust, commitment, personality and compatibility is a must.
- Two teachers must have similar teaching philosophy, support and time to plan together. (Fitzell, 2003)

# *Continuum of Placement Options*

- Regular classes-Co-teaching happens here
- Special classes
- Special schools
- Home instruction
- Hospitals and Institutions.

# *IDEA Foundations*

## **Inclusion**

- An opportunity to interact, socialize, and learn with “regular” students, thus minimizing the tendency to become stigmatized and isolated from the schools regular education delivery model.
- There is also inherent value in providing students without a disability an opportunity to increase awareness of the many challenges faced by children with disabilities and to sensitize them to their unique needs.

(Essex 2005)

# Analysis of the Program

- Effective training of how to team teach
- Teacher compatibility
- Teachers report professional growth, personal support, and enhanced motivation.
- Students demonstrated academic and social skill improvements.
- Student's benefit from teachers' strengths.

# Concerns:

- Common planning time
- Scheduling
- Maintaining natural proportions
- Need for more teaming
- Adhering to the team model
- Not everyone passes
- Alternative classes vs. Co-teaching
- Need for longitudinal support

# ***Assignment and Transfer Notes***

From meeting on 4-12-2010

14

## ***Timeline for Filling Teaching Positions***

- March 22<sup>nd</sup> - Teacher Development Committee develops "Intervention Specialist" job descriptions.
- March 26<sup>th</sup> to April 2<sup>nd</sup> - Postings for "Intervention Specialist" positions.
- April 12<sup>th</sup> - Assignment & Transfer meeting to review preliminary teacher postings.
- April 14<sup>th</sup> - Preliminary postings for the "Big Fill" is available for viewing for staff on the district website.
- April 15<sup>th</sup> - "Big Fill" participant seniority list posted. Email sent to participants as to the time and date to report.
- April 16<sup>th</sup> and April 19<sup>th</sup> - Interviews for "Intervention Specialist" positions.
- April 16<sup>th</sup> - Early release day. Information sessions for certified staff on the process and postings of the "Big Fill".
  - Woodland Middle School Auditorium from 1:00 to 2:30 for Middle School staff.
  - Central High School Cafeteria from 2:00 to 3:30 for High School staff.
- April 19<sup>th</sup> - World Language pre fill - 4:00 pm in Room 302 at HOCHS.
- April 20<sup>th</sup> - Career & Technical Education pre fill - 4:00 pm in the Human Resources office.
- April 21<sup>st</sup> - Music pre fill - 4:00 pm in Room 302 at HOCHS.
- April 22<sup>nd</sup> - Counselor & Media Specialist pre-fill - 4:00 pm in Room 302 at HOCHS.
- April 26<sup>th</sup> - Day 1 of Big Fill. First 50 - 4:00 pm at Media Center, Central High School.
- April 28<sup>nd</sup> - Day 2 of Big Fill. Next 60 - 4:00 pm at Media Center, Central High School.
- May 3<sup>rd</sup> - Day 3 of Big Fill. Next 60 - 4:00 pm at Media Center, Central High School.
- May 5<sup>th</sup> - Day 4 of Big Fill. Remainder of eligible teachers - 4:00 pm at Media Center, Central High School.
- May 6<sup>th</sup> - Additional or make up day if necessary - 4:00 pm at Media Center, Central High School.
- May 7<sup>th</sup> - Early release day. Placed teachers have meetings at their new buildings regarding next year's assignments.
- May 7<sup>th</sup> - Early release day. Non-tenured / non placed teacher meeting - 1:45 pm in Board Room at HOCHS.

## ***Timeline for Filling Winter Sports & Activities Head Coaches & Advisors***

- March 26<sup>th</sup> to April 2<sup>nd</sup> - Postings for winter sports & activities coaches and advisors.
- April 12<sup>th</sup> - Screenings for winter sports & activities coaches and advisor applicants.
- April 20<sup>th</sup> - Interviews for winter sports & activities coaches and advisor candidates.

## ***Timeline for Filling Spring Sports & Activities Head Coaches & Advisors***

- June 4<sup>th</sup> to June 11<sup>th</sup> - Postings for spring sports & activities coaches and advisors.
- June 14<sup>th</sup> - Screenings for spring sports & activities coaches and advisor applicants.
- June 21<sup>st</sup> - Interviews for spring sports & activities coaches and advisor candidates.

## ***Timeline for Assistant Coaches & Advisors Positions***

- March 26<sup>th</sup> to April 2<sup>nd</sup> - Fall Assistant Coaches & Advisors position postings.
- May 17<sup>th</sup> to May 21<sup>st</sup> - Winter Assistant Coaches & Advisors position postings.
- July 26<sup>th</sup> to July 30<sup>th</sup> - Spring Assistant Coaches & Advisors position postings.

NOTE: Necessary interviews will follow postings. They will be building based and coordinated by the Activity Directors.

**Central  
Site 210  
6/30/2011**

**FTE Funding**

Ratio fte (Enrollment = 1,474)

	PCN	Dollars	Fte
General	TE01		50.20
Comped -allocated	TE35		3.20
Total Ratio			53.40
Zero Hour			1.00
DOSA			1.00
Dropout recovery (Stars)			1.00
ALC - Interventions			0.90
TOSA's			1.20
Title I			3.10
Desegregation			2.10
Total Funded			63.70

Available class schedule

**Discretionary**

Comped discretionary	TE15	\$ 104,519	
Desegregation	TE13	\$ 192,000	IAW 3 - year plan
Title I	TE45	\$ 370,000	
		\$ (60,000)	Summer school
		\$ (192,000)	Desegregation
		\$ (279,000)	
		\$ 135,519	

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
<b>** Read 180 - 90 students/3 sections 2 hr block</b>	<b>1.20</b>	<b>60% Ratio = .7 - 40% focus/other (yellow)</b>
Learning Base supervisory support	2.00	\$ 90,000 District AYP
Extended Day - Excel teacher support	\$ 3,388	Targeted services
Summer Program	TBD	ALC
Student Support Advocate - CTAG	TBD	Integration
Strategic Math labs		
<b>** - Algebra/Geo (67 students/2 sections)</b>	<b>0.40</b>	<b>60% Ratio = .2 - 40% focus/other</b>
<b>** Trans Math - 89 students/3 sections</b>	<b>0.60</b>	<b>60% Ratio = .4 - 40% focus/other</b>
# TOSA's math	0.60	ARRA/Ratio = 1.0 fte
# TOSA's reading (literary coach)	0.60	ARRA/Ratio = 1.0 fte
Extended Year	\$ 30,000	Site Title
<b>** Stars - Dropout prevention</b>	<b>1.00</b>	<b>District funded</b>
<b>** Counselor(s)</b>	<b>3.50</b>	<b>Ratio</b>
<b>** Media</b>	<b>1.00</b>	<b>Ratio</b>
<b>** DOSA</b>	<b>1.00</b>	<b>District funded</b>

**Central High School 2010-2011  
Staff Assignments**

<b>Subject</b>	<b>Subject Licensure</b>	<b>FTE</b>	<b>Subject</b>	<b>Teacher</b>	<b>FTE</b>
<b>English</b>	All (3 Block Read 180)	8.90	<b>Business Ed.</b>	Marketing	0.60
	CITS AP 12	0.60		Computers	0.50
	CITS AP 11	0.40		<b>Department Total</b>	<b>1.10</b>
	CITS Collge Comp	0.20			
	Public Speaking	0.20			
	<b>Department Total</b>	<b>10.30</b>	<b>FACS</b>	<b>Department Total</b>	<b>1.00</b>
<b>Social St.</b>	All	6.90	<b>Music</b>	Choir	1.20
	CITS Econ	0.30		Band	1.40
	CITS Am Gov	0.30		Orchestra	1.20
	CITS Psych	0.20		<b>Department Total</b>	<b>3.80</b>
	CITS Sociology	0.10			
	CITS C & C Law	0.10	<b>Freshman Sem.</b>	<b>Department Total</b>	<b>0.70</b>
	AP World History	0.40			
	AP US History	0.40	<b>Industrial Ed.</b>	<b>Department Total</b>	<b>0.60</b>
	<b>Department Total</b>	<b>8.70</b>			
			<b>Student Council</b>	<b>Department Total</b>	<b>0.20</b>
<b>W. Language</b>	German	1.20	<b>Yearbook</b>	<b>Department Total</b>	<b>0.20</b>
	Spanish	2.80			
	Chinese	0.20	<b>Counselor</b>	<b>Department Total</b>	<b>3.80</b>
	Ojibwe	0.20			
	<b>Department Total</b>	<b>4.40</b>	<b>Media</b>	<b>Department Total</b>	<b>1.40</b>
<b>Phy. Ed./Health</b>	Health	0.80	<b>Drop Out/STAR</b>	<b>Department Total</b>	<b>1.80</b>
	Phy Ed.	1.20			
	CITS Strength Train.	0.10	<b>School within a School</b>	<b>1.60</b>	
	<b>Department Total</b>	<b>2.10</b>			
			<b>9th Grade CORE Coordinator</b>	<b>0.60</b>	
<b>Math</b>	CITS Pre-Calc	0.80			
	AP Calc	0.40	<b>Social Worker</b>	<b>0.20</b>	
	All	7.60			
	Algebra Lab .4				
	Geometry Lab .2				
	Trans Math .2		<b>SubTotal</b>		<b>61.50</b>
<b>Department Total</b>	<b>8.80</b>				
<b>Science</b>	Physical Science 9	1.80			
	Biology	2.00	TOSA'S	1.20	
	Anatomy/Phys/CITS	0.80			
	Chemistry/CITS Chemist	2.40	DOSA	1.00	
	Physics/CITS Physics	0.60			
	Earth & Space	0.60	<b>Grand Total</b>	<b>63.70</b>	
	<b>Department Total</b>	<b>8.20</b>			
<b>Art</b>	<b>Department Total</b>	<b>2.00</b>			

**DCHS High  
School**  
**Course Requests - Life Skills/FACS**  
**2010-11**

Course	Number of Requests	Class Size	Number of Sections	Number of FTE
Foods and Healthy Living	119.00	29.75	4.00	0.40
Foods Science & Nutr	44.00	22.00	2.00	0.20
Global Cuisine/Cultural	38.00	38.00	1.00	0.10
Independent Living	38.00	19.00	2.00	0.20
Child Development	31.00	31.00	1.00	0.10
<b>Total</b>	<b>270.00</b>	<b>139.75</b>	<b>10.00</b>	<b>1.00</b>



**DCHS High  
School**  
**Course Requests - Music**  
**2010-11**

Course	Number of Requests	Class Size	Number of Sections	Number of FTE	
71081	Freshman Band	55.00	55.00	1.00	0.10
71082	Freshman Band	55.00	55.00	1.00	0.10
71101	Intermediate Band	76.00	38.00	2.00	0.20
71102	Intermediate Band	77.00	38.00	2.00	0.20
71161	Advanced Band	93.00	46.50	2.00	0.20
71162	Advanced Band	93.00	46.50	2.00	0.20
71201	Jazz Ensemble	19.00	19.00	1.00	0.10
71202	Jazz Ensemble	19.00	19.00	1.00	0.10
	Lessons				0.20
	Total				1.40
71221	World Percussion	10.00	10.00	1.00	0.10
71222	World Percussion	11.00	11.00	1.00	0.10
71341	Freshman Orchestra	26.00	26.00	1.00	0.10
71342	Freshman Orchestra	26.00	26.00	1.00	0.10
71361	Concert Orchestra	39.00	39.00	1.00	0.10
71362	Concert Orchestra	39.00	39.00	1.00	0.10
71381	Symphony Orch	35.00	35.00	1.00	0.10
71382	Symphony Orch	35.00	35.00	1.00	0.10
71421	Chamber Orch	16.00	16.00	1.00	0.10
71422	Chamber Orch	16.00	16.00	1.00	0.10
	Lessons				0.20
	Total				1.20
71521	Intermediate Mixed	52.00	52.00	1.00	0.10
71522	Intermediate Mixed	51.00	51.00	1.00	0.10
71661	Adv. Concert Choir	66.00	66.00	1.00	0.10
71662	Adv. Concert Choir	66.00	66.00	1.00	0.10
71741	Chamber Choir	16.00	16.00	1.00	0.10
71742	Chamber Choir	16.00	16.00	1.00	0.10
71581	Show/Jazz Choir	25.00	25.00	1.00	0.10
71582	Show/Jazz Choir	24.00	24.00	1.00	0.10
71461	Men's Choir /Women's	42.00	42.00	1.00	0.10
71462	Men's Choir /Women's	42.00	42.00	1.00	0.10
71561	Women's Adv Choir	24.00	24.00	1.00	0.10
71562	Women's Adv Choir	24.00	24.00	1.00	0.10
	Total				1.20
	<b>Total</b>	1188.00	1018.00	34.00	3.80

**Central High  
School**  
**Course Requests - Science**  
**2010-11**

	Course	Number of Requests	Class Size	Number of Sections	Number of FTE
	Physical Science	224.00	32.00	7.00	0.70
	Physical Science	220.00	31.43	7.00	0.70
Zero hr	Physical Science	66.00	33.00	2.00	0.20
Zero hr	Physical Science	66.00	33.00	2.00	0.20
	Biology	255.00	31.88	8.00	0.80
	Biology	256.00	32.00	8.00	0.80
	Honors Biology	35.00	35.00	1.00	0.10
	Honors Biology	35.00	35.00	1.00	0.10
Zero hr	Biology	33.00	33.00	1.00	0.10
Zero hr	Biology	33.00	33.00	1.00	0.10
	Anatomy/Physiology	71.00	35.50	2.00	0.20
	Anatomy/Physiology	70.00	35.00	2.00	0.20
	CITS Anatomy/Physiology	58.00	29.00	2.00	0.20
	CITS Anatomy/Physiology	58.00	29.00	2.00	0.20
	Intro to Chemistry	40.00	20.00	2.00	0.20
	Intro to Chemistry	40.00	20.00	2.00	0.20
	Chemistry	158.00	31.60	5.00	0.50
	Chemistry	158.00	31.60	5.00	0.50
Zero hr	Honors Chemistry (CITS)	32.00	32.00	1.00	0.10
Zero hr	Honors Chemistry (CITS)	32.00	32.00	1.00	0.10
	(CITS) Honors Chemistry	72.00	36.00	2.00	0.20
	(CITS) Honors Chemistry	72.00	36.00	2.00	0.20
	Physics	35.00	35.00	1.00	0.10
	Physics	35.00	35.00	1.00	0.10
	(CITS) Honors Physics	49.00	25.00	2.00	0.20
	(CITS) Honors Physics	49.00	25.00	2.00	0.20
	Earth and Space Science	74.00	25.00	3.00	0.30
	Earth and Space Science	73.00	25.00	3.00	0.30
	(CITS) Hon Chem II	45.00	23.00	2.00	0.20
	(CITS) Hon Chem II	45.00	23.00	2.00	0.20
	<b>Total</b>	<b>2489.00</b>	<b>913.00</b>	<b>82.00</b>	<b>8.20</b>

**Cnetral High  
School**  
**Course Requests - Studies**  
**2010-11**

	<b>Course</b>	<b>Number of Requests</b>	<b>Class Size</b>	<b>Number of Sections</b>	<b>Number of FTE</b>
	American History 9	293.00	33.00	9.00	0.90
	American History I	314.00	34.89	9.00	0.90
	American History II	310.00	34.44	9.00	0.90
	Honors AP US History	60.00	30.00	2.00	0.20
	Honors AP US History	60.00	30.00	2.00	0.20
	International Studies I	144.00	36.00	4.00	0.40
	International Studies II	135.00	33.75	4.00	0.40
	American Government	271.00	33.88	8.00	0.80
Zero hr	Am Gov	41.00	20.00	2.00	0.20
	CITS Honors Am Gov	80.00	27.00	3.00	0.30
	Economics	237.00	34.00	7.00	0.70
	CITS Economics	83.00	27.00	3.00	0.30
Zero hr	Economics	48.00	24.00	2.00	0.20
	Psychology	65.00	32.50	2.00	0.20
	CITS General Psychology	43.00	22.00	2.00	0.20
	CITS Honors Sociology	39.00	39.00	1.00	0.10
	Sociology	37.00	37.00	1.00	0.10
	CITS Civil & Criminal	33.00	33.00	1.00	0.10
	World History I	178.00	30.00	6.00	0.60
	World History II	170.00	34.00	5.00	0.50
	AP World History	59.00	29.50	2.00	0.20
	AP World History	59.00	29.50	2.00	0.20
	C & C Law	25.00	25.00	1.00	0.10
	<b>Total</b>	2784.00	709.46	87.00	8.70

**Central High  
School**  
**Course Requests - World Language**  
**2010-11**

Course	Number of Requests	Class Size	Number of Sections	Number of FTE
6121 German 1	61.00	30.50	2.00	0.20
6122 German 1	60.00	30.00	2.00	0.20
6141 German 2	90.00	30.00	3.00	0.30
6142 German 2	90.00	30.00	3.00	0.30
6161 German III/IV	31.00	31.00	1.00	0.10
6162 German III/IV	31.00	31.00	1.00	0.10
6221 Chinese I/II/III	25.00	25.00	1.00	0.10
6222 Chinese I/II/III	25.00	25.00	1.00	0.10
6321 Spanish 1	90.00	30.00	3.00	0.30
6322 Spanish 1	88.00	29.33	3.00	0.30
6341 Spanish 2	202.00	34.00	6.00	0.60
6342 Spanish 2	202.00	34.00	6.00	0.60
6361 Spanish 3	83.00	27.00	3.00	0.30
6362 Spanish 3	83.00	27.00	3.00	0.30
6381 Honors Spanish 4	47.00	23.50	2.00	0.20
6382 Honors Spanish 4	47.00	23.50	2.00	0.20
<b>Integration Fund</b>				
Ojibwe I/II	29.00	29.00	1.00	0.10
Ojibwe I/II	29.00	29.00	1.00	0.10
<b>Total</b>	<b>1313.00</b>	<b>518.83</b>	<b>44.00</b>	<b>4.40</b>

**Central High  
School**  
**Course Requests -Student Council/Yearbook/Freshman Seminar**  
**2010-11**

Course	Number of Requests	Class Size	Number of Sections	Number of FTE
Zero Hr. Student Council	29	29.00	1.00	0.10
Zero Hr. Student Council	29	29.00	1.00	0.10
Yearbook	30	30.00	1.00	0.10
Yearbook	30	30.00	1.00	0.10
Freshman Seminar	222	32.00	7.00	0.70
<b>Total</b>	<b>340.00</b>	<b>150.00</b>	<b>11.00</b>	<b>1.10</b>

**East  
Site 220  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte (Enrollment = 1,436)			
General	TE01		47.80
Comped -allocated	TE35		4.40
Total Ratio			52.20
Zero Hour			1.00
DOSA			1.00
Dropout recovery (Stars)			1.00
ALC - Interventions			0.50
TOSA's			1.20
Other - contingency			1.30
Total Funded			58.20
<b>Discretionary</b>			
Comped discretionary	TE15		
Desegregation	TE13		-
Title I	TE45		-

**Academic Interventions/Investments**

	Forecasted Needs	
<b>** Read 180 - 65 students/1 sections 2 hr block</b>	<b>0.40</b>	<b>60% Ratio = .2 - 40% focus/other</b>
Learning Base supervisory support	2.00	\$ 90,000 District AYP
Extended Day - Excel teacher support	\$ 3,388	Targeted services
Summer Program	TBD	ALC
Student Support Advocate - CTAG	TBD	Integration
Strategic Math labs		
<b>** - Algebra/Geo (48 students/2 sections)</b>	<b>0.40</b>	<b>60% Ratio = .25 - 40% focus/other</b>
<b>** Trans Math - 50 students/2 sections</b>	<b>0.40</b>	<b>60% Ratio = .25 - 40% focus/other</b>
# TOSA's math	0.60	ARRA/Ratio = 1.0 fte
# TOSA's reading (literary coach)	0.60	ARRA/Ratio = 1.0 fte
Extended Year		
<b>** Stars - Dropout prevention</b>	<b>1.00</b>	<b>District funded</b>
<b>** Counselor(s)</b>	<b>3.00</b>	<b>Ratio</b>
<b>** Media</b>	<b>1.00</b>	<b>Ratio</b>
<b>** DOSA</b>	<b>1.00</b>	<b>District funded</b>

**2010-2011  
Staff Assignments/East**

<b>Subject</b>	<b>Subject Licensure</b>	<b>FTE</b>		<b>Science</b>	<b>Subject Licensure</b>		
					Phys, Sci	2.4	
					Biology	2.2	
<b>English</b>	All	7.5			Anat/Phys	0.6	
	CITS/AP 12	0.2			Chemistry	1.6	
	CITS/AP 11	0.6			Physics	1	
	CITS College Comp.	0.3			Earth &Space	0.2	
	Pub. Spking.	0.4			<b>Department Total</b>	<b>8</b>	
	<b>Department Total</b>	<b>9</b>		<b>Business</b>	Marketing	0.6	
					Computers	0.4	
					<b>Department Total</b>	<b>1</b>	
<b>Social St.</b>	<b>Subject Licensure</b>			<b>FACS</b>	<b>Subject Licensure</b>		
	All	6.6			All		
	CITS Econ.	0.3			<b>Department Total</b>	<b>0.8</b>	
	CITS Gov't	0.3		<b>Music</b>	<b>Subject Licensure</b>		
	CITS Psych.	0.1			Choral	1.2	
	CITS Soc.	0.1			Band	1	
	CITS C&C Law	0.1			Orchestra	1	
	AP World Hist.	0.4			<b>Department Total</b>	<b>3.6</b>	
	Fresman Sem.	0.4		<b>Industrial Ed.</b>	<b>Subject Licensure</b>		
	AP US Hist.	0.6			All	0.4	
	<b>Department Total</b>	<b>8.8</b>			<b>Department Total</b>	<b>0.4</b>	
<b>Language</b>	<b>Subject Licensure</b>			<b>Art</b>	<b>Subject Licensure</b>		
	German	0.8			All	1.9	
	Spanish	4			<b>Department Total</b>	<b>1.9</b>	
	Chinese	0.2					
	<b>Department Total</b>	<b>5</b>					
<b>Phy. Ed./Health</b>	<b>Subject Licensure</b>				<b>Total FTE Gen. Fund</b>	<b>48.5</b>	
	Health	0.8					
	CITS ST. Train.	0.2					
	P.E.	1.2		<b>Counselors</b>		3.5	
	<b>Department Total</b>	<b>2.2</b>		<b>Media</b>		1	
				<b>STAR</b>		1	
<b>Math</b>	<b>Subject Licensure</b>			<b>DOSA</b>		1	
	CITS Pre-calc.	1.2		<b>READ 180</b>		1	.4 GF
	AP Calc.	0.4					
	All	6.4		<b>Literacy TOSA</b>		1	.4 GF
	Alg. Lab	0.2		<b>Math TOSA</b>		1	.4 GF
	Geom. Lab	0.2					
	Trans Math	0.4		<b>Total</b>		58.2	
	<b>Department Total</b>	<b>8</b>	<b>.8 DF</b>				

**East High School  
Course Requests  
2010-11**

Course	Course Name	# of Requests	Actual Class Size	Class Size	# of Sections	# of FTE
01121	English 9	230	29			8
01122	English 9	230	29			8
01221	Honors English 9	139	34			4
01222	Honors English 9	139	34			4
02121	English 10	217	31			7
02122	English 10	217	31			7
02221	Honors English 10	169	34			5
02222	Honors English 10	169	34			5
03121	English 11	202+17	36			6
03122	English 11	202+17	36			6
03141	Zero Hour English 11	(17)				
03142	Zero Hour English 11	(17)				
03221	Honors English 11	34	34			1
03222	Honors English 11	34	34			1
03261	AP Lang. & Comp.	91	31			3
03262	AP Lang. & Comp.	91	31			3
04261	CITS AP Lit. & Comp.	29	29			1
04262	CITS AP Lit. & Comp.	29	29			1
05350	Values in Lit	43	43			1
05370	Drama as Lit	55	27			2
05410	Grammar & Comp.	78	26			3
05530	CITS College Comp	106	35			3
05630	Creative Writing	165	33			5
05730	Interpersonal Comm.	41	41			1
05750	Public Speaking	80	27			3
05891	Journalism	30	30			1
05892	Journalism	30	30			1
	<b>Total</b>					<b>9.0</b>
	Alt. English					
	Alt. English					
	Life Skills English					
	Life Skills English					
	Focus					
	Focus					



**East High School  
Course Requests  
2010-11**

<b>Course</b>	<b>Course Name</b>	<b># of Requests</b>	<b>Actual Class Size</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
06121	German 1	41	41			1
06122	German 1	41	41			1
06141	German 2	74	37			2
06142	German 2	74	37			2
06161	German 3	31	31			1
06162	German 3	31	31			1
06181	Honors German 4	1				N/O
06182	Honors German 4	1				N/O
06221	Chinese 1	11				1
06222	Chinese 1	11				1
06721	Chinese 2	12				
06722	Chinese 2	12				
06741	Chinese 3	5				
06742	Chinese 3	5				
06621	Ojibwe 1					
06622	Ojibwe 1					
06641	Ojibwe 2					
06642	Ojibwe 2					
06321	Spanish 1	72	36			2
06322	Spanish 1	72	36			2
06341	Spanish 2	288	36			8
06342	Spanish 2	288	36			8
06361	Spanish 3	193	32			6
06362	Spanish 3	193	32			6
06381	Honors Spanish 4	74	36.5			2
06382	Honors Spanish 4	74	36.5			2
06401	Honors Spanish 5	80	40			2
06402	Honors Spanish 5	80	40			2
	<b>Total</b>					5.0

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
American History 9	371	34		11
Freshman Seminar	90+TBD			5
American History I	303	34		9
American History II	303	34		9
Honors AP US History	88	29		3
Honors AP US History	88	29		3
International Studies I	156	32		5
International Studies II	156	32		5
American Government	182+19	40		5
Zero Hour Am Government	(19)			
CITS Honors Am Government	99	33		3
Economics	160	32		5
CITS Economics	104	35		3
Zero Hour Economics	28	28		1
Psychology	73	36.5		2
CITS General Psychology	45	45		1
CITS Honors Sociology	30	30		1
Sociology	22	22		1
Civil & Criminal Law	23+10	33		1
CITS Civil & Criminal Law	(10)			
World History I	137	35		4
World History II	137	35		4
AP World History	50	25		2
AP World History	50	25		2
<b>Total</b>				<b>8.5</b>
Alt Social St.				
Alt Social St.				
Life Skills Soc. St.				
Life Skills Soc. St.				
Student Government	30	30		1
Student Government				
Yearbook	30	30		1
Yearbook	30	30		1
<b>Total</b>				<b>8.8</b>

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
Integrated Math IV				
Integrated Math IV				
Beginning Algebra	107	27		4
Beginning Algebra	107	27		4
Intermediate Algebra	178	30		6
Intermediate Algebra	178	30		6
Geometry	251	32		8
Geometry	251	32		8
Honors Geometry	96	32		3
Honors Geometry	96	32		3
Algebra II Concepts	33	33		1
Algebra II Concepts	33	33		1
Algebra II	335	34		10
Algebra II	335	34		10
CITS Pre-Calculus	201	34		6
CITS Pre-Calculus	201	34		6
CITS AP Calculus	88	44		2
CITS AP Calculus	88	44		2
<b>Total</b>				<b>8.0</b>
Alt Math				
Alt Math				
Life Skills Math				
Life Skills Math				
Algebra Lab				
Algebra Lab				

**East High School  
Course Requests  
2010-11**

Course Name	# of Requests	Class Size	# of Sections	# FTE
Physical Science	347	32		11
Physical Science	347	32		11
Zero Hour Physical Science	49	29(move 20 stud.)		1
Zero Hour Physical Science	49	29(move 20 stud.)		1
Biology	229	33		7
Biology	229	33		7
Honors Biology	65	33		2
Honors Biology	65	33		2
Zero Hour Biology	38	38		1
Zero Hour Biology	38	38		1
Zero Hour Honors Biology	43	43		1
Zero Hour Honors Biology	43	43		1
Anatomy/Physiology	48	24		2
Anatomy/Physiology	48	24		2
CITS Anatomy/Physiology	39	39		1
CITS Anatomy/Physiology	39	39		1
Zero Hour CITS Anatomy/Physiology	(11)			
Zero Hour CITS Anatomy/Physiology	(11)			
Intro to Chemistry	25	25		1
Intro to Chemistry	25	25		1
Chemistry	104	35		3
Chemistry	104	35		3
Honors Chemistry	106	35		3
Honors Chemistry	106	35		3
(CITS) Honors Chemistry 2	22	22		1
(CITS) Honors Chemistry 2	22	22		1
Physics	91	30		3
Physics	91	30		3
(CITS) Honors Physics	51	26		2
(CITS) Honors Physics	51	26		2
Earth and Space Science	38	38		1
Earth and Space Science	38	38		1
<b>Total</b>				<b>8.0</b>

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
Health	220	37		6
Zero Hour Health	108 (move 30)	39		2
Zero Hour Found. Of Fitness	119(move 30)	45		2
Foundation of Fitness	280	40		7
Personal Wellness & Training	37	37		1
(CITS) Strength Training	69	35		2
Lifetime Activities & Fitness	61	31		2
Service Learning				
Service Learning				
<b>Total</b>				<b>2.2</b>

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
Art Across Mediums	46	46		1
Drawing & Painting 1	105	35		3
Drawing & Painting 2	70	35		2
Drawing & Painting 3	7	7	Combine 1,2,& 3	
Cinematography 1	92	31		3
Cinematography 2	45	23		2
Cinematography 3	9		Combine 2&3	
Ceramics & Sculpture 1	98	33		3
Ceramics & Sculpture 2	29	29		1
Ceramics & Sculpture 3	2		Combine 2&3	
Stained Glass 1	92	31		3
Stained Glass 2	33	33		1
Stained Glass 3	5		Combine 2&3	
<b>Total</b>				<b>1.9</b>

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
Business & Personal Finance	20	(move to Ind. Liv&consumer)		
Business Seminar	1			
Keyboarding/Microsoft Word	13			
Computer Applications	26	26		1
Computer Graphics	87	29		3
Marketing 1	67	34		2
Marketing 1	67	34		2
(CITS) Marketing 2	30	30		1
(CITS) Marketing 2	30	30		1
Marketing Internship	28			
Marketing Internship	28			
<b>Total</b>				<b>1.0</b>

**East High School  
Course Requests  
2010-11**

<b>Course Name</b>	<b># of Requests</b>	<b>Class Size</b>	<b># of Sections</b>	<b># FTE</b>
Foods and Healthy Living	110	28		3
Foods Science & Nutrition	26	26		1
Global Cuisine/Cultural App.	47	24		2
Sustainable Housing Design				
Independent Living/Consumer	11+BPF	31		1
Child Development	36	36		1
<b>Total</b>				<b>.8</b>
Futures/Independent Living				
Life Skills Transition				
Life Skills Health Ind. Living				

**East High School  
Course Requests  
2010-11**

Course Name	# of Requests	Class Size	# of Sections	# FTE
CAD for Engineering I	17			
CAD for Engineering II	10			
CAD for Architecture I	18			
CAD for Architecture II	7			
Manufacturing and Fabrication I	17			
Manufacturing and Fabrication II	15			
Manufacturing and Fabrication III	1			
Introduction to Engineering	14			
Introduction to Engineering				
Civil Engineering and Architecture	1			
Civil Engineering and Architecture	1			
Principles of Engineering	8			
Principles of Engineering	8			
	108			
<b>Total</b>				<b>.4</b>

**Morgan Park  
Site 340  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte (Enrollment = 710)			
General	TE01		25.80
Comped -allocated	TE35		1.50
Total Ratio			27.30
Itinerant - music			1.70
Middleschool allocation	TE01		1.00
ALC - Interventions			1.70
TOSA's			1.20
Purchased			8.90
Other (.2 WECEP)	TE01		0.20
Total Site FTE			42.00

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 127,901	(1.4 fte)
Desegregation	TE13	\$ 74,000	IAW 3 - year plan
Title I	TE45	\$ 280,000	(3.3 fte)
Referendum		\$ 380,131	(4.2 fte)
		\$ (55,000)	Summer school - Title
		\$ (74,000)	Desegregation
		\$ (733,032)	Purchased fte
Available funds		\$ -	

**Academic Interventions/Investments**

	Forecasted Needs	
** Read 180 - 109 students/5 sections 2 hr block	2.00	60% Ratio = 1.2 - 40% focus/other
** Trans Math - 170 students/8 sections (red)	1.60	60% Ratio = 1.0 - 40% focus/other
Learning Base supervisory support	2.00	\$ 90,000 District AYP
Extended Day - Excel teacher support	\$ 3,388	Targeted services
Summer Program	TBD	ALC
Extended Year	\$ 55,000	Site Title
Student Support Advocate - CTAG	TBD	Integration
** Strategic Math labs (68 Students/3 labs)(Yellow)	0.60	60% Ratio = .30- 40% focus/other
** Councilor(s)	2.00	Ratio
** Media	1.00	Ratio
Itinerant Music -	1.70	DW Allocation
Climate		District AYP
TOSA's math	0.60	ARRA/Ratio = 1.0 fte
TOSA's reading (literary coach)	0.60	ARRA/Ratio = 1.0 fte

<b>Morgan Park</b>		<b>Middle School</b>			
<b>Course Requests 2010-11</b>					
<b>Subject</b>	<b>Licensure</b>	<b>Number of Requests</b>	<b>Class Size</b>	<b>Number of Sections</b>	<b>Number of FTE</b>
<b>6th Grade</b>	Lang Arts/Read/Math	267.00			10.00
	Science/SS			0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
	<b>6th Grade Total</b>	267.00	27.00	10.00	10.00
<b>Art</b>	6th 9 weeks	260.00	33.00	8.00	0.40
	7th 9 weeks	221.00	32.00	7.00	0.35
	8th a/b	217.00	36.00	6.00	0.60
					0.00
					0.00
	<b>Art Total</b>	698.00		21.00	1.35
<b>Business</b>	6th 9 weeks	262.00	33.00	8.00	0.40
	7th 9 weeks	221.00	32.00	7.00	0.35
	8th			0.00	0.00
	computer topics	27.00	27.00	1.00	0.10
	comp applications	23.00	23.00	1.00	0.10
	ojt			0.20	0.20
	<b>Business Total</b>	533.00		17.20	1.15
<b>Family</b>	6th 9 weeks	259.00	32.00	8.00	0.40
	7th 9 weeks	221.00	28.00	8.00	0.40
	8th			0.00	0.00
	Fam, Div	17.00	17.00	1.00	0.10
	Food	34.00	34.00	1.00	0.10
	<b>Family/Cons Total</b>	531.00		18.00	1.00
<b>Math</b>	Int Algebra	40.00	40.00	0.20	0.20
	7th	168.00	33.00	6.00	1.20
	8th	105.00	35.00	3.00	0.60
	trans math gr 6-8	132.00	19.00	7.00	1.40
	Math Lab 6(14).2	67.00		3.00	0.60
	7(31) .2 8(22) .2				
	<b>Math Total</b>	512.00		19.20	4.00
	Tosa Math				0.40
	<b>Math Total</b>				3.60

<b>Language</b>	6th			0.00	0.00	39
	7th	199.00	28.00	7.00	1.40	
	8th	168.00	28.00	6.00	1.20	
				0.00	0.00	
				0.00	0.00	
	<b>Language Total</b>	367.00		13.00	2.60	
<b>Music</b>	Band	129/113/87	4sec/3sec/2	9.00	1.40	
	Orchestra	35/33/17	1sec/1sec/1	3.00	0.50	
	Choir	87/68/56	3 sec/2 sec/2	7.00	1.10	
	Lessons -Band			1.30	1.30	
	Lessons - Orchestra			0.20	0.20	
<b>6th a/b schedule</b>						
	<b>Music Total</b>	0.00	0.00	20.50	4.50	
<b>Phy Ed/Health</b>	6th a/b	261.00	33.00	8.00	0.80	
	7th a/b	247.00	31.00	8.00	0.80	
	8th a/b	218.00	36.00	6.00	0.60	
	Health a/b	242.00	30.00	8.00	0.80	
	Weight Training	51.00	26.00	0.20	0.20	
	<b>Phy Ed/Health Total</b>	1019.00		30.20	3.20	
<b>PLTW</b>	6th a/b	261.00	33.00	0.40	0.40	
	7th a/b	220.00	28.00	8.00	0.40	
	8th			0.00	0.00	
	Design	29.00	1.00	0.10	0.10	
	prototype	13.00	1.00	0.10	0.10	
	<b>PLTW Total</b>	523.00	63.00	8.60	1.00	
<b>Read 180</b>	6th	17.00	1.00	0.40	0.40	
	7th	37.00	2.00	0.80	0.80	
	8th	23.00	1.00	0.40	0.40	
	sped	20.00	1.00	0.40	0.40	
	Reading Tosa/Read 180				.4/1.6	
	<b>Read 180 Total</b>	97.00	5.00	2.00	2.00	

<b>Science</b>	6th			0.00	0.00
	7th - Life	245.00	27.00	9.00	1.80
	8th - Earth	213.00	27.00	8.00	1.60
				0.00	0.00
				0.00	0.00
	<b>Science Total</b>	458.00		17.00	3.40
<b>Social Studies</b>	6th			0.00	0.00
	7th	245.00	31.00	8.00	1.60
	8th	215.00	31.00	7.00	1.40
				0.00	0.00
				0.00	0.00
	<b>Social Studies Total</b>	460.00		15.00	3.00
<b>World Lang</b>	Spanish	66.00	33.00	2.00	0.40
	German	38.00	38.00	1.00	0.20
				0.00	0.00
				0.00	0.00
				0.00	0.00
	<b>World Lang Total</b>	104.00		3.00	0.60
<b>Other(list)</b>	Counselor			2.00	2.00
	Media			1.00	1.00
	Math TOSA			1.00	0.60
	Read TOSA			1.00	0.60
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
				0.00	0.00
	<b>Other Total</b>	0.00	0.00	5.00	4.20
	<b>Grand Total</b>	5569.00	95.00	199.70	42.00

**Woodland  
Site 335  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte (Enrollment = 971)			
General	TE01		35.20
Comped -allocated	TE35		2.20
<b>Total Ratio</b>			<b>37.40</b>
Itinerant - music			2.10
Middleschool allocation			2.00
ALC - Interventions			1.30
TOSA's			1.20
Purchased			3.20
Other - contingency	TE01		1.00
<b>Total Site FTE</b>			<b>48.20</b>

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 9,200	
Desegregation	TE13	\$ 74,000	IAW 3 - year plan
Title I	TE45		-
Referendum		\$ 519,869	
		\$ (288,000)	3.2 fte
		\$ (30,000)	Activity Buses (5)
		<b>\$ 201,869</b>	

**Academic Interventions/Investments**

	Forecasted Needs	
** Read 180 - 83 students/4 sections 2 hr block	1.60	60% Ratio = 1.0 - 40% focus/other
** Trans Math - 103 students/5 sections (Red)	1.00	60% Ratio = .6- 40% focus/other
Learning Base supervisory support	2.00	\$ 90,000 District AYP
Extended Day - Excel teacher support	\$ 3,388	Targeted services
Summer Program	TBD	ALC
Extended Year		
Student Support Advocate - CTAG	TBD	Integration
** Strategic Math labs (75 Students/3 labs)(Yellow)	0.60	60% Ratio .3 = - 40% focus/other
** Counselor(s)	2.00	Ratio
** Media	1.00	Ratio
Itinerant Music -	2.10	DW Allocation
Climate		District AYP
TOSA's math	0.60	ARRA/Ratio = 1.0 fte
TOSA's reading (literary coach)	0.60	ARRA/Ratio = 1.0 fte

**2010-2011  
Woodland Staff Assignments**

Subject	Subject Licensure	FTE	Subject	Subject Licensure	FTE	
<b>6th Grade</b>	Lang Arts/Read		<b>PLTW</b>	6th	0.5	
	Math/Sci/SS	9		7th	0.5	
				8th	0.4	
<b>Read 180</b>	6th (2 sections)	0.4		<b>Department Total</b>	<b>1.4</b>	
	7th (1 section)	0.2				
	8th (1 section)	0.2	<b>Business</b>	<b>Subject licensure</b>		
	<b>Department Total</b>	<b>0.8</b>		6th grade	0.5	
<b>Social St.</b>	<b>Subject licensure</b>			7th grade	0.5	
	7th	2		<b>Department Total</b>	<b>1</b>	
	8th	2	<b>Family Consumer</b>	<b>Subject licensure</b>		
<b>Department Total</b>	<b>4</b>	6th		0.5		
		7th		0.5		
<b>English</b>	<b>Subject licensure</b>			8th	0.4	
	7th	2		<b>Department Total</b>	<b>1.4</b>	
	8th	2	<b>Music</b>	<b>Subject licensure</b>		
	<b>Department Total</b>	<b>4</b>				
		Band		1.4		
<b>World Lang</b>	Spanish	1		Orchestra	1	
	German	0.4		Choir	1.5	
	<b>Department Total</b>	<b>1.4</b>		Itinerant (Dist alloc)	2.1	
<b>Phy Ed/Health</b>	<b>Subject licensure</b>			<b>Department Total</b>	<b>6</b>	
	6th PE	0.9	<b>Counselor</b>			
	7th PE	1.1				
	8th PE	1				2
	Health	1.1	<b>Dean of Students</b>			
	Weight Training	0.4				1
	<b>Department Total</b>	<b>4.4</b>	<b>Media Generalist</b>			1
<b>Math</b>	<b>Subject licensure</b>		<b>Math TOSA(Dist alloc)</b>	(.4 lab/int .6 TOSA)	(0.6 Dist)	
	7th	2				
	8th	2	<b>Reading TOSA (Dist alloc)</b>	(.4 R180 .6 TOSA)	(0.6 Dist)	
	Trans Math (5 sec)	0.6				
	Math Lab (3 sec)	0.35				
<b>Department Total</b>	<b>4.95</b>	<b>FTE Grand Total</b>			<b>46.75</b>	
<b>Science</b>	<b>Subject licensure</b>		Read 180		<b>0.8</b>	
	7th - Life Sci	2	Transmath		<b>0.4</b>	
	8th - Earth Sci	2	Labs		<b>0.25</b>	
	<b>Department Total</b>	<b>4</b>				
<b>Art</b>	<b>Subject licensure</b>					
	6th	0.5			48.2	
	7th	0.5				
	8th	1				
	Comp Graphics	0.4				
<b>Department Total</b>	<b>2.4</b>				Draft4/12/10	

**Lincoln  
Site 310  
6/30/2011**

<b>FTE Funding</b>	PCN	Dollars	Fte
Ratio fte			
General	TE01		12.00
Comped -allocated	TE35		1.60
State Class Size Reduction	TECX		2.00
Total Ratio			15.60
Adjustments			
Purchase from other			3.40
Total Sections			<u>19.00</u>

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 247,612	
Desegregation	TE13	\$ 17,531	IAW 3 - year plan
Title I	TE45	\$ 240,000	
		\$ (30,000)	Summer - Title
		\$ (342,000)	Purchased fte - (includes .4 specialist)
		\$ (17,531)	integration
		\$ (90,000)	Reading specialist
		<u>\$ 25,612</u>	

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source	
Instructional/Data Coaches (certified staff)	0.50	District AYP	Combine w/K-2 Lit Coach
K-2 Literacy Coach - CTAG	0.50	Integration	Combine w/Instructional
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services	
Extended year	\$ 30,000	Site Title	
Student Support Advocate - CTAG	TBD	Integration	
Elementary intervention - PLC	TBD	AYP Title	
All Day Kindergarten		District Funded	
Reading Corp			

Grade Level	Enroll	Class size	Sections
K	92	23.00	4.00
1	89	22.25	4.00
2	80	22.86	3.50
3	64	25.60	2.50
4	57	22.80	2.50
5	71	28.40	2.50
	<u>453</u>		<u>19.00</u>

**Congdon Park  
Site 435  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		13.90
Comped -allocated	TE35		2.10
State Class Size Reduct	TECX		2.10
Total Ratio			18.10
Adjustments	TE01		(0.10)
Purchase from other			
Total Sections			18.00

<b>Discretionary</b>	
Comped discretionary	TE15
Desegregation	TE13
Title I	TE45

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Enroll	Class size	Sections
K	93	31.00	3.00
1	63	21.00	3.00
2	80	26.67	3.00
3	88	29.33	3.00
4	90	30.00	3.00
5	87	29.00	3.00
	501		18.00

**Homecroft  
Site 475  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		11.00
Comped -allocated	TE35		1.40
State Class Size Reduction	TECX		1.70
Total Ratio			14.10
Adjustments	TE01		(0.10)
Purchase from other			
Total Sections			14.00

<b>Discretionary</b>	
Comped discretionary	TE15
Desegregation	TE13
Title I	TE45

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Enroll	Class size	Sections
K	69	23.00	3.00
1	70	28.00	2.50
2	68	27.20	2.50
3	50	25.00	2.00
4	64	32.00	2.00
5	61	30.50	2.00
	<u>382</u>		<u>14.00</u>

**Lakewood  
Site 500  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		8.30
Comped -allocated	TE35		1.00
State Class Size Reduction	TECX		1.40
Total Ratio			10.70
Adjustments	TE01		0.30
Purchase from other			
Total Sections			11.00

<b>Discretionary</b>	
Comped discretionary	TE15
Desegregation	TE13
Title I	TE45

<b>Academic Interventions/Investments</b>	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP
Reading Corp		
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Enroll	Class size	Sections
K	55	27.50	2.00
1	43	28.67	1.50
2	42	28.00	1.50
3	46	23.00	2.00
4	52	26.00	2.00
5	53	26.50	2.00
	<u>291</u>		<u>11.00</u>

**Lester Park  
Site 510  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		9.60
Comped -allocated	TE35		1.10
State Class Size Reduction	TECX		1.70
Total Ratio			12.40
Adjustments	TE01		(0.40) Transferred to Rockridge
Purchase from other			
Total Sections			12.00

<b>Discretionary</b>	
Comped discretionary	TE15
Desegregation	TE13
Title I	TE45

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP
Reading Corp		
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Staffed	Class size	Sections
K			
1			
2	89	29.67	3.00
3	78	26.00	3.00
4	87	29.00	3.00
5	91	30.33	3.00
	345		12.00

**Lowell  
Site 520  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		14.30
Comped -allocated	TE35		2.10
State Class Size Reduction	TECX		2.30
			<u>18.70</u>
Adjustments	TE01		0.30 From contingency
Purchase from other			
Total Sections			<u><u>19.00</u></u>

<b>Discretionary</b>			
Comped discretionary	TE15		
Desegregation	TE13	18,000	0.20 Music
Title I	TE45		

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP Combine w/K-2 Lit Coach
K-2 Literacy Coach - CTAG	0.50	Integration Combine w/Instructional
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Enroll	Class size	Sections
K	92	26.29	3.50
1	92	26.29	3.50
2	93	31.00	3.00
3	77	25.67	3.00
4	84	28.00	3.00
5	72	24.00	3.00
	<u>510</u>		<u>19.00</u>

**Laura Mac  
Site 525  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		12.70
Comped -allocated	TE35		1.90
State Class Size Reduction	TECX		2.10
Total Ratio			16.70
Adjustments			
Purchase from other			2.30
Total Sections			19.00

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 160,398	
Title I	TE45	\$ 250,000	
Uses		\$ (30,000)	Summer - Title
		\$ (243,000)	Purchase fte(includes .4 specialist)
		\$ (90,000)	Title I TE pullout
		\$ (36,400)	.7 clerical
		\$ (9,000)	Title I P.I. coordinator
Available funds		\$ 1,998	

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source	
Instructional/Data Coaches (certified staff)	0.50	District AYP	Combine w/K-2 Lit Coach
K-2 Literacy Coach - CTAG	0.50	Integration	Combine w/Instructional
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services	
Extended year	\$ 30,000	Site Title	
Student Support Advocate - CTAG	TBD	Integration	
Elementary intervention - PLC	TBD	AYP Title	
All Day Kindergarten		District Funded	

Grade Level	Enroll	Class size	Sections
K	83	20.75	4.00
1	72	24.00	3.00
2	89	29.67	3.00
3	80	26.67	3.00
4	69	23.00	3.00
5	76	25.33	3.00
	<u>469</u>		<u>19.00</u>

**Nettleton  
Site 540  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		13.20
Comped -allocated	TE35		1.70
State Class Size Reduction	TECX		2.10
Total Ratio			17.00
Adjustments			
Purchase from other			4.00
Total Sections			21.00

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 485,222	
Title I	TE45	\$ 500,000	
		\$ (30,000)	Summer - Ttile
		\$ (396,000)	Purchased fte - class size(.4 specialist)
		\$ (360,000)	Purchased fte - Read/math
		\$ (125,000)	Assistant Principal
		\$ (50,000)	AYP
Available funds		\$ 24,222	

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source	
Instructional/Data Coaches (certified staff)	0.50	District AYP	Combine w/K-2 Lit Coach
K-2 Literacy Coach - CTAG	0.50	Integration	Combine w/Instructional
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services	
Extended year	\$ 30,000	Site Title	
Student Support Advocate - CTAG	TBD	Integration	
Elementary intervention - PLC	TBD	AYP Title	
All Day Kindergarten		District Funded	

Grade Level	Enroll	Class size	Sections
K	75	18.75	4.00
1	82	20.50	4.00
2	79	19.75	4.00
3	76	25.33	3.00
4	75	25.00	3.00
5	75	25.00	3.00
	<u>462</u>		<u>21.00</u>

**Rockridge  
Site 560  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		5.70
Comped -allocated	TE35		0.90
State Class Size Reduction	TECX		0.60
Total Ratio			7.20
Adjustments	TE01		0.80
Purchase from other			
Total Sections			8.00

<b>Discretionary</b>			
Comped discretionary	TE15		
Desegregation	TE13		
Title I	TE45		

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP Combine w/K-2 Lit
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	TBD	Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Staffed	Class size	Sections
K	93	23.25	4.00
1	94	23.50	4.00
2			
3			
4			
5			
	187		8.00

**Stowe  
Site 565  
6/30/2011**

	PCN	Dollars	Fte
<b>FTE Funding</b>			
Ratio fte			
General	TE01		9.70
Comped -allocated	TE35		1.50
State Class Size Reduction	TECX		1.50
Total Ratio			12.70
Adjustments			
Purchase from other			0.80
Total Sections			13.50

<b>Discretionary</b>			
Comped discretionary	TE15	\$ 76,596	
Desegregation	TE13		
Title I - (cannot use for CSR)	TE45	\$ 160,000	
		\$ (30,000)	Summer - title
		\$ (72,000)	Class size .8
		\$ (90,000)	Title I TE pullout
		\$ (44,000)	Assistant
Available funds		\$ 596	

**Academic Interventions/Investments**

	Forecasted Needs	Funding Source
Instructional/Data Coaches (certified staff)	0.50	District AYP Combine w/K-2 Lit
Extended Day - Excel teacher support w/read/math program	\$ 3,388	Targeted Services
Extended year	\$ 30,000	Site Title
Student Support Advocate - CTAG	TBD	Integration
Elementary intervention - PLC	TBD	AYP Title
All Day Kindergarten		District Funded

Grade Level	Enroll	Class size	Sections
K	61	24.40	2.50
1	63	21.00	3.00
2	51	25.50	2.00
3	54	27.00	2.00
4	67	33.50	2.00
5	50	25.00	2.00
	<u>346</u>		<u>13.50</u>

**2010-11**  
**Music Registration and FTE Information**

<b>Department/Course Name</b>	<b>East Enrollment</b>	<b>East FTE</b>	<b>Central Enrollment</b>	<b>Central FTE</b>
<b>Band</b>				
Freshman Band	203	1.0	224	1.0
Intermediate Band				
Advanced Band				
Jazz Ensemble	15	.2	19	.2
World Percussion	5	.0	See Orchestra	See Orchestra
<b>Total</b>	223	1.2 (with lessons)	243	1.2 (with lessons)
<b>Orchestra</b>				
Freshman Orchestra	53	.2	26	.2
Concert Orchestra	44	.2	26	.2
Symphony Orchestra	73	.2	39	.2
Chamber Orchestra	25	.2	36	.2
World Percussion	See Band	See Band	15	.2
<b>Total</b>	195	1.0 (with lessons)	142	1.2 (with lessons)
<b>Choir</b>				
Men's Choir	32	.2	42	.2
Women's Choir	48	.2		
Intermediate Mixed Choir	58	.2	51	.2
Advanced Concert Choir	88	.2	66	.2
Chamber Choir	17	.2	15	.2
Women's Advanced Choir	TBD	.2	24	.2
Show/Jazz Choir	14	.2	24	.2
<b>Total</b>	257	1.4 (without lessons)	222	1.2 (without lessons)
<b>Overall Music Totals</b>	675	3.6	607	3.6

**2009-10**  
**Music Registration and FTE Information**

<i>Department/Course Name</i>	<i>East Enrollment</i>	<i>East FTE</i>	<i>Central Enrollment</i>	<i>Central FTE</i>	<i>Denfeld Enrollment</i>	<i>Denfeld FTE</i>
<b>Band</b>						
Freshman Band	54	1.0 (with lessons)	31	1.0 (with lessons)	61	1.0 (with lessons)
Denfeld Symphonic					41	
Central Trojan Band			27			
East Concert Band	48					
Wind Ensemble	59				50	
Concert Band			53			
Jazz Ensemble	20		17		17	
Total	181				128	
<b>Orchestra</b>						
Denfeld Hunter Orchestra		1.0 (with lessons)		1.0 (with lessons)	27	.4 (with lessons)
Central Trojan Orchestra			30			
East Greyhound Orchestra	45					
Concert Orchestra	39		56		15	
World Percussion Ensemble			17			
Central Chamber Orchestra			26			
Symphony Orchestra	56					
East Sterling Strings	24					
Total	164				129	
<b>Choir</b>						
Denfeld Hunter Gold Choir		1.2 (with lessons)		1.0 (without lessons)	49	1.0 (with lessons)
Central Trojan Choir			33			
Men's Choir	16					
Women's Choir	42					
Steppin Up					16	
Choralaires			43			
East Birchwood Choir	43					
Concert Choir			52		47	
Denfeld Solid Gold					20	
Central Little Mob			17			
Women's Select Choir						
A' Cappella Choir	83					
East Choralaires	18					
Total	202				145	
<b>Overall Music Totals</b>	547	3.2	402	3.0	343	2.4



## ***Early Childhood Screening***

*Duluth Public Schools, ISD No. 709  
2102 Blackman Avenue • Duluth, MN 55811  
(218) 336-8816 • FAX (218) 336-8819*

Lions Club- Duluth  
C/O Gail Tate  
327 Kenilworth Ave.  
Duluth, MN 55803

March 5, 2010

Dear Lions Club,

As Early Childhood Screening Coordinator for the Duluth Public Schools, I oversee the comprehensive health and developmental screening that the State of Minnesota requires for all children before they enroll in kindergarten. In 2006, the MN Department of Education, MN Department of Health and MN Department of Human Services announced new Minnesota Vision Screening Guidelines. This included procedural guidelines and rescreen/referral criteria for use at Early Childhood Screening and other vision screenings by school nurses. The recommended vision chart for children ages 3-6 years is the 10 foot HOTV or LEA chart with 50% spaced rectangle boxes around each line and a required 20/25 line (manufactured by Good-Lite).

During the course of a school year, I have the opportunity to work with our school nurses and became aware that they are working with dated vision screening equipment. Most notably, the current eye charts in use are missing the required 20/25 line. This matters when identifying children with a two line difference between their right and left eyes. If the 20/25 line is not a part of the exam, a referral could be missed. For example, a 20/20 right eye and 20/30 left eye result on an old eye chart is a one line difference, therefore “passing”. On the currently recommended eye chart, this result would be a two-line difference, resulting in an eye doctor referral upon a second “failure”.

In the spring of last school year, a child was seen at Early Childhood Screening who needed a second screen to determine if a referral to the eye doctor should be made. Her original screening results were 20/20 right eye and 20/30 left eye (a difference of two lines on the eye chart). For convenience, the mother asked if the second screen could be arranged at the school where she teaches. It was completed by the school nurse with the same result, but on an old eye chart this was considered “passing”. I encouraged the mother to return to ECS for another rescreen on a current eye chart, which resulted in a referral to the eye doctor. Subsequently, she got glasses just in time for kindergarten. Recently, this same mother happened to email about arranging screening for her youngest daughter. In the note, she expressed her appreciation and wrote about her kindergartner: She is loving school- she is flying in- as per her teacher. She loves her glasses. They made a world of difference.

The team of nurses who serve our Duluth public and non-public schools need current vision charts to properly screen young children and to meet the expectations of Minnesota's guidelines. During these challenging economic times, Camille Murphy, RN Licensed School Nurse and I seek a solution to this need by making a request of the Duluth Lion's Club on behalf of the Duluth school nurses group. The nurses request funding for 14 sets of HOTV vision charts, as described below:

14 Mass Test HOTV Distance Charts @ \$30.00 each = \$420.00	
<u>Shipping and handling</u>	<u>= \$ 14.00</u>
TOTAL:	\$434.00

Your consideration of this request is greatly appreciated.

Sincerely,

Kathy Johnson  
Early Childhood Screening Coordinator  
218-336-8816

Camille Murphy, RN Licensed School Nurse  
Lowell Elementary School  
218-336-8895

Attachments:  
Good-Lite quote  
Mass Test HOTV Distance Chart information

K-12 Math Committee  
2007-2010

k-12 Member Names	School	k	1	2	3	4	5	6	7	8	Alg I	Alab	A 1b	Geom	Alg II	INT I	Int II	Pre C	Calc
Tonya Sconiers	Denfeld DNA																		
Cher Obst	dropped																		
Kim Eaton	Laura MacArthur	x																	
Brenda Florestano	East													x*	x			x	
Kim Anderson	Morgan Park								x	x									
John Bushey	Piedmont (dropped)					x													
Melissa Kelley	Nettleton				x														
Erica Wittmers-Graves	Lakewood							x											
Terri Micheau	Homecroft			x															
Nathan Norman	Woodland																		
Jody Belcastro	Grant (dropped)																		
Patricia Bambenek	HOCHS																		
Timothy White	Denfeld											x*	x	*				x	x
Tamara Meyer	Ordean→MP Focus							x											
Rebecca Starks	Lincoln→Morgan P								x*	x			x						
Ed Lewis	Central (dropped)																x		x
Deborah Debolt	Lowell → Grant		x	x*		x*													
Jill Anderson	Special Ed AJC																		
Lisa Heehn	Stowe			x															
Anne Krafthefer	Lester Park						x												
Marj Fisher	Congdon Park				x														
Nathan Norman	Woodland								x										
Nancy Broman	Nettleton Title I				x	x	x												
Chris Knox	Lincoln (joined Fall 08)		x																
Schools missing																			
Grant	Deb DeBolt (moved)																		
Lincoln Park	joined this Fall																		
Additions																			
Pam Nelson	East HS																		
Jill Dalbacka	Lowell						x												
Peter Graves	Central HS joined 2/10																		
Sheila Nyback	Morgan Park joined Fall 10)								x	x*									
Homecroft	Gwen Curran	x																	

\* taught recently

## 2008 Math Committee Belief Statements

- 1. We believe that the goal of our K-12 mathematics program is to develop and improve student reasoning, communication, application and skills in all four math strands: Number and Operation, Algebra, Geometry and Measurement, Data Analysis and Probability.*
- 2. We believe an effective mathematics program is an articulated K-12 scope and sequence program developed through committee process.*
- 3. We believe that learning mathematics is an active, collaborative process.*
- 4. We believe that computational skills and number concepts are essential components of the mathematics curriculum.*
- 5. We believe that students should be able to communicate their thinking and understanding using appropriate mathematical vocabulary.*
- 6. We believe that students need to learn appropriate use of technology in mathematics.*
- 7. We believe that assessment practices and tasks in mathematics are clearly linked to the curriculum, the learner outcomes and the standards.*
- 8. We believe that qualified teachers are the key to achieving excellence in mathematics education. To this end, professional development opportunities must occur.*

## **Summary of *Foundations for Success: The Final Report of the National Mathematics Advisory Panel, 2008***

The National Mathematics Panel was charged with defining a system for delivering instruction in mathematics that enables all students to acquire competence in algebra and readiness for higher levels of mathematics. Although the report's findings and recommendations are focused on grades PreK-8, the PreK-8 path laid down by the panel is directed toward the study of *authentic algebra* in middle and secondary school. The panel goes on to define the content of *authentic algebra* in a one-page table of major topics.

The system of mathematics education set forth by the Panel includes Curricular Content, Learning Processes, Teachers and Teacher Education, Instructional Practices, Instructional Materials, Assessments, and Research Policies and Mechanisms. The report's Executive Summary presents 45 major findings and recommendations for the system that are based upon, among other resources, over 16,000 research publications and policy reports.

### **Curricular Content:**

The Panel determined a progression of learning mathematics from less sophisticated topics to more sophisticated ones. For example, by the end of grade 5, students should be proficient, by that they should, understand the important concepts and develop flexible, accurate, and automatic execution of algorithms to solve problems working with whole numbers. Followed by, at the end of grade 7, students should be proficient with fractions, including decimals, percents, and negative fractions. The implementation of such progressions will support student proficiency in algebra with students understanding the important concepts and developing flexible, accurate, and automatic execution of algorithms to solve problems.

### **Learning Processes:**

Since students come to school with different mathematical knowledge, effective mathematics interventions are necessary in every classroom. Curriculum must address the development of conceptual understanding, computational fluency, and problem solving simultaneously. This can be achieved when students are afforded sufficient time to learn. Students and families need to understand the importance of student effort as related to successful mathematics performance.

### **Teacher and Teacher Education:**

Research shows direct relationship between teachers' content knowledge and their students' achievement. Key to improving teachers' effectiveness in the classroom is that teachers engage in multiple opportunities to learn the mathematics for teaching. Teacher education programs must graduate teachers knowledgeable in teaching school mathematics. Schools and district must support teachers throughout their career.

### **Instructional Practices:**

A balance between teacher and student-centered approaches to teaching and learning is critical for student success in learning mathematics. The needs of students whether they are struggling or mathematically talented need to be met. Regular use of formative assessments to design and individualize instruction improves students learning.

### **Instructional Materials:**

Schools and districts need to provide instructional materials aligned with state standards and the recommendations of the National Mathematics Panel and free of mathematical errors with regard to accuracy, clarity, and logical reasoning. Also, publishers should produce much shorter and more focused textbooks.

**Assessment:**

State and national assessments need to be aligned with the Panel's curricular content recommendations and accessible to all students.

**Research Policies and Mechanisms:**

Continuous research in partnership with PreK-16 educators needs to be conducted to ensure effective curricular, instructional practices, assessments, and teacher education. This PreK-16 partnership includes educators, psychologists, sociologists, economists, cognitive scientists, and mathematicians.

**The National Mathematics Panel identified Benchmarks for Critical Foundations to Algebra.** The interpretation of these benchmarks should be flexible to accommodate student needs. Three clusters of concepts and skills that are foundational for formal algebra coursework include:

- Fluency with whole numbers
- Fluency with fractions, and
- Particular aspects of geometry and measurement

**Fluency with Whole Numbers:**

- By the end of Grade 3, students should be proficient with the addition and subtraction of whole numbers.
- By the end of Grade 5, students should be proficient with multiplication and division of whole numbers.

**Fluency with Fractions:**

- By the end of Grade 4, students should be able to identify and represent fractions and decimals and compare them on a number line or with other common representations of fractions and decimals.
- By the end of Grade 5, students should be proficient with comparing fractions and decimals and common percents, and with the addition and subtraction of fractions and decimals.
- By the end of Grade 6, students should be proficient with multiplication and division of fractions and decimals.
- By the end of Grade 6, students should be proficient with all operations involving positive and negative integers.
- By the end of Grade 7, students should be proficient with all operations involving positive and negative fractions.
- By the end of Grade 7, students should be able to solve problems involving percent, ratio, and rate, and extend this work to proportionality.

**Particular Aspects of Geometry and Measurement:**

- By the end of Grade 5, students should be able to solve problems involving perimeter and area of triangles, and all quadrilaterals having at least one pair of parallel sides ( i.e. trapezoids).
- By the end of Grade 6, students should be able to analyze the properties of two-dimensional shapes and solve problems involving perimeter and area. They should also be able to analyze properties of three- dimensional shapes and solve problems involving surface area and volume.
- By the end of Grade 7, students should understand relationships involving similar triangles.

## **The Major Topics of School Algebra**

### **Symbols and Expressions**

- Polynomial expressions
- Rational expressions
- Arithmetic and finite geometric series

### **Linear Equations**

- Real numbers as points on the number line
- Linear equations and their graphs
- Solving problems with linear equations
- Linear inequalities and their graphs
- Graphing and solving systems of simultaneous linear equations

### **Quadratic Equations**

- Factors and factoring of quadratic polynomials with integer coefficients
- Completing the square in quadratic expressions
- Quadratic formula and factoring of general quadratic polynomials
- Using the quadratic formula to solve equations

### **Functions**

- Linear functions
- Quadratic functions—word problems involving quadratic functions
- Graphs of quadratic functions and completing the square
- Polynomial functions (including graphs of basic functions)
- Simple nonlinear functions (e.g., square and cube root functions; absolute value; rational functions; step functions)
- Rational exponents, radical expressions, and exponential functions
- Logarithmic functions
- Trigonometric functions
- Fitting simple mathematical models to data

### **Algebra of Polynomials**

- Roots and factorization of polynomials
- Complex numbers and operations
- Fundamental theorem of algebra
- Binomial coefficients (and Pascal's Triangle)
- Mathematical induction and the binomial theorem

### **Combinatorics and Finite Probability**

- Combinations and permutations, as applications of the binomial theorem and Pascal's Triangle
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Learning Processes



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Similarities

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Differences

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# 5

## Curriculum Focal Points for Mathematics in Prekindergarten through Grade 8

Three curriculum focal points are identified and described for each grade level, pre-K–8, along with connections to guide integration of the focal points at that grade level and across grade levels, to form a comprehensive mathematics curriculum. To build students' strength in the use of mathematical processes, instruction in these content areas should incorporate—

- the use of the mathematics to solve problems;
- an application of logical reasoning to justify procedures and solutions; and
- an involvement in the design and analysis of multiple representations to learn, make connections among, and communicate about the ideas within and outside of mathematics.

The purpose of identifying these grade-level curriculum focal points and connections is to enable students to learn the content in the context of a focused and cohesive curriculum that implements problem solving, reasoning, and critical thinking.

These curriculum focal points should be considered as major instructional goals and desirable learning expectations, not as a list of objectives for students to master. They should be implemented with the intention of building mathematical competency for all students, bolstered by the pedagogical understanding that not every student learns at the same rate or acquires concepts and skills at the same time.

Those who are involved in curriculum planning for grades 6–8 should note that this set of curriculum focal points has been designed with the intention of providing a three-year middle school program that includes a full year of general mathematics in each of grades 6, 7, and 8. Those whose programs offer an algebra course in grade 8 (or earlier) should consider including the curriculum focal points that this framework calls for in grade 8 in grade 6 or grade 7. Alternatively, these topics could be incorporated into the high school program. Either way, curricula would not omit the important content that the grade 7 and grade 8 focal points offer students in preparation for algebra and for their long-term mathematical knowledge.

## Curriculum Focal Points and Connections for Prekindergarten

The set of three curriculum focal points and related connections for mathematics in prekindergarten follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations: Developing an understanding of whole numbers, including concepts of correspondence, counting, cardinality, and comparison**

Children develop an understanding of the meanings of whole numbers and recognize the number of objects in small groups without counting and by counting—the first and most basic mathematical algorithm. They understand that number words refer to quantity. They use one-to-one correspondence to solve problems by matching sets and comparing number amounts and in counting objects to 10 and beyond. They understand that the last word that they state in counting tells “how many;” they count to determine number amounts and compare quantities (using language such as “more than” and “less than”), and they order sets by the number of objects in them.

### **Geometry: Identifying shapes and describing spatial relationships**

Children develop spatial reasoning by working from two perspectives on space as they examine the shapes of objects and inspect their relative positions. They find shapes in their environments and describe them in their own words. They build pictures and designs by combining two- and three-dimensional shapes, and they solve such problems as deciding which piece will fit into a space in a puzzle. They discuss the relative positions of objects with vocabulary such as “above,” “below,” and “next to.”

### **Measurement: Identifying measurable attributes and comparing objects by using these attributes**

Children identify objects as “the same” or “different,” and then “more” or “less,” on the basis of attributes that they can measure. They identify measurable attributes such as length and weight and solve problems by making direct comparisons of objects on the basis of those attributes.

**Data Analysis:** Children learn the foundations of data analysis by using objects’ attributes that they have identified in relation to geometry and measurement (e.g., size, quantity, orientation, number of sides or vertices, color) for various purposes, such as describing, sorting, or comparing. For example, children sort geometric figures by shape, compare objects by weight (“heavier,” “lighter”), or describe sets of objects by the number of objects in each set.

**Number and Operations:** Children use meanings of numbers to create strategies for solving problems and responding to practical situations, such as getting just enough napkins for a group, or mathematical situations, such as determining that any shape is a triangle if it has exactly three straight sides and is closed.

**Algebra:** Children recognize and duplicate simple sequential patterns (e.g., square, circle, square, circle, square, circle,...).

## Curriculum Focal Points and Connections for Kindergarten

The set of three curriculum focal points and related connections for mathematics in kindergarten follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

<p><b>Number and Operations: Representing, comparing, and ordering whole numbers and joining and separating sets</b></p> <p>Children use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set, creating a set with a given number of objects, comparing and ordering sets or numerals by using both cardinal and ordinal meanings, and modeling simple joining and separating situations with objects. They choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the number in a small set, counting and producing sets of given sizes, counting the number in combined sets, and counting backward.</p>	<p><b>Data Analysis:</b> Children sort objects and use one or more attributes to solve problems. For example, they might sort solids that roll easily from those that do not. Or they might collect data and use counting to answer such questions as, “What is our favorite snack?” They re-sort objects by using new attributes (e.g., after sorting solids according to which ones roll, they might re-sort the solids according to which ones stack easily).</p> <p><b>Geometry:</b> Children integrate their understandings of geometry, measurement, and number. For example, they understand, discuss, and create simple navigational directions (e.g., “Walk forward 10 steps, turn right, and walk forward 5 steps”).</p> <p><b>Algebra:</b> Children identify, duplicate, and extend simple number patterns and sequential and growing patterns (e.g., patterns made with shapes) as preparation for creating rules that describe relationships.</p>
<p><b>Geometry: Describing shapes and space</b></p> <p>Children interpret the physical world with geometric ideas (e.g., shape, orientation, spatial relations) and describe it with corresponding vocabulary. They identify, name, and describe a variety of shapes, such as squares, triangles, circles, rectangles, (regular) hexagons, and (isosceles) trapezoids presented in a variety of ways (e.g., with different sizes or orientations), as well as such three-dimensional shapes as spheres, cubes, and cylinders. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.</p>	
<p><b>Measurement: Ordering objects by measurable attributes</b></p> <p>Children use measurable attributes, such as length or weight, to solve problems by comparing and ordering objects. They compare the lengths of two objects both directly (by comparing them with each other) and indirectly (by comparing both with a third object), and they order several objects according to length.</p>	

## Curriculum Focal Points and Connections for Grade 1

The set of three curriculum focal points and related connections for mathematics in grade 1 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### ***Number and Operations and Algebra: Developing understandings of addition and subtraction and strategies for basic addition facts and related subtraction facts***

Children develop strategies for adding and subtracting whole numbers on the basis of their earlier work with small numbers. They use a variety of models, including discrete objects, length-based models (e.g., lengths of connecting cubes), and number lines, to model “part-whole,” “adding to,” “taking away from,” and “comparing” situations to develop an understanding of the meanings of addition and subtraction and strategies to solve such arithmetic problems. Children understand the connections between counting and the operations of addition and subtraction (e.g., adding two is the same as “counting on” two). They use properties of addition (commutativity and associativity) to add whole numbers, and they create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems involving basic facts. By comparing a variety of solution strategies, children relate addition and subtraction as inverse operations.

### ***Number and Operations: Developing an understanding of whole number relationships, including grouping in tens and ones***

Children compare and order whole numbers (at least to 100) to develop an understanding of and solve problems involving the relative sizes of these numbers. They think of whole numbers between 10 and 100 in terms of groups of tens and ones (especially recognizing the numbers 11 to 19 as 1 group of ten and particular numbers of ones). They understand the sequential order of the counting numbers and their relative magnitudes and represent numbers on a number line.

### ***Geometry: Composing and decomposing geometric shapes***

Children compose and decompose plane and solid figures (e.g., by putting two congruent isosceles triangles together to make a rhombus), thus building an understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine figures, they recognize them from different perspectives and orientations, describe their geometric attributes and properties, and determine how they are alike and different, in the process developing a background for measurement and initial understandings of such properties as congruence and symmetry.

***Number and Operations and Algebra:*** Children use mathematical reasoning, including ideas such as commutativity and associativity and beginning ideas of tens and ones, to solve two-digit addition and subtraction problems with strategies that they understand and can explain. They solve both routine and nonroutine problems.

***Measurement and Data Analysis:*** Children strengthen their sense of number by solving problems involving measurements and data. Measuring by laying multiple copies of a unit end to end and then counting the units by using groups of tens and ones supports children’s understanding of number lines and number relationships. Representing measurements and discrete data in picture and bar graphs involves counting and comparisons that provide another meaningful connection to number relationships.

***Algebra:*** Through identifying, describing, and applying number patterns and properties in developing strategies for basic facts, children learn about other properties of numbers and operations, such as odd and even (e.g., “Even numbers of objects can be paired, with none left over”), and 0 as the identity element for addition.

## Curriculum Focal Points and Connections for Grade 2

The set of three curriculum focal points and related connections for mathematics in grade 2 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations: Developing an understanding of the base-ten numeration system and place-value concepts**

Children develop an understanding of the base-ten numeration system and place-value concepts (at least to 1000). Their understanding of base-ten numeration includes ideas of counting in units and multiples of hundreds, tens, and ones, as well as a grasp of number relationships, which they demonstrate in a variety of ways, including comparing and ordering numbers. They understand multidigit numbers in terms of place value, recognizing that place-value notation is a shorthand for the sums of multiples of powers of 10 (e.g., 853 as 8 hundreds + 5 tens + 3 ones).

### **Number and Operations and Algebra: Developing quick recall of addition facts and related subtraction facts and fluency with multidigit addition and subtraction**

Children use their understanding of addition to develop quick recall of basic addition facts and related subtraction facts. They solve arithmetic problems by applying their understanding of models of addition and subtraction (such as combining or separating sets or using number lines), relationships and properties of number (such as place value), and properties of addition (commutativity and associativity). Children develop, discuss, and use efficient, accurate, and generalizable methods to add and subtract multidigit whole numbers. They select and apply appropriate methods to estimate sums and differences or calculate them mentally, depending on the context and numbers involved. They develop fluency with efficient procedures, including standard algorithms, for adding and subtracting whole numbers, understand why the procedures work (on the basis of place value and properties of operations), and use them to solve problems.

### **Measurement: Developing an understanding of linear measurement and facility in measuring lengths**

Children develop an understanding of the meaning and processes of measurement, including such underlying concepts as partitioning (the mental activity of slicing the length of an object into equal-sized units) and transitivity (e.g., if object A is longer than object B and object B is longer than object C, then object A is longer than object C). They understand linear measure as an iteration of units and use rulers and other measurement tools with that understanding. They understand the need for equal-length units, the use of standard units of measure (centimeter and inch), and the inverse relationship between the size of a unit and the number of units used in a particular measurement (i.e., children recognize that the smaller the unit, the more iterations they need to cover a given length).

**Number and Operations:** Children use place value and properties of operations to create equivalent representations of given numbers (such as 35 represented by 35 ones, 3 tens and 5 ones, or 2 tens and 15 ones) and to write, compare, and order multidigit numbers. They use these ideas to compose and decompose multidigit numbers. Children add and subtract to solve a variety of problems, including applications involving measurement, geometry, and data, as well as nonroutine problems. In preparation for grade 3, they solve problems involving multiplicative situations, developing initial understandings of multiplication as repeated addition.

**Geometry and Measurement:** Children estimate, measure, and compute lengths as they solve problems involving data, space, and movement through space. By composing and decomposing two-dimensional shapes (intentionally substituting arrangements of smaller shapes for larger shapes or substituting larger shapes for many smaller shapes), they use geometric knowledge and spatial reasoning to develop foundations for understanding area, fractions, and proportions.

**Algebra:** Children use number patterns to extend their knowledge of properties of numbers and operations. For example, when skip counting, they build foundations for understanding multiples and factors.

## Curriculum Focal Points and Connections for Grade 3

The set of three curriculum focal points and related connections for mathematics in grade 3 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations and Algebra: Developing understandings of multiplication and division and strategies for basic multiplication facts and related division facts**

Students understand the meanings of multiplication and division of whole numbers through the use of representations (e.g., equal-sized groups, arrays, area models, and equal “jumps” on number lines for multiplication, and successive subtraction, partitioning, and sharing for division). They use properties of addition and multiplication (e.g., commutativity, associativity, and the distributive property) to multiply whole numbers and apply increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving basic facts. By comparing a variety of solution strategies, students relate multiplication and division as inverse operations.

### **Number and Operations: Developing an understanding of fractions and fraction equivalence**

Students develop an understanding of the meanings and uses of fractions to represent parts of a whole, parts of a set, or points or distances on a number line. They understand that the size of a fractional part is relative to the size of the whole, and they use fractions to represent numbers that are equal to, less than, or greater than 1. They solve problems that involve comparing and ordering fractions by using models, benchmark fractions, or common numerators or denominators. They understand and use models, including the number line, to identify equivalent fractions.

### **Geometry: Describing and analyzing properties of two-dimensional shapes**

Students describe, analyze, compare, and classify two-dimensional shapes by their sides and angles and connect these attributes to definitions of shapes. Students investigate, describe, and reason about decomposing, combining, and transforming polygons to make other polygons. Through building, drawing, and analyzing two-dimensional shapes, students understand attributes and properties of two-dimensional space and the use of those attributes and properties in solving problems, including applications involving congruence and symmetry.

**Algebra:** Understanding properties of multiplication and the relationship between multiplication and division is a part of algebra readiness that develops at grade 3. The creation and analysis of patterns and relationships involving multiplication and division should occur at this grade level. Students build a foundation for later understanding of functional relationships by describing relationships in context with such statements as, “The number of legs is 4 times the number of chairs.”

**Measurement:** Students in grade 3 strengthen their understanding of fractions as they confront problems in linear measurement that call for more precision than the whole unit allowed them in their work in grade 2. They develop their facility in measuring with fractional parts of linear units. Students develop measurement concepts and skills through experiences in analyzing attributes and properties of two-dimensional objects. They form an understanding of perimeter as a measurable attribute and select appropriate units, strategies, and tools to solve problems involving perimeter.

**Data Analysis:** Addition, subtraction, multiplication, and division of whole numbers come into play as students construct and analyze frequency tables, bar graphs, picture graphs, and line plots and use them to solve problems.

**Number and Operations:** Building on their work in grade 2, students extend their understanding of place value to numbers up to 10,000 in various contexts. Students also apply this understanding to the task of representing numbers in different equivalent forms (e.g., expanded notation). They develop their understanding of numbers by building their facility with mental computation (addition and subtraction in special cases, such as  $2,500 + 6,000$  and  $9,000 - 5,000$ ), by using computational estimation, and by performing paper-and-pencil computations.

## Curriculum Focal Points and Connections for Grade 4

The set of three curriculum focal points and related connections for mathematics in grade 4 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations and Algebra: Developing quick recall of multiplication facts and related division facts and fluency with whole number multiplication**

Students use understandings of multiplication to develop quick recall of the basic multiplication facts and related division facts. They apply their understanding of models for multiplication (i.e., equal-sized groups, arrays, area models, equal intervals on the number line), place value, and properties of operations (in particular, the distributive property) as they develop, discuss, and use efficient, accurate, and generalizable methods to multiply multidigit whole numbers. They select appropriate methods and apply them accurately to estimate products or calculate them mentally, depending on the context and numbers involved. They develop fluency with efficient procedures, including the standard algorithm, for multiplying whole numbers, understand why the procedures work (on the basis of place value and properties of operations), and use them to solve problems.

### **Number and Operations: Developing an understanding of decimals, including the connections between fractions and decimals**

Students understand decimal notation as an extension of the base-ten system of writing whole numbers that is useful for representing more numbers, including numbers between 0 and 1, between 1 and 2, and so on. Students relate their understanding of fractions to reading and writing decimals that are greater than or less than 1, identifying equivalent decimals, comparing and ordering decimals, and estimating decimal or fractional amounts in problem solving. They connect equivalent fractions and decimals by comparing models to symbols and locating equivalent symbols on the number line.

### **Measurement: Developing an understanding of area and determining the areas of two-dimensional shapes**

Students recognize area as an attribute of two-dimensional regions. They learn that they can quantify area by finding the total number of same-sized units of area that cover the shape without gaps or overlaps. They understand that a square that is 1 unit on a side is the standard unit for measuring area. They select appropriate units, strategies (e.g., decomposing shapes), and tools for solving problems that involve estimating or measuring area. Students connect area measure to the area model that they have used to represent multiplication, and they use this connection to justify the formula for the area of a rectangle.

**Algebra:** Students continue identifying, describing, and extending numeric patterns involving all operations and nonnumeric growing or repeating patterns. Through these experiences, they develop an understanding of the use of a rule to describe a sequence of numbers or objects.

**Geometry:** Students extend their understanding of properties of two-dimensional shapes as they find the areas of polygons. They build on their earlier work with symmetry and congruence in grade 3 to encompass transformations, including those that produce line and rotational symmetry. By using transformations to design and analyze simple tilings and tessellations, students deepen their understanding of two-dimensional space.

**Measurement:** As part of understanding two-dimensional shapes, students measure and classify angles.

**Data Analysis:** Students continue to use tools from grade 3, solving problems by making frequency tables, bar graphs, picture graphs, and line plots. They apply their understanding of place value to develop and use stem-and-leaf plots.

**Number and Operations:** Building on their work in grade 3, students extend their understanding of place value and ways of representing numbers to 100,000 in various contexts. They use estimation in determining the relative sizes of amounts or distances. Students develop understandings of strategies for multidigit division by using models that represent division as the inverse of multiplication, as partitioning, or as successive subtraction. By working with decimals, students extend their ability to recognize equivalent fractions. Students' earlier work in grade 3 with models of fractions and multiplication and division facts supports their understanding of techniques for generating equivalent fractions and simplifying fractions.

## Curriculum Focal Points and Connections for Grade 5

The set of three curriculum focal points and related connections for mathematics in grade 5 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations and Algebra: Developing an understanding of and fluency with division of whole numbers**

Students apply their understanding of models for division, place value, properties, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multidigit dividends. They select appropriate methods and apply them accurately to estimate quotients or calculate them mentally, depending on the context and numbers involved. They develop fluency with efficient procedures, including the standard algorithm, for dividing whole numbers, understand why the procedures work (on the basis of place value and properties of operations), and use them to solve problems. They consider the context in which a problem is situated to select the most useful form of the quotient for the solution, and they interpret it appropriately.

### **Number and Operations: Developing an understanding of and fluency with addition and subtraction of fractions and decimals**

Students apply their understandings of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They apply their understandings of decimal models, place value, and properties to add and subtract decimals. They develop fluency with standard procedures for adding and subtracting fractions and decimals. They make reasonable estimates of fraction and decimal sums and differences. Students add and subtract fractions and decimals to solve problems, including problems involving measurement.

### **Geometry and Measurement and Algebra: Describing three-dimensional shapes and analyzing their properties, including volume and surface area**

Students relate two-dimensional shapes to three-dimensional shapes and analyze properties of polyhedral solids, describing them by the number of edges, faces, or vertices as well as the types of faces. Students recognize volume as an attribute of three-dimensional space. They understand that they can quantify volume by finding the total number of same-sized units of volume that they need to fill the space without gaps or overlaps. They understand that a cube that is 1 unit on an edge is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating or measuring volume. They decompose three-dimensional shapes and find surface areas and volumes of prisms. As they work with surface area, they find and justify relationships among the formulas for the areas of different polygons. They measure necessary attributes of shapes to use area formulas to solve problems.

**Algebra:** Students use patterns, models, and relationships as contexts for writing and solving simple equations and inequalities. They create graphs of simple equations. They explore prime and composite numbers and discover concepts related to the addition and subtraction of fractions as they use factors and multiples, including applications of common factors and common multiples. They develop an understanding of the order of operations and use it for all operations.

**Measurement:** Students' experiences connect their work with solids and volume to their earlier work with capacity and weight or mass. They solve problems that require attention to both approximation and precision of measurement.

**Data Analysis:** Students apply their understanding of whole numbers, fractions, and decimals as they construct and analyze double-bar and line graphs and use ordered pairs on coordinate grids.

**Number and Operations:** Building on their work in grade 4, students extend their understanding of place value to numbers through millions and millionths in various contexts. They apply what they know about multiplication of whole numbers to larger numbers. Students also explore contexts that they can describe with negative numbers (e.g., situations of owing money or measuring elevations above and below sea level).

## Curriculum Focal Points and Connections for Grade 6

The set of three curriculum focal points and related connections for mathematics in grade 6 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations: Developing an understanding of and fluency with multiplication and division of fractions and decimals**

Students use the meanings of fractions, multiplication and division, and the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions and explain why they work. They use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain the procedures for multiplying and dividing decimals. Students use common procedures to multiply and divide fractions and decimals efficiently and accurately. They multiply and divide fractions and decimals to solve problems, including multistep problems and problems involving measurement.

### **Number and Operations: Connecting ratio and rate to multiplication and division**

Students use simple reasoning about multiplication and division to solve ratio and rate problems (e.g., “If 5 items cost \$3.75 and all items are the same price, then I can find the cost of 12 items by first dividing \$3.75 by 5 to find out how much one item costs and then multiplying the cost of a single item by 12”). By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative sizes of quantities, students extend whole number multiplication and division to ratios and rates. Thus, they expand the repertoire of problems that they can solve by using multiplication and division, and they build on their understanding of fractions to understand ratios. Students solve a wide variety of problems involving ratios and rates.

### **Algebra: Writing, interpreting, and using mathematical expressions and equations**

Students write mathematical expressions and equations that correspond to given situations, they evaluate expressions, and they use expressions and formulas to solve problems. They understand that variables represent numbers whose exact values are not yet specified, and they use variables appropriately. Students understand that expressions in different forms can be equivalent, and they can rewrite an expression to represent a quantity in a different way (e.g., to make it more compact or to feature different information). Students know that the solutions of an equation are the values of the variables that make the equation true. They solve simple one-step equations by using number sense, properties of operations, and the idea of maintaining equality on both sides of an equation. They construct and analyze tables (e.g., to show quantities that are in equivalent ratios), and they use equations to describe simple relationships (such as  $3x = y$ ) shown in a table.

**Number and Operations:** Students' work in dividing fractions shows them that they can express the result of dividing two whole numbers as a fraction (viewed as parts of a whole). Students then extend their work in grade 5 with division of whole numbers to give mixed number and decimal solutions to division problems with whole numbers. They recognize that ratio tables not only derive from rows in the multiplication table but also connect with equivalent fractions. Students distinguish multiplicative comparisons from additive comparisons.

**Algebra:** Students use the commutative, associative, and distributive properties to show that two expressions are equivalent. They also illustrate properties of operations by showing that two expressions are equivalent in a given context (e.g., determining the area in two different ways for a rectangle whose dimensions are  $x + 3$  by 5). Sequences, including those that arise in the context of finding possible rules for patterns of figures or stacks of objects, provide opportunities for students to develop formulas.

**Measurement and Geometry:** Problems that involve areas and volumes, calling on students to find areas or volumes from lengths or to find lengths from volumes or areas and lengths, are especially appropriate. These problems extend the students' work in grade 5 on area and volume and provide a context for applying new work with equations.

## Curriculum Focal Points and Connections for Grade 7

The set of three curriculum focal points and related connections for mathematics in grade 7 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Number and Operations and Algebra and Geometry: Developing an understanding of and applying proportionality, including similarity**

Students extend their work with ratios to develop an understanding of proportionality that they apply to solve single and multistep problems in numerous contexts. They use ratio and proportionality to solve a wide variety of percent problems, including problems involving discounts, interest, taxes, tips, and percent increase or decrease. They also solve problems about similar objects (including figures) by using scale factors that relate corresponding lengths of the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and identify the unit rate as the slope of the related line. They distinguish proportional relationships ( $y/x = k$ , or  $y = kx$ ) from other relationships, including inverse proportionality ( $xy = k$ , or  $y = k/x$ ).

### **Measurement and Geometry and Algebra: Developing an understanding of and using formulas to determine surface areas and volumes of three-dimensional shapes**

By decomposing two- and three-dimensional shapes into smaller, component shapes, students find surface areas and develop and justify formulas for the surface areas and volumes of prisms and cylinders. As students decompose prisms and cylinders by slicing them, they develop and understand formulas for their volumes ( $Volume = Area\ of\ base \times Height$ ). They apply these formulas in problem solving to determine volumes of prisms and cylinders. Students see that the formula for the area of a circle is plausible by decomposing a circle into a number of wedges and rearranging them into a shape that approximates a parallelogram. They select appropriate two- and three-dimensional shapes to model real-world situations and solve a variety of problems (including multistep problems) involving surface areas, areas and circumferences of circles, and volumes of prisms and cylinders.

### **Number and Operations and Algebra: Developing an understanding of operations on all rational numbers and solving linear equations**

Students extend understandings of addition, subtraction, multiplication, and division, together with their properties, to all rational numbers, including negative integers. By applying properties of arithmetic and considering negative numbers in everyday contexts (e.g., situations of owing money or measuring elevations above and below sea level), students explain why the rules for adding, subtracting, multiplying, and dividing with negative numbers make sense. They use the arithmetic of rational numbers as they formulate and solve linear equations in one variable and use these equations to solve problems. Students make strategic choices of procedures to solve linear equations in one variable and implement them efficiently, understanding that when they use the properties of equality to express an equation in a new way, solutions that they obtain for the new equation also solve the original equation.

**Measurement and Geometry:** Students connect their work on proportionality with their work on area and volume by investigating similar objects. They understand that if a scale factor describes how corresponding lengths in two similar objects are related, then the square of the scale factor describes how corresponding areas are related, and the cube of the scale factor describes how corresponding volumes are related. Students apply their work on proportionality to measurement in different contexts, including converting among different units of measurement to solve problems involving rates such as motion at a constant speed. They also apply proportionality when they work with the circumference, radius, and diameter of a circle; when they find the area of a sector of a circle; and when they make scale drawings.

**Number and Operations:** In grade 4, students used equivalent fractions to determine the decimal representations of fractions that they could represent with terminating decimals. Students now use division to express any fraction as a decimal, including fractions that they must represent with infinite decimals. They find this method useful when working with proportions, especially those involving percents. Students connect their work with dividing fractions to solving equations of the form  $ax = b$ , where  $a$  and  $b$  are fractions. Students continue to develop their understanding of multiplication and division and the structure of numbers by determining if a counting number greater than 1 is a prime, and if it is not, by factoring it into a product of primes.

**Data Analysis:** Students use proportions to make estimates relating to a population on the basis of a sample. They apply percentages to make and interpret histograms and circle graphs.

**Probability:** Students understand that when all outcomes of an experiment are equally likely, the theoretical probability of an event is the fraction of outcomes in which the event occurs. Students use theoretical probability and proportions to make approximate predictions.

## Curriculum Focal Points and Connections for Grade 8

The set of three curriculum focal points and related connections for mathematics in grade 8 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

### **Algebra: Analyzing and representing linear functions and solving linear equations and systems of linear equations**

Students use linear functions, linear equations, and systems of linear equations to represent, analyze, and solve a variety of problems. They recognize a proportion ( $y/x = k$ , or  $y = kx$ ) as a special case of a linear equation of the form  $y = mx + b$ , understanding that the constant of proportionality ( $k$ ) is the slope and the resulting graph is a line through the origin. Students understand that the slope ( $m$ ) of a line is a constant rate of change, so if the input, or  $x$ -coordinate, changes by a specific amount,  $a$ , the output, or  $y$ -coordinate, changes by the amount  $ma$ . Students translate among verbal, tabular, graphical, and algebraic representations of functions (recognizing that tabular and graphical representations are usually only partial representations), and they describe how such aspects of a function as slope and  $y$ -intercept appear in different representations. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines that intersect, are parallel, or are the same line, in the plane. Students use linear equations, systems of linear equations, linear functions, and their understanding of the slope of a line to analyze situations and solve problems.

### **Geometry and Measurement: Analyzing two- and three-dimensional space and figures by using distance and angle**

Students use fundamental facts about distance and angles to describe and analyze figures and situations in two- and three-dimensional space and to solve problems, including those with multiple steps. They prove that particular configurations of lines give rise to similar triangles because of the congruent angles created when a transversal cuts parallel lines. Students apply this reasoning about similar triangles to solve a variety of problems, including those that ask them to find heights and distances. They use facts about the angles that are created when a transversal cuts parallel lines to explain why the sum of the measures of the angles in a triangle is 180 degrees, and they apply this fact about triangles to find unknown measures of angles. Students explain why the Pythagorean theorem is valid by using a variety of methods—for example, by decomposing a square in two different ways. They apply the Pythagorean theorem to find distances between points in the Cartesian coordinate plane to measure lengths and analyze polygons and polyhedra.

### **Data Analysis and Number and Operations and Algebra: Analyzing and summarizing data sets**

Students use descriptive statistics, including mean, median, and range, to summarize and compare data sets, and they organize and display data to pose and answer questions. They compare the information provided by the mean and the median and investigate the different effects that changes in data values have on these measures of center. They understand that a measure of center alone does not thoroughly describe a data set because very different data sets can share the same measure of center. Students select the mean or the median as the appropriate measure of center for a given purpose.

**Algebra:** Students encounter some nonlinear functions (such as the inverse proportions that they studied in grade 7 as well as basic quadratic and exponential functions) whose rates of change contrast with the constant rate of change of linear functions. They view arithmetic sequences, including those arising from patterns or problems, as linear functions whose inputs are counting numbers. They apply ideas about linear functions to solve problems involving rates such as motion at a constant speed.

**Geometry:** Given a line in a coordinate plane, students understand that all “slope triangles”—triangles created by a vertical “rise” line segment (showing the change in  $y$ ), a horizontal “run” line segment (showing the change in  $x$ ), and a segment of the line itself—are similar. They also understand the relationship of these similar triangles to the constant slope of a line.

**Data Analysis:** Building on their work in previous grades to organize and display data to pose and answer questions, students now see numerical data as an aggregate, which they can often summarize with one or several numbers. In addition to the median, students determine the 25th and 75th percentiles (1st and 3rd quartiles) to obtain information about the spread of data. They may use box-and-whisker plots to convey this information. Students make scatterplots to display bivariate data, and they informally estimate lines of best fit to make and test conjectures.

**Number and Operations:** Students use exponents and scientific notation to describe very large and very small numbers. They use square roots when they apply the Pythagorean theorem.

Elementary Math Committee  
Program Strength and Weaknesses

<b>Strengths of Math Expressions</b>		<b>Total</b>	<b>Strengths of Math In Focus</b>		<b>Total</b>
Embedded Professional Development	4		Focused scope and sequence	5	
Math Talk/ student led discussions	4		Rigorous	4	
Multiple strategies to build to algorithm	3		Bar Model	2	
Practice opportunities- Remembering Pages	3		Reteaching/extension components	2	
Differentiation - and extension activities	3		Bar Model	2	
Opportunities for active engagement	2		Ample instructional materials	1	
Progression from concrete to pictorial to abstract	2		Focus on algebra skills	1	
Manipulative support/ sequence	2		Ties in with EDC Calendar Math	1	
'friendly' for teacher, parent, student	2		Vocabulary	1	
Rigor	1				
Strong algebra	1				
Homework informs instructions	1				
<b>Weaknesses of Math Expressions</b>			<b>Weaknesses of Math In Focus</b>		
Too much content/ topics for a year 'mile wide'	5		Too teacher directed	3	
Differentiated card format difficult for primary	2		less balance of concepts/procedures	2	
Manipulatives not holding up, trays	2		kindergarten component - weak	2	
Too many options	1		not enough hands on	1	
Too fast paced	1		instruction - boring delivery	1	
Wrap up not as visual or easy to use as MIF	1		primary - lack of flow to components	1	
Calendar math overlaps with routines	1		lack review of previously learned concepts	1	
Cost of bells and whistles	1		Not enough practice in daily lessons	1	
not enough reteaching	1		Lacks real world problems	1	
			technology	1	
			Rely on teacher/ preteaching b/4 text	1	
			More Professional Development required	1	

Score range - 1-5	MX - 5	MX - 4	% high rank	% high rank	MIF - 5	MIF - 4
<b>1. Concepts/skills align to MN standards</b>	29	4	100	100	28	5
<b>2. Concepts/skills align to NCTM Focal Points</b>	30	3	100	100	29	4
3. Accurate mathematics	22	11	100	100	22	11
4. Technology integrated with content	13	17	91	30	1	9
5. Gender Fair	22	8	91	79	17	9
6. Racially, ethnically & culturally diverse	18	8	79	76	18	7
7. Age appropriate	23	9	97	64	6	15
8. Consistency of content & correct vocabulary	16	15	94	73	17	7
<b>9. Topics ↑ in complexity, focused, excessive review ↓</b>	11	14	76	82	10	17
10. Clear explanations of concepts	19	11	91	67	3	19
11. Explicit technology instruction as it relates to math	13	12	91	27	1	8
12. Connects between math concepts, prior knowledge	22	8	91	58	7	12
13. Multiple representations (table, graph, visual, symbolic)	21	11	97	49	3	13
14. More than one way to solve a problem	25	6	94	15	0	5
<b>15. Method to move student to abstract (C,P,A)</b>	26	5	94	61	7	13
<b>16. Higher order thinking, meta-cognition</b>	17	13	91	64	8	13
17. Supports networks of knowledge (conceptual)	14	17	94	67	6	16
18. Evidence of justifying, explaining, evaluating	19	11	91	39	1	12
19. Clear identification of mastery level for basic skills	12	17	88	61	7	13
<b>20. Enough practice to develop computational fluency</b>	14	15	88	37	2	10
21. Engaging and relevant for students	25	7	97	33	1	10
22. Promotes transfer - to solve novel problems	16	14	91	30	3	7
23. Reform & explicit instruction of computation	20	7	82	46	3	12
24. ELL component	14	11	76	42	2	12
25. Provides parent information (reference, reinforcement)	25	7	97	45	5	10
26. Provides PD in a variety of formats	14	13	82	24	2	6
27. Materials accessible to students (texts, e version, audio)	16	12	85	33	3	8
28. User friendly for teachers	25	5	91	30	1	9
29. Applicable to other settings (Title, Sp. Ed. )	15	13	85	9	2	12
<b>30. High quality differentiated instruction</b>	10	20	91	58	6	13
31. A variety of assessments- formative to summative	14	7	63	46	4	11

scale: 1-5	BIM 5	BIM 4	% high rank	% high rank	PH/CMP II - 5	PH/CMP II -4
1. Concepts/skills align to NCTM Focal Points	8	3	100	64	2	5
2. Concepts/skills align to MN standards	6	5	100	73	1	7
3. Accurate mathematics	7	4	100	91	5	5
4. Technology integrated with content	4	3	64	73	2	6
5. Gender Fair	6	3	82	64	3	4
6. Racially, ethnically & culturally diverse	4	4	73	55	2	4
7. Age appropriate	8	2	91	82	1	8
8. Consistency of content & correct vocabulary	7	4	100	73	2	6
<b>9. Topics ↑ in complexity, focused, excessive review ↓</b>	6	5	100	46	0	5
10. Clear explanations of concepts	7	5	109	64	1	6
11. Explicit technology instruction as it relates to math	2	5	64	55	1	5
12. Connects between math concepts, prior knowledge	6	5	100	37	0	4
13. Multiple representations (table, graph, visual, symbolic)	7	4	100	46	0	5
14. More than one way to solve a problem	6	5	100	28	0	3
<b>15. Method to move student to abstract (C,P,A)</b>	8	3	100	37	0	4
<b>16. Higher order thinking, meta-cognition</b>	8	3	100	9	0	3
17. Supports networks of knowledge (conceptual)	2	9	100	18	1	1
18. Evidence of justifying, explaining, evaluating	8	3	100	18	1	1
19. Clear identification of mastery level for basic skills	5	7	109	37	0	4
<b>20. Enough practice to develop computational fluency</b>	6	5	100	82	2	7
21. Engaging and relevant for students	7	4	100	37	0	4
22. Promotes transfer - to solve novel problems	3	7	91	18	0	2
23. Reform & explicit instruction of computation	7	4	100	27	0	3
24. ELL component	2	2	37	9	1	0
25. Provides parent information (reference, reinforcement)	6	5	100	55	3	3
26. Provides PD in a variety of formats	3	6	82	46	0	5
27. Materials accessible to students (texts, e version, audio)	5	4	82	37	0	4
28. User friendly for teachers	10	1	100	18	0	2
29. Applicable to other settings (Title, Sp. Ed. )	6	4	91	9	0	1
<b>30. High quality differentiated instruction</b>	7	4	100	9	0	1
31. A variety of assessments- formative to summative	3	7	100	27	0	3

Reviewer's Name: \_\_\_\_\_ Date reviewed: \_\_\_\_\_ Grade level(s) \_\_\_\_\_  
 Publisher: \_\_\_\_\_ Title: \_\_\_\_\_ Copyright date: \_\_\_\_\_

**Review Criteria Scale**                      **Low**                      **High**

**Standards-Based Content**

1. Content/skills align to MN standards	1	2	3	4	5
2. Content/skills align to NCTM Focal Points	1	2	3	4	5
3. Mathematically accurate	1	2	3	4	5
4. Technology integrated with content	1	2	3	4	5
5. Gender fair	1	2	3	4	5
6. Racially, ethnically diverse	1	2	3	4	5

**Understanding**

7. Connects to prior knowledge	1	2	3	4	5
8. Provides real world connections	1	2	3	4	5
9. Consistency of content & correct vocab.	1	2	3	4	5
10. Multiple representations of math (Tables, graphs, visual, symbolic)	1	2	3	4	5
11. Method to move student to <b>abstract</b> (concrete, pictorial, abstract)	1	2	3	4	5
12. Topics increase in complexity (reduce excessive review)	1	2	3	4	5
13. Clear explanations of concepts	1	2	3	4	5
14. Emphasis on higher order thinking skills & meta-cognition	1	2	3	4	5
15. A variety of assessments from formative to summative	1	2	3	4	5
16. Explicit technology instruction as it relates to math	1	2	3	4	5

**Reasoning**

17. Supports networks of knowledge	1	2	3	4	5
18. Promotes accountable talk (justify)					

**Computing**

19. Clear identification of mastery level and prerequisite skill for basic skills fluency	1	2	3	4	5
20. Enough practice to develop computational fluency	1	2	3	4	5
21. Reform and explicit instruction of computation	1	2	3	4	5
22. More than one way to solve a problem	1	2	3	4	5

**Applying**

23. Promotes transfer and independent problem solvers	1	2	3	4	5
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**Engaging**

24. Interesting, relative for students	1	2	3	4	5
	1	2	3	4	5

**Support and Infrastructure**

25. Parent information piece (reference/reinforcement)	1	2	3	4	5
26. Materials accessible to students (texts, web e versions, audio versions)	1	2	3	4	5
27. High quality differentiated learning offered (especially high ability and underperforming)	1	2	3	4	5
28. ELL component (appropriate strategies & technology)	1	2	3	4	5
29. Applicable to other settings (Sp. Ed., Title, Focus)	1	2	3	4	5
30. User friendly for teachers	1	2	3	4	5

Reviewer’s Comments:

Final recommendation

- Recommend
- Do not recommend
- Recommend with modification; specify:

## Math Alignment k-12

Alignment of current instructional tools/curriculum to MN 2007 state standards

### Strands

Grades	Number and Operation	Algebra	Geometry/ Measurement	Data Analysis
K	4/7	0/1	2/5	*
1	2/10	3/5	4/5	*
2	8/11	2/2	4/7	*
3	11/14	3/3	6/8	*
4	13/16	3/3	8/10	1/1
5	11/14	2/2	7/7	1/1
6	10/16	5/5	5/8	¼
7	1/13	2/9	0/6	3/6
8	4/5	13/21	3/6	3/3
9-12	*	2/30	1/25	8/16

\*No benchmarks in this strand for this grade

Analysis of current materials: Number of benchmarks needing to be added or strengthened (only partially met)/ total number of benchmarks per strand.

Current materials: Investigations and Connected Mathematics Project, HS by course  
 Cross grade level meetings and k-12 committee work summarized – Spring 2008- Fall 2009

## Fifth Grade Math Curriculum and Assessment Form

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Number & Operation	Divide multi-digit numbers; solve real-world and mathematical problems using arithmetic.	Divide multi-digit numbers, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms. Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal.  <i>For example:</i> Dividing 153 by 7 can be used to convert the improper fraction $\frac{153}{7}$ to the mixed number $21\frac{6}{7}$ .  5.1.1.1	<b>Houghton Mifflin Math Expressions</b>  Unit 7 Lessons 7.12,7.13, 7.17-7.21,7.23 Unit 9 Lesson 9.12	
		Consider the context in which a problem is situated to select the most useful form of the quotient for the solution and use the context to interpret the quotient appropriately.  <i>For example:</i> If 77 amusement ride tickets are to be distributed evenly among 4 children, each child will receive 19 tickets, and there will be one left over. If \$77 is to be distributed evenly among 4 children, each will receive \$19.25, with nothing left over.  5.1.1.2	Unit 7 Lesson 7.20	
		Estimate solutions to arithmetic problems in order to assess the reasonableness of results of calculations.  5.1.1.3	Unit 2 Lessons 2.2, 2.6 Unit 3 Lessons 3.10, 3.13, 3.15 Unit 4 Lesson 4.7 Unit 6 Lessons 6.2, 6.5 Unit 7 Lesson 7.1.,7.6,7.16	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Number & Operation	Divide multi-digit numbers; solve real-world and mathematical problems using arithmetic.	<p>Solve real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers. Use various strategies, including the use of a calculator and the inverse relationships between operations, to check for accuracy.</p> <p><i>For example:</i> The calculation <math>117 \div 9 = 13</math> can be checked by multiplying 9 and 13.</p> <p>5.1.1.4</p>	<p><b>Houghton Mifflin</b> <b>Math Expressions</b> Fluency Plan Unit 1 Lessons 1.1-1.4, 1.8 Unit 2 Lesson 2.2 Unit 3 Lessons 3.10, 3.20, 3.21 Unit 6 Lessons 6.3-6.5 Unit 7 7.2-7.6,7.11,7.13,7.15,7.20,7.21 Unit 8 Lesson 8.2 Unit 9 Lesson 9.1,9.2,9.13 Unit 11 Lesson 11.2</p>	
	Read, write, represent and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.	<p>Read and write decimals using place value to describe decimals in terms of groups from millionths to millions.</p> <p><i>For example:</i> Possible names for the number 0.37 are:</p> <p style="text-align: center;">37 hundredths 3 tenths + 7 hundredths;</p> <p>possible names for the number 1.5 are:</p> <p style="text-align: center;">one and five tenths 15 tenths.</p> <p>5.1.2.1</p>	<p>Unit 3 Lesson 3.1-3.3, 3.5, 3.15 Unit 5 Lesson 5.18 Unit 7 Lessons 7.7-7.9</p>	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Number & Operation		Find 0.1 more than a number and 0.1 less than a number. Find 0.01 more than a number and 0.01 less than a number. Find 0.001 more than a number and 0.001 less than a number. 5.1.2.2	<b>Houghton Mifflin Math Expressions</b>  Unit 7 Lessons 7.8,7.9	
		Order fractions and decimals, including mixed numbers and improper fractions, and locate on a number line.  <i>For example:</i> Which is larger 1.25 or $\frac{6}{5}$ ? <i>Another example:</i> In order to work properly, a part must fit through a 0.24 inch wide space. If a part is $\frac{1}{4}$ inch wide, will it fit? 5.1.2.3	Unit 3 Lessons 3.2, 3.3 Unit 5 Lessons 5.2,5.11,5.13,5.14,5.18,5.19 Unit 9 Lesson 9.2,9.10 Unit 11 Lesson 11.10	
	Read, write, represent and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.	Recognize and generate equivalent decimals, fractions, mixed numbers and improper fractions in various contexts.  <i>For example:</i> When comparing 1.5 and $\frac{19}{12}$ , note that $1.5 = 1\frac{1}{2} = \frac{6}{12} = \frac{18}{12}$ , so $1.5 < \frac{19}{12}$ . 5.1.2.4	Unit 5 Lessons 5.11-5.14, 5.16, 5.18, 5.19, 5.21 Unit 6 Lesson 6.4 Unit 7 Lesson 7,14 Unit 9 Lesson 9.7 Unit 11 Lesson 11.10	
		Round numbers to the nearest 0.1, 0.01 and 0.001.  <i>For example:</i> Fifth grade students used a calculator to find the mean of the monthly allowance in their class. The calculator display shows 25.80645161. Round this number to the nearest cent. 5.1.2.5	Unit 3 Lesson 3.15 Unit 7 Lessons 7.10,7.11	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Number & Operation	Add and subtract fractions, mixed numbers and decimals to solve real-world and mathematical problems.	Add and subtract decimals and fractions, using efficient and generalizable procedures, including standard algorithms. 5.1.3.1	<b>Houghton Mifflin Math Expressions</b> Unit 3 Lessons 3.4, 3.7-3.9 Unit 5 Lessons 5.1, 5.3-5.10, 5.14-5.17, 5.19-5.21 Unit 7 Lesson 7.7 Unit 9 Lessons 9.6,9.9,9.14	
		Model addition and subtraction of fractions and decimals using a variety of representations.  <i>For example:</i> Represent $\frac{2}{3} + \frac{1}{4}$ and $\frac{2}{3} - \frac{1}{4}$ by drawing a rectangle divided into 4 columns and 3 rows and shading the appropriate parts or by using fraction circles or bars. 5.1.3.2	Unit 3 Lessons 3.4, 3.7, 3.9 Unit 5 5.1,5.3-5.7,5.9,5.14, 5.17, 5.19	
		Estimate sums and differences of decimals and fractions to assess the reasonableness of results in calculations.  <i>For example:</i> Recognize that $12\frac{2}{3} - 3\frac{3}{4}$ is between 8 and 9 (since $\frac{2}{3} < \frac{3}{4}$ ). 5.1.3.3	Unit 5 Lesson 5.20 Unit 7 Lessons 7.10,7.15	
		Solve real-world and mathematical problems requiring addition and subtraction of decimals, fractions and mixed numbers, including those involving measurement, geometry and data.  <i>For example:</i> Calculate the perimeter of the soccer field when the length is 109.7 meters and the width is 73.1 meters. 5.1.3.4	Unit 3 Lessons 3.4, 3.8, 3.9, 3.21 Unit 5 Lesson 5.1, 5.3-5.5,5.9-5.11,5.14,5.19,5.21 Unit 6 Lesson 6.7 Unit 7 Lesson 7.7 Unit 9 Lessons 9.13,9.14	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Algebra	Recognize and represent patterns of change; use patterns, tables, graphs and rules to solve real-world and mathematical problems.	<p>Create and use rules, tables, spreadsheets and graphs to describe patterns of change and solve problems.</p> <p><i>For example:</i> An end-of-the-year party for 5th grade costs \$100 to rent the room and \$4.50 for each student. Know how to use a spreadsheet to create an input-output table that records the total cost of the party for any number of students between 90 and 150.</p> <p>5.2.1.1</p>	<p><b>Houghton Mifflin Math Expressions</b> Fluency Plan Unit 1 Lesson 1.5, 1.11 Unit 5 Lesson 5.18 Unit 6 Lesson 6.2 Unit 7 Lessons 7.1, 7.2, 7.5, 7.9 Unit 8 Lesson 8.3 Unit 10 Lessons 10.1, 10.2 Unit 11 Lessons 11.1-11.6, 11/13</p>	
		<p>Use a rule or table to represent ordered pairs of positive integers and graph these ordered pairs on a coordinate system.</p> <p>5.2.1.2</p>	<p>Unit 10 Lesson 10.4</p> <p>Need to include prior to MCA III</p>	
	Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving whole numbers.	<p>Apply the commutative, associative and distributive properties and order of operations to generate equivalent numerical expressions and to solve problems involving whole numbers.</p> <p><i>For example:</i> Purchase 5 pencils at 19 cents and 7 erasers at 19 cents. The numerical expression is <math>5 \times 19 + 7 \times 19</math> which is the same as <math>(5 + 7) \times 19</math>.</p> <p>5.2.2.1</p>	<p>Fluency Plan Unit 1 Lessons 1.6, 1.9, 1.10 Unit 3 Lessons 3.11, 3.19 Unit 8 Lesson 8.4</p>	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Algebra	Understand and interpret equations and inequalities involving variables and whole numbers, and use them to represent and solve real-world and mathematical problems.	<p>Determine whether an equation or inequality involving a variable is true or false for a given value of the variable.</p> <p><i>For example:</i> Determine whether the inequality <math>1.5 + x &lt; 10</math> is true for <math>x = 2.8</math>, <math>x = 8.1</math>, or <math>x = 9.2</math>.</p> <p>5.2.3.1</p>	<p><b>Houghton Mifflin Math Expressions</b></p> <p>Supplement</p>	
		<p>Represent real-world situations using equations and inequalities involving variables. Create real-world situations corresponding to equations and inequalities.</p> <p><i>For example:</i> <math>250 - 27 \times a = b</math> can be used to represent the number of sheets of paper remaining from a packet of 250 when each student in a class of 27 is given a certain number of sheets.</p> <p>5.2.3.2</p>	<p>Fluency Plan Unit 1 Lessons 1.5-1.7, 1.9 Unit 3 Lessons 3.11, 3.18, 3.19 Unit 8 Lesson 8.4</p>	
		<p>Evaluate expressions and solve equations involving variables when values for the variables are given.</p> <p><i>For example:</i> Using the formula, <math>A = \ell w</math>, determine the area when the length is 5, and the width 6, and find the length when the area is 24 and the width is 4.</p> <p>5.2.3.3</p>	<p>Unit 1 Lessons 1.1-1.3, 1.10 Unit 2 Lessons 2.2-2.4 Unit 3 Lessons 3.6, 3.18-3.20, 3.22 Unit 5 Lesson 5.3, 5.15 Unit 8 Lesson 8.1 Unit 10 Lesson 10.2 Unit 11 Lessons 11.5-11.7, 11.9</p>	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Geometry & Measurement	Describe, classify, and draw representations of three-dimensional figures.	Describe and classify three-dimensional figures including cubes, prisms and pyramids by the number of edges, faces or vertices as well as the types of faces.  5.3.1.1	<b>Houghton Mifflin Math Expressions</b> Unit 6 Lesson 6.1, 6.2 Unit 11 Lesson 11.13 Unit 12 Lesson 12.1-12.4	
		Recognize and draw a net for a three-dimensional figure.  5.3.1.2	Unit 12 Lesson 12.1,12.2	
Geometry & Measurement	Determine the area of triangles and quadrilaterals; determine the surface area and volume of rectangular prisms in various contexts.	Develop and use formulas to determine the area of triangles, parallelograms and figures that can be decomposed into triangles. 5.3.2.1	Fluency Plan Unit 6 Lessons 6.2,6.5 Unit 11 Lesson 11.7	
		Determine the surface area of a rectangular prism by applying various strategies.  <i>For example:</i> Use a net or decompose the surface into rectangles. 5.3.2.2	Unit 6 Lesson 6.2 Unit 12 Lessons 12.1,12.2	

Strand	Standard	Benchmarks	Curriculum tools and materials	Assessment
Geometry & Measurement	Determine the area of triangles and quadrilaterals; determine the surface area and volume of rectangular prisms in various contexts.	Understand that the volume of a three-dimensional figure can be found by counting the total number of same-size cubic units that fill a shape without gaps or overlaps. Use cubic units to label volume measurements.  <i>For example:</i> Use cubes to find the volume of a small fish tank.  5.3.2.3	<b>Houghton Mifflin Math Expressions</b>  Unit 6 Lesson 6.1	
		Develop and use the formulas $V = \ell wh$ and $V = Bh$ to determine the volume of rectangular prisms. Justify why base area $B$ and height $h$ are multiplied to find the volume of a rectangular prism by breaking the prism into layers of unit cubes.  5.3.2.4	Unit 6 Lessons 6.1-6.3, 6.5	
Geometry & Measurement	Determine the area of triangles and quadrilaterals; determine the surface area and volume of rectangular prisms in various contexts.	Know and use the definitions of the mean, median and range of a set of data. Know how to use a spreadsheet to find the mean, median and range of a data set. Understand that the mean is a "leveling out" of data.  <i>For example:</i> The set of numbers 1, 1, 4, 6 has mean 3. It can be leveled by taking one unit from the 4 and three units from the 6 and adding them to the 1s, making four 3s.  5.4.1.1	Unit 3 Lesson 3.12 Unit 7 Lesson 7.22	
Data Analysis	Display and interpret data; determine mean, median and range.	Create and analyze double-bar graphs and line graphs by applying understanding of whole numbers, fractions and decimals. Know how to create spreadsheet tables and graphs to display data.  5.4.1.2	Unit 3 Lessons 3.14, 3.16, 3.17, 3.21, 3.22 Unit 4 Lesson 4.6 Unit 7 Lesson 7.22	

Big Ideas Math – Grade 6 - Required Lessons - School Year 2010-2011

Curricular Unit Math Topic	Benchmark	Required lessons	Approx# of Days	Suggested Timeline*	Test Specifications
<b>NUMBERS AND OPERATIONS</b> Chapter 1 Expressions & Number Properties (and include factors/multiples, number properties, area/surface area)	6.1.1.5. 6.1.1.6. 6.2.1.1. 6.2.2.1. 6.3.1.2.	All sections  <i>Also include: BSH Topic 2 and SRH Topics: 2.1, 2.2, 2.3 3.4, 11.2, 11.5 and 12</i>	20 days	September 13 – October 8	Allowable multiplication notation: $3x$ , $xy$ , $3 \cdot 4$ , $3(4)$ Prime factors are not greater than 13 Equations not containing exponents Conversions are limited to within a representation (e.g. $7/4 = 1 \frac{3}{4}$ , not $0.5 = \frac{1}{2}$ ) <i>Vocabulary:</i> evaluate, area, order of operations, simplify, $x^2$ , $>$ , $<$ , GCF, LCM, prime factor, prim factorization, exponent, power, base and vocabulary given at previous grades
<b>NUMBERS AND OPERATIONS</b> Chapter 2 Multiplying and Dividing Fractions	6.1.1.4. 6.1.3.1. 6.1.3.2. 6.1.3.4. 6.1.3.5.	All sections	22 days	October 11 – November 11	Items must not have context  <i>Vocabulary:</i> reciprocal, rate, ratio, unit rate, and vocabulary given at previous grades
<b>NUMBERS AND OPERATIONS</b> Chapter 3 Multiplying and Dividing Decimals	6.1.3.1. 6.1.3.2. 6.1.3.4. 6.1.3.5.	All sections	15 days	November 15 – December 9	Items must not have context  <i>Vocabulary:</i> reciprocal, rate, ratio, unit rate, and vocabulary given at previous grades
<b>PERCENTS, RATIOS, AND RATES</b> Chapter 4 Fractions, Decimals and Percents	6.1.1.1. 6.1.1.2. 6.1.3.3. 6.1.1.3. 6.1.3.4. 6.1.1.4. 6.1.3.5. 6.1.1.7	All sections  <i>Also include: App B 8.1, SRH Topics: 4.2, 5.1 5.4 and 10.1</i>	18 days	December 10 – January 14	Allowable notation: 25%, 50%, $\frac{1}{4}$ , 1:4, 0.95, 0.25 Same scale on both axes No more than 2 operations Items may require locating pts on x or y axis Percents included: 100, 110, 125, 150, 200%  <i>Vocabulary:</i> reciprocal, integer, x-axis, y-axis, horizontal & vertical axes, rational number, coordinate grid, is greater than, is less than, exponent, integer and vocabulary given at previous grades

**Big Ideas Math – Grade 6 - Required Lessons - School Year 2010-2011**

<b>PERCENTS, RATIOS, AND RATES</b> Chapter 5 Rate, Ratios, and Data Analysis	6.1.1.7. 6.1.2.1. 6.1.2.2. 6.1.2.3. 6.1.2.4.	All sections <i>Also include: SRH Topic 18.1 and Gr 7 text – 9.1, 9.2 and 9.3</i>	20 days	January 18 – February 17	Allowable ratio notation: $\frac{1}{4}$ , 1 to 4, 1 out of 4, and 24% Rates may be expressed as “per”  <i>Vocabulary:</i> ratio, percent, unit rate and vocabulary given at previous grades
Chapter 9 Probability  In Grade 7 text (red) *Find more	6.4.1.1. 6.4.1.2. 6.4.1.3. 6.4.1.4.	Chp 9 – Sections 9.2 – 9.3			Size of sample space not exceed 36 then, 100 <i>Vocabulary:</i> probability, outcome, event, predict, sample space, tree diagram, likely, unlikely, certain, impossible, random, theoretical and experimental frequencies, relative frequency
<b>GEOMETRY</b> Chapter 6 *Circles and <u>Area</u> (and include Surface area/volume of 2 and 3-d figures)	6.3.1.1. 6.3.1.2. 6.3.1.3.	<i>Area/Perimeter:</i> SRH Topics: 12.2 and 13.1 & BSH Topic 14.2 *May want to teach circle lessons after spring MCA testing			Allowed notation: $3 \text{ sq cm} = 3 \text{ cm sq} = 3 \text{ cm}^3$ Justify formulas (may involve decomposition nets  <i>Vocabulary:</i> surface area/volume of prisms and units $\text{cm}^2$ , $\text{cm}^3$
Chapter 1 Angles & Similarity  Grade 8 text (blue) * Find more	6.3.2.1. 6.3.2.2. 6.3.2.3.	Gr 8 txt – 1.1, 1.5, 5.1, 5.2, 5.3 & 5.5 and SRH Topics: 16.1 & 16.2	19 days	February 28 – March 25	<i>Vocabulary:</i> intersecting, vertical, adjacent, complementary, supplementary, straight, hypotenuse, leg, interior, exterior, diagonal
Measurement  Grade 8 text (red) * Find more	6.3.3.1. 6.3.3.2.	Chp 1 – Section 1.5 (8 <sup>th</sup> ) SRH Topic 16 – 16.1 & 16.2			<i>Vocabulary:</i> customary, metric, capacity
<b>ALGEBRA</b> Chapter 7 Equations	6.2.1.1. 6.2.2.1. 6.2.1.2. 6.2.3.1. 6.2.3.2.	All sections  Chp 1 – Sections 1.1 and 1.2 Chp 9 – Sections 9.1 – 9.3	19 days  + 8 MCA practice days	March 28 – April 29	Allowable multiplication notation: $3x$ , $xy$ , $3 \ 4$ and $3(4)$  Equations not containing exponents <i>Vocabulary:</i> evaluate, translate, function, and coordinate grid
<b>ALGEBRA</b> Chapter 8 Inequalities	6.2.3.1.	All sections	14 days	May 2 – 20	<i>Vocabulary:</i> Same as above
<b>ALGEBRA</b> Chapter 9 Tables, Graphs and Functions	6.2.1.1. 6.2.1.2.	All sections Chp 1 – Sections: 1.1, 1.2  Also include: App B.7	15 days	May 23 – June 6	Allowable multiplication notation: $3x$ , $xy$ , $3 \ 4$ & $3(4)$ Equations not containing exponents <i>Vocabulary:</i> evaluate, translate function, coordinate grid & vocabulary given at previous grade

## K-12 Math Committee Meeting Minutes

December 9<sup>th</sup>, 2009

8-4

Attendees: Pamela Nelson, Kim Anderson, Becky Starks, Sheila Nyback, Brenda Florestano, Deb DeBolt, Jill Anderson, Nate Norman, Terri Micheau, Marge Fisher, Melissa Kelley, Tami Meyer, Kristin Know, Nancy Broman, Tim White, Gwyn Curran, Patti Bambenek

Webinar- "Teaching math to Low-Achieving Students: Response to Intervention in Mathematics"

Review first 4 of 8 recommendations based on scientific research. Levels of evidence rated as low, moderate, and high. See attachment

Tier I 1. Universal screening

Tier II 2. Focus instruction on whole number for grades k-5 and rational numbers for grades 6-8

3. Systematic instruction

4. Visual representations

5. Building fluency with basic arithmetic facts

7. Progress Monitoring

8. Use of motivational strategies

See attached checklist for further information

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**1. Universal screening – currently assess (district priority)**

k-5- Quantity Discrimination/ MBSP: Computation

6-9 NWEA, 11<sup>th</sup> at Denfeld

\*High School – inconsistent and least screened

**2. Focus ‘small group’ instruction- k-5 whole numbers and 6-8 rational numbers**

**3. Systematic Instruction-** i.e. Clear examples, teacher think alouds, students communicate their problem solving

**4. Solving word problems-** teach underlying common structures

**5. Provide visual representations of mathematical ideas**

**6. Build fluency-** k-12 changed recommendation from fact fluency to incorporate computational fluency etc.

**K-12 recommendations to build fluency**

K-5 (6) – Provide 10 minutes of fluency instruction a day

6-8 – Provide 5 minutes of fluency instruction a day

HS- Provide fluency instruction in intervention settings; Excell, Focus, Title I, Special Ed., Math Labs

Will investigate tools: i.e. Fact Fluency- Trans Math, Otter Creek, FastMath, and FreeRice.com

Difficulty with computer based programs is the lack of access to computers

**7. Progress Monitoring-** use tools such as QD and Monitoring Basic Skills Progress or other Curriculum Based Measurement such as EDC Calendar Math at the elementary level.

**8. Use motivational Strategies-** k-12 committee suggested it for Tier III

Question: Who does small group? Is Title I pull out considered Tier II intervention for example?

Compared previous intervention suggestions from March 24<sup>th</sup> 2009 to research in webinar.

Changes are noted in green on chart.

Other topics discussed

**Summer school:** Re-evaluate – not seen as productive use of time or resources.

**Focus and Excel:** what is their purpose? Confusion as to whether there is a math/reading focus. Lack of consistency in implementation and no data to evaluate effectiveness were seen as areas for improvement.

**Credit Recovery:**

1. Is the rigor there for Plato or on-line courses? Needs to be evaluated

Credit Recovery for 6 week summer school - only allow ½ a credit instead of full credit

**Note:** Changes are in green

Structure	High School	Middle School	Elementary School
Additional math class	Algebra Math Lab (NWEA for placement)	Math Lab (Morgan Park only) Woodland	Extra math class
Additional time in school	* Hourly volunteer tutoring	Pull outs- from electives Morgan Park – 6th <del>Team taught math Lunch</del> Math (Ordean) Five Points Math	*Peer tutor *Enrichment <del>*Ability groups</del> <del>In at recess</del> *Flexible Grouping
Additional time after school		After school math class Excel	Math Club Excel Compass Program
Additional time-summer school	*6 week summer for 8 <sup>th</sup> graders that failed		*6 week summer school
Computer Assisted Technology	Plato- check rigor of credit recovery	Study Island	
Special Math Class		Co-taught Focus	Co-taught
Building Fluency	Incorporate into all Intervention math settings	6 <sup>th</sup> -8 <sup>th</sup> – 5 minutes a day	k-5- 10 minutes a day
Tools/resources 3-11	Learning Locator Create or locate test of Critical Benchmarks (webinar) Teach critical benchmarks only	Learning Locator Create or locate test of Critical Benchmarks (webinar) Teach critical benchmarks only	Learning Locator
Math Labs for transition years- 6 <sup>th</sup> and 9 <sup>th</sup>	Identify incoming 9 <sup>th</sup> graders at the end of 8 <sup>th</sup> for 9 <sup>th</sup> grade math lab	Identify incoming 6 <sup>th</sup> graders at the end of 5 <sup>th</sup> grade for 6 <sup>th</sup> grade math lab	

- Not current practice at all sights
- Colored green- additions, changes, corrections to last year

#### Adoption of materials

High School generated list of their greatest needs to focus evaluation of k-8 materials adoption process

1. Factors
2. Rationale #s – fluency with and in particular multiplication of whole numbers and rationale numbers
3. Estimation
4. Transfer math from words to symbols

5. Incorporate algebraic thinking prior to coming to HS
6. Foster perseverance- effort counts
7. Multi-step problems
8. Show their thinking – organize written work
9. Read more
10. Recommend a focused curriculum – see critical benchmarks

Committee read 45 recommendations from the NMAP and *Guiding Principles for Mathematics Curriculum and Assessment*

Suggestions written above underlined in green indicate recommendations that were the same from both sources.

### **Elementary and Middle School Adoption Process**

Shared selection process, evaluation tools, and chapter/unit titles of k-5 program. Texts were brought for both grade bands. Some opportunity for reviewing the materials was provided.

#### Questions on Parking Lot

1. Can district override state decision for math requirements and credits?
2. What is the on-line curriculum teaching in math?
3. What would qualify as a HS math credit? (Sped students receive credit for Alt. Math)
4. Research- how comparable districts at elementary are able to increase their math time?
5. Purpose of Excell?
6. Special Ed- hiring practices to encourage greater math background?

#### Additional tasks

1. Evaluate current/possible new intervention resources
  2. Investigate the use of responders with lack of available computer lab time
  3. Contact other districts to determine how they build in additional math time.
-

## K-12 Math Committee Minutes

Attendees: Peter Graves (no sub left early), Brenda Florestano, Pam Nelson, Tim White, Nate Norman, Sheila Nyback, Kim Anderson, Becky Starks( 1 1/2 day no sub), Tami Meyer, Nancy Broman, Melissa Kelley, Deb DeBolt, Marge Fisher, Terri Micheau, Gwen Curran, Anne Krafthefer (1/2 day another meeting), Jill Dalbacka, Jill Anderson, Patti Bambenek

March 18, 2010

### 1. Update on **adoption** and selection process shared-

Handouts-

\*Elementary Evaluation Results – % of participants with score of 4 or 5 (5 point scale) - Math Expressions and Math in Focus

\* Elementary program strength and weaknesses comparison

\* Middle School Evaluation Results- % of participants with scores of 4 or 5 – Big Ideas Math and Prentice Hall/CMP II

\*Middle School focus question results – 6-8

Feedback to pilot

Peter Graves – wanted to know if all teachers knew what they were responsible to teach

Melissa Kelley- shared that elementary teachers are given pacing guides and assessment packets yearly; teachers may or may not read them.

Anne Krafthefer- suggested that teachers are given standards aligned to their materials

### 2. Professional Development

\*Secondary - May 14<sup>th</sup> all day - Identify essential concepts and skills – Dr. Cash facilitating, Dr. Wayne Roberts – guest

\*High School - Assessment trainings— late August – TBD -

\* Elementary- Math Expressions training – first round offered in June – the week of June 14<sup>th</sup>

\* Middle School- Big Ideas Math 2 day training – week of August 23<sup>rd</sup>

Elementary: CBM- continue to investigate, may delay a year

Upcoming math meetings- added by need

Elementary- March 31st room 302 – 406

Middle School – ½ + TBD

2010-2011 Professional Development Proposals

\* Elementary grade level implementation meetings – recommend ½ day grade level meetings monthly

\* Middle school meetings- recommend ½ day middle school meetings-1 per grading period

\* High school meetings – meet 5-6 times – ½ day per grading period

Upcoming math meetings- added by need

Elementary- March 31st room 302 – 4 -6 pm

Middle School – ½ + TBD

### 3. Interventions

Shared draft of tiered interventions

\*handouts- copies of tiered intervention draft by grade band

**Elementary** tiered Intervention suggested changes

Core- 80 minutes –materials: Math Expressions (include embedded fact fluency from core materials) and Everyday Counts Calendar math goal: to meet the MN standards and benchmarks

Strategic – 20 minutes (a portion dedicated to fact/computational fluency)

Reduce classroom interruptions

Evaluate current materials by grade bands for use in interventions

Elementary recommendations\_

With the new curriculum adoption, we recommend the following be considered

\* To lessen the fiscal impact and make the best use of the materials in our new curriculum, for the first year all teachers be trained and required to use the intervention and extension materials associated with the curriculum. This includes Mega Math, Destination Math, and Soar to Success.

\* Excel programs also use these allowed materials to enhance student support

\* After school program staff (NYS, Compass, etc.) be offered in-service on intervention programs to support students outside of the school day.

\* Open computer lab nights for parent to support student or for parent/student collaborative work

**Middle School** – Labs - pre-teaches, re-teach and address gaps, Excel- 4 days, 2 math 2 reading

**High School Intervention** suggestions: Math Resource (not math study hall) possible 6<sup>th</sup> assignment, add after school

**Beginning Algebra** (no lab)

\*small classes (extra body/teacher)

\*Grade Periods 1 and 2

Topics: Order of operations, rational numbers, integers, percents, arithmetic, applications, Chapter 1 of Algebra I

Materials: MCA practice books, Black box of worksheets, Slossen worksheets, Algebra I text

\*Grade Periods 3 -6

Topics: Chapters 2-6 from Algebra 1 text. Chapter 7 optional, online resources

**Intermediate Algebra- with Algebra Lab** for selected students, criteria- NWEA and teacher recommendation

9<sup>th</sup> graders- online textbook, learner locator #, pre-teach, homework help, manipulatives/concrete

**Geometry Labs- integrate into Math Resource Lab**

**Need: Diagnostic test and specific skills review**

Webinars

ISucceed – 3- 8 Intervention program organized by strands

VMath – 2-8 Intervention program organized by grade level modules

Handout- criteria for evaluating intervention programs

Will investigate further for Middle School adoption/training – sample materials will be sent ASAP

**Duluth Head Start  
Federal Grant Application  
2010-2011**

- 1. Federal Grant Budget Details**
- 2. Projected Federal Budget**
- 3. COLA- June 30-July31, 2010**
- 4. COLA- August 1, 2010-July 31, 2011**
- 5. Program Goals 2010-2011**
- 6. Additional Considerations- Enrollment  
Reduction Proposal**

## **Duluth Head Start Federal Budget 2010-2011**

This grant money funds:

- 9 classrooms with 18 half day sessions 4 days per week at Stowe, Laura MacArthur, Lincoln, Nettleton, Grant and Barnes serving 298 children and families.
- Director @ .8 FTE
- Clerical 4 for a total of 1.85 FTE
- Education Coordinator @ .8 FTE
- Disabilities and Mental Health Coordinator @ .8 FTE
- ERSEAT/Nutrition Coordinator @ .8 FTE
- Health Services Coordinator @ .58 FTE
- Classroom Teachers 9 @ 1.0 FTE
- Classroom Paraprofessionals 9 @ .975/ 39 hours per week
- Classroom Paraprofessionals 6 @ .463 FTE/18.5 per week
- Family Advocates 4 part-time @ 2.0 FTE total
- Food Service Helper (1 @ MacArthur only)
- Substitute Teachers as needed
- Substitute Paraprofessionals as needed
- Summer recruitment/Additional Clerical Hours /Screening Hourly/Misc.

**Salary/Fringe: \$1,714,119.**

The non-labor budget lines include our Mental Health consultant, print shop, phones, transportation (cabs), insurance, memberships, classroom and office supplies and indirect costs as the budget detail shows.

**Non-labor: \$153,101.**

Head Start requires that Training and Technical Assistance funds allocated as part of the annual Federal Head Start are to be utilized to help meet program improvement goals identified by the program. Monies may be used for training, consultants, training expenses, but are restricted as they may not be used to pay salaries of Head Start employees. A Training and Technical Assistance consultant is currently working with us to develop our Training and technical Assistance Plan which will be submitted with the Head Start grant.

**Training and Technical Assistance: \$28, 958.**

**Federal Base Grant Total: \$1,863,426.**

Salary	Fringe	Total	Explanation
56,945	21,720	78,665	.8 FTE from federal budget; rest from state budget
45,883	26,077	71,959	1.85 FTE among 4 people; rest from state budget
155,260	80,704	235,964	Disability & Mental Helath .8 FTE (.2 State)
			Health .58FTE (.8 Total)
			Education .8 FTE (.2 State)
			ERSEA-T & Nutrition .8 FTE(.2 State)
510,353	218,051	728,405	9 Teachers @ 1.0 FTE
203,939	141,930	345,870	9 @ .975 FTE (39 hours/week) No Increase
59,536	9,935	69,472	6 @ .463 FTE (18 1/2 hours/week)
3,609	459	4,068	1 Food Service HRA @ 8.5/hour
97,320	53,506	150,826	Combined total of 4 classroom advocates is 2.0375 FTE (80 hours/week)
7,000	1,088	8,088	This is an estimate; close to what we used last year
6,000	879	6,879	This is what we used last year
11,550	2,373	13,923	summer recruitment (4770-Hrly clerical); additional Clerical 40 hrs (2046); screening help (\$3500.); Misc Salaries (1234)
<b>1,157,396</b>	<b>556,723</b>	<b>1,714,119</b>	<b>1,714,119</b>
		36,491	Mental Health estimate (34,656); Print Shop (1,835)
		5,800	Cell phones and land lines
		900	Postage
		900	Mandated insurance per child
		3,000	Parent transportation
		2,500	In district-mileage
		300	copy machine
		2,500	General office supplies
		6,918	Classroom Supplies
		2,000	Food
		800	Memberships
		2,383	Miscellaneous
		88,609	Rate set by state; amount that goes to District
		<b>153,101</b>	
		32,752	Projected 1.84% COLA
		1,834,468	Projected Grant Amount
		<b>1,867,220</b>	<b>Total Projected Grant amount</b>
		<b>1,867,220</b>	
		<b>(0)</b>	

**Federal Cost of Living Allowance for June 30, 2010-July 31, 2010**

Head Start has announced it will provide an additional 1.84% of the total federal Head Start grant amount from FY06 as a Cost of Living Allowance. This COLA will cover increases in wages and fringe benefits as per district contracts.

This one-month supplemental COLA grant application must be submitted separately from the amount available during the regular Duluth Head Start federal grant cycle. Funds will be used to cover salary and fringe increases for employees.

**COLA for June 30, 2010-July 31, 2010: \$2718**

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**Federal Cost of Living Allowance for 2010-2011**

Head Start has announced it will provide an additional 1.84% of the total federal Head Start grant amount as a Cost of Living Allowance. This COLA will cover increases in wages and benefits as per district contract.

These funds will allow us to maintain salary and fringe the increases we have given in the past when no cost of living increases were available and the grantee's employment contracts called for increases in the salary and fringe benefits.

**COLA for August 1, 2010-July 31, 2011: \$32, 752**

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**Duluth Head Start Program Goals 2010-2011**

1. Increase the parent involvement of families of color.
2. Increase parent understanding of all aspects of Head Start.
3. Increase parental understanding of and build a smooth transition to kindergarten for Head Start families.
4. Increase the number of families who meet the medical and dental requirements for Head Start.

These goals will be further developed to include strategies that we will implement to meet these goals in 2010-2011.

**Additional Federal Grant and Budget Considerations for 2010-2011**

In January 2010, Duluth Head Start submitted a proposal for an Enrollment Reduction. An Enrollment Reduction allows programs to serve fewer children and retain the same level of funding, thereby raising the cost per child. Because Duluth Head Start is in the bottom three in cost per child in the state of Minnesota, this is a significant issue. Our current cost per child is \$6156. This proposal raises that to \$7194. Raising our cost per child will enable us to maintain quality programming with the cost savings. Our proposal to serve 43 fewer children would bring our total enrollment to 255 from 298. Essentially, we save money by eliminating a teacher position, a paraprofessional position and the costs associated with the operation of one Head Start classroom.

Our rationale was sent to the Head Start Regional office in Chicago where we were asked for further clarification. Those questions were answered and details clarified on March 3, 2010. We have been assured the Regional Office is reviewing this proposal. We wanted to make you aware of this as should we get approval, we will have to amend our budget and grant proposal. This change may also affect the state funding allocation.

We do understand that a proposal like this sounds counterintuitive. We assure you that we have explored other options and know that continue to offer high quality programming; we must be able to pay our rising costs.

## **Minnesota Partnership for School Connectedness (MPSC)**

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The Minnesota Partnership for School Connectedness (MPSC) is a three-year intercollegiate, interdisciplinary initiative partnering the University of Minnesota with five diverse school districts throughout Minnesota to increase connectedness between sixth grade teachers and students and foster student engagement in learning.

**Paul Snyder, MSW, MDiv**  
Program Manager  
612-626-8412

**Pam Moore, MA**  
Program Coordinator  
612-626-6787

**Konopka Institute for Best Practices in Adolescent Health  
University of Minnesota**

## **MPSC Funding**

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- **The Minnesota Partnership for School Connectedness (MPSC) is funded by the Institute of Education Sciences (IES) at the U.S. Department of Education.**
- **MPSC is funded as a pilot study, designed to test the feasibility of the intervention. If the model is deemed feasible, a new proposal would be submitted to IES in 2012 for funding as an initiative to test the intervention's efficacy.**

## **Partnership - *at the University***

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**Between:**

- **The Konopka Institute for Best Practices in Adolescent Health, Division of Adolescent Health and Medicine, Department of Pediatrics, Medical School**

**and**

- **The Department of Educational Psychology in the College of Education and Human Development**

## **MPSC University Staff**

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**At 50% time or more:**

- **Program Manager Paul Snyder, MSW, MDiv**
- **Program Coordinator Pam Moore, MA**
- **Graduate Research Assistant (to be named)**

**At 15% time or less:**

- **Principal Investigator Michael Resnick, PhD**
- **Co-principal Investigator Sandra Christenson, PhD**
- **Communications Director Glynis Shea, BA**
- **Support Staff Person (to be named)**

## Partnership - *with Intervention Schools*

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- **Duluth Public Schools**
  - Morgan Park Middle School
  - Woodland Middle School
- **Maple River Public Schools**
  - Maple River Middle School
- **Mounds View Public Schools**
  - Edgewood Middle School
  - Highview Middle School
- **South Washington County Public Schools**
  - Cottage Grove Middle School
  - Woodbury Middle School
- **Worthington Public Schools**
  - Worthington Middle School

## Partnership - *with Non-Intervention Schools*

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- **Some schools will be engaged from among the following districts to provide a total of four Teacher Leaders (experienced teachers – recognized for their skills in engaging students – who will assist MPSC University staff in developing MPSC training components)**
  - Mounds View Public Schools
  - South Washington County Public Schools
  - Fergus Falls Public Schools
  - McGregor Public Schools
  - Minneapolis Public Schools
  - Richfield Public Schools
  - Robbinsdale Public Schools
  - St. Paul Public Schools

## **Other Partners**

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- **Advisory Committee, consisting of national experts in school connectedness, student engagement, and curriculum development for adults**
- **Youth Advisory Board members, Twin Cities greater metro high school students seeking to improve the learning experience for other youth**
- **Youth CHAT, a group of older adolescent actors from the greater Twin Cities metro who will work with the Teacher Fellows at the Training Institute**
- **The Office for Research and Consulting Services (ORCS) at the University of Minnesota, who will provide expertise in evaluation and data analysis and reporting**

## **MPSC Teacher Fellows**

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- **One sixth grade teacher will be recruited by each principal of the eight intervention schools**
- **These eight teachers will serve as teacher fellows in the MPSC professional development fellowship**
- **First fellowship cohort: August 2010 - June 2011**

## MPSC Teacher Fellows (continued)

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- **Requirements for completion of fellowship:**
  - Attendance and participation at Training Institute
  - Attendance and participation at all three Cohort Convenings
  - Implementation of Student Engagement Plan in classroom on a regular basis
  - Completion of fellowship paper
  - Presentation on fellowship experience to local school board
- **Recognition of completion of fellowship:**
  - Stipend of \$2,000
  - Continuing education units (CEUs)
  - One professional master's credit
- **Teacher fellows will be reimbursed for lodging and mileage costs re: attendance at the Training Institute and the Cohort Convenings**

## MPSC Teacher Leaders

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- **Four teachers from non-intervention schools, including some from districts other than the five districts with intervention schools, will work with MPSC University staff to:**
  - Develop MPSC training components
  - Ensure that the intervention is realistic for middle school teachers
  - Assist at the Training Institute
  - Participate in the revision process between the first year fellowship and the second year fellowship

## **MPSC Teacher Leaders (continued)**

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- Possible Teacher Leaders will be recommended from each of the eight intervention schools by the schools' principals
- To verify the recommended teacher's level of engagement with students, the Student Engagement Inventory (SEI), a validated instrument that measures levels of student engagement, will be administered to five randomly chosen students in the recommended teacher's classroom
- Teacher Leaders will receive a stipend of \$1,000

## **Four Key Components**

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1. *Three-day Training Institute*
2. *Ongoing Classroom Intervention*
3. *Three one-day Cohort Convenings*
4. *Attention to School Context*

## **Key Component #1**

### ***Training Institute***

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- A three-day Training Institute for all Teacher Fellows will occur in mid-August in the Twin Cities metro area
- Institute goal: Impart relevant knowledge, develop skills, provide support
- Build upon school and district professional development plans
- Each teacher fellow will develop a Student Engagement Plan, with learning goals for the year; student engagement strategies for application in the classroom; and areas for additional coaching
- Role plays with youth actors

### ***Training Institute (continued)***

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- **Probable topics will include, but not be limited to:**
  - Stages of adolescent development
  - Principles of healthy youth development
  - Student engagement
  - Learning motivation
  - Social emotional learning (SEL)
  - Classroom organization
  - Instructional support
  - Communications skills
  - Active learning

## **Key Component #2**

### ***Classroom Implementation***

- Every other month, the MPSC Program Coordinator and Graduate Research Assistant will observe each Teacher Fellow in his/her classroom, using the Classroom Assessment Scoring System (CLASS) a classroom observation tool
- The following day, the MPSC Program Coordinator will coach the teacher, using the Co-Active Coaching Model
- Attention will be focused on assuring implementation of the teacher-developed Student Engagement Plan

## **Key Component #3**

### ***Cohort Convenings***

- Cohort Convenings for the eight Teacher Fellows will occur at the University of Minnesota – Twin Cities campus, in the months of October 2010, December 2010, and February 2011
- Goal: Impart knowledge, develop skills, provide support
- Build upon school and district professional development plans
- Convenings will reinforce previous training material, introduce new material, explore implementation of the material in the classroom, provide opportunity for peer co-instruction and feedback, and troubleshoot problems
- Reimbursements will be provided to school districts for substitute teachers for Teacher Fellow classrooms will be paid for by MPSC

## Key Component #4

### *School Context*

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- In November 2010, January 2011, March 2013, and May 2013, the MPSC Program Manager will visit the intervention school districts and meet with the following individuals to ensure that the initiative is progressing as intended, including diffusion of new knowledge of connectedness and student engagement techniques from Teacher Fellows to other school personnel:
  - Intervention school principals
  - Other school district personnel (including school district administrators and/or same grade team teachers)
- Communication between visits will occur by telephone, email, and video conferencing

## Data Collection in Schools

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- **Students in principal-recommended Teacher Leader classrooms**
  - Five items from adapted Student Engagement Inventory (SEI) – once
- **Students in Teacher Fellow classrooms**
  - Full administration of adapted SEI – twice per semester or quarter
- **Teacher Fellows**
  - Student academic achievement rating forms – three times per semester or quarter

## Data Collection in Schools (continued)

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- **Attendance clerk**
  - Attendance of students in Teacher Fellow's classes  
– daily
- **Principals**
  - Survey Monkey electronic survey – twice per  
fellowship year
- **Same grade teachers**
  - Survey Monkey electronic survey – twice per  
fellowship year

## **Minnesota Partnership for School Connectedness**

### **Facts about the Teacher Fellows**

Each school year, there will be eight different teacher fellows, all sixth grade teachers from the following participating schools:

**Duluth Public Schools:**

Morgan Park Middle School, Duluth  
Woodland Middle School, Duluth

**Maple River Public Schools:**

Maple River Middle School, Mapleton

**Mounds View Public Schools:**

Edgewood Middle School, Mounds View  
Highview Middle School, New Brighton

**South Washington County Middle Schools:**

Cottage Grove Middle School, Cottage Grove  
Woodbury Middle School, Woodbury

**Worthington Public Schools:**

Worthington Middle School, Worthington

Teacher fellows will be recruited by the school's principal.

The first fellowship year will run from August 2010 – June 2011.

A total stipend of \$2,000 will be provided to each teacher fellow for participating fully in the fellowship. Full participation includes:

- Attendance and participation at the three-day Training Institute at the University of Minnesota, Twin Cities campus
- Implementation of their Student Engagement Plan in the classroom on a regular basis
- Attendance and participation at the three Cohort Convenings at the University of Minnesota, Twin Cities campus
- Completion of a paper, reflecting on the fellowship experience and implementation of connectedness and engagement techniques in the classroom
- Presentation on the MPSC intervention and their fellowship experience to their local school board

The stipend will be paid in installments, upon receipt of MPSC Teacher Fellow Invoices submitted at the following times:

- \$750 after the August 2010 Training Institute
- \$250 after the Teacher Fellow Cohort Convening in October 2010
- \$250 after the Teacher Fellow Cohort Convening in December 2010
- \$250 after the Teacher Fellow Cohort Convening in February 2010
- \$500 after completion of the fellowship paper and presentation to the local school board.

(over)

In addition to the stipend, upon completion of the fellowship, teacher fellows will receive continuing education units (CEUs) one professional master's credit.

Mileage incurred related to attendance at the Training Institute and Cohort Coverings will be reimbursed at the federally determined reimbursement rate.

If needed, MPSC will cover costs for two nights' lodging related to attendance at the Training Institute.

Two of the eight teacher fellows will be asked to contribute to the development of the Training Institute in August, 2011. These two teacher fellows will receive an additional compensation of \$500 for their efforts.

## Minnesota Partnership for School Connectedness

### Duluth Public Schools CHECKLIST

The following items are needed from each school:

#### Spring 2010

- Provide MPSC staff with school professional development plan
- Start school district IRB process
- Identify 6<sup>th</sup> grade teacher who will be participating in MPSC fellowship
- Work with MPSC staff to finalize Memorandum of Understanding
- Complete required University of MN vendor authorization form
- Complete W-9 tax ID form

#### Fall 2010

- Provide MPSC staff with official school calendar for 2010-2011 school year (detailing breaks, staff development days, P/T conferences)
- Determine who will be the in-school contact person for MPSC staff
- Add MPSC staff to school cancellation list
- Obtain consent from participating classrooms (teachers, parents, teams, principals)

**RESOLUTION**

**Acceptance of Grant Awards to Duluth Public Schools**

WHEREAS, Minnesota Statute 465.03 requires a school district to accept grants by resolution expressed in the terms prescribed by the donor in full; and,

WHEREAS, acceptance of the grant in accordance with the donor's terms is in the best interest of the Duluth Public Schools:

NOW, THEREFORE, BE IT RESOLVED that the Duluth Public Schools does accept the below-described grants from said organizations in accordance with the terms set forth herein.

BE IT FURTHER RESOLVED that the Duluth Public Schools wishes to extend its grateful appreciation to these various organizations.

	Organization	Author/Contact	Project Title	Award Amount	Terms
1.	Northland Foundation	Christen Hull, Special Education Teacher at Lakewood Elementary	Reading Intervention for Special Education Students	\$420.00	Funds to be used to support Lakewood's Reading Intervention for Special Education Students project.
2.	Perpich Center for Arts in Education	Deb Sauter, Principal MacArthur Elementary	Perpich Arts and Schools as Partners (ASAP) Grant	\$5,500 per year for two years	Funds to be used to support the design of fifth grade story/creative drama/writing curriculum.
3.	Minnesota Department of Health	Jim Arndt, Principal at STC	Minnesota Health Careers Promotion Grant	\$8,267	Funds to be used to support activities within the Medical Occupations Program at STC.
4.	Minnesota Department of Education	Kathy Bartsias, Learning Services Coordinator	Learn and Serve Minnesota Service-Learning Grant	\$14,000	Funds to be used to support building sustainability of district-wide service-learning including vision and leadership, ongoing high-quality professional development, progress monitoring and continuous improvement, school-community collaborations, and curriculum assessment.

Project # 4640

March 2, 2010

Christen Hull, Special Education Teacher  
Lakewood Elementary School - ISD #709  
5207 North Tischer Road  
Duluth, MN 55804

Dear Ms. Hull:

Enclosed please find your payment as specified in our notification letter dated 2/19/2010. These funds may be used as identified in your project request, ***Reading Intervention for Special Education Students.***

Thank you for your efforts to improve services and resources in our region. Please call our office, if you have any questions.

Sincerely,



Suzanne Rauvola  
Administrative Assistant

Enclosure



*Building a Strong Foundation for the Future of Our Region*



March 18, 2010



Enclosed is the executed contract for Duluth Public Schools ASAP grant. Suzanne Bursh has authorized our accounting department to proceed with payment.

Questions regarding:

- **Grant terms**, please contact Barbara Cox via e-mail at [Barbara.cox@pcae.k12.mn.us](mailto:Barbara.cox@pcae.k12.mn.us) or via phone at 763-591-4762.
- **Payment**, please contact Suzanne Bursh via phone at 763-591-4636 or via e-mail at [suzanne.bursh@pcae.k12.mn.us](mailto:suzanne.bursh@pcae.k12.mn.us).

Thanks for all your help toward executing this contract.

A handwritten signature in blue ink that reads 'Jennifer Manning'.

Jennifer Manning  
OAS Senior, Contracts  
763-591-4705

Enclosures: Contract Original

STATE OF MINNESOTA  
GRANT CONTRACT

This grant contract is between the State of Minnesota, acting through its Perpich Center for Arts Education ("State") and Duluth Public Schools (Laura McArthur Elementary School), an Anchor Organization, not an employee of the State of Minnesota, address 215 North First Avenue East, Duluth, MN 55802, 218-336-8717 ("Grantee").

**Recitals**

1. Under Minn. Stat. § 12.061 the State is empowered to enter into this grant.
2. Under Minn. Stat. § 129.10 Subd C the Perpich Center for Arts Education is empowered to enter into this grant.
3. The State is in need of high quality arts education learning for all K-12 students in Minnesota, and the ASAP professional development program grants build the capacity of teachers and teaching artists to improve k-12 arts education statewide.
4. The Grantee represents that it is duly qualified and agrees to perform all services described in this grant contract to the satisfaction of the State.

**Grant Contract**

**1 Term of Grant Contract**

- 1.1 **Effective date:** March 5, 2010, or the date the State obtains all required signatures under Minnesota Statutes Section §16C.05, subdivision 2, whichever is later.  
**The Grantee must not begin work under this grant contract until this contract is fully executed and the Grantee has been notified by the State's Authorized Representative to begin the work.**
- 1.2 **Expiration date:** June 30, 2011, or until all obligations have been satisfactorily fulfilled, whichever occurs first.
- 1.3 **Survival of Terms.** The following clauses survive the expiration or cancellation of this grant contract: 8. Liability; 9. State Audits; 10. Government Data Practices and Intellectual Property; 12. Publicity and Endorsement; 13. Governing Law, Jurisdiction, and Venue; and 15 Data Disclosure.

**2 Grantee's Duties**

The Grantee, who is not a state employee, will:

As the Anchor Organization, the grantee will partner with Artist Rachel Nelson to participate in the Arts and Schools as Partners professional development grant program.

During the course of the grant period, the anchor organization and their assigned partner organizations will:

- 1) participate in PCAE program workshops (dates negotiated with PCAE) and planning to learn and develop partnering skills;
- 2) collaboratively plan and implement student learning experiences and professional development; and
- 3) document, assess, and communicate their work, including completion of reporting as requested and required by program staff.

STATE OF MINNESOTA  
GRANT CONTRACT

The Anchor Organization assumes responsibility for coordination of the partnership organizations and for management and reporting of all program activities and all expenditure of funds, inclusive of reports from the partnership organizations.

**3 Time**

The Grantee must comply with all the time requirements described in this grant contract. In the performance of this grant contract, time is of the essence.

**4 Consideration and Payment**

**4.1 Consideration.** The State will pay for all services performed by the Grantee under this grant contract as follows:

A total of \$11,000 is awarded to each school and arts partner team for the two-year grant period. The grantee is the named fiscal agent for the partner team.

Payment disbursement terms:

\$3,850 within 30 days of contract execution.

\$1,650 upon receipt and acceptance of project plan and budget reports due June 15, 2010

\$3,850 upon receipt and acceptance of project plan and budget reports due October, 2010.

\$1,650 upon receipt and acceptance of final reports, which are due May 15, 2011.

*Upon successful completion of year one and two, teams will be eligible to apply for a third and final year of funding.*

**Total Obligation.** The total obligation of the State for all compensation and reimbursements to the Grantee under this grant contract will not exceed \$11,000 (Eleven Thousand dollars and Zero cents).

**4.2. Payment**

**Invoices.** No invoices are required for this contract. Payments will be made as stated in the payment disbursement terms listed in 4.1 Consideration.

**Federal funds.** (Where applicable, if blank **this section does not apply**) Payments under this grant contract will be made from federal funds obtained by the State through Title \_\_\_\_\_ CFDA number \_\_\_\_\_ of the \_\_\_\_\_ Act of \_\_\_\_\_. The Grantee is responsible for compliance with all federal requirements imposed on these funds and accepts full financial responsibility for any requirements imposed by the Grantee's failure to comply with federal requirements.

**5 Conditions of Payment**

All services provided by the Grantee under this grant contract must be performed to the State's satisfaction, as determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations. The Grantee will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

**6 Authorized Representative**

The State's Authorized Representative is Barbara Cox, Arts Education Partnership Coordinator, Perpich Center for Arts Education, 6125 Olson Memorial Highway, Golden Valley, MN 55422, 763-591-4762, or his/her successor, and has the responsibility to monitor the Grantee's performance and the authority to accept the services provided under this grant contract. If the services are satisfactory, the State's Authorized Representative will certify acceptance on each report submitted for payment.

The Grantee's Authorized Representative is Keith Dixon, Superintendent, Duluth Public Schools, 215 North First Avenue East, Duluth, MN 55802, 218-336-8700. If the Grantee's Authorized Representative changes at any time during this grant contract, the Grantee must immediately notify the State.

**7 Assignment, Amendments, Waiver, and Grant contract Complete**

**7.1 Assignment.** The Grantee may neither assign nor transfer any rights or obligations under this grant contract without the prior consent of the State and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this grant contract, or their successors in office.

**7.2 Amendments.** Any amendment to this grant contract must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original grant contract, or their successors in office.

**7.3 Waiver.** If the State fails to enforce any provision of this grant contract, that failure does not waive the provision or its right to enforce it.

**7.4 Grant Contract Complete.** This grant contract contains all negotiations and agreements between the State and the Grantee. No other understanding regarding this grant contract, whether written or oral, may be used to bind either party.

**8 Liability**

The Grantee must indemnify, save, and hold the State, its agents, and employees harmless from any claims or causes of action, including attorney's fees incurred by the State, arising from the performance of this grant contract by the Grantee or the Grantee's agents or employees. This clause will not be construed to bar any legal remedies the Grantee may have for the State's failure to fulfill its obligations under this grant contract.

**9 State Audits**

Under Minn. Stat. §16C.05, subd. 5, the Grantee's books, records, documents, and accounting procedures and practices relevant to this grant contract are subject to examination by the State and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this grant contract.

**10 Government Data Practices and Intellectual Property**

**10.1. Government Data Practices.** The Grantee and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this grant contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Grantee under this grant contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data referred to in this clause by either the Grantee or the State.

If the Grantee receives a request to release the data referred to in this Clause, the Grantee must immediately notify the State. The State will give the Grantee instructions concerning the release of the data to the requesting party before the data is released. 124

#### 10.2. **Intellectual Property Rights**

The State shall own all rights, title and interest in all of the materials conceived or created by the Grantee, or its employees or subgrantees, either individually or jointly with others and which arise out of the performance of and are paid for under this grant contract, including any inventions, reports, studies, designs, drawings, specifications, notes, documents, software and documentation, computer based training modules, electronically, magnetically or digitally recorded material, and other work in whatever form ("Materials").

The Grantee hereby assign to the State all rights, title and interest to the Materials. Grantee shall, upon request of the State, execute all papers and perform all other acts necessary to assist the State to obtain and register copyrights, patents or other forms of protection provided by the law for the Materials. The Materials created under this grant contract by the Grantee, its employees or subgrantees, individually or jointly with others, shall be considered "works made for hire" as defined by the United States Copyright Act.

All of the Materials, whether in paper, electronic, or other form, shall be remitted to the State by the Grantee, its employees and any subgrantees, shall not copy, reproduce, allow or cause to have the Materials copied, reproduced or used for any purpose other than the performance of the Grantee's obligations under this grant without the prior written consent of the State's Authorized Representative.

#### 11 **Workers' Compensation**

The Grantee certifies that it is in compliance with Minn. Stat. § 176.181, subd. 2, pertaining to workers' compensation insurance coverage. The Grantee's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees and any claims made by any third party as a consequence of any act or omission on the part of these employees are in no way the State's obligation or responsibility.

#### 12 **Publicity and Endorsement**

12.1 **Publicity.** Any publicity regarding the subject matter of this grant contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State's Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Grantee individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this grant contract.

12.2 **Endorsement.** The Grantee must not claim that the State endorses its products or services.

STATE OF MINNESOTA  
GRANT CONTRACT

**13 Governing Law, Jurisdiction, and Venue**

Minnesota law, without regard to its choice-of-law provisions, governs this grant contract. Venue for all legal proceedings out of this grant contract, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

**14 Termination**

The State may cancel this grant contract at any time, with or without cause, upon 30 days' written notice to the Grantee. Upon termination, the Grantee will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.

**15 Data Disclosure**

Under Minn. Stat. § 270C.65, Subd. 3, and other applicable law, the Grantee consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and state tax agencies and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state tax laws which could result in action requiring the Grantee to file state tax returns and pay delinquent state tax liabilities, if any.

**1. STATE ENCUMBRANCE VERIFICATION**

*Individual certifies that funds have been encumbered as required by Minn. Stat. "16A.15 and 16C.05.*

Signed: *Rosalind A. Johnson*  
Date: 2-25-10

CFMS Grant contract No. B- 40682

**3. STATE AGENCY**

By: *Debra Fitzloff-Meyer*  
(with delegated authority)  
Title: AMD  
Date: 3-5-10

**2. GRANTEE**

The Grantee certifies that the appropriate person(s) have executed the grant contract on behalf of the Grantee as required by applicable articles, bylaws, resolutions, or ordinances.

By: *Scott M. Davis*  
Title: Superintendent of Schools  
Date: 3/1/10

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:  
Agency  
Grantee  
State's Authorized Representative - Photo Copy

**State Accounting Information:**

Agency:	Fiscal Year: 2010 / 2011	Vendor Number: 009-709000 00
Total Amount of Contract: FY10 \$5,506 \$11,000.00 FY11 \$5,509		Amount of Contract First FY:
Commodity Code: 023 11	Commodity Code:	Commodity Code:
Object Code: 5600	Object Code:	Object Code:
Amount: 5500.00	Amount:	Amount:

Accounting Distribution 1:	Accounting Distribution 2:	Accounting Distribution 3:
Fund: 100	Fund: 100	Fund:
Appr: CAE	Appr: CAE	Appr:
Org/Sub: 3402	Org/Sub: 3402	Org/Sub:
Rept Catg:	Rept Catg:	Rept Catg:
Amount: \$5,500	Amount: \$5,500	Amount:

ACTIVITY ASAP

ACTIVITY ASAP

Processing Information: [some entries may not apply]

Start Date: 03/05/10 End Date: 06/30/11  
(as defined in section IV to follow)

Requisition: \_\_\_\_\_  
number / date / entry initials

Solicitation: \_\_\_\_\_  
number / date / entry initials

Contract: B40682/2-25-10/RA  
number / date / entry initials

Orders: \_\_\_\_\_  
number / date / signature

[Individual signing certifies that funds have been encumbered as required by Minn. Stat. §§ 16A15 and 16C.05.]

identification number and Minnesota tax identification number if you do business with the State of Minnesota. This information may be used in the enforcement of federal and state tax laws. Supplying these numbers could result in action requiring GRANTEE to file state tax returns and pay delinquent state tax liabilities, if any. \*\*\*This grant contract will not be approved unless these numbers are provided.\*\*\* These numbers will be available to federal and state tax authorities and state personnel involved in approving the grant contract and the payment of state obligations.

Grantee Name and Address: Duluth Public Schools (Laura MacArthur Elementary School)  
215 North First Avenue East  
Duluth, MN 55802

Soc. Sec. or Federal Employer I.D. No. 416003776

Minnesota Tax ID No (if applicable) 8014301

**THIS PAGE OF THE GRANT CONTRACT CONTAINS PRIVATE INFORMATION. EXCEPT AS DEFINED ABOVE, THIS PAGE SHOULD NOT BE REPRODUCED OR DISTRIBUTED EXTERNALLY WITHOUT EXPRESS WRITTEN PERMISSION OF THE GRANTEE.**

*If you circulate this Grant Contract internally, only offices that require access to the tax identification number AND any individuals/offices signing this Grant Contract should have access to this page.*

Competitive Learn & Serve - 2009-2010

FY 10 Budget

Budget is now on SERVS

Funding is from a federal source

14,000.00

1-684-005-867-2499.00

ID 1771

14,000.00

Grant Year March 8, 2010 to Aug 21, 2010

NAME

Kathy Bartsias

Teacher Training - Stipend pay @  
\$20.26 per hr x 60 hrs

Total

	IFAS Code	UFARS CODE	Estimate for Summer 10 = 130 hrs x 42.55	Service Learning 101 & SL Rep Meetings	Total	
Tcher sub	1145.00	145		-	-	
Hrly Stipends for training & other	1185.00	185	5,532	1,216	6,747	6,747
FICA @ 7.65%	1210.00	210	423	93	516	
PERA @ 6.75%	1214.00	214			-	
TRA @ 5.79%	1218.00	218	320	70	391	
Work Comp @ 1.1%	1270.00	270	61	13	74	
Unempl comp @ .25%	1280.00	280	14	-	14	995
TOTAL SAL /FRINGE			6,350	1,392	7,742	Total Frg

Object	Object	Amount
Contr Svcs	303 Contract svcs under \$25K	4,260
Telephone	320	-
Student Transp #709	365	-
Training - food	366 Staff Development Food for inservice/training	800
InState Travel	366 Travel Instate-Mileage SL Meetings in Mpls Metro & Other	848
InState Travel	366 Travel Instate-meals, lodge, regis	-
Printshop	303 Printing Newsletters, brochures, & 101 booklet	-
Gen supplies	401 Books Supplies - misc.	350
Indirect cost - N/A to this program	895	-
Miscellaneous	899	-
	NonLabor	6,258
	Labor	7,742
	Total	14,000
	Difference	0

NOTE changes in object  
codes for federal program expenses

### DISTRICT 709 FIELD TRIP REQUESTS

In accordance with School District Policy District 6160, District 709 recognizes properly planned, well conducted, and carefully supervised field trips may be a vital part of the curriculum. School field trips are encouraged within available resources and requirements outlined below.

**DIRECTIONS:** All staff are required to submit a Field Trip Request **prior** to the field trip being finalized with the involved students and to:

- > Receive administrative and/or extra-curricular coordinator approval for all instructional and supplementary field trips
- > Receive administrative reviewal and school board approval for all extended trips (Exceptions may be granted by the school board chair to accommodate emergencies.)

**DEFINITIONS:**

Instructional Trips - Trips that take place during the school day, relate directly to a course of study, and require student participation. Fees may not be assessed against students.

Supplementary Trips - Trips in which students voluntarily participate in and which often take place outside the regular school day, but do not include overnight stays. Financial contributions may be requested of students.

Extended Trips Within Minnesota, the Continental United States, or a Foreign Country - Trips that involve one or more overnight stops within Minnesota, the Continental United States, or a Foreign Country (externally sponsored) and may be instructional or supplementary and are voluntary in nature. Extended field trips require school board approval prior to the trip.

<b>INSTRUCTIONAL TRIP ACTION</b>		
Principal:	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Not Approved	Name: <u>Deborah Rickard</u> Date: <u>Feb. 25, 2010</u>
<b>SUPPLEMENTAL TRIP ACTION</b>		
Principal:	<input type="checkbox"/> Approved <input type="checkbox"/> Not Approved	Name: _____ Date: _____
<b>Instructional/Supplemental Trips need not be sent to District office.</b>		
<b>EXTENDED/EXTERNALLY SPONSORED TRIP ACTION</b>		
Principal:	<input type="checkbox"/> Recommended <input type="checkbox"/> Not Recommended	Name: _____ Date: _____
Assistant Superintendent:	<input checked="" type="checkbox"/> Recommended <input type="checkbox"/> Not Recommended	Name: <u>[Signature]</u> Date: <u>4/5/10</u>
School Board:	<input type="checkbox"/> Approved <input type="checkbox"/> Not Approved	Name: _____ Date: _____
<b>All extended trip proposals must be sent to the Assistant Superintendent's Office to be placed on the Education Committee meeting agenda for approval.</b>		

# FIELD TRIP REQUEST FORM

Date of Submission:

Type of Trip:     Instructional     Supplementary     Extended     Externally Sponsored\*

1. Organization/Grade/Course Planning Trip: Congdon Park Elementary School
2. Contact Person (Responsible for Checklist Completion): Deborah Rickard
3. Field Trip Date(s): April 21-23, 2010 Destination: Wolf Ridge Environmental Center
4. Field Trip Overview (Include events, establishments and locations): Wolf Ridge Environmental Learning Center is an accredited residential environmental school. It is located 90 miles north of Duluth in Finland, Minnesota.
5. Field Trip Departure from School (Date and Time): Wednesday, April 21, 2010 9:00 AM  
Field Trip Return to School (Date and Time): Friday, April 23, 2010 2:00 PM
6. Objectives of Field Trip: Teach the concepts of conservation and stewardship. Promote social understand, respect and cooperation. Learn behaviors that promote a sustainable life-style and foster understanding of the earth.
7. Relationship to Curriculum or Student Learning: Students participate in outdoor experiences that focus on ecology and science, human culture and history, personal growth and group building.
8. Planned Follow-up Field Trip Activities: Students keep a journal about their learning experiences. After the trip, students write a personal narrative.
9. Field Trip Budget Request

Estimated Expenses		
Total Admission/Fees	<u>includes meals and lodging</u>	\$ 13,300
Total Meals		\$
Total Lodging		\$
Total Transportation		\$ 350
<input type="checkbox"/> School District Vehicle(s)		
<input checked="" type="checkbox"/> Commercial Transportation Carrier ~ Name:	<u>Voyageur Bus Co.</u>	
<input type="checkbox"/> Private Vehicle (requires certificate of insurance) ~ Name:		
Total Additional Stipends:		\$
Other:		\$
<b>Total</b>		<b>\$ 13,650</b>

Revenues		
District Budget	Code:	\$
Booster Group	<u>PTA</u>	\$ 1,200
Donations		\$ 475
Student Fees		\$ 11,975
Total Additional Stipends:		\$
<b>Total</b>		<b>\$ 13,650</b>

11. Reviewed/Completed Request Checklist:     Yes     No

\*The Assistant Superintendent's office must receive a signed waiver form for each student participating in an externally sponsored trip prior to the departure date.

**RETURN COMPLETED REQUEST TO BUILDING PRINCIPAL**

### DISTRICT 709 FIELD TRIP REQUESTS

In accordance with School District Policy District 6160, District 709 recognizes properly planned, well conducted, and carefully supervised field trips may be a vital part of the curriculum. School field trips are encouraged within available resources and requirements outlined below.

**DIRECTIONS:** All staff are required to submit a Field Trip Request **prior** to the field trip being finalized with the involved students and to:

- Receive administrative and/or extra-curricular coordinator approval for all instructional and supplementary field trips
- Receive administrative reviewal and school board approval for all extended trips (Exceptions may be granted by the school board chair to accommodate emergencies.)

**DEFINITIONS:**

Instructional Trips - Trips that take place during the school day, relate directly to a course of study, and require student participation. Fees may not be assessed against students.

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Extended Trips Within Minnesota, the Continental United States, or a Foreign Country - Trips that involve one or more overnight stops within Minnesota, the Continental United States, or a Foreign Country (externally sponsored) and may be instructional or supplementary and are voluntary in nature. Extended field trips require school board approval prior to the trip.

**INSTRUCTIONAL TRIP ACTION**

Principal:                     Approved                    Name: \_\_\_\_\_  
                                        Not Approved                Date: \_\_\_\_\_

**SUPPLEMENTAL TRIP ACTION**

Principal:                     Approved                    Name: \_\_\_\_\_  
                                        Not Approved                Date: \_\_\_\_\_

**Instructional/Supplemental Trips need not be sent to District office.**

**EXTENDED/EXTERNALLY SPONSORED TRIP ACTION**

Principal:                     Recommended                Name: Anna Klewe  
                                        Not Recommended            Date: 3/3/2010

Assistant Superintendent:  Recommended                Name: [Signature]  
                                        Not Recommended            Date: 4/5/10

School Board:                 Approved                    Name: \_\_\_\_\_  
                                        Not Approved                Date: \_\_\_\_\_

**All extended trip proposals must be sent to the Assistant Superintendent's Office to be placed on the Education Committee meeting agenda for approval.**

## FIELD TRIP REQUEST FORM

Date of Submission: 3/3/2010

131

Type of Trip:     Instructional     Supplementary     Extended     Externally Sponsored\*

1. Organization/Grade/Course Planning Trip: Science Dept. / 7+8 / State Science Fair
2. Contact Person (Responsible for Checklist Completion): Annette Strom
3. Field Trip Date(s): 3/26 - 3/28/10 Destination: Crown Plaza St. Paul Riverfront
4. Field Trip Overview (Include events, establishments and locations): See letter attached

5. Field Trip Departure from School (Date and Time): Friday 3/26 a.m.  
Field Trip Return to School (Date and Time): Students will be back Mon. 3/29

6. Objectives of Field Trip: students will compete in the state science fair and meet scientists from the field.

7. Relationship to Curriculum or Student Learning: Scientific Method / Research / Application.

8. Planned Follow-up Field Trip Activities: PTSA meeting notes

9. Field Trip Budget Request See attached

Estimated Expenses	
Total Admission/Fees	\$
Total Meals	\$
Total Lodging	\$
Total Transportation	\$
<input type="checkbox"/> School District Vehicle(s)	
<input type="checkbox"/> Commercial Transportation Carrier ~ Name: _____	
<input type="checkbox"/> Private Vehicle (requires certificate of insurance) ~ Name: _____	
Total Additional Stipends:	\$
Other:	\$
<b>Total</b>	<b>\$</b>

Revenues	
District Budget	\$
Code:	
Booster Group	\$
Donations	\$
Student Fees	\$
Total Additional Stipends:	\$
<b>Total</b>	<b>\$</b>

11. Reviewed/Completed Request Checklist:     Yes     No

\*The Assistant Superintendent's office must receive a signed waiver form for each student participating in an externally sponsored trip prior to the departure date.

**RETURN COMPLETED REQUEST TO BUILDING PRINCIPAL**

EXTENDED TRIP REQUEST--Additional Information  
 Ordean Middle School  
 Event: Minnesota Academy of Science State Science Fair  
 St. Paul, MN  
 March 26-28, 2010

#### Transportation Information

- Students must arrange their own transportation to and from St. Paul. Teachers will drive their own cars – no students will ride with teachers.

#### Special Needs and Circumstances to Consider

##### Ration of Chaperones/Supervisors to Students

- 3 teachers : 29 students
- Parents do attend the state fair at varying levels. Some students will stay with their parents in a hotel room and be under their parent's supervision the whole time; other parents will come and go throughout the event. Some students will be without parents and will be the sole responsibility of the teachers the entire time.

##### Student Behavior Expectations

- Students must abide by all Isd 709 behavior expectations and must also sign and adhere to all of the expectations in the Minnesota Academy of Science Code of Ethics. (see attached).
- Students are held to the highest standards and expectations by all involved throughout the weekend.

##### Cost per Student

- \$120 student registration fee
- Hotel fees: students staying with other students typically pay \$70; students staying with their families pay the going discounted state fair rate.
- We are working on offsetting costs through donations from the PTSA and through science department money

##### Contact People and Local Phone Numbers at Trip Site

- Annette Strom Cell Phone: 218.340.1589
- Erin Pepelnjak Cell Phone: 218.340.6874
- Crown Plaza St. Paul (formerly the Radisson Riverfront)  
 11 East Kellogg Boulevard  
 St. Paul, MN 55101  
 (651) 292-1900

##### Special Conditions to Consider

- We will check with the nurse's office on any health concerns students attending may have. We will make sure we have all of the appropriate information and medical supplies if needed.

**Requirements/Evaluation of Students**

- Students must attend all Minnesota Academy of Science sponsored events.
- Students must follow the itinerary and attend all sanctioned and unsanctioned events as a group at the times indicated.
- Students are not allowed to schedule or partake in their own personal events or agendas.

**Ratio of Male-Female Chaperones**

- 3 females

**Disciplinary Procedures**

- Students must sign and abide by the Minnesota Academy of Science Code of Ethics.
- Students not in compliance with Isd 709, Minnesota Academy of Science, or chaperone expectations will have their parents contacted and they will be asked to pick up their student from St. Paul.
- Minor infractions will be dealt with by chaperones on the spot.



Ed Crawford  
Principal

**DENFELD SENIOR HIGH SCHOOL**

4405 West Fourth Street  
Duluth, Minnesota 55807  
(218) 336-8830 Main Office



Tonya M. Sconiers  
Assistant Principal

134

March 10, 2009


Dr. Joseph Hill  
Ind. School District 709  
215 N. 1<sup>st</sup> Ave. E.  
Duluth, MN 55802

Dear Dr. Hill,

Donald E. Nelson is asking to receive a diploma from Denfeld High School. Donald attended Denfeld until June of 1965. He quit school and enlisted in the United States Air Force serving our country in the Philippines, Viet Nam and other places from September 1965 to September 1969.

I am requesting he be granted his diploma with the date of June 10, 1965.

Sincerely,



Ed Crawford  
Principal

EJC:cra

--an equal opportunity employer--