

P-5 Math Grade Level Agreements 2004

Based on the Alignment of
Curriculum, Instruction and Assessment
and the Washington State
Grade Level Expectations for Mathematics

Dates of grade level meetings:

Kindergarten – December 1, 2004

1st Grade – November 22, 2004

2nd Grade – November 8, 2004

3rd Grade – November 4, 2004

4th Grade – November 2, 2004

5th Grade – October 26, 2004

This document was created as a result of grade level meetings in the fall of 2004. As a grade level team, teachers came to agreement about which Grade Level Expectations (GLE's) required more focused math instruction (yellow) and which were sufficiently taught/learned (green) by the end of the school year. Teacher identified gaps in our current math programs and identified instructional materials needed to support the weaknesses.

Recommended Entry Skills for Kindergarten

Goals	Caregiver Strategies
<p>Child demonstrates knowledge of numbers and counting.</p> <ul style="list-style-type: none"> • Counts to between 10 and 20 from memory • Counts 5-10 objects, with one-to-one correspondence without assistance. (e.g. Touches, moves, and counts objects such as pennies) • Differentiates letters from numbers • Recognizes (points to a given number), names some numbers • Attempts to write numerals 0-9 	<p>Child demonstrates knowledge of numbers and counting.</p> <ul style="list-style-type: none"> • Play card or board games with child that use counting. • Encourage child to count objects during daily routines. • Use games, toys and coins in daily counting activities • Model writing numerals (0-9)
<p>Child sorts, classifies and organizes objects.</p> <ul style="list-style-type: none"> • Orders several objects on the basis of one characteristic through trial and error. (e.g. puts 4 blocks in a row from smallest to largest) • Recognizes simple patterns • Classifies everyday objects that go together (e.g. shoe/sock, pencil/paper) 	<p>Child sorts, classifies and organizes objects.</p> <ul style="list-style-type: none"> • Encourage child to look for patterns everywhere • Create examples of patterns for child to create and recreate • Play classification games (e.g. gather a group of objects have child sort)
<p>Child identifies shapes.</p> <ul style="list-style-type: none"> • Names different kinds of shapes (circle, square, triangle) • Compares sizes of objects (big and small) • Attempts to draw shapes • Begins to recognize shapes in the environment (e.g. windows are squares) 	<p>Child identifies shapes.</p> <ul style="list-style-type: none"> • Use accurate words to promote child's understanding of shapes (windows are square or rectangular) • Encourage child to recognize shapes in the environment. • Provided toys that can be connected and combined to create new shapes (Tinker Toys etc) • Provide art projects that use shapes (e.g. make a house with a square and triangle) • Read stories including reference to size such as Goldilocks
<p>Child measures.</p> <ul style="list-style-type: none"> • Uses size words such as many, big and little appropriately. • Describes objects using size words • Matches objects correctly (e.g. bolts to nuts, jars to lids, cards to envelopes) 	<p>Child measures.</p> <ul style="list-style-type: none"> • Help child to arrange blocks, toys or objects from smallest to largest, longest to shortest. • Engage child in measuring tasks (e.g. measuring ingredients, weighing a pet) • Play measuring games (e.g. which is heavier, which is longer?)

Kindergarten Strengths and Weaknesses According to Kindergarten teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand the concept of number	1.5.3 Understand the concept of equality and inequality
1.2.1 Understand and apply appropriate terminology to compare attributes.	
1.2.4 Understand and apply procedures to measure with non-standard units.	
1.3.2 Know the characteristics of familiar objects.	
1.3.3 Understand the relative position of objects in the environment.	
1.4.3 Understand how data can be collected and organized.	
1.4.5 Understand how a display provides information.	
1.5.1 Know how to recognize patterns.	

Kindergarten Strengths and Weaknesses According to 1st grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand the concept of number	1.5.3 Understand the concepts of equality and inequality
1.1.5 Understand the meaning of addition	
1.2.1 Understand and apply appropriate terminology to compare attributes	
1.2.4 Understand and apply procedures to measure with non-standard units	
1.3.2 Know the characteristics of familiar objects	
1.4.5 Understand how a display provides information	
1.5.1 Know how to recognize patterns	

Everyday Math

Strengths	Weaknesses
1.1.1 Understand the concept of number	1.1.2 Understand sequential relationships among whole numbers
1.1.5 Understand the meaning of addition	1.4.3 Understand how data can be collected and organized
1.2.1 (except for ELL) Understand and apply appropriate terminology to compare attributes	
1.3.2 Know the characteristics of familiar objects	
1.3.3 Understand the relative position of objects in the environment.	
1.5.1 Know how to recognize patterns	

First Grade Math Grade Level Agreements

All first grade teachers agree to:

- Make an hour of math instruction per day a goal
- Emphasize addition fact strategies (counting on, doubles, doubles plus)
- Emphasize decomposition (up to ten)
- Emphasize the use of estimation before finding an exact answer.
- Do more estimation activities

Everyday Math buildings also agree to do the TERC data unit.

First Grade Strengths and Weaknesses According to 1st grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand different representations of whole numbers	1.1.2 Understand sequential relationships among whole numbers
1.1.5 Understand the meaning of subtraction	1.1.8 Understand and apply estimation strategies to determine reasonableness of answers
1.1.6 Understand and apply procedures for addition of whole numbers with fluency	1.2.4 Understand and apply procedures to measure with non-standard or standard units.
1.2.1 Understand and apply attributes to describe and compare objects.	1.5.3 Understand the meaning of symbols and labels used to represent equality in situations.
1.3.2 Understand how to compare figures based on their characteristics.	
1.3.3 Understand the location of numbers on a positive number line.	
1.4.5 Understand how a display provides information.	

Everyday Math

Strengths	Weaknesses
1.1.1 Understand the different representations of whole numbers.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers.
1.1.2 Understand sequential relationships among whole numbers.	
1.1.5 Understand the meaning of subtraction.	
1.1.6 Understand and apply procedures for addition of whole numbers with fluency.	
1.2.1 Understand and apply attributes to describe and compare objects.	
1.3.2 Understand how to compare figures based on their characteristics.	
1.3.3 Understand the locations of numbers on a positive number line.	
1.5.1 Understand the concept of patterns.	
1.5.3 Understand the meaning of symbols and labels used to represent equality in situations.	

First Grade Strengths and Weaknesses According to 2nd grade teachers

Growing with Math

Strengths	Weaknesses
1.1.2 Understand sequential relationships among whole numbers.	1.1.5 Understand the meaning of subtraction.
1.2.1 Understand and apply attributes to describe and compare objects.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers.
1.3.3 Understand the locations of numbers on a positive number line.	1.5.3 Understand the meaning of symbols and labels used to represent equality.
1.4.5 Understand how a display provides information.	
1.5.1 Understand the concept of patterns.	

Everyday Math

Strengths	Weaknesses
1.1.2 Understand sequential relationships among whole numbers.	1.1.6 Understand and apply procedures for addition of whole numbers with fluency.
1.1.5 Understand the meaning of subtraction.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers.
1.2.1 Understand and apply attributes to describe and compare objects.	1.4.3 Understand how data can be organized and displayed.
1.2.4 Understand and apply procedures to measure with non-standard or standard units.	
1.3.2 Understand how to compare figures based on their characteristics.	
1.3.3 Understand the locations of numbers on a positive number line.	
1.4.5 Understand how display provides information.	
1.5.1 Understand the concept of patterns.	

First Grade GLE Alignment

Growing with Math Weaknesses

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.2	GWM Topics 1,4,6,11 TERC <u>Number Games</u> p46, Van de Walle p.87-88			Two colored counters (set per grade level)	
1.1.8	GWM Topics 2,6,10 TERC – <u>Building Number Sense</u> , p92, Van de Walle p.101-102, 199-204	Make a habit of using estimation language and build estimation into strategy sharing sessions			
1.2.4	GWM Topics 3,7 TERC- Bigger, Taller Van de Walle, Ch. 16			Color Tiles Judy Clocks Overhead money (set per grade level)	
1.5.3	GWM Topics 2,5,8 TERC <u>Mathematical Thinking, Number Games, Building Number Sense</u>	Use balance scale or teeter totter idea.			

Everyday Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.8	EM TERC, Building Number Sense Van de Walle pp 101-102, 199-204		Build into strategy sessions		
1.4.3	EM, Units 3,6,10 "Data Days" TERC, <u>Survey Questions and Secret Rules</u>				

Second Grade Math Grade Level Agreements

All second grade teachers agree to:

- Emphasize math fact strategies
- Focus on number sense
- Focus on estimation and reasonableness of answers.
- Use adopted programs

Everyday Math buildings agree to:

- Move slowly enough through program to support conceptual development.

Second grade teacher all want either kitchen timers or stopwatches to use for basic fact fluency.

Second Grade Strengths and Weaknesses According to 2nd grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand place value in whole numbers	1.1.8 Understand and apply estimation strategies to determine reasonableness of answers
1.1.2 Understand sequential relationships among whole numbers	1.4.3 Understand the organization of a graph
1.1.5 Understand the meaning of addition and subtraction and how they relate to one another	1.4.5 Understand how a display provides information about a question.
1.2.1 Understand and apply attributes to measure objects and time.	1.5.3 Understand the meaning of symbols and labels used to represent situations.
1.2.4 Understand and apply procedures to measure with non-standard or standard units	
1.2.6 Understand how to estimate in measurement situations.	
1.3.2 Understand characteristics to two-dimensional geometric figures.	
1.3.3 Understand the location of numbers on a positive number line.	
1.5.1 Understand how patterns are generated.	

Everyday Math

Strengths	Weaknesses
1.1.2. Understand sequential relationships among whole numbers	1.1.6 Understand and apply procedures for addition and subtraction of whole numbers with fluency
1.1.5 Understand the meaning of addition and subtraction and how they relate to one another	
1.2.1 Understand and apply attributes to measure objects and time	
1.2.4 Understand and apply procedures to measure with non-standard or standard units	
1.3.2 Understand characteristics of two-dimensional geometric figures	
1.3.3 Understands the locations of numbers on a positive number line	
1.5.3 Understand the meaning of symbols and labels used to represent situations.	
1.5.6 Understand and apply strategies to solve for the unknown using addition and subtraction	

Second Grade Strengths and Weaknesses According to 3rd grade teachers

Growing with Math

Strength	Weakness
1.1.5 (addition only) Understand the meaning of addition and subtraction and how they relate to one another.	1.1.5 (subtraction only) Understand the meaning of addition and subtraction and how they relate to one another.
	1.1.8 Understand and apply estimation strategies to predict computation results and to determine the reasonableness of answers.
	1.4.3 Understand the organization of a graph.

Everyday Math

Strength	Weakness
1.1.1 Understand place value in whole numbers.	1.1.8 Understand and apply estimation strategies to predict computation results and to determine the reasonableness of answers.
1.1.2 Understand sequential relationships among whole numbers.	
1.1.5 Understand the meaning of addition and subtraction and how they relate to one another.	

Second Grade GLE Alignment

Growing with Math Weaknesses

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.8	Topics 5,9,12 Math Chats Van de Walle, Ch. 11	Teacher Habits: <ul style="list-style-type: none"> •Estimate first •Ask, "is it reasonable?" •Focus on language •Anchors/benchmarks "is the answer closer..." •Emphasize predicting when solving problems •Explain basis for estimate •When is an exact answer needed? •Estimation jar 			
1.4.3	TERC How many Pockets	Teacher become aware of difference between quantitative/ categorical data		Terry will: <ul style="list-style-type: none"> •Chart with parts of graphs •Lesson on graph construction 	DMI data Module
1.4.5		More opportunities for kids to build, interpret graphs			
1.5.3		Use teeter-totter idea of balance			

Everyday Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.6	EM Unit Two Games, dominoes, fact triangles, coins from Unit 3	Follow text, utilize games	Unit Two assessment District basic facts tests	GWM Student Book (to use as a resource) More manipulatives TERC materials	Games workshop TERC workshop

Third Grade Math Grade Level Agreements

All third grade teachers agree to:

- Teach at least 60 minutes of math per day
- Put additional emphasis on math facts
- Read the fact strategies chapter in the Van de Walle book
- Encourage some kind of math homework (based on building policy decisions)

In addition, third grade teachers would like:

- Professional development on the teaching of fact strategies
- Timers or stopwatches for fact fluency, and Judy Clocks for measurement.

Third Grade Strengths and Weaknesses According to 3rd grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand the concept of whole numbers	1.1.5 (division only) Understand the meaning of division on whole numbers
1.1.2 Understand the relative values of whole numbers	1.1.6 Apply procedures of addition and subtraction on whole numbers with fluency.
1.3.2 Under and apply attributes and properties to two-dimensional shapes and figures.	1.1.8 Understand and apply strategies and tools as appropriate to tasks involving addition and subtraction on whole numbers.
1.3.3 Understand relative locations including intervals of numbers on a positive number line.	1.2.1 Understand how different attributes (length, perimeter, time, money value, weight / mass, and temperature) are used to describe objects
1.5.1 Understand patterns of objects including number patterns with a single addition or subtraction operation.	1.2.6 Understand and apply strategies to obtain reasonable estimates of length, time, weight, and temperature measurements.
1.5.4 Understand and apply operational and relational symbols and notations to write equations involving addition and subtraction.	1.4.4 Understand and apply mode to describe a set of data.

Everyday Math

Strengths	Weaknesses
1.1.2 Understand the relative value of whole numbers.	1.3.1 Understand the concept of congruence.
1.1.3 Understand and apply the commutative and identity properties of addition on whole numbers.	
1.1.5 Understand the meaning of multiplication and division on whole numbers.	
1.2.6 Understand and apply strategies to obtain reasonable estimates of length, time, weight, and temperature measurements.	
1.5.3 Apply understanding of the concept of mathematical equality.	
1.5.4 Understand and apply operational and relational symbols and notations to write equations involving addition and subtraction.	
1.5.6 Understand and apply strategies to solve equations that include addition or subtraction.	

Third Grade Strengths and Weaknesses According to 4th grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand the concept of whole numbers.	1.1.5 Understand the meaning of multiplication and division on whole numbers.
1.1.2 Understand the relative values of whole numbers	1.1.6 Apply procedures of addition and subtraction on whole numbers with fluency.
1.2.4 Understand and apply systematic procedures to measure length, time, weight, money value, and temperature.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving addition and subtraction on whole numbers.
1.5.1 Understand patterns of objects including number patterns with a single addition or subtraction operation.	1.2.1 Understand how different attributes(length, perimeter, time, money value, weight/mass, and temperature) are used to describe objects.
	1.2.6 Understand and apply strategies to obtain reasonable estimates of length, time, weight, and temperature measurements.
	1.4.4 Understand and apply mode to describe a set of data.

Third Grade Strengths and Weaknesses According to 4th grade teachers

Everyday Math

Strength	Weakness
1.1.3 Understand and apply the commutative and identity properties of addition on whole numbers.	1.1.1 Understand the concept of whole numbers.
1.2.1 Understand how different attributes (length, perimeter, time, money value, weight/mass, and temperature) are used to describe objects.	1.1.5 Understand the meaning of multiplication and division on whole numbers.
1.2.2 Understand the difference between non-standard.	1.1.6 Apply procedures of addition and subtraction on whole numbers with fluency.
1.3.1 Understand the concept of congruence.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving addition and subtraction on whole numbers.
1.3.2 Understand and apply attributes and properties to two-dimensional shapes and figures.	1.4.4 Understand and apply mode to describe a set of data.
1.4.3 Understand how to use data collection and display methods to obtain desired information.	
1.5.1 Understand patterns of objects including number patterns with a single addition or subtraction operation.	
1.5.6 Understand and apply strategies to solve equations that include addition or subtraction.	

Third Grade GLE Alignment Weaknesses

Growing with Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.5	Topic 8, 9, 14, 20, 24 TERC <u>Things that Come in Groups</u> Van de Walle, p120	Consider distributing Topic 8 or 9 across time		Marilyn Burns Multiplication unit (per building) Overhead base ten	
1.1.6	Topic 2, 5, 12 TERC <u>Combining and Comparing</u>	Have students have computation strategies early and often	Assessing the lesson activities (GWM)	FUNDamentals 2-3 and 3-4	DMI Module One for all new teachers
1.1.8	Topic 5 Van de Walle Ch 10, 11	20 second response rule to encourage estimating; more modeling		Stopwatch or kitchen timer	
1.2.1	Topic 4, 15, 18, 19, 21, Math From Many Cultures TERC <u>Paces to Feet</u> Van De Walle, Ch 16	Tie to Foss measurement Kit		Judy Clocks Measurement tub	Develop a measurement workshop
1.2.6		Model more often, stress the words "about" and "reasonable"			
1.4.4		Vocabulary - mode			

Everyday Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.3.1	Everyday Math				

Fourth Grade Grade Level Agreements

All fourth grade teachers agreed to:

- Focus on basic fact fluency, with a goal of 80% of class meeting standard
- Work toward the goal of spending at least 75 minutes per day on math instruction
- Rearranging the order of topics to make sure students are ready for the WASL in April (move Probability topic up)
- Be intentional about the teaching of algebraic sense beyond what is in the book

Fourth grade teachers have the following materials requests:

- Groundworks (Algebra) books for every teacher
- One set of meter / yard sticks per building
- Fact drill CDs (Kim Sutton or equivalent)

Fourth Grade Strengths and Weaknesses According to 4th grade teachers

Growing with Math

Strengths	Weaknesses
1.1.1 Understand the concept of decimals (money) and fractions.	1.1.3 Understand and apply the associative property of addition and multiplication and the commutative, identity, and zero properties of multiplication on whole numbers.
1.1.2 Understand the relative values of fractions and decimals (money).	1.1.6 Apply procedures of multiplication and division on whole numbers with fluency.
	1.2.2 Understand the differences between length units and area (square) units in U.S. or metric systems.
	1.2.6 Understand and apply strategies to obtain reasonable estimates of area measurement for irregular figures.
	1.3.3 Apply understanding of the location of points on a coordinate grid in the first quadrant.
	1.3.4 Understand and apply single transformations using a translation (slide) or reflection (flip)
	1.4.1 Understand when events are certain or impossible and more likely, less likely, or equally likely.
	1.4.4 Understand and apply median and range to describe a set of data.
	1.5.3 Apply understanding of the concept of mathematical inequality.
	1.5.4 Understand and apply operational and relational symbols and notations to write expressions and equations involving multiplication and division.
	1.5.5 Understand and apply a variety of strategies to evaluate expressions with addition, subtraction, or multiplication.

Fourth Grade Strengths and Weaknesses According to 4th grade teachers

Everyday Math

Strengths	Weaknesses
1.1.1 Understand the concept of decimals (money) and fractions.	1.1.5 Understand the meaning of addition and subtraction on like-denominator fractions.
1.1.3 Understand and apply the associative property of addition and multiplication and the commutative, identity, and zero properties of multiplication on whole numbers.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving multiplication and division on whole numbers.
1.2.1 Understand the concept of area.	1.2.2 Understand the differences between length units and area (square) units in U.S. or metric systems.
1.3.1 Understand concepts of parallel and perpendicular lines and line symmetry in two-dimensional shapes and figures.	1.2.4 Understand and apply systematic procedures to determine the area of figures composed of rectangles.
1.3.2 Apply understanding of congruence to two-dimensional shapes and figures.	1.2.6 Understand and apply strategies to obtain reasonable estimates of area measurements for irregular figures.
1.3.4 Understand and apply single transformations using a translation using a translation (slide) or reflection (flip).	
1.4.1 Understand when events are certain or impossible and more likely, less likely, or equally likely.	
1.4.3 Understand and apply data collection methods to obtain the desired information.	
1.5.1 Understand patterns of objects including number patterns using addition, subtraction, or multiplication based on a single arithmetic operation.	
1.5.2 Understand a pattern to develop a rule describing the pattern which may include a single arithmetic operation.	
1.5.5 Understand and apply a variety of strategies to evaluate expressions with addition,	
1.5.6 Equations that include multiplication.	

Fourth Grade Strengths and Weaknesses According to 5th grade teachers

Growing with Math

Strengths	Weaknesses
1.1.5 Understand the meaning of addition and subtraction on like-denominator fractions.	1.1.1 Understand the concept of decimals (money) and fractions.
1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving multiplication and division on whole numbers.	1.1.3 Understand and apply the associative property of addition and multiplication and commutative, identity, and zero properties of multiplication on whole numbers.
1.2.4 Understand and apply systematic procedures to determine the area of figures composed of rectangles.	1.2.2 Understand the differences between length units and area (square) units in U.S. or metric systems.
1.3.1 Understand concepts of parallel and perpendicular lines and line symmetry in two-dimensional shapes and figures.	1.3.3 Apply understanding of the location of points on a coordinate grid in the first quadrant.
1.5.1 Understand patterns of objects including number patterns using addition, subtraction, or multiplication based on a single arithmetic operation.	1.4.4 Understand and apply median and range to describe a set of data.
1.5.2 Understand a pattern to develop a rule describing the pattern which may include a single arithmetic operation.	
1.5.6 Understand and apply strategies to solve equations that include multiplication.	

Fourth Grade Strengths and Weaknesses According to 5th grade teachers

Everyday Math

Strengths	Weaknesses
1.1.1 Understand the concept of decimals (money) and fractions.	1.1.5 Understand the meaning of addition and subtraction on like-denominator fractions.
1.1.3 Understand and apply the associative property of addition and multiplication and the commutative, identity, and zero properties of multiplication on whole numbers.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving multiplication and division on whole numbers.
1.2.1 Understand the concept of area.	1.2.2 Understand the differences between length units and area (square) units in U.S. or metric systems.
1.3.1 Understand concepts of parallel and perpendicular lines and line symmetry in two-dimensional shapes and figures.	1.2.4 Understand and apply systematic procedures to determine the area of figures composed of rectangles.
1.3.2 Apply understanding of congruence to two-dimensional shapes and figures.	1.2.6 Understand and apply strategies to obtain reasonable estimates of area measurements for irregular figures.
1.3.4 Understand and apply single transformations using a translation using a translation (slide) or reflection (flip).	
1.4.1 Understand when events are certain or impossible and more likely, less likely, or equally likely.	
1.4.3 Understand and apply data collection methods to obtain the desired information.	
1.5.1 Understand patterns of objects including number patterns using addition, subtraction, or multiplication based on a single arithmetic operation.	
1.5.2 Understand a pattern to develop a rule describing the pattern which may include a single arithmetic operation.	
1.5.5 Understand and apply a variety of strategies to evaluate expressions with addition,	
1.5.6 Understand and apply strategies to solve equations that include multiplication.	

Fourth Grade Grade Level Expectations

Growing with Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.3	Math on Call 216-218; TERC <u>Combining and Comparing, Arrays and Shares, Packages and Groups, Money, Miles and Large Numbers</u>	Emphasize associative property			
1.1.6	Topic 7, 11, 14, 18 TERC <u>Arrays and Shares, Packages and Groups</u> Van de Walle ch 8	Utilize practice opportunities on Math Tech websites		Fact fluency CDs	DMI <u>Making Meaning of Operations</u> Module
1.2.2	Topic 9 TERC <u>Sunken Ships and Grid Patterns</u> ; Van de Walle Ch 16			Sets of meter/yard sticks	
1.2.6	Topic 19 TERC <u>Sunken Ships and Grid Patterns</u> (modified) Van de Walle Ch 16	Teach Topic 19 sooner; emphasize estimation before finding actual			
1.3.3	Topic 15, 17 TERC <u>Sunken Ships and Grid Patterns</u> Van de Walle, page 162	Number line practice as warm up; latitude/longitude			
1.3.4	Topic 24 TERC <u>Sunken Ships and Grid Patterns</u>			Tesselmania	
1.4.1	Topic 17 TERC <u>Between Never and Always</u> (Grade 5) Van de Walle Ch 18				
1.4.4	Topic 11, 20 TERC <u>The Shape of the Data</u>				
1.5.3	Topic 6 TERC <u>Different Shapes, Equal Pieces</u> Ch 19	More opportunities		<u>Groundworks</u>	DMI Algebra

Growing with Math continued...

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.5.4	Topic 3, 11, 18 <u>TERC Arrays and Shares, Packages and Groups</u> Van de Walle Ch 19				DMI Algebra
1.5.5	<u>TERC Arrays and Shares, Packages and Groups, Miles, Money, and Large Numbes, Landmarks in the Thousands, Mathematical Thinking at Grade 4</u> Van de Walle Ch 19				DMI Algebra

Everyday Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.5	EM Unit 7 Patterns Blocks Everyday Math Cards		Observational Journal pages Unit tests	Sunset needs TERC fraction book	Math tech website within own buildings.
1.2.2	EM Unit 8 Problem Solver Exemplars		Unit tests Journal pages Observational		
1.2.6	EM Unit 8 Problem Solver Exemplars		Unit tests Journal pages Observational		
1.4.3	Problem Solver TERC (not enough in EM)		Observational		
1.4.5	Technology lessons		Observational		More work with technology (websites, activities)

Fifth Grade Grade Level Agreements

All fifth grade teachers agree to:

- Devote at least 45 minutes per day to actual math instruction
- Consider rearranging topics to ensure WASL readiness by April
- Make a habit of asking for estimates first, before doing problems
- Increase emphasis on the metric system
- Emphasize basic fact fluency, with a goal of 80% of class meeting standard
- Focus more on algebraic sense

Teachers request the following:

- Groundworks (algebra) books for every teacher
- Basic fact practice materials

Fifth Grade Strengths and Weaknesses According to 5th grade teachers

Growing with Math

Strengths	Weaknesses
1.2.1 Understand the concept of angle measurement	1.1.3 Understand and apply the concept of divisibility
1.2.2 Understand degrees (30,45,60,90 and 180) as units of measurement for angles.	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving addition and subtraction on non-negative decimals and like-denominator fractions.
1.3.4 Apply understanding of translations (slides) or reflections (flips) to congruent figures.	1.2.3 Understand how measurement units of capacity, weight, and length are organized in the metric system.
1.4.4 Understand and apply mean of a set of data.	1.3.3 Apply understanding of the location of non-negative rational numbers on a positive number line.
	1.4.2 Understand and apply the Fundamental Counting Principal to situations.
	1.4.3 Understand how different collection methods or different questions can affect the result.
	1.5.2 Apply understanding of a pattern to develop a rule describing the pattern including combinations of two arithmetic operations.
	1.5.3 Apply understanding of the concept of mathematical inequality.
	1.5.4 Understand how to represent situations involving one operation or two alternating arithmetic operations.
	1.5.5 Understand and apply a variety of strategies to evaluate expressions with division.
	1.5.6 Understand and apply strategies to solve equations that include division.

Fifth Grade Strengths and Weaknesses According to 5th grade teachers

Everyday Math

Strengths	Weaknesses
1.1.1 Understand the concepts of fractions and decimals.	1.2.3 Understand how measurement units of capacity, weight, and length are organized in the metric system.
1.1.2 Understand the relative values of non-negative fractions or decimals.	1.4.2 Understand and apply the Fundamental Counting Principal to situations.
1.1.3 Understand and apply the concept of divisibility.	1.4.3 Understand how different collection methods or different questions can affect the result.
1.1.6 Apply procedures of addition and subtraction with fluency on non-negative decimals and like-denominator fractions.	1.5.4 Understand how to represent situations involving one operation or two alternating arithmetic operations.
1.2.1 Understand the concept of angle measurement.	
1.2.2 Understand degrees (30, 45, 60, 90, and 180) as units of measurement for angles.	
1.2.6 Understand and apply strategies to obtain reasonable estimates of angles and area measurements for rectangles and triangles.	
1.3.1 Understand properties of angles and polygons.	
1.3.3 Apply understanding of the location of non-negative rational numbers on a positive number lines.	
1.4.1 Understand the likelihood (chance) of events occurring.	
1.4.4 Understand and apply the mean of a set of data.	
1.5.1 Understand patterns of objects including relationships between two sets of numbers	
1.5.3 Apply understanding of inequality.	
1.5.5 Understand and apply a variety of strategies to evaluate expressions with division.	

Fifth Grade Strengths and Weaknesses According to 6th grade teachers

Growing with Math

Strengths	Weaknesses
1.1.6 Apply procedures of addition and subtraction with fluency on non-negative decimals and like-denominator fractions	1.1.3 Understand and apply the concept of divisibility
1.2.1 Understand the concept of angle measurement	1.1.8 Understand and apply estimation strategies to determine the reasonableness of answers in situations involving addition and subtraction on non-negative decimals and like-denominator fractions.
1.5.1 Understand patterns of objects including relationships between two sets of numbers based on a single arithmetic operation.	1.2.3 Understand how measurement units of capacity, weight, and length are organized in the metric system.
1.5.2 Apply understanding of a pattern to develop a rule describing the patterns including combinations of two arithmetic operations	1.3.3 Apply understanding of the location of non-negative rational numbers on a positive number line.
1.5.3 Apply understanding of the concept of mathematical inequality	1.4.5 Apply strategies to organize, display, and interpret data
	1.5.2 Apply understanding of a pattern to develop a rule describing the patterns including combinations of two arithmetic operations
	1.5.4 Understand how to represent situations involving one operation or two alternating arithmetic operations.

Fifth Grade, Grade Level Expectations

Growing with Math

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.1.3	Topics 1,3,14	Use program			
1.1.8	Topics 1,4,17,21,22	Increased attention			
1.2.3	Topics 4, 11, and 12	Tie to science			
1.3.3	Topic 11 TERC	Increased attention		Number line	
1.4.2	Topic 8 TERC Van de Walle Ch. 18			Groundworks Hands on Equations	
1.4.3	Topic 8 TERC Van de Walle Ch 18	Foss Variables kit			DMI
1.5.2	Topic 8, 19			Groundworks	DMI
1.5.3	Topic 1, 5	Attention to inequality signs			
1.5.4	Topic 19 Van de Walle Ch 19 Exemplars			Groundworks	
1.5.5	Topic 3, 22 TERC Van de Walle pp 184-191	Math Tech Pilot ideas		Frog Math	
1.5.6	Topic 3, 14, 22, Van de Walle pp 184-191				

Everyday Math Fifth Grade

GLE	Materials	Strategies	Assessments	Materials Needed	PD Needed
1.2.3		Integrate metric measurement			