4th Grade Math Scope and Sequence Overview 2009-2010

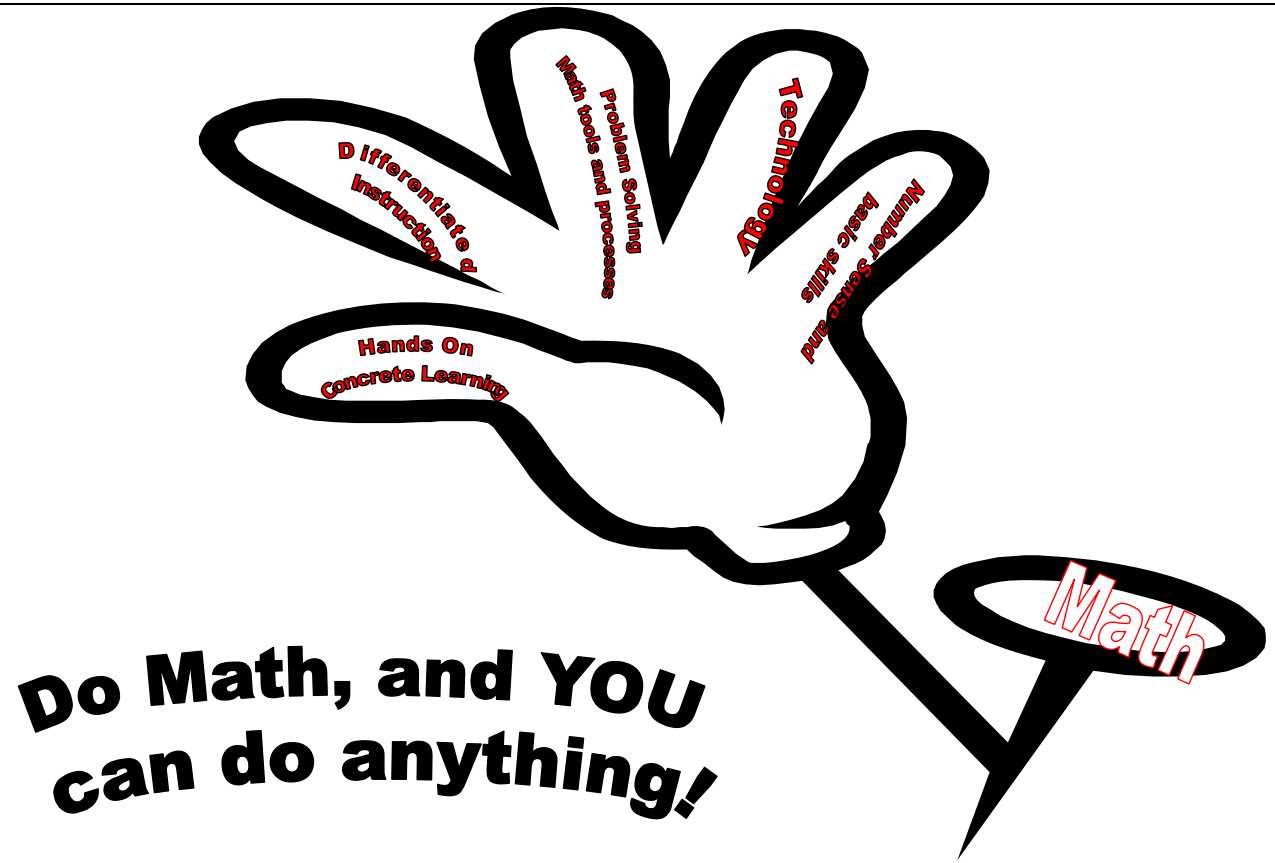
	1st 6wks Aug 24- Oct 2	2nd 6wks Oct 5 - Nov 6	3rd 6weeks Nov 9- Dec 18	4th 6 weeks Jan 5-Feb19	5th 6 weeks Feb 22 - April 16	6th 6 weeks April 19 - June 4
Week One	Measuring Week TIME/Temperature and Conversions (4.12A, B) Rituals and Routines: -Review Routines -Problem Solving -Math Notebook/Journal -Facts and Data Aug. 24- 28	Measuring Week Linear Measurement - Perimeter/Area and Conversions (4.11A, B) Oct 5-9	Multiplication/Division Facts (4.4 B, C, D, E) (4.6A) Nov. 9-13	Measuring Week Weight/Mass and Conversions (4.11A, B, E) Jan 5-8	Fractions/Decimals (4.1 B) (4.2 D) (4.3 B) (4.10) Feb 22-26	Review for TAKS April 19-23
Week Two	Place Value-Estimation (4.1A,B) (4.5A) Aug. 31- Sept 4 **Logical Reasoning**	Algebra, Patterns, Expressions, Equations (4.6A,B) (4.7A) Oct 12-16 **Working Backwards**	Multiplication/Division Facts (4.4 A, B, C, D, E) (4.6A) Nov.16-20 **Measurement Madness I** **Draw a Picture**	Data (4.7) (4.13 A,B) Jan 11-15 **Make a List**	Measuring Week Capacity/Volume and Conversions (4.11 A, B, C, D) March 1-5 Writing TAKS March 3	April 26-30 Math TAKS 27 Math Projects (4.14AD) (4.15AB)(4.16B)
Week Three	Place Value-Estimation (4.1A,B) (4.5A) Sept. 7-11	Algebra, Patterns, Expressions, Equations (4.6A,B) (4.7A) Oct. 19-23	Multiplication/Division Facts-Estimation (4.4 A, B, C, D, E) (4.5B) Nov. 30-Dec4	Probability and Combinations (4.13 A, B) (4.16A) Jan 18-22	Measuring Week Review March 1-5	Problem Solver May 3-7 **Guess and Check** (4.14BC)
Week Four	Place Value-Estimation (4.1A,B) (4.5A) Sept. 14-18 **Make a Table**	Multiplication/Division Facts (4.4 A, B, C) (4.6 A) Oct.26-30 **Guess and Check**	Multiplication/Division Facts-Estimation (4.4 A, B, C, D, E) (4.5B) Dec. 7-11 **Make It Simpler**	Geometry (4.8 A,B,C) Jan 25-29 **Math Bowl** **Act it Out**	Review **MOCK TEST** March 29-April 2	Problem Solver May 10-14 **Look for Patterns** (4.14BC)
Week Five	Addition/Subtraction-Estimation (4.3A) (4.5B) Sept. 21-25	Multiplication/Division Facts (4.4 A, B, C) (4.6 A) Nov. 2- 6	Data (4.13A, B) Review and Benchmark Dec. 14-18	Geometry (4.9 A, B, C) Feb. 1-5	Review for TAKS March 29-April 2	Preparing for Measuring Madness Open-ended Test (4.14BC)(4.16B) May 17-21
Week Six	Review and Benchmark Sept. 28-Oct 2			Fractions (4.2A, B, C) Feb. 8-12 **Looking for a Pattern**	Review for TAKS April 5-9	Measurement Madness II Division and Multiplication (3.4A) May 24-28
Week seven				Fractions/Decimals (4.1 B) (4.2 D) (4.3 B) Feb. 15-19	Review for TAKS April 12-16	Presentation of Math Projects (4.14AD) (4.15AB) May 31-June4

Spiral throughout the year- Problem Solving, Data and Graphing,Measurement/ multiplication and division facts

Instructional Levels: I - Introduced D- Developed M- Mastered T- Tested and R - Retaught

Math Principles for Clint ISD 2009-2010

The math curriculum at CLINT ISD operates under these **five principles.**



Math lessons need to reflect these five components.

Underlying Processes and Mathematical Tools

The following TEKS are to be taught from day one in the classroom and need to be to increase the mathematical thinking of the students.

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
(K.13) Underlying processes and mathematical tools. The student **applies** Kindergarten mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:	**(1.11)** Underlying processes and mathematical tools. The student **applies** Grade 1 mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:	**(2.12)** Underlying processes and mathematical tools. The student **applies** Grade 2 mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:	**(3.14)** Underlying processes and mathematical tools. The student **applies** Grade 3 mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:	**(4.14)** Underlying processes and mathematical tools. The student **applies** Grade 4 mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:	**(5.14)** Underlying processes and mathematical tools. The student **applies** Grade 5 mathematics **to solve** problems connected to everyday experiences and activities in and outside of school. The student is expected to:
(A) Identify mathematics in everyday situation			**(A) Identify** mathematics in everyday situation **(MT)**		
(B) solve problems with guidance, that incorporates the process of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness			**(B) solve** problems with guidance, that incorporates the process of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness **(MT)**		
(C) select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in	**(C) select or develop** an appropriate problem-solving plan or strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem		**(C) select or develop** an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem **(MT)**		
(D) use tools such as real objects, manipulatives, and technology **to solve** problems			**(D) use** tools such as real objects, manipulatives, and technology **to solve** problems **(RM)**		
(K.14) Underlying processes and mathematical tools. The student **communicates** about Kindergarten mathematics **using** informal language. The student is expected to:	**(1.12)** Underlying processes and mathematical tools. The student **communicates** about Grade 1 mathematics **using** informal language. The student is expected to:	**(2.13)** Underlying processes and mathematical tools. The student **communicates** about Grade 2 mathematics **using** informal language. The student is expected to:	**(3.15)** Underlying processes and mathematical tools. The student **communicates** about Grade 3 mathematics **using** informal language. The student is expected to:	**(4.15)** Underlying processes and mathematical tools. The student **communicates** about Grade 4 mathematics **using** informal language. The student is expected to:	**(5.15)** Underlying processes and mathematical tools. The student **communicates** about Grade 5 mathematics **using** informal language. The student is expected to:
(A) communicate mathematical ideas **using** objects, words, pictures, numbers, and technology	**(A) explain and record** observations **using** objects, words, pictures, numbers, and technology		**(A) explain and record** observations **using** objects, words, pictures, numbers, and technology **(RM)**		
(B) relate everyday language **to** mathematical language and symbols			**(B) relate** informal language to mathematical language and symbols **(MT)**		
(K.15) Underlying processes and mathematical tools. The student is expected to:	**(1.13)** Underlying processes and mathematical tools. The student is expected to:	**(2.14)** Underlying processes and mathematical tools. The student is expected to:	**(3.16)** Underlying processes and mathematical tools. The student **uses** logical reasoning. The student is expected to:	**(4.16)** Underlying processes and mathematical tools. The student **uses** logical reasoning. The student is expected to:	**(5.16)** Underlying processes and mathematical tools. The student **uses** logical reasoning. The student is expected to:
			(A) make generalizations from patterns or sets of examples and nonexamples **(MT)**		
The student **uses** logical reasoning. The student is expected **to justify** his or her thinking **using** objects, words, pictures, numbers and technology.			**(B) justify** why an answer is reasonable and **explain** the solution process **(RM)**		

Assumptions

- ►Mathematic processes and tools will be used everyday in the classroom by teachers and students.
- ►Open-ended assessments will be given to students three times a year and student growth charts will be kept to be review throughout the year.
- ► Review boards are expected to be used weekly by teachers and students.
- ► Mathematic lessons are planned and implemented under the district five principles. (See Principle section)
- ► 15-30-45 Model with 90 minute block

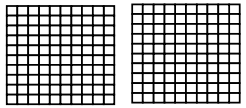
4th Grade Math Scope and Sequence Overview 2009-2010

First Six Weeks - Week One - August 24-28 Measuring Week Time/Temp. & Conversions

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.12) Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius). The student is expected to: A. **use** a thermometer **to measure** temperature and changes in temperature; and B. **Use** tools such a clock with gears or a stopwatch to **solve** problems involving elapsed time. Students usually have a hard time with elapsed time. We suggest making a lineal model of the clock.	**4.12A MT** **4.12B MT**	**Use** a thermometer to measure: 1.temperature 2. changes in temperature. **Use tools to solve problems involving elapsed time.** **Tools such as:** 1. clock with gears 2. stopwatch Begin memorizing multiplication and division facts . See HSP Chapter 4 and 5 for reinforcement	**Temperature** degrees Fahrenheit Celsius thermometer elapsed time Concept of A.M P.M before after quarter till quarter after	**Grade 3** (3.12A) use a thermometer to measure temperature **Grade 5** (5.11A) solve problems involving changes in temperature **Grade 3** (3.12B) tell and write time shown on analog and digital clocks **Grade 5** (5.11B) solve problems involving elapsed time. Every teacher in Clint ISD needs to set up a method to review math concepts throughtout the year. Example: Review Board, Calendar math with skills incorported in it, Mountain Math, This needs to be set up NO later than the first week of school.	The thermometer below shows the high temperature for one day in March. The low temperature for one day in March. The low temperature for one day was 17º F lower. What was the low temperature? (A thermometer is shown with this question) Look at the clocks. Mark baby-sits from 2:45 PM to 5:15 PM each day. How long does he baby-sit each day?	**Text HSP Book** 1. Page 474 A (Measure time) 2. Page 476 A (Elapsed Time) 3. Page 480A to 483 (Sequencing elapsed time and Calendar) 4. Page 484A-485 (Temp and F) 5. Page 486-487 (Temp Celcius) **Think Math** E-Lab (Time and Money) (4.12A) Page 702 (412B) Page 692 **Motivation Math** Page 155 - 160 **Count on it** p 26-31 p 50-51 p 93 (T.E) **Internet Resource** www.tmsds.org

4th Grade Math Scope and Sequence Overview 2009-2010

First Six Weeks - Week Two, Three and Four - August 31-September 18 Place Value- Estimation

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.1) Number, operation, and quantitative reasoning. The student **uses** place value to represent whole numbers and decimals. The student is expected to: (A) **use** place value **to read**, **write, compare, and order** whole numbers through 999,999,999; and (B) **use** place value **to read, write, compare, and order** decimals involving tenths and hundredths, including money, **using** concrete objects and pictorial models. (4.5) Number, operation, and quantitative reasoning. The student **estimates to determine** reasonable results. The student is expected to: (A) **round** whole numbers to the nearest ten, hundred, or thousand **to approximate reasonable results** in problem situations; and	**4.1 (A) IDMT** **4.1(B) IDMT** **4.5(A) MT**	(4.1A) Use place value **to read, write, compare, and order** whole numbers through 999,999,999 (4.1B) Use place value **to read, write, compare, and order** decimals involving tenths and hundredths, **using** concrete objects and pictorial models **including:** money. (4.5A) **Round** whole numbers **to approximate** reasonable results in problem situations. Round to the nearest: 1. ten 2. hundred 3. thousand	place Value whole number decimals decimal point compare tenths hundredths estimate round reasonable approximate greater than less than equal not equal standard form expanded form word form	**Grade 3**: (3.1A) use place value to read (in symbols and words), and describes the value of whole numbers through 999,999 **Grade 5**: (5.1A) Use place value to read, write, compare and order numbers through 999,999,999,999. **Grade 3**: (3.5A) Round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations. **Grade 5**: (5.4) Use strategies including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplic	Which of the following is another way to write the numeral 5,010,705? There are 24 hours in a day and 365 days in a year. Which is the best estimate of the number of hours in a year? What decimal does the model represent? 	**HSP** **1.** 1.1 page 4-7 (place value) 2. 1.2 page 8-9 (hands on millions) 3. 1.3 page 10-11 (place value millions) 4. 1.4 page 12-15 (compare whole numbers) 5. 1.5 page 16-19 (order whole numbers) 6. 2.2 page 34-37 (round whole numbers) **EDM** Math Journal 1 page 31 (whole numbers) Math Journal 1 page 95-96 (Decimals) **Think Math** (4.1) Place Value page 594-601 E-Lab: Place Value to 100,000 (4.1A) page 602 **Motivation Math** Page 5-10 and page 77-82 **Count on it** **page 42-47** **Intenet Resources** www.tmsds.org

Make connection to students that fractions, decimals and division are the same

Notce that place value needs to be for whole numbers and decimals.

4th Grade Math Scope and Sequence Overview 2009-2010

First Six Weeks - Week Five - September 21-25 Addition/Subtraction-Estimation

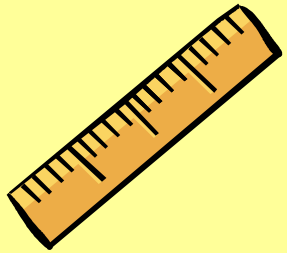
Standards	Instr. Level	Concepts	Vocabulary	Prerequisites	Assessment	Resources/ Materials
(4.3) Number, operation, and quantitative reasoning. The student adds and subtracts **to solve** meaningful problems involving whole numbers and decimals. The student is expected to: (A) **Use** addition and subtraction **to solve** problems involving whole numbers and; (4.5) Number, operation, and quantitative reasoning. The student **estimates** to determine reasonable results. The student is expected to: (A) **round** whole numbers to the nearest ten, hundred, or thousand **to approximate reasonable results** in problem situations; and	**4.3(A) MT** **4.5(A) MT**	**4.3 A** **Use** addition and subtraction *to solve* problems involving whole numbers. **(4.5A)** **Round** whole numbers **to approximate** reasonable results in problem situations. Round to the nearest: 1. ten 2. hundred 3. thousand	sum difference addend	**4.3 A** **Grade 3:** (3.3A) Use addition and substraction using pictures, words, and numbers. **Grade 5:** (5.3A) Using addition and subtraction to solve problems involving whole numbers and decimals. **4.5 A** **Grade 3:** (3.5A) Round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations. **Grade 5:** (5.4) Use strategies including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplic	There were 1,455,268 people living in weston in 1990. In the year 2000 there were 1,426,599 people. How many more people were living in Weson in 1990 than in 2000?	**HSP** 1. 2.3 page 38-39 (add/sub patterns) 2. 2.4 page 40-43 (estimate sums/diff) 3. 2.5 page 44-47 (mental math) 4. 2.7 page 50-53 (add/sub to 4digits) 5. 2.8 page 54-55 (subtract across 0's) 6. 2.9 page 56-59 (choose method) Chapter 16 reference to the place value fo decimals This will be reviewed again during the end of the 4th six weeks **Think Math** page 10-15 E-lab (subtracting- across 0) Motivation Math (4.3A) Page 35-40 (4.5A) Page 77-82 **Count on it** Page 10-15 **Internent Resources** www.tmsds.org

4th Grade Math Scope and Sequence Overview 2009-2010

First Six Weeks - Week Six - September 21-October 2- Review and Benchmark

Standards		Concepts	Vocabulary	Prerequisites	Assessment	Resources/ Materials

Students will be able to:



1. Use thermometer to measure temperature
2. Use thermometer **to measure changes** in temperature
3. Use tool (stopwatch and clock with gears) to solve problems involving elapsed time
4. Use place value to **read** whole numbers through 999,999,999
5. Use place value to **write** whole numbers through 999,999,999
6. Use place value to **compare** whole numbers through 999,999,999
7. Use place value to **order** whole numbers through 999,999,999
8. Use place value to **read** decimals involving tenth and hundredths (including money) using concrete objects and pictorial models
9. Use place value to **write** decimals involving tenth and hundredths (including money) using concrete objects and pictorial models
10. Use place value to **compare** decimals involving tenth and hundredths (including money) using concrete objects and pictorial models
11. Use place value to **order** decimals involving tenth and hundredths (including money) using concrete objects and pictorial models
12. Round whole numbers to the nearest ten to approximate reasonable results in problem situations
13. Round whole numbers to the nearest hundred to approximate reasonable results in problem situations
14. Round whole numbers to the nearest thousand to approximate reasonable results in problem situations
15. Use addition to solve problems involving whole numbers
16. Use subtraction to solve problems involving whole numbers

Remember that these skills need to be reviewed and supported throughout the year with our Review Boards.

4th Grade Math Scope and Sequence Overview 2009-2010

Second Six Weeks - Week One - October 5-9 Measuring Week Linear Measurement-Perimeter/Area and Conversions

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.11) Measurement. The student **applies** measurement concepts. The student is expected **to estimate and measure** to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass. The student is expected to: (A) **Estimate and use** measurement tools to determine length (including perimeter), area, capacity, and weight/mass using standard units SI (metric) and customary. (B) **Perform** simple conversions between different units of length, between different units of capacity, and between units of weight within the customary measurement system.	**4.11A MT** **4.11B IDMT**	**4.11A** **Estimate and use** measurement tools to determine 1. length (including perimeter) 2. area 3. capacity 4. weight/mass Using standard units SI (metric) and customary **4.11B** **Perform** simple conversions between different units of 1. length 2. capacity 3. weight within the **customary** measurement systems. Remember that our emphasis is on length including perimeter and area.	estimate length perimeter area Metric System Customary Conversion Unit of measurement inch foot yard mile millimeter centimeter decimeter kilometer	**(4.11A)** **Grade 3** (3.11A) use linear measurement tools to estimate and measure lengths using standard units; (B) use standard units to find the perimeter of a shape; (C) use concrete and pictorial models of square units to determine the area of two-dimensional surfaces **Grade 5** (5.10C) select and use appropriate units and formulas to measure length, perimeter, area, and volume. **(4.11B)** First time to be presented to students	Greg would like to cover a wall of his room with posters. He needs to know the area of the wall before he buys the posters. The wall is 12 feet wide and 8 feet high. What is the area of the wall?	**HSP** 1. Pages 552-557 (customary) 2. pages 574-577 (metric length) 3. pages 600-607 (perimeter) 4. pages 610-623 (area) **Think Math** Page 710,720,730 E-lab- Length; perimeter E-lab- all measurements **EDM** Math Journal 2 pg 238 Math masters pg 330 Math Journal 2 page 239 TE page 608-609 Math Journal 2 page 246-245 TE page 616-620 Math journal 2 page 317-319 TE page 810-811 Math Journal 2 page 322-323 TE page 820-821 **Internet resources** www.tmsds.org

4th Grade Math Scope and Sequence Overview 2009-2010

Second Six Weeks - Week Two and Three - October 12-23 Algebra, Patterns, Expressions, Equations

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.6) Patterns, relationships, and algebraic thinking. The student **uses** patterns in multiplication and division. The student is expected to: **(A) use** patterns and relationships **to develop** strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as 9 x 9 = 81 and 81 ÷ 9 = 9); and **(B) use** patterns to multiply by 10 and 100**.** (4.7) Patterns, relationships, and algebraic thinking. The student **uses** organizational structures **to analyze and describe** patterns and relationships. The student is expected **to describe** the relationship between two sets of related data such as ordered pairs in a table.	**4.6A MT** **4.6B MT** **4.7 MT**	4.6A **Use** patterns and relationships **to develop** strategies **to rememeber** basic multiplication and division facts. **Such as**: patterns in related multiplication and division number sentences, e.g., 9 x 9 = 81 and 81÷ 9 = 9. 4.6B **Use** patterns **to multiply** by 10 and 100 4.7 **Describe** the relationship between two sets of related data **such as**: ordered pairs in a table. Use patterns to multiply by 10 and 100	pattern relationship fact family order pair data table array	**4.6A** **Grade 3** (3.6C) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 , 2 = 3, 6 , 3 = 2. **Grade 5** (5.5A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts and diagrams. **4.6B** **Grade 3** (3.6B) identify patterns in multiplication facts using concrete objects, pictorial models, or technology **Grade 5** (5.5B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs **4.7** **Grade 3** (3.7B) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table **Grade 5** No future direct reference in grade 5.	Exactly 90 players signed up to play in a baseball league. There were 10 players on each team. Which number sentence is in the same fact family as 90 : 10 = ---- ? Mr. and Mrs. Gomez ride bikes to exercise. The table shows the total number of miles they had ridden after different numbers of days. If the pattern continues,how many miles will Mr. and Mrs. Gomez have ridden after 28 days?	**HSP** 1. Multiplication facts Chapter 4 (4.1 to 4.5) pages 96 - 109 2. Division facts Chapter 5 (5.1-5.6) pages 118-133 3. multiplication and division patterns/properties chapter 6 (6.1-6.7 and 6.9) pages 142-165 **Think Math** Pages 1094-1095: 1087-1088; 1101 1103 **EDM** Math Journal 1 page 52 Math masters page 253 TE pages 147-148 **Motivation Math** pages 89-94 **Count on it** pages 34-39 and 58-63 **Internet Resources** www.tmsds.org

4th Grade Math Scope and Sequence Overview 2009-2010

Second Six Weeks - Week Four and Five - October 26-30 Multiplication/Division Facts Page 1

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.4) Number, operation, and quantitative reasoning. The student **multiplies and divides to solve** meaningful problems involving whole numbers. The student is expected to: **(A) model** factors and products **using** arrays and area models; **(B) Represent** multiplication and division situations in pictures, word, and number form. **(C) Recall and apply** multiplication facts through 12 x 12. **(4.6)** Patterns, relationships, and algebraic thinking. The student **uses** patterns in multiplication and division. The student is expected to: **(A) use** patterns and relationships **to develop** strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as 9 x 9 = 81 and 81 ÷ 9 = 9); and	**4.4A IDMT** **4.4B MT** **4.4C MT** **4.6A MT**	**4.4A** **Model** factors and products **using** 1. arrays 2. area models **4.4B** **Represent** multiplication situations: 1. in pictures 2. in word 3. in number **Represent** division situations: 1. in pictures 2. in word 3. in number 4.4C **Recall** multiplication facts through 12 x 12. **Apply** multiplication facts through 12 x 12. **4.6A** **Use** patterns and relationships **to develop** strategies **to rememeber basic multiplication and division facts.** **Such as:** patterns in related multiplication and division number sentences, e.g., 9 x 9 = 81 and 81÷ 9 = 9	factor product array area model divisor dividend quotient number sentence	**4.4A** No prior experience **Grade 5** (5.3D) identify common factors of a set of whole numbers **4.4B** No prior experience No future direct reference 4.4C **Grade 3** (3.4A) learn and apply multiplication facts through 12 by 12 using concrete models and objects **Grade 5** No future direct reference in grade 5. 4.6A **Grade 3** (3.6C) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ¸ 2 = 3, 6 ¸ 3 = 2. **Grade 5** (5.5A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts and diagrams.	Luis has 4 paint sets. There are 12 jars of paint in each set. Which number sentence can be used to find the total number of jars of paint Luis has? A. 12 X 4 = C. 12 - 4 = B. 12 + 4 = Justin has 11 pets on his farm. He fed each pet 12 times last week. How many times in all did he feed his pets last week? When Maggie went to her sister's graduation, she saw that 300 students were graduating. Maggie noticed that equal numbers of graduating students were seated in 5 different sections of the auditorium. How many graduating students were seated in 1 section? Keep reviewing the patterns discovered the weeks before to assure memorization of multiplication facts. (4.6A) Notice that TEKS 4.4B is only taught in the fourth grade. Multiplication facts need to be recall in 4th grade.	**HSP** 1. Chapter 7 (7.1 - 7.5) pages 184-197 2. Chapter 8 (8.1-8.4) pages 206-213 **Think Math** pages 418-428 Motivation Math pages 47-52 E-Lab Multiplication **Count on it** page 42-47

4th Grade Math Scope and Sequence Overview 2009-2010

Third Six Weeks - Week One, Two - November 9-20 Multiplication/Division Facts **Measurement Madness I**

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.4) Number, operation, and quantitative reasoning. The student **multiplies and divides to solve** meaningful problems involving whole numbers. The student is expected to: **(B) Represent** multiplication and division situations in pictures, word, and number form. **(C) Recall and apply** multiplication facts through 12 x 12. **(D) use** multiplication **to solve** problems (no more than two digits times two--digits without technology) **(E)** use division to solve problems (no more than one digit divisors and three-digit dividends without technology) **(4.6)** Patterns, relationships, and algebraic thinking. The student **uses** patterns in multiplication and division. The student is expected to: **(A) use** patterns and relationships **to develop** strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as 9 x 9 = 81 and 81 ÷ 9 = 9); and	**4.4B MT** **4.4C MT** **4.4D MT** **4.4E IDMT**	**4.4D** **Use** multiplication to solve problems (no more than 2 digits times two digits without technology) **4.4E** **Use** division **to solve problems** (no more than one digit divisors and 3-digit dividends without technology) **4.4B** **Represent** multiplication situations: 1. in pictures 2. in word 3. in number **Represent** division situations: 1. in pictures 2. in word 3. in number 4.4C **Recall** multiplication facts through 12 x 12. **Apply** multiplication facts through 12 x 12. **4.6A** **Use** patterns and relationships **to develop** strategies **to rememeber basic multiplication and division facts.** **Such as:** patterns in related multiplication and division number sentences, e.g., 9 x 9	factor product array area model divisor dividend quotient number sentence	4.4D **Grade 3** (3.4B) solve and record multiplication problems (up to 2 digits times 1 digit) **Grade 5** (5.3B) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology) **4.4E** **Grade 3** (3.4C) use models to solve division problems and use number sentences to record the solutions **Grade 5** (5.3C) use division to solve problems involving whole numbers (no more than two digit divisors and three-digit dividends without technology) including interpreting the remainder within a given context **4.4B** No prior experience No future direct reference 4.4C **Grade 3** (3.4A) learn and apply multiplication facts through 12 by 12 using concrete models and objects **Grade 5** No future direct reference 4.6A see last six weeks for correlation Notice that TEKS 4.4B is only taught in the fourth grade. Multiplication facts need to be recall in 4th grade.	Luis has 4 paint sets. There are 12 jars of paint in each set. Which number sentence can be used to find the total number of jars of paint Luis has? A. 12 X 4 = C. 12 - 4 = B. 12 + 4 = Justin has 11 pets on his farm. He fed each pet 12 times last week. How many times in all did he feed his pets last week? When Maggie went to her sister's graduation, she saw that 300 students were graduating. Maggie noticed that equal numbers of graduating students were seated in 5 different sections of the auditorium. How many graduating students were seated in 1 section?	**HSP** **Chapter 9** 1. pages 224-229 (9.1-9.3) 2. pages 234-235 (9.5) 3. pages 236-239 (9.6) 4. pages 240-241 (9.7) 5. pages 244-245 (9.9) **Think Math** pages 418-428 Motivation Math pages 47-76 E-Lab Multiplication **Count on it** page 42-47 

4th Grade Math Scope and Sequence Overview 2009-2010

Third Six Weeks - Week Three and Four - November 30-Dec 11 Multiplication/Division Facts/Estimation

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.4) B,C,D,E Refer to week one and two for these TEKS **(4.5)** Number, operation, and quantitative reasoning. The student **estimates to determine** reasonable results. The student is expected to: **(B) use** strategies including rounding and compatible numbers **to estimate** solutions to multiplication and division problems.	**4.5B MT** **4.4B MT** **4.4C MT** **4.4D MT** **4.4E IDMT**	**(4.4) B,C,D,E** Refer to week one and two for these TEKS. 4.5B **Use** strategies **to estimate** solutions to: 1. multiplication problems 2. division problems **Strategies include**: 1. rounding 2. compatible numbers	Estimation comparatible numbers rounding approximately	**(4.4) B,C,D,E** Refer to week one and two for these TEKS. 4.5B **Grade 3** (3.5B) use strategies including rounding and compatible numbers to estimate solutions to addition and subtraction problems **Grade 5** 5.4 use strategies including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplication, and division problems	Don can ride his bike 19 miles in one hour. If he rides at the same speed, about how many miles can he ride in 3 hours?	

4th Grade Math Scope and Sequence Overview 2009-2010

Third Six Weeks - Week Five - December 14-18 DATA Review and Benchmarks Page 1

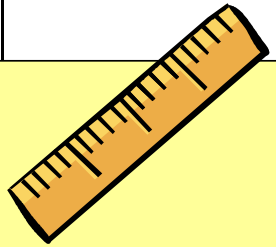
Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.13) Probability and statistics. The student **solves** problems by **collecting, organizing, displaying, and interpreting** sets of data. The student is expected to: **(A) Use** concrete objects or pictures **to make generalizations** about determining all possible combinations of a given set of data or of objects in a problem situation. **(B) interpret** bar graphs **Caution:** **Add lessons on probability and not only combination lessons**	**4.13A IDMT** **4.13B IDMT**	4.13A **Use** concrete objects or pictures **to make** generalizations about determining all possible combinations of a given set of data or of object in a problem situation 4.13B **Interprete** bar graphs	collect organize display interpret data information table graph bar graph set of data possible combinatio n probability	4.13A **Grade 3** No prior experience **Grade 5** (5.13B) use experimental results to make predictions (5.13C) list all possible outcomes of a probability experiment such as tossing a coin 4.13B **Grade 3** (3.13B) interpret information from pictographs and bar graphs **Grade 5** **(**3.13A) use tables of related number pairs to make line graphs	Jill has a bag with 20 tiles numbered 1 to 20. If she picks out 1 tile without looking, what is the probability that the number on the tile will be an even number? Example for answer: 1 out of 10 in this case the correct answer is 10 out of 20 How many more…. Than? Which two combined have a total of …..? How much does ….. Have?	**HSP** **EDM** math master page 111 TE page 564-567 Math Journal 2 page 223 TE page 571 **Think Math** pages 794-828 **Motivation Math** pages161-172 **Count on it** pages 82-87 **Internet resources** www.tmsds.org

4th Grade Math Scope and Sequence Overview 2009-2010

Third Six Weeks - Week Five - December 14-18 DATA Review and Benchmarks Page 2

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials

Students will be able to:



1. Estimate and use tools to determine length
2. Estimate and use tools to determine perimeter
3. Estimate and use tools to determine area
4. Perform simple convertions between different units of length with in the customay measurement system.
5. Use patterns and relationship to develop strategies to remember basic multiplication and division facts (example:fact families)
6. Use patterns to multiply by 10 and 100
7. Describe the relationship between two sets of related data such as ordered pairs in a table.
8. Model factors and products using arrays and area models.
9. Represent multiplication and division in pictures, word, and number form
10. Recall multiplication facts through 12 x 12.
11. Apply multiplication facts through 12 x 12.
12. Use multiplication to solve problems (no more than two digits times two--digits without technology)
13. Use division to solve problems (no more than one digit divisors and three-digit dividends without technology)
14. Use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems.
15. Use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation.
16. Interpret bar graphs

Remember that these skills need to be reviewed and supported throughout the year with our Review Boards.

Benchmark will have some 5 questions from the previous benchmark to check on student retention of material.

4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week One - January 5-8 Measuring Week Weight/Mass and Conversions

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
Chapter 21 **(4.11)** Measurement. The student applies measurement concepts. The student is expected **to estimate and measure to solve** problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass. The student is expected to: **(A) Estimate** and use measurement tools to determined length (including perimeter), area, capacity, and weight/mass **using** standard units SI (metric) and customary. **(B) Perform** simple conversions between different units of length, between different units of capacity, and between units of weight within the customary measurement system. **(E)** **explain** the difference between weight and mass	**4.11A** **MT** **4.11B** **IDMT** **4.11E** **IDM**	**4.11A** **Estimate and use** measurement tools to determine 1. length (including perimeter) 2. area 3. capacity 4. weight/mass Using standard units SI (metric) and customary **4.11B** **Perform** simple conversions between different units of 1. length 2. capacity 3. weight within the **customary** measurement systems. Remember that our emphasis is on length including perimeter and area.	Estimate measure weight mass Metric System Customary Sys. Convertions Ounce pound ton kilogram miligrams gram	**(4.11A)** **Grade 3** (3.11A) use linear measurement tools to estimate and measure lengths using standard units; (B) use standard units to find the perimeter of a shape; (C) use concrete and pictorial models of square units to determine the area of two-dimensional surfaces **Grade 5** (5.10C) select and use appropriate units and formulas to measure length, perimeter, area, and volume. **(4.11B)** **Grade 3** No reference at this grade level **Grade 5** (5.10A) perform simple conversions within the same measurement system SI (metric) or customary **(4.11E)** No reference to this TEKS in grade 3 or 5	This area of the TEKS have not been tested yet in a TAKS test. Possible questions could be: Which of the following weights one gram?	**HSP** 1. Weight pages 558-559 (21.3) 2. Mass pages 578-579 (22.2) **Think Math** Pages 710; 720; 730 **EDM** Math Journal 2 Page 238 Math Master page 330 TE pages 608-609 Math Journal 2 pages 317-319 TE pages 810-811 Math Journal 2 pages 322-323 TE 820-821 **Motivation Math** Pages 155-160 **Internet Resources:** www.tmsds.org

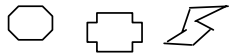
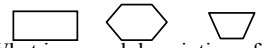
4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Two- January 11-15 Continuation with Data

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.7) Patterns, relationships, and algebraic thinking. The student uses organizational structures to analyze and describe patterns and relationships. The student is expected to **describe** the relationship between two sets of related data such as ordered pairs in a table. **(4.13)** Probability and statistics. The student **solves** problems by **collecting, organizing, displaying, and interpreting** sets of data. The student is expected to: **(A) Use** concrete objects or pictures **to make generalizations** about determining all possible combinations of a given set of data or of objects in a problem situation. **(B) interpret** bar graphs	**4.13A IDMT** **4.13B IDMT**	4.7 **Describe** the relationship between two sets of related data **such as:** ordered pairs in a table. 4.13A **Use** concrete objects or pictures **to make** generalizations about determining all possible combinations of a given set of data or of object in a problem situation 4.13B **Interprete** bar graphs	collect organize display interpret data information table graph bar graph set of data possible combination probability relationship order pairs	4.7 **Grade 3** (3.7B) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table **Grade 5** No future direct reference in grade 5. 4.13A **Grade 3** No prior experience **Grade 5** (5.13B) use experimental results to make predictions **(**5.13C) list all possible outcomes of a probability experiment such as tossing a coin 4.13B **Grade 3** (3.13B) interpret information from pictographs and bar graphs **Grade 5** (3.13A) use tables of related number pairs to make line graphs	4.7 Each number set P is paired with a number Q. The relationship for each pair of numbers is the same. If the number in set P is 11, how will you find its paired number in set Q? Set P / SetQ 1 / 7 4 / 10 1 / 14 4.13AB Show students different graphs and asks questions such as: How many more…. Than? Which two combined have a total of …..? How much does ….. Have?	**HSP** **EDM** math master page 111 TE page 564-567 Math Journal 2 page 223 TE page 571 **Think Math** **(4.7)** pages 100-103 (4.13A) pages 794-828 **Motivation Math** (4.7) pages101-106 (4.13A) pages 161-172 **Count on it** (4.13A) pages 82-87 **Internet resources** www.tmsds.org

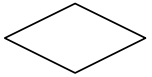
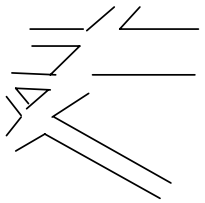
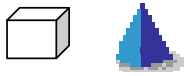
4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Three - January 18-22 Probability and Combinations

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.13) Probability and statistics. The student **solves** problems by **collecting, organizing, displaying, and interpreting** sets of data. The student is expected to: **(A) Use** concrete objects or pictures **to make generalizations** about determining all possible combinations of a given set of data or of objects in a problem situation. **(B) interpret** bar graphs **(4.16)** Underlying processes and mathematical tools. The student **uses** logical reasoning. **(A) make** generalizations from patterns or sets of examples and nonexamples	**4.13A IDMT** **4.13B IDMT** **4.16A MT**	4.13A **Use** concrete objects or pictures **to make** generalizations about determining all possible combinations of a given set of data or of object in a problem situation 4.13B **Interprete** bar graphs 4.16A **Make** generalizations from patterns or sets of examples and non-examples	collect organize display interpret data information table graph bar graph set of data possible combination probability possible chances outcome examples nonexamples pattern sets	4.13A **Grade 3** No prior experience **Grade 5** (5.13B) use experimental results to make predictions (5.13C) list all possible outcomes of a probability experiment such as tossing a coin 4.13B **Grade 3** (3.13B) interpret information from pictographs and bar graphs **Grade 5** **(**3.13A) use tables of related number pairs to make line graphs **4.16A** Reads exactly the same in 3rd and 5th grade.	Jill has a bag with 20 tiles numbered 1 to 20. If she picks out 1 tile without looking, what is the probability that the number on the tile will be an even number? Example for answer: 1 out of 10 in this case the correct answer is 10 out of 20 How many more…. Than? Which two combined have a total of …..? How much does ….. Have? 4.16A Carl drew these shapes  Carmella drew these shapes.  What is a good description of the shapes Carl drew?	**HSP** 1. Combinations (Lessons 19.1 - 19.8) Pages 496-513 2. Probability (Lessons 20.1-20.5) Pages 522-539 **Think Math** pages 794-828 **Motivation Math** pages161-172 **Count on it** pages 82-87 **Internet resources** www.tmsds.org

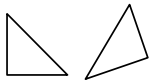
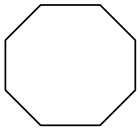
4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Four and Five - January 25-Feb 5 Geometry

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.8) The student **identifies** and **describes** attributes of geometric figures **using** formal geometric language. The student is expected to: **(A) identify and describe** right, acute, and obtuse angles **(B) Identify and describe** parallel and intersecting lines (including perpendicular lines), **using** concrete objects and pictorial models **(C) Use** essential attributes **to define** two-and three-dimensional geometric figures **Math Bowl** **January 28** **CTW** 	**4.8A** **MT** **4.8B** **MT** **4.8C** **IDMT**	4.8A **Identify** the following angles: 1. right 2. acute 3. obtuse **Describe** the following angles: 1. right 2. acute 3. obtuse 4.8B Identify models of: 1. parallel lines 2. Intersecting lines (including perpendicular lines) **Describe** models of: 1. parallel lines 2. intersecting lines (including perpendicular lines) 4.8C **Use** essential attributes **to define** 1. 2-D geometric figures 2. 3-D geometric figures	Right angle acute angle obtuse angle parallel lines intersecting l perpendicular line segnment line ray plane angle point 2-D figures 3-D figures attribute face vertices edge	**(4.8A)** **Grade 3** No reference to TEKS **Grade 5** **(5.7)**The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures. **(4.8B)** **Grade 3** No prior reference **Grade 5** (5.7)The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures. **(4.8C)** **Grade 2** **(2.7B)** use attributes to describe how 2 two-dimensional or 2 three-dimensional geometric figures are alike or different **Grade 5** **(5.7)**The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures. □	Show students a figure and ask which angles are obtuse?  Which streets appear to be perpendicular to each other?  Corinne made the 2 models shown by connecting straws with pieces of clay. If Corinne counts the number of straws she used in both models, what information will she have? 	**HSP** 1. Chapter 10 (2-D Figures) Pages 258-277 2. Chapter 12 (3-D figures) Pages 314-325 **Think Math (4.8A)** Pages 240-262 **EDM** Unit 1 Check Progress Math Masters pages 387-389 TE page 389 Student Reference Book page 78-79 TE pages 26-27 TE pages 788-791 math masters page 228 TE page 29 math masters pages 367, 173, 368 **Motivation Math** pages 107-124 Internet Resources www.tmsds.org

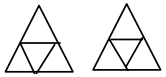
4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Five - February 1-5 Geometry

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.9) Geometry and spatial reasoning. The student **connects** transformations to congruence and symmetry. The student is expected to: (A) **demonstrate** translations, reflections, and rotations **using** concrete models; (B) **use** translations, reflections, and rotations to **verify** that two shapes are congruent; and (C) **use** reflections **to verify** that a shape has symmetry.	**4.9A IDM** **4.9B MT** **4.9C MT**	4.9B **Use** translations, reflections, and rotations **to verify** two shapes are congruent. 4.9C **Use** reflections **to verify** that a shape has symmetry.	symmetry translations reflections rotations congruent transformation tessellations pattern unit	**(4.9A)** **Grade 3** No reference at this grade **Grade 5** (5.8A) sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid **(4.9B)** **Grade 3:** (3.9A) identify congruent two-dimensional figures; Grade 5: (5.8B) identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid **(4.9C)** **Grade 3** (3.9B) create two-dimensional figures with lines of symmetry using concrete models and technology; and (3.9C) identify lines of symmetry in two-dimensional geometric figures **Grade 5** No reference at this grade	Use Tangrams or make Tessellations Have students reflect, rotate and transalate figures.  How many lines of symmetry does this shape have? 	**HSP** Chapter 11 Symmetry/Transformation/congruency pages 286-301 **Think Math** page 300 **Motivation Math** page 125-136

4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Six - February 8-19 Fractions

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
4.2 Number, operation, and quantitative reasoning. The student **describes** and **compares** fractional parts of whole objects or sets of objects. The student is expected to: **(A) Use** concrete objects and pictorial models t**o generate** equivalent fractions. **(B) Model** fraction quantities greater than one **using** concrete objects and pictorial models **(C) Compare and order** fractions **using** concrete objects and pictorial models. Students should use manipulatives as introduce to the concept of eqivalent fractions Make fraction parts of shaded and non shaded areas	**4.2A IDMT** **4.2B IDMT** **4.2C IDMT**	4.2A **Use** objects and pictorial models **to generate** equivalent fractions. 4.2B **Model** fraction quantities greater than one **using** pictorial models 4.3C **Compare** and **order** fractions **using** pictorial models.	numerator denominator equivalent fractional part whole object set of objects equal parts mixed number	**4.2A** **Grade 3** (3.2D) construct concrete models of equivalent fractions for fractional parts of whole objects **Grade 5** (5.2A) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3 4.2B **Grade 3** (3.2C) use fraction names and symbols to describe fractional parts of whole objects or sets of objects **Grade 5** (5.2B) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number **4.2C** **Grade 3** (3.2B) compare fractional parts of whole objects or sets of objects in a problem situation using concrete models **Grade 5** (5.2C) compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators	Give equivalent and non equivalent fractions for the shaded area.  The model is shaded to show which fraction?  Compare models and pictures of fractional parts using =; <; and > include improper fractions in your possible answers	**HSP** Chapte 15 EDM TE pages 518-520 TE pages 541-542 TE pages 512-515 TE pages 546-547 TE pages 550-551 Pages 554-556

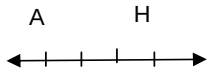
4th Grade Math Scope and Sequence Overview 2009-2010

Fourth Six Weeks - Week Six - February 5-19 Fractions/Decimals

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.1B) Use place value **to read, write, compare, and order** decimals involving tenths and hundredths, including money, **using** concrete objects and pictorial model**s.** **4.2**Number, operation, and quantitative reasoning. The student **describes and compares** fractional parts of whole objects or sets of objects. The student is expected to: **(D) Relate** decimals to fractions **that name** tenths and hundredths **using** concrete objects and pictorial models **4.3**Number, operation, and quantitative reasoning. The student **adds and subtracts** to solve meaningful problems involving whole numbers and decimals. The student is expected to**:** **(B) add and subtract** decimals to the hundredths place using concrete objects and pictorial models	**4.1(B) IDMT** **4.2D IDMT** **4.3B IDMT**	4.1B **Use** place value **to read, write, compare, and order** decimals involving tenths and hundredths, **using** concrete objects and pictorial models **including** money. 4.2D Relate decimals to fractions that name tenths and hundredths using pictorial models 4.3B **add and subtract** decimals to the hundredths place using concrete objects and pictorial models	tenth hundredth place value pictorial model	**4.1B** **Grade 3** (3.1C) determine the value of a collection of coins and bills. **Grade 5** (5.1B) use place value to read, write, compare, and order decimals through the thousandths place 4.2D Grade 3 No reference at this grade **Grade 5** (5.2D) use models to relate decimals to fractions that name tenths, hundredths, and thousandths **4.3B** Grade 3 (3.1C) determine the value of a collection of coins and bills **Grade 5** (5.3A) use addition and subtraction to solve problems involving whole numbers and decimals	At the school store Rochelle bought a package of pens for $1.34 and a set of map pencils for $2.78. What was the total amount she paid for school supplies? This type of problem is usually presented with pictorial models. The model is shaded represents 2 3/10. Which decimal does the model represent? At the school sore Rochelle bought a package of pens for $1.34 and a set of map pencils for $2.78. What was the total amount she paid for school supplies? This type of problem is usually presented with pictorial models.	**HSP** **Chapter 16 and 17** **EDM** TE pages 518-520 TE pages 541-542 TE pages 512-515 TE pages 546-547 TE pages 550-551 Pages 554-55

4th Grade Math Scope and Sequence Overview 2009-2010

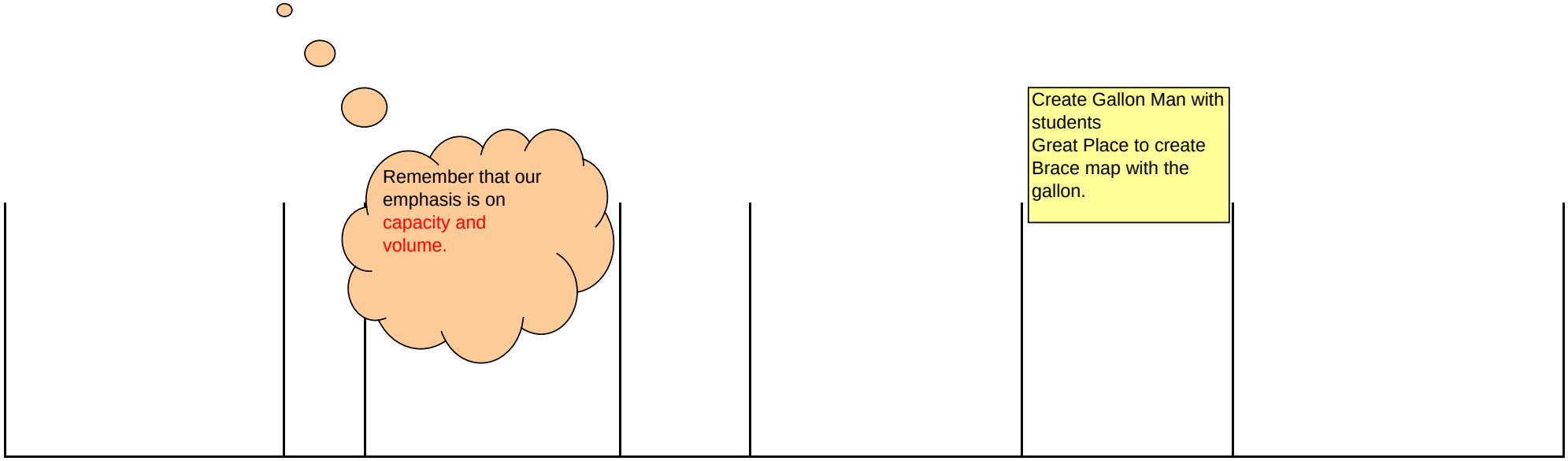
Fifth Six Weeks - Week One - February 22-26 Fractions and Decimals

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
Refer to Weeks five and six of the 4th six weeks for TEKS: 4.2A,B,C,D **4.10** Geometry and spatial reasoning. The student **recognizes** the connection between numbers and their properties and points on a line. The student is expected to **locate and name** points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as tenths.	4.10 IDMT	4.10 **locate** and **name** points on a number line **using:** 1.whole numbers 2. fractions (**such as** halves and fourths) 3.decimals (**such as** tenths)	number line points	4.10 **Grade 3** (3.10) Geometry and spatial reasoning. The student recognizes that a line can be used to represent numbers and fractions and their properties and relationships. **Grade 5** (5.9) Geometry and spatial reasoning. The student recognizes the connection between ordered pairs of numbers and locations of points on a plane.	Which point on the number line best represents ¼?  Which number is best represented by Point P on the number line? What number on the number line does point H best represents?	**HSP** glances of this TEKS are found in Unit 6

4th Grade Math Scope and Sequence Overview 2009-2010

Fifth Six Weeks - Week Two - March 1-5 Capacity/Volume

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.11) Measurement. The student **applies** measurement concepts. The student is expected **to estimate and measure** to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass. The student is expected to: (A) **Estimate and use** measurement tools to determine length (including perimeter), area, capacity, and weight/mass using standard units SI (metric) and customary. (B) **Perform** simple conversions between different units of length, between different units of capacity, and between units of weight within the customary measurement system. (C) **Use** concrete models of standard cubic units to **measure** volume. (D) **estimate** volume in cubic units	**4.11A MT** **4.11B IDMT** **4.11C DM** **4.11D DM**	**4.11A** **Estimate and use** measurement tools to determine 1. length (including perimeter) 2. area 3. capacity 4. weight/mass Using standard units SI (metric) and customary **4.11B** **Perform** simple conversions between different units of 1. length 2. capacity 3. weight within the **customary** measurement systems. Remember that our emphasis is on capacity and volume.	Estimate measure weight mass Metric System Customary Sys. Convertions liter milliliter cup gallon quart volume cubic units	**(4.11A)** **Grade 3** (3.11A) use linear measurement tools to estimate and measure lengths using standard units; (B) use standard units to find the perimeter of a shape; (C) use concrete and pictorial models of square units to determine the area of two-dimensional surfaces **Grade 5** (5.10C) select and use appropriate units and formulas to measure length, perimeter, area, and volume. **(4.11B)** **Grade 3** No reference at this grade level **Grade 5** (5.10A) perform simple conversions within the same measurement system SI (metric) or customary	Which of the following holds only 1 milliliter of water? Pictures of dropper, water bottle, aquarium and water tower. Which is the best estimate of the capacity of a coffee cup? Create Gallon Man with students Great Place to create Brace map with the gallon.	**HSP** Chapter 24 **Think Math** pages 710;720;730 **Motivation Math** pages 155-160


Remember that our emphasis is on capacity and volume.
Create Gallon Man with students
Great Place to create Brace map with the gallon.

4th Grade Math Scope and Sequence Overview 2009-2010

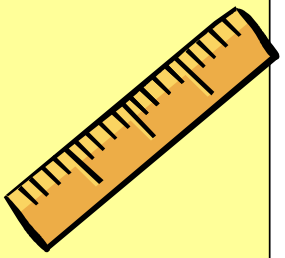
Fifth Six Weeks - Week Three - March 8-12 REVIEW Measurement

Standards	Instr. level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials

Since the whole year the emphasis has been on measurement, during this week teachers will review the concepts of measurement.

Students will be able to:

1. Estimate and use tools to determine length using standard units SI (metric) and customary.
2. Estimate and use tools to determine perimeter using standard units SI (metric) and customary.
3. Estimate and use tools to determine area using standard units SI (metric) and customary.
4. Estimate and use tools to determine capacity using standard units SI (metric) and customary.
5. Estimate and use tools to determine weight/mass using standard units SI (metric) and customary.
6. Perform simple convertions between different units of length with in the customay measurement system.
7. Perform simple convertions between different units of capacity with in the customay measurement system.
8. Perform simple convertions between different units of weight with in the customay measurement system.
9. Use concrete models of standard cubic units to measure volume.
10. Estimate volume in cubic units.
11. Explain the difference between weight and mass
12. Use a thermometer to measure temperature and changes in temperature
13. Use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time



Remember that these skills need to be reviewed and supported throughout the year with our Review Boards.

4th Grade Math Scope and Sequence Overview 2009-2010

Fifth Six Weeks - Week Four - March 22-26 Review and MOCK TEST

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials

Students will be able to:

1. Describe the relationship between two sets of related data such as ordered pairs in a table.
2. Use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation
3. Interpret bar graphs
4. Make generalizations from patterns or sets of examples and nonexamples.
5. Identify and describe right, acute, and obtuse angles.
6. Identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models.
7. Use essential attibutes to define two- and three- dimensional geometric figures
8. Demostrate transalations, reflections, and rotations using concrete models.
9. Use transalations, reflections, and rotations to verify that two shapes are congruent.
10. Use reflections to verify that a shape has symmetry.
11. Use concrete objects and pictorial models to generate equivalent fractions
12. model fraction quantities greater than one using concrete objects and pictorial models
13. compare and order fractions using concrete objects and pictorial models
14. relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models
15. Use place value to read, write, compare and oder decimals involving tenths and hundreths, inclucing money, using concrete objects and pictorial models
16. Add and subtract decimals to the hundredths place using concrete objects and pictorial models
17. Locate and name points on a number line

Remember that these skills need to be reviewed and supported throughout the year with our Review Boards.

4th Grade Math Scope and Sequence Overview 2009-2010

Fifth Six Weeks - Week Five,six and seven - March 29 - April 16- Review for TAKS

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
						Review Materials: 1. Motivation Math 2. Review Boards 3. Jeopardy Games 4. Study Guides from TEA 5. On line practice test at TEA website

Suggestions for Review:

1. Dessagragate Data by TEKS as you have done it for every benchmark with your math leader. (item Analysis and Student Analysis)
2. Target the items that are between 69% and 60% and less than 60%.
3. You might want to group your students according to ability by TEKS to target the deficient areas.
4. Do not forget to go back to the concrete for those concepts that students are not understanding and move them from the concrete to the representations.
5. Make sure to incorporate Marzano's research-based strategies to increase results: Identifying similarities and differences, summarizing and note taking, reinforcing effort and providing recognition, nonlinguistic representations, cooperative learning, setting objetives and providing feedbak, generating and testing hypotheses, cues, questions and advance organizers.
6. Try to figure out students misunderstandings and reasoning. It is important to know what the student is thinking to try to reteach the contect properly.

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week One - April 19-23 Review for TAKS

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
						Review Materials: 1. Motivation Math 2. Review Boards 3. Jeopardy Games 4. Study Guides from TEA 5. On line practice test at TEA website 6. Informational Booklets

Suggestions for Review: This is the last week you have to review. Keep it POSITIVE!!

1. Dessagragate Data by TEKS as you have done it for every benchmark with your math leader. (item Analysis and Student Analysis)
2. Target the items that are between 69% and 60% and less than 60%.
3. You might want to group your students according to ability by TEKS to target the deficient areas.
4. Do not forget to go back to the concrete for those concepts that students are not understanding and move them from the concrete to the representations.
5. Make sure to incorporate Marzano's research-based strategies to increase results:
Identifying similarities and differences, summarizing and note taking, reinforcing effort and providing recognition, nonlinguistic representations, cooperative learning, setting objetives and providing feedbak, generating and testing hypotheses, cues, questions and advance organizers.
6. Try to figure out students misunderstandings and reasoning. It is important to know what the student is thinking to try to reteach the contect properly.

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Two - April 26-30 Math TAKS April 27th and introduction to Math Project

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.14) Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to: **(A) identify** the mathematics in everyday situations; **(D) use** tools such as real objects, manipulatives, and technology to solve problems. **(4.15)** Underlying processes and mathematical tools. The student communicates about Grade 4 mathematics using informal language. The student is expected to: **(A) explain and record** observations using objects, words, pictures, numbers, and technology; and **(B) relate** informal language to mathematical language and symbols.	**4.14A MT** **4.14D RM** **4.15A RM** **4.15B MT**	**4.14A** **Identify** the mathematics in everyday situations **4.15B** **Relate** informal language to mathematical language and symbols		These TEKS are exactly the same in 3rd and 5th grade	A class is going on a field trip. Each group of 5 students will need an adult helper. What can the teacher do to find out how many adult helpers are needed?	**EDM** Volume 2 Teacher Edition Pages 882-913

Have students work in groups and choose one of seven projects listed on the back of EDM Volume 2 for teacher. Pages 882-913 TE.

Project 1: Making a Cutaway Globe
Project 2: Using a Magnetic Compass
Project 3: A Carnival Game
Project 4: Making a Quilt
Project 5: Which Soft drink is the best buy?
Project 6: Building and viewing structures
Project 7: Numbers, Maya Style
Students will have several weeks to work on this project and presented before the end of the year.
Math Leaders will collect samples from each classroom.

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Three - May 3-7 Interactive Lessons

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
4.14 Underlying processes and mathematical tools. The student applies Grade 4 mathematics **to solve problems** connected to everyday experiences and activities in and outside of school. The student is expected to: (A) **identify** the mathematics in everyday situations (B) **solve** problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness (C) **select or develop** an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, **systematic guessing and checking,** acting it out, making a table, working a simpler problem, or working backwards to solve a problem	**4.14A MT** **4.14B MT** **4.14C MT**	**4.14A** **Identify** the mathematics in everyday situations **4.14B** Solve problems that incorporate: 1. **understand** the problem 2. **making** a plan. 2. **carrying out** the plan 3. **evaluating** the solution for reasonableness **4.14C** **Select or develop** an appropriate problem-solving plan or strategy Plan/Strategies include: 1. **Draw** a picture 2. **Looking** for a pattern 3. Systematic **guessing and checking** 4. Acting it out 5. **Making** a table 6. **Working** a simpler problem 7.**Working** backwards to solve a problem.	systematic guess check strategies estimation rounding compatable numbers	These TEKS are exactly the same in 3rd and 5th grade	1. Jenna has 12 days left to read a 192-page book for a report. She has already read 60 pages. Which would be the best way for Jenna to find how many pages she should read each day to finish the book on time. 2. Mr. Henderson is a guest reader for 6 classes at Thompson Elementary School. He plans to read a different story to each of the classes listed below. Mr. Henderson can stay for only 2 ¼ hours. Which strategy can he use to find wheter he has enough time	Problem Solver I and II books Count on it Books

This week the concentration is on Systematic Guessing and Checking. This process will help students with their stimation and number sense.

Class	Time
1	23 min.
2	23 min.
3	23 min.
4	23 min.
5	23 min.
6	23 min.

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Four - May 10-14 Problem Solver

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
4.14 Underlying processes and mathematical tools. The student applies Grade 4 mathematics **to solve problems** connected to everyday experiences and activities in and outside of school. The student is expected to: (A) **identify** the mathematics in everyday situations (B) **solve** problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness (C) **select or develop** an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem **(4.16)** Underlying processes and mathematical tools. The student **uses** logical reasoning. The student is expected to: (A) **make** generalizations from patterns or sets of examples and nonexamples;	**4.14A MT** **4.14B MT** **4.14C MT** **4.16A MT**	**4.14A** **Identify** the mathematics in everyday situations **4.14B** Solve problems that incorporate: 1. **understand** the problem 2. **making** a plan. 2. **carrying out** the plan 3. **evaluating** the solution for reasonableness **4.14C** **Select or develop** an appropriate problem-solving plan or strategy Plan/Strategies include: 1. **Draw** a picture 2. **Looking** for a pattern 3. Systematic **guessing and checking** 4. Acting it out 5. **Making** a table 6. **Working** a simpler problem 7.**Working** backwards to solve a problem. **4.16A** **Make** generalizations from patterns or sets of examples and non-examples.	patterns generalization unit examples nonexamples sets strategies This week the concentration is on Looking for a pattern. This process is crucial for studetns to see relationship between numbers. The lessons also need to incorporate TEKS 4:16 A where students are making generalizations from	These TEKS are exactly the same in 3rd and 5th grade	1.Dave washes the dishes every day. If he washes the dishes on Aug 3, on which of the following days will he NOT have to wash the dishes? 2. Mr. Henderson is a guest reader for 6 classes at Thompson Elementary School. He plans to read a different story to each of the classes listed below. Mr. Henderson can stay for only 2 ¼ hours. Which strategy can he use to find wheter he has enough time **Class** / **Time** 1 — 23 min. 2 — 23 min. 3 — 23 min. 4 — 23 min. 5 — 23 min. 6 — 23 min.	Problem Solver I and II books Count on it Books

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Five - May 17-21 Preparing for Measuring Madness plus Assessment

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials

Let students build and practice activity that they will be hosting during the Measurement Madness event. The event will take place during the week of May 24-28 at each campus. Your math leader has given you details of the event by now. Remember that the purpose of this event is to review measurement concepts.

You will also be given an **open ended test** to your students based on TEKS 4.14ABC; 4.15AB; 4.16AB

Students can also work with EDM Math Projects

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Six - May 24-28 Measurement Madness II

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.4) Number, operation, and quantitative reasoning. The student **multiplies and divides to solve** meaningful problems involving whole numbers. The student is expected to: **(C) Recall and apply** multiplication facts through 12 x 12. **(4.6)** Patterns, relationships, and algebraic thinking. The student **uses** patterns in multiplication and division. The student is expected to: **(A) use** patterns and relationships **to develop** strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as 9 x 9 = 81 and 81 ÷ 9 = 9); and		4.4C **Recall** multiplication facts through 12 x 12. **Apply** multiplication facts through 12 x 12. **4.6A** **Use** patterns and relationships **to develop** strategies **to rememeber basic multiplication and division facts.** **Such as:** patterns in related multiplication and division number sentences, e.g., 9 x 9 = 81 and 81÷ 9 = 9		4.4C **Grade 3** (3.4A) learn and apply multiplication facts through 12 by 12 using concrete models and objects **Grade 5** No future direct reference in grade 5. 4.6A **Grade 3** (3.6C) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 , 2 = 3, 6 , 3 = 2. **Grade 5** (5.5A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts and diagrams.	Luis has 4 paint sets. There are 12 jars of paint in each set. Which number sentence can be used to find the total number of jars of paint Luis has? A. 12 X 4 = C. 12 - 4 = B. 12 + 4 = Justin has 11 pets on his farm. He fed each pet 12 times last week. How many times in all did he feed his pets last week? When Maggie went to her sister's graduation, she saw that 300 students were graduating. Maggie noticed that equal numbers of graduating students were seated in 5 different sections of the auditorium. How many graduating students were seated in 1 section?	Fourth grade teachers need to assure that students are moving to 5th grade with masterery of multiplication and division TEKS.

Measurement Madness II

Review Open ended Assessment with students

4th Grade Math Scope and Sequence Overview 2009-2010

Sixth Six Weeks - Week Seven- May 31 - June 4 Project: Choice Week

Standards	Instr. Level	Kilgo Depth of Thinking	Vocabulary	Vertical Alignment	Sample Questions	Resources/ Materials
(4.14) Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to: **(A) identify** the mathematics in everyday situations; **(D) use** tools such as real objects, manipulatives, and technology to solve problems. **(4.15)** Underlying processes and mathematical tools. The student communicates about Grade 4 mathematics using informal language. The student is expected to: **(A) explain and record** observations using objects, words, pictures, numbers, and technology; and **(B) relate** informal language to mathematical language and symbols.	**4.14A MT** **4.14D RM** **4.15A RM** **4.15B MT**	**4.14A** **Identify** the mathematics in everyday situations **4.15B** **Relate** informal language to mathematical language and symbols		These TEKS are exactly the same in 3rd and 5th grade	A class is going on a field trip. Each group of 5 students will need an adult helper. What can the teacher do to find out how many adult helpers are needed?	**EDM** Volume 2 Teacher Edition Pages 882-913

Groups will present Projects.

You might want to consider an audience for your presentation. You can invite parents or another class to see your presentations.

Project 1: Making a Cutaway Globe
Project 2: Using a Magnetic Compass
Project 3: A Carnival Game
Project 4: Making a Quilt
Project 5: Which Soft drink is the best buy?
Project 6: Building and viewing structures
Project 7: Numbers, Maya Style

Students will have several weeks to work on this project and presented before the end of the year.

Math Leaders will collect samples from each classroom.