



Third Grade Math Pacing Guide

Lynchburg City Schools 2013-2014



GRADING PERIOD: 1st Nine Weeks				
SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology	
“Getting to Know You”- Community Building 3.17 Bar Graphs: (Ongoing skill) Review prior knowledge (● pictographs displaying the same data as the bar graph) a. Formulate questions to investigate. b. Design data investigations to answer formulated questions, limiting the number of categories for data collection to four. c. Collect data, using surveys, polls, questionnaires, scientific experiments, and observations. d. Organize data and construct a <u>bar graph</u> on grid paper representing 16 or fewer data points for no more than four categories. g. Label each axis on a <u>bar graph</u> and give the <u>bar graph</u> a title. Limit increments on the numerical axis to whole numbers representing multiples of 1, 2, 5, or 10. h. Read the information presented on a simple <u>bar graph</u> (Continued on the next page)	5 days	IDI Folder Vertical Articulation <u>Vocabulary Cards</u> Activities Lessons Literature Text: Ch 3 pp.48-49 Text: Ch 3 pp.50 Text: Ch 15 pp.302-313 Text: Ch 16 pp.322-327; 330-331	Rockingham Resources Suffolk STAR Resources HMC CountryCountdown/WWGraphing/A-F NumberGames/Arachnagraph/A-F Brain POP Jr Tally Charts and Bar Graphs	Assessments Exam View Pro Test Maker

Links: [VDOE SOL Instructional Materials](#); [Curriculum Framework](#); [Enabling Objectives](#)

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GRADING PERIOD: 1st Nine Weeks (continued)

SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.17 Bar Graphs (continued) i. Analyze and interpret information from <u>bar graphs</u> , with up to 30 data points and up to 8 categories, by writing at least one sentence. j. Describe the categories of data and the data as a whole. k. Identify parts of the data that have special characteristics (the greatest, the least, or the same) l. Select a correct interpretation of a graph from a set of where one is correct and the rest are incorrect.	Part of previous 5 days		Rockingham Resources Suffolk STAR Resources	
3.11 Time: (ongoing skill) Review prior knowledge a. Tell time to the nearest minute, using analog and digital clocks. b. Match the times shown on analog and digital clocks to written times and to each other. 3.12 Equivalent Time Periods a. Identify equivalent relationships observed in a calendar, including the number of days in a given month, the number of days in a week, the number of days in a year, and the number of months in a year. b. Identify the number of minutes in an hour and the number of hours in a day.	5 days	Vertical Articulation Text: Ch 7 Time Lessons Time Activities Literature Calendar Lessons Calendar Activities	HMC Country Countdown/Clock/E-J Number Games/Think Tank/E BrainPOPJr Time to the Minute BrainPOPJr Time to the Quarter and Half Hour BrainPOPJr Time to the Hour BrainPOPJr- Calendar and Dates	Assessments Exam View Pro Test Maker Calendar Assessments

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	Suggested	Activities	Technology/Online	
3.1 Place Value: Review Prior Knowledge a. Investigate and identify the place and value for each digit in a six-digit numeral, using Base-10 manipulatives (e.g., Base-10 blocks). b. Use the patterns in the place value system to read and write numbers. c. Read six-digit numerals orally. d. Write six-digit numerals that are stated verbally or written in words. e. Round a given whole number, 9,999 or less, to the nearest ten, hundred, and thousand. f. Solve problems, using rounding of numbers, 9,999 or less, to the nearest ten, hundred, and thousand. g. Determine which of two whole numbers between 0 and 9,999 is greater. h. Determine which of two whole numbers between 0 and 9,999 is less. i. Compare two whole numbers between 0 and 9,999, using the symbols $>$, $<$, or $=$. j. Use the terms <i>greater than</i> , <i>less than</i> , and <i>equal to</i> when comparing two whole numbers.	12 days	Vertical Articulation <u>Place Value Lessons</u> <u>Place Value Activities</u> Text: Ch 2 Literature Text: Ch 3	Rockingham Resources Suffolk STAR Resources HMC Number Games/Tiny's ThinkTank/A Fraction Action/Number Line/A BrainPOPJr Place Value BrainPOPJr Rounding HMC CountryCountdown/Harrison's/L-N Fraction Action/Number Line/B-C BrainPOPJr Comparing Numbers	Assessments Exam View Pro Test Maker

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	Suggested	Activities	Technology/Online	
3.2 Inverse Relationships (addition and subtraction) a. Use the inverse relationships between addition/subtraction to solve related basic fact sentences. For example, $5 + 3 = 8$ and $8 - 3 = \underline{\quad}$. b. Write three related basic fact sentences when given one basic fact sentence for addition/subtraction.	3 days	Vertical Articulation Text: Ch1 <u>Fact Family Lessons</u> <u>Fact Family Activities</u> Literature	Rockingham Resources Suffolk STAR Resources HMC CountryCountdown/CountCritters/G-U	Assessments Exam View Pro Test Maker
3.4 Single-step and Multistep problems (ongoing) a. Determine whether an estimate or an exact answer is an appropriate solution for practical addition and subtraction problems. b. Determine whether to add or subtract in practical problem situations. c. Estimate the sum or difference of two whole numbers, each 9,999 or less when an exact answer is not required. d. Add or subtract two whole numbers, each 9,999 or less. e. Solve practical problems involving the sum of two whole numbers, each 9,999 or less, with or without regrouping f. Solve practical problems involving the difference of two whole numbers, each 9,999 or less, with or without regrouping g. Solve single-step and multistep problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping.	4 days	Vertical Articulation Text: Ch 4, 5 <u>Problem Solving Lessons</u> <u>Problem Solving Activities</u> <u>Literature</u>	HMC CountryCountdown/BlockBuster/S-Z Number Games/Think Tank/B-C Modeling Problems with Thinking Blocks	Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.19 Addition Patterns Review Prior Knowledge a. Recognize repeating and growing numeric patterns (e.g., skip counting, addition tables). b. Describe repeating and growing numeric patterns formed using numbers, tables, and/or pictures, using the same or different forms. c. Extend repeating and growing patterns of numbers using concrete objects, numbers, tables, and/or pictures	4 days	Vertical Articulation Patterns Lessons Patterns Activities Text: Ch 23 Literature	Rockingham Resources Suffolk STAR Resources Video Strategies for Learning Basic Facts_ BrainPOPJr Basic Adding	Assessments Exam View Pro Test Maker
3.20 Properties for addition a. Investigate the identity property for addition (when the number zero is added to another number or another number is added to the number zero, that number remains unchanged. Examples of the identity property for addition are $0 + 2 = 2$; $5 + 0 = 5$. c. Recognize that the commutative property for addition is an order property. Changing the order of the addends does not change the sum ($5 + 4 = 9$ and $4 + 5 = 9$). e. Write number sentences to represent equivalent mathematical relationships (e.g., $4 + 3 = 9 - 2$). f. Identify examples of the identity properties for addition. g. Identify examples of the commutative properties for addition	4 days	Vertical Articulation Properties Lessons Properties Activities	BrainPOP Commutative Property Video Commutative Property_	Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
Extra days for flexible time	2 days			
Enrichment and Remediation	3 days			Remediation Post Tests

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GRADING PERIOD: 2 nd Nine Weeks				
SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.17 Picture Graphs: Review Prior Knowledge (● pictographs with keys and solve problems using information in the graph) a. Formulate questions to investigate. b. Design data investigations to answer formulated questions, limiting the number of categories for data collection to four. c. Collect data, using surveys, polls, questionnaires, scientific experiments, and observations. h. Read the information presented on a picture graph i. Analyze and interpret information from picture graphs, with up to 30 data points and up to 8 categories, by writing at least one sentence. j. Describe the categories of data and the data as a whole k. Identify parts of the data that have special characteristics, including categories with the greatest, the least, or the same l. Select a correct interpretation of a graph from a set of interpretations of the graph, where one is correct and the remaining are incorrect.	5 days	Vertical Articulation Activities Lessons Text: Ch 3 pp.48-49 Text: Ch 3 pp.50 Text: Ch 15 pp.302-313 Text: Ch 16 pp.322-327; 330-331 Literature	Rockingham Resources Suffolk STAR Resources HMC CountryCountdown/WWGraphing/A-F NumberGames/Arachnagraph/A-F	Assessments Exam View Pro Test Maker
3.6 Model Multiplication through the 5s tables (begin) a. Model multiplication, using area, set, and number line models.	5 days	Vertical Articulation Lessons Activities Text: Ch 8,9 Literature	HMC CountryCountdown/Counting/V-Z Video Array Model for Multiplication	Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.5 Multiplication Facts through 12s (ongoing) a. Recall and state the multiplication facts through the twelves table. b. Recall and write the multiplication facts through the twelves table. 3.6 Multiplication a. Model multiplication, using area, set, and number line models. c. Solve multiplication problems, using the multiplication algorithm, where one factor is 99 or less and the second factor is 5 or less. d. Create and solve word problems involving multiplication, where one factor is 99 or less and the second factor is 5 or less. 3.20 Multiplication Properties b. Investigate the identity property for multiplication d. Recognize that the commutative property for multiplication is an order property. f. Identify examples of the identity and commutative properties for multiplication 3.19 Multiplication Patterns a. Recognize, describe and extend multiplication patterns using numbers and tables.	17 days	Vertical Articulation Lessons Activities Text: Ch 10, 11, 29 Literature Vertical Articulation Lessons Activities Vertical Articulation Lessons Activities Text: Ch 11 pp.220-221 Vertical Articulation Lessons Activities Text: Ch 9 pp. 180-181 Ch 11 pp. 216-217 Literature	Rockingham Resources Suffolk STAR Resources HMC Number Games/UpUpArray/A-C Multiplication Applet HMC Fraction Action/ Number Line/D BrainPOPJr-Arrays BrainPOPJr- Multiply by 0 and 1 BrainPOPJr-Repeated Addition HMC Numberopolis/CarnivalStories/S (For Numberopolis sign-in as a 2nd grade guest)	Assessments Exam View Pro Test Maker Assessments Exam View Pro Test Maker Assessments Exam View Pro Test Maker Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.11 Elapsed Time: (ongoing skill) c. When given the beginning time and ending time, determine the elapsed time in one-hour increments within a 12-hour period (times do not cross between a.m. and p.m.). ● Identify the ending time when given the beginning and elapsed time. d. Solve practical problems in relation to time that has elapsed. Extra days for Flexible Time	3 days	Vertical Articulation Lessons Activities Text: Ch 7 Literature	Rockingham Resources Suffolk STAR Resources	Assessments Exam View Pro Test Maker
Enrichment and Remediation	5 days			Remediation Post Tests

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GRADING PERIOD: 3 rd Nine Weeks				
SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.17 Line Plots (continuing graphing) a. Formulate questions to investigate. e. Construct a line plot with no more than 30 data points. f. Read, interpret and analyze information from line plots by writing at least one statement. k. Identify parts of the data that have special characteristics, including categories with the greatest, the least, or the same l. Select a correct interpretation of a graph from a set of interpretations of the graph, where one is correct and the remaining are incorrect.	4 days	Vertical Articulation Activities Lessons Text: Ch15, 16 (parts) Literature	Rockingham Resources Suffolk STAR Resources HMC MegaMath NumberGames/Arachnagraph/E-F	Assessments Exam View Pro Test Maker

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GRADING PERIOD: 3 rd Nine Weeks (continued)				
SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.3 Fractions: Review Prior Knowledge a. Name and write fractions (including mixed numbers) represented by a model to include halves, thirds, fourths, eighths, tenths, and twelfths. b. Use concrete materials and pictures to model at least halves, thirds, fourths, eighths, tenths, and twelfths and find equivalent fractions. c. Compare fractions using the terms greater than, less than, or equal to and the symbols ($<$, $>$, and $=$). Comparisons are made between fractions with both like and unlike denominators, using models, concrete materials and pictures.	10 days	Vertical Articulation Lessons Activities Text: Ch 25 Literature	Rockingham Resources Suffolk STAR Resources Video Models for Teaching Fractions_ Naming Fraction Sets Naming Fraction Circles	Assessments Exam View Pro Test Maker
3.7 Add and Subtract Fractions a. Demonstrate a fractional part of a whole (area models) b. Demonstrate a fractional part of a whole (set models) c. Demonstrate a fractional part of a whole, using length/measurement models. d. Name and write fractions and mixed numbers represented by drawings or concrete materials. e. Represent a given fraction or mixed number, using concrete materials, pictures, and symbols. f. Add and subtract with proper fractions having like denominators of 12 or less, using concrete materials and pictorial models representing area/regions (circles, squares, and rectangles), length/measurements (fraction bars and strips), and sets (counters).		Vertical Articulation Lessons Activities Text: Ch 26 Literature	HMC Fraction Action/Flare Up/A-F ShapesAhoy/ShipShapes/T-V (For Shapes Ahoy sign-in as a 2nd grade guest) BrainPOPJr- Basic Parts of a Whole BrainPOPJr –More Fractions HMC Fraction Action/Flare Up/G-H Visual Fractions- Add Fraction Circles	Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.10 Perimeter and Area a. Measure each side of a variety of polygons and add the measures of the sides to determine the perimeter of each polygon. b. Determine the area of a given surface by estimating and then counting the number of square units needed to cover the surface.	2 days	Vertical Articulation Lessons Activities Text: Ch 22.1-22.2	HMC Shapes Ahoy/ShipShape/W, X (For Shapes Ahoy sign-in as a 2nd grade guest) BrainPOPJr-Perimeter BrainPOPJr-Area	Assessments Exam View Pro Test Maker
3.6 Model Division b. Model division, using area, set, and number line models. 3.2 Inverse Relationships- Multiplication & Division a. Use the inverse relationships between multiplication/division to solve related basic fact sentences. For example, $4 \times 3 = 12$ and $12 \div 4 = \underline{\quad}$. b. Write three related basic fact sentences when given one basic fact sentence for multiplication/division. For example, given $3 \times 2 = 6$, solve the related facts $\underline{\quad} \times 3 = 6$, $6 \div 3 = \underline{\quad}$, and $6 \div \underline{\quad} = 3$.	10 days	Vertical Articulation Lessons Activities Text: Ch 12, 13, 14 Literature Vertical Articulation <u>Fact Family Lessons</u> <u>Fact Family Activities</u> Text: Ch 12 pp.246-249 Ch 14 pp. 280-281 Literature	Rockingham Resources Suffolk STAR Resources BrainPOPJr- Making Equal Groups BrainPOPJr- Repeated Subtraction BrainPOPJr-Arrays	Assessments Exam View Pro Test Maker Assessments Exam View Pro Test Maker

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.8 Money: Review Prior Knowledge a. Count the value of collections of coins and bills up to \$5.00. b. Compare the values of two sets of coins or bills, up to \$5.00, using the terms <i>greater than</i> , <i>less than</i> , and <i>equal to</i> . c. Make change from \$5.00 or less. Identify the group of coins and bills needed to make change. Extra Days for Flexible Time	5 days 1 days	Vertical Articulation Lessons Activities Text: Ch 6 Literature	Rockingham Resources Suffolk STAR Resources HMC Numberopolis/Lulu'sLunch/Q-W (For Numberopolis sign-in as a 2nd grade guest) BrainPoPJr- Counting Coins	Assessments Exam View Pro Test Maker
Enrichment and Remediation	5 days			Remediation Post Tests

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GRADING PERIOD: 4 th Nine Weeks				
SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.18 Probability: Review Prior Knowledge a. Define probability as the chance that an event will happen. b. List all possible outcomes for a given situation (e.g., heads and tails are the two possible outcomes of flipping a coin). Identify all possible combinations of a 2x3 array of objects. c. Identify the degree of likelihood of an outcome occurring using terms such as <i>impossible</i> , <i>unlikely</i> , <i>as likely as</i> , <i>equally likely</i> , <i>likely</i> , and <i>certain</i> .	5 days	Vertical Articulation Lessons Activities Text: Ch 24 Literature	Rockingham Resources Suffolk STAR Resources HMC Fraction Action/Last Chance/A-C BrainPOP Jr- Basic Probability	Assessments Exam View Pro Test Maker
3.15 Points, lines, line segments, rays and angles a. Identify examples of points, line segments, rays, angles, and lines. b. Draw representations of points, line segments, rays, angles, and lines, using a ruler or straightedge.	Total geometry about 10 days	Lessons Activities Text: Ch 19 Literature	HMC Ice Station/Polar Plane/A-B	Assessments Exam View Pro Test Maker
GRADING PERIOD: 4 th Nine Weeks (continued)				

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SOL and Enabling Objectives	Time Frame	Teaching Resources		Assessments
	Suggested	Activities	Technology/Online	
3.19 Geometric Patterns a. Recognize repeating and growing geometric patterns b. Describe repeating and growing geometric patterns c. Extend repeating and growing patterns of figures using concrete objects, and/or pictures 3.16 Congruence a. Identify examples of congruent and noncongruent figures. Verify their congruence by laying one on top of the other using drawings or models. b. Determine and explain why plane figures are congruent or noncongruent, using tracing procedures.		Vertical Articulation Lessons Activities Text: Ch 23 pp. 470-473 Ch 23 pp. 474-477 Literature Vertical Articulation Lessons Activities Text: Ch 20	Rockingham Resources Suffolk STAR Resources HMC Ice Station/Polar Plane/A-B HMC Ice Station/Polar Plane/H-K Video ▶ Angles	Assessments Exam View Pro Test Maker Assessments Exam View Pro Test Maker
Review for SOL Test	28 days left in the 9 weeks			Remediation Post Tests

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