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Lynchburg City Schools 2013-2014

Grading Period: 1st Nine Weeks			**Total Days to Teach = 44 days**
SOL & Enabling Objectives: Description	**Text**	**Recommended Activities**	**Time Frame**
Begin the school year with relationship building activities – continue integrating relationship building throughout the school year **Activity Ideas**			
Begin teaching the 3rd day of school. **DO NOT FEEL BOUND TO THE TEXT BOOK! PLEASE USE ONLINE RESOURCES, APPLETS, & HANDS-ON ACTIVITIES**			
Exponents & Scientific Notation 7.1a Recognizing powers of 10 with a **negative exponents** by examining patterns.	Not in text!	ESS 7.1ab Powers of Ten The Universe Within	**Total for this unit = 5 days**
7.1b write a power of 10 with **a negative exponent in fraction & decimal form.**	Not in text!	ESS_7.1cgh_Scientific Notation	
7.1c Write a number greater than 0 in **scientific notation.**	1-9	Scientific Notation Lesson Plan	

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7.1d Recognize a number greater than 0 in **scientific notation.** 7.1e Compare & determine **equivalent relationships** between numbers larger than 0 written in **scientific notation.** 7.1h **Order no more than 3 numbers** greater than 0 written in scientific notation.	1-9 Not in text! Not in text!	The Megapenny Project Lesson plan Comparing #'scientific Notation	
Fractions, Decimals, & Percents 7.1f **Represent a number in fraction, decimal, & percent forms.** 7.1g **Compare, order, & determine equivalent relationships among fractions, decimals, & percents**. Decimals are limited to the thousandths place, & percents are limited to the tenths place. Ordering is limited to no more than 4 numbers.	5-4, 5-5, 5-6, 7-6 5-8	Fraction Tower Equivalencies Activities on R drive Interactive Activity_Equivalent Fractions NLVM fractions percents Visual Fractions ESS 7.1g Ordering Fractions Decimals & Percents ESS 7.1cgh Scientific Notation Interactive Activity Order Fractions Anneberg Fraction Tracks	**Total for this unit = 9 days**
Fractions & Decimals		ESS 6.4ab Modeling Multiplication of Fractions	

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6.4a **Demonstrate multiplication & division of fractions using multiple representations.**	7-2a, 7-4a	ESS 6.4ab Modeling Division of Fractions VDOE Area Model for Multiplication of Fractions Video	
6.4b **Model algorithms for multiplying & dividing with fractions** using appropriate representations.	Not in text!	Illuminations Fraction Models	
6.6a **Multiply & divide with fractions & mixed numbers.** Answers are expressed in simplest form.	7-2, 7-3	VDOE Fraction Computation Video	
6.6b **Solve single-step & multi-step practical problems that involve addition & subtraction with fractions & missed numbers,** with and without regrouping, that include like and unlike denominators of 12 or less. Answers are expressed in simplest form.	6-3, 6-4	NLVM Multiplying Fractions Applet NLVM Dividing Fractions Applet VDOE Fraction Computation Video	
6.6c **Solve single-step & multi-step practical problems that involve multiplication & division with fractions & mixed numbers,** with and without regrouping, that include denominators of 12 or less. Answers are expressed in simplest form.	7-2, 7-3	Real Life Fractions Lesson Plan Mangos Lesson Plan VDOE Fraction Computation Video	

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6.7 **Solve single-step & multi-step practical problems involving addition, subtraction, multiplication, & division with decimals** expressed to thousandths with no more than 2 operations.	3-5, 4-1, 4-2, 4-3, 4-4	Multiplying Fractions Lesson Plan Dividing Fractions Lesson Plan ESS 6.7 Decimal Lesson Plan 6.7 Decimal Lesson Plan Decimal Lesson Plan	
Integers 7.3a **Model addition, subtraction, multiplication, & division of integers** using pictorial representations of concrete manipulatives. 7.1j Demonstrate **absolute value using a number line.** 7.1k Determine the **absolute value of a rational number.** 7.1l Show that the distance between two rational	 3-4a,3-5a, 3-6 (p.134), 3-7 (p. 138) 3-1 3-1 Not in text!	 VDOE Integer Models Part 1 Video VDOE Integer Models Part 2 Video ESS 7.1jk Absolute Value Are you Absolutely Sure? Lesson & Activities ESS 7.3ab Integers: Addition Subtraction	

numbers on the number line is the **absolute value** of their difference, & apply this principle to **solve practical problems.**		ESS 7.3ab Integers: Multiplication Division	
7.3b **Add, subtract, multiply, & divide integers.**	3-4, 3-5, 3-6, 3-7	NLVM Subtract Integers	
7.3c **Simplify numerical expressions** involving addition, subtraction, multiplication, & division of integers using order of operations.	1-3 & w/in (3-4, 3-5, 3-6, 3-7)	NLVM Addition Integers Interactive Integer Chip Model CMP	
7.3d **Solve practical problems involving addition, subtraction, multiplication, & division with integers.**		Order of Operations Lesson Plan ESS 7.1i Square Roots	
7.1i Determine the **square root of a perfect square** less that or equal to 400.	11-1	Illuminations lesson Squares & Square Roots	
Properties 7.16a **Identify properties of operations used in simplifying expressions.** 7.16b **Apply the properties of operations to simplify expressions.**	1-6	VDOE Properties Part 1 Video VDOE Properties Part 2 Video VDOE Commutative Property Video	**Total for this unit = 6 days**

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		VDOE Associative Property for Addition Video VDOE Distributive Property of Multiplication over Addition Video ESS 7.16ab Properties Illuminations lesson properties & Alg Transform	
Flex days/Remediation			**6 days**
Grading Period: 2nd Nine Weeks			**Total Days to Teach = 45 days**
SOL & Enabling Objective: Description	**Text**	**Recommended Activities**	**Time Frame**
Expressions 7.13a **Write verbal expressions as algebraic expressions.** Expressions will be limited to no more than 2 operations.	4-1	ESS 7.13abde Translate & Evaluate	**Total for this unit = 5 days**

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7.13b **Write verbal sentences as algebraic equations.** Equations will contain no more than 1 variable term. 7.13c **Translate algebraic expressions & equations to verbal expressions & sentences.** Expressions will be limited to no more than 2 operations. 7.13d **Identify examples of expressions & equations.** 7.13e **Apply the order of operations to evaluate expressions for given replacement values** of the variable. Limit the number of replacement to no more than 3 per expression.	4-1 Not in text! Not in text! Review = 1-3 New = 1-4	Order of operations	
Linear Equations 7.14a **Represent & demonstrate steps for solving one-and two-step equations in one variable using concrete materials**, pictorial representations & algebraic sentences. 7.14b **Solve one-and two-step linear equations in 1 variable.**	4-2a lab, 4-3 lab (p. 160) 4-2, 4-3, 4-4	VDOE Modeling One-Step Equations Video Illuminations Activity Algebra Tiles Thinking Blocks Modeling and Solving equations ESS 7.14abc Equations NLVM Solving Equations	**Total for this unit = 5 days**

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7.14c **Solve <u>practical problems</u> that require the solution of a one-or two-step linear equation.**		Balancing Equations Spy Guys Illuminations lesson plan Building Bridges	
Inequalities 7.15a **Represent & demonstrate steps in solving inequalities in 1 variable, using concrete materials,** pictorial representations, & algebraic sentences. 7.15c **Identify a numerical value that satisfies the inequality.** 7.15b **Graph solutions to inequalities on the number line.**	Not in text! 4-5 4-5	Algebra Tiles Activity ESS 7.15abc Inequalities Inequality Match: Group Organizer PDF	**Total for this unit = 4 days**
Proportional Reasoning **LCS *Ratios, Rates, Unit Rates*** 7.4a **Write proportions** that represent equivalent relationships between 2 sets. 7.4b **Solve a proportion to find a missing term.**	7-1, 7-2 7-3, 7-8,8-2 7-3	Ratio Lesson Spy Guys ESS 7.4a Solving Proportions Illuminations Lesson Capture-Recapture Illuminations Lesson plan Highway Robbery	**Total for this unit = 14 days**

7.4d **Apply proportions to solve practical problems,** including scale drawings. Scale factors shall have denominators no greater than 12 & decimals no less than tenths. Calculators may be used. 7.4c Apply proportions to **convert units of measurement between the U.S. Customary System & the metric system.** Calculators may be used. 7.4e **Using 10% as a benchmark, mentally compute 5%, 10%, 15%, or 20% in a practical situation** such as tips, tax, or discounts. 7.4f **Solve problems involving tips, tax, & discounts.** Limit problems to only one percent computation per problem.	7-4 1-8 Not in text! 8-5	Illuminations Scale Factor Illuminations Lesson plan Scaling away Illuminations lesson plan scale & distance Lesson Plan Mental Math	
Coordinate Graphing 6.11a **Identify & label the axes** of a coordinate plane. 6.11b **Identify & label the quadrants** of a coordinate plane. 6.11c **Identify the quadrant or the axis** on which a	8-6	ESS 6.11abcdef Whats the Point Applet Coordinate Graphing Coordinate Plane Brain Pop Video	**Total for this unit = 2 days**

point is positioned by examining the coordinates (ordered pair) of the point. 6.11d **Graph ordered pairs in the 4 quadrants** and on the axes of a coordinate plane. 6.11e **Identify ordered pairs represented by points in the 4 quadrants** and on the axes of the coordinate plane. 6.11f **Relate the coordinates of a point to the distance from each axis** & relate the coordinate of a single point to another point on the same horizontal or vertical line.		Billy Bug Coordinate Plane NLVM Point Plotter Brainpop Coordinate Plane Coordinate Plane Locate Aliens	
Congruence of Segments, Angles, & Polygons 6.12a **Characterize polygons as congruent & non-congruent** according to the measures of their sides 7 angles. 6.12b Determine the **congruence of segments, angles, & polygons given their attributes.** 6.12c **Draw polygons in the coordinate plane** given coordinates for the vertices; use coordinates to find the length of a side joining points with the		VDOE Angles Video	**Total for this unit = 3 days**

same first coordinate or the same second coordinate. Apply these techniques in the same context of solving practical & mathematical problems.			
Similar Figures 7.6a **Identify corresponding sides & corresponding & congruent angles of similar figures** using traditional notation of curved lines for the angles. 7.6b **Write proportions to express the relationships between the length of corresponding sides of similar figures.** 7.6c **Determine if quadrilaterals or triangles are similar** by examining congruence of corresponding angles & proportionality of corresponding sides. 7.6d **Given two similar figures, write similarity statements using symbols** such as $\triangle ABC \sim \triangle DEF$, $\angle A$ *corresponds to* $\angle D$, and $\overline{AB}$ corresponds to $\overline{DE}$.		VDOE Angles Video ESS 7.6cd Similar Figures 10-6 Lab (text p.440)	**Total for this unit = 4 days**

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Flex days/Remediation:			**3 days**
Grading Period: 3rd Nine Weeks			**Total Days to Teach = 48 days**
SOL & Enabling Objective: Description	**Text**	**Recommended Activities**	**Time Frame**
Quadrilaterals 7.7a **Compare & contrast attributes of the following quadrilaterals:** parallelogram, rectangle, square, rhombus, & trapezoid. 7.7b **Identify the classification(s) to which a quadrilateral belongs,** using deductive reasoning & inference.	10-5	VDOE Properties of Polygons Video ESS 7.7a Quadrilateral Sort Illuminations Activity Shape Sorter Illuminations lesson plan classify polygons Activity Quadrilateral Quest	**Total for this unit = 2 days**
Transformations **LCS** ***Coordinate Plane*** 7.8a **Identify the coordinates of the image of a right triangle or rectangle that has been translated** either vertically, horizontally, or a combination of a vertical & horizontal translation.	3-3 10-8	Brainpop Coordinate Plane Coordinate Plane Locate Aliens Game Transformation Golf ESS 7.8bf Rotation	**Total for this unit = 12 days**

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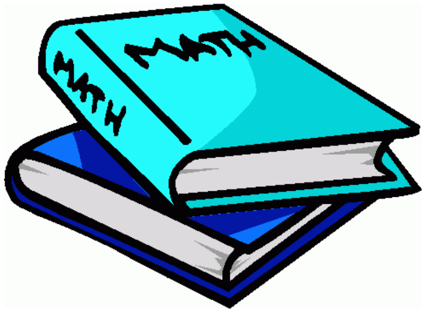

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7.8b **Identify the coordinates of the image of a right triangle or rectangle that has been rotated 90 or 180 degrees about the origin.** 7.8c **Identify the coordinates of the image of a right triangle or a rectangle that has been reflected over the x- or y- axis.** 7.8d **Identify the coordinates of a right triangle or rectangle that has been dilated.** The center of the dilation will be the origin. 7.8e **Sketch the image of a right triangle or rectangle translated** vertically or horizontally. 7.8f **Sketch the image of a right triangle or rectangle or rectangle that has been rotated 90 or 180 degrees about the origin.** 7.8g **Sketch the image of a right triangle or rectangle that has been reflected over the x- or y-axis.** 7.8h **Sketch the image of a dilation of a right triangle or rectangle limited to a scale factor**	10-8b 10-9 10-8b 10-8 10-9b	Illuminations Algebraic Transformations Hotmath Keylock Transformations ESS 7.8dh Dilation NLVM dilations ESS 7.8efgh Translation & Reflection NLVM translations NLVM rotations NLVM reflections	

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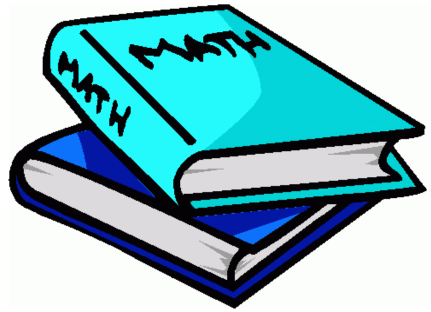
or ¼, ½, 2, 3, or 4.			
Sequences 7.2a Analyze **arithmetic & geometric sequences** to discover a variety of patterns. 7.2b Identify the **common difference in arithmetic sequence.** 7.2c Identify the **common ratio in a geometric sequence.** 7.2d Given an arithmetic or geometric sequence, **write a variable expression to describe the relationship between two consecutive terms in a sequence.**	1-7 Not in text!	ESS 7.2abcd Arithmetic & Geometric Sequences Interactive Sequencer Describing Patterns Write the Variable Expression for a Sequence What's the Rule? Lesson and Activities	**Total for this unit = 3 days**
2D and 3D Figures LCS **Perimeter, Circumference, & Area of 2D figures** 7.5a **Determine if a practical problem involving a rectangular prism or cylinder represents the application of volume or surface area.**	6-8, 11-5, 11-6 Not in text!	VDOE Units of Measure Video VDOE Measurement in Square Units Video Area and Perimeter Lesson Spy Guys	**Total for this unit = 13 days**



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		VDOE Volume & Surface Area Video	
VOLUME			
7.5f Find the **volume of a rectangular prism.**	12-4	ESS 7.5b Surface Area Rectangular Prism (textbook) 12-4a	
7.5g **Solve practical problems that require finding the volume of a rectangular prism.**		Surface Area Rectangular Prism: Learner.org Surface Area and Volume lesson	
7.5h Find the **volume of a cylinder.**	12-5	ESS 7.5dh Surface Area Volume Cylinder	
7.5i **Solve practical problems that require finding the volume of a cylinder.**		Surface Are of Cylinder: leaner.org	
7.5j **Describe how the volume of a rectangular prism is affected when one measure attribute is multiple by a scale factor.** Problems will be limited to changing attributes by scale factors only.	12-4b		
SURFACE AREA		ESS 7.5f Volume of Rectangular Prism	
7.5b Find the **surface area of a rectangular prism.**	12-2	Annenberg Building Rafts with Rods	
7.5c **Solve the practical problems that require finding the surface area of a rectangular**	12-3	Illuminations Lesson plan Popcorn Volume	

prism. 7.5d Find the **surface area of a cylinder.** 7.5e **Solve practical problems that require finding the surface area of a cylinder.** 7.5k **Describe how the surface area of a rectangular prism is affected when one measured attribute is multiplied by a scale factor.** Problems will be limited to changing attributes by scale factors only.		Volume and Displacement Lesson Spy Guys ESS 7.5h Surface Area Volume Cylinder Annenberg Largest Container Activity ESS 7.5jk Attributes Rectangular Prism Illuminations Scale Factor Changing Attributes Surface Area and Volume	
Statistics – Histograms **LCS** ***Frequency Charts*** 7.11a Collect, organize, display, & interpret a data set using **histograms.** For collection & display of raw data, limit the data to 20 items. 7.11b **Determine the patterns & relationships within data sets (e.g., trends).** 7.11c **Make inferences, conjectures, & predictions based on analysis of a set of data.**	2-7 (Not in much in text!) 2-2 2-2	Illuminations Lesson Histograms & Bar Graphs ESS 7.11ad Numbers in a Name HLVM Histograms Illuminations Advanced Data Grapher Interpreting Graphs Lesson Spy Guys	**Total for this unit = 8 days**

7.11d **Compare & contrast histograms w/line plots, circle graphs, & stem-and-leaf plots presenting information from the same data set.**	2-1. 2-3. 2-5. 10-2		
Tree Diagrams	9-2		**2 days**
Flex days/Remediation			**8 days**
Grading Period: 4th Nine Weeks			**Total Days to Teach = 43 days**
SOL & Enabling Objective: Description	**Text**	**Recommended Activities**	**Time Frame**
Probability 7.10a Compute the number of possible outcomes by using the **Fundamental Counting Principle.** 7.9a Determine the **theoretical probability** of an event. 7.9b Determine the **experimental probability** of an event.	 9-3 9-6 9-6	 Interactive Applet theor & exper probability Interactive Coin Tosses Probability Lesson Spy Guys Interactive Experimental Probability	**Total for this unit = 11 days**

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7.9c **Describe changes in the experimental probability as the number of trials increases.** 7.9d **Investigate & describe the difference between the probability of an event found through experiment or simulation versus the theoretical probability of that same event.** 7.10b Determine the **probability of a compound event** containing no more than 2 events.	9-6b 9-7	ESS 7.9d What are the Chances Illuminations lesson plan coin toss Illuminations lesson exper & theo probability ESS 7.10a The Real meal Deal Data Analysis and Probability Games ESS 7.10a The Real Meal Deal Data Analysis and Probability Games	
POST-TEST (for Teacher Evaluation & School Improvement – use same test as PRE-TEST			
SOL Review & Testing:			**31 Days**

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