



# Math Curriculum Guide: Sixth Accelerated

## Revised for 2008-2009

### INTRODUCTION:

This Curriculum Guide is an evolving document that will serve teachers in each of our accelerated sixth grade math classrooms. Our own teachers, working with a variety of resources, constructed the sequence. We look forward to your comments and suggestions for improvement as we work together to provide the best possible educational experience for children in the Lynchburg City Schools.

When one views a curriculum sequence like this one, it is critical that the listing not be interpreted to mean that each topic should be taught only once. Rather, the introduction of that topic should occur before or within the given six weeks, and a major focus during that time would be to address those specific SOL.

As educators, we recognize that it is unrealistic to think that these topics can be taught and mastered in a day or even a week. A sound educational approach involves weaving the math SOL throughout the school year and into other subject matter as well. To truly understand and be able to demonstrate mastery of the math SOL, students need to experience the SOL content spiraled throughout the curriculum at appropriate cognitive levels during the entire school year.

As you use this guide, periodically send your comments and suggestions for improvement to Patty West at [westpl@lcsedu.net](mailto:westpl@lcsedu.net).

Thank you for all that you do for our children and for your fellow educators.

## 2008-2009 Sixth Accelerated Math Sequence (page 1 of 3)

1 <sup>st</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.2 Simplifying expressions containing whole numbers, positive exponents and decimals using order of operations ( begin)	7.1 Use of scientific notation for numbers greater than ten ( begin) 7.3 Identify and apply properties of operations with Real Numbers 7.19 Investigate and describe with tables, graphs and rules, patterns of functional relationships, including arithmetic and geometric sequences. 7.21 Use algebraic terms appropriately: <i>equation</i> , <i>inequality</i> , and <i>expression</i> .*	Ch 1- Decimal Patterns and Algebra; includes: <ul style="list-style-type: none"> <li>Scientific notation</li> <li>Metric conversions</li> <li>Exponents</li> <li>Introducing variables, expressions and equations</li> </ul>	<i>The Language of Algebra</i> Phase 1: Writing Equations and Inequalities
7.16 Mean, mode, median, and range			
7.17 Collect, analyze, display and interpret data, including frequency distributions, line, stem & leaf, and box & whiskers plots, histograms and scattergrams			
7.18 Make inferences and predictions based on the analysis of data			
NOTES: * Additional resources on inequalities may have to be supplemented.			
2 <sup>nd</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.5 Solve practical problems involving basic operations with integers	7.12 Graphing ordered pairs in four quadrants of a coordinate plane	Ch 3- Algebra: Integers includes: Coordinate graphing	<i>The Language of Algebra</i> Phase 2: Creating Graphs of Equations
7.20 Translate verbal expressions into algebraic expressions, and sentences into equations			
7.22 Solve one-step, one-variable equations and inequalities		Ch 4.1-4.3 Algebra: Linear Equations (in 1-variable)* Ch 4.5- Inequalities	<i>The Language of Algebra</i> Phase 3: Finding Solutions of Equations
NOTES:* Ch 4.4, 4.6, and 4.7 involve 8 <sup>th</sup> grade SOL which may be used as an extension into solving two step equations and linear functions.			

## 2008-2009 Sixth Accelerated Math Sequence (page 2 of 3)

3 <sup>rd</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.1 Compare, order, and determine equivalent relations between fractions, decimals, and percents, including scientific notation for numbers greater than ten. (continued)	7.2 Simplifying expressions that contain whole numbers, fractions, decimals and positive exponents using order of operations (continued)	Ch 5- Fractions, Decimals and Percents; includes: <ul style="list-style-type: none"> <li>• Prime factorization</li> <li>• GCF</li> <li>• LCM</li> </ul>	<i>Making Mathematical Arguments</i> Phase 3: Primes, Patterns and Generalizations
*6.6 Review the four operations (add, subtract, multiply and divide) with fractions			
7.4 Solve practical problems involving tips, discounts, and sales tax with whole numbers, fractions and decimals (begin)	7.6 Use proportions to solve practical problems, including scale drawings with rational numbers and percents	Ch 7.1-7.5 Ratios and Proportions Ch 7.7-7.8 Percents Ch 6.7 Changing customary units	<i>Buyer Beware</i> Phase 1: Rates & unit prices Phase 2: Ratio and Proportion <i>From the Ground Up</i> Phase 1: Floor plans, Site Plans and Walls
7.6 Use proportions to solve practical problems, including scale drawings with rational numbers and percents			
NOTES: * A review of operations with fractions may or may not be necessary for your students.			
4 <sup>th</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.4 Solve practical problems using rational numbers (whole numbers, fractions, decimals) and percents, including tips, discounts, sales tax and simple interest	7.14 Describe the difference between the theoretical probability of a simple event and the probability found through simulation	Ch 8- Applying Percent	<i>Buyer Beware</i> Phase 3: Percents
7.15 Identify the possible arrangements of several objects using a tree diagram or the Fundamental (Basic) Counting Principle			
NOTES:			

## 2008-2009 Sixth Accelerated Math Sequence (page 3 of 3)

5 <sup>th</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.9 Compare, contrast and classify quadrilaterals (parallelogram, rectangle, square, rhombus, and trapezoid)		Ch 10.5-10.9b-Geometry*	<i>Getting In Shape</i> Phase 2: Polygons Phase 3: Circles  <i>From the Ground Up</i> Phase 2: Roofs, Area and Cost  Phase 3: Budgeting and Building
7.10 Identify and draw polygons (5 to 10 sides)		Ch 6.8- Perimeter and area**	
7.11 Determine if quadrilaterals and triangles are similar, and write proportions to express the relationships between corresponding parts of similar polygons		Ch 6.9- Circumference	
7.13 Transformations of polygons in a coordinate plane using rotations and translations.		Ch 11.4-11.8 Geometry: Measuring Two- Dimensional Figures***	
7.7 Estimate and find the area of polygons by subdividing; and apply perimeter and area formulas in practical situations			

NOTES: \* Ch 10.2 is a review of circle graphs which is a 6<sup>th</sup> grade SOL (6.18)  
 \*\* Perimeter and area formulas are on the Math 8th SOL test reference sheet.  
 \*\*\* Ch 11.1-11.2 reviews squares and square roots if a review is needed.(SOL 6.22)

6 <sup>th</sup> SIX WEEKS	SOL Objectives	Textbooks	
		Glencoe	MathScape
7.8 Investigate and solve problems involving the volume and surface area of rectangular prisms and cylinders*		Ch 12.1-12.5 - Geometry: Measuring Three- Dimensional Figures	
<b>Review for SOL Test</b>			

NOTES:  
 \* Volume and surface area formulas are on the Math 8 SOL test reference sheet.