



Math Curriculum Guide: Seventh Grade

Revised for 2008-2009

INTRODUCTION:

This Curriculum Guide is an evolving document that will serve teachers in each of our seventh 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.

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

2008-2009 Seventh Grade Math Sequence (page 1 of 3)

1 st SIX WEEKS	SOL Objectives	Resources
7.2 Simplifying expressions containing whole numbers, positive exponents and decimals using order of operations (begin)		Ch 1- Decimal Patterns and Algebra; includes: <ul style="list-style-type: none"> • Scientific notation • Metric conversions • Exponents • Introducing variables, expressions and equations
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> .		
7.16 Mean, mode, median, and range		Ch 2.1-2.7- Statistics: Analyzing Data http://www.shodor.org/interactivate/activities/StemAndLeafPlotter/
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: Ch 2.8 may be covered if time permits.		
2 nd SIX WEEKS	SOL Objectives	Resources
7.5 Basic operations with integers		Ch 3- Algebra: Integers ; includes coordinate graphing http://www.shodor.org/interactivate/activities/GeneralCoordinates/ http://www.shodor.org/interactivate/activities/MazeGame/ http://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=114
7.12 Graphing ordered pairs in four quadrants of a coordinate plane		
7.20 Translate verbal expressions into algebraic expressions, and sentences into equations		Ch 4.1-4.3 Algebra: Linear Equations (in 1-variable)* Ch 4.5- Inequalities
7.22 Solve one-step, one variable equations and inequalities		
NOTES:*Ch 4.4, 4.6 and 4.7 involve 8 th grade SOL which will be used as an extension after SOL tests are given. They will not be tested during this six weeks. Omit any problems that involve two step solutions.		

2008-2009 Seventh Grade Math Sequence (page 2 of 3)

3 rd SIX WEEKS	SOL Objectives	Resources
7.1 Compare ,order, and determine equivalent relations between fractions, decimals, and percents, including scientific notation for numbers greater than ten. (continue)		Ch 5- Fractions, Decimals and Percents; includes: <ul style="list-style-type: none"> • Prime factorization • GCF • LCM
7.2 Simplifying expressions that contain whole numbers, fractions, decimals and positive exponents using order of operations (continue)		
*6.6 Review the four operations (add, subtract, multiply and divide) with fractions		Review if needed: Ch 6.1-6.6- Applying Fractions
7.4 Solve practical problems involving tips, discounts, sales tax, and simple interest with whole numbers, fractions, decimals, and percents (begin)		Ch 7.1-7.5- Ratios and Proportions Ch 7.7-7.8- Percents
7.6 Use proportions to solve practical problems, including scale drawings with rational numbers and percents		Ch 6.7 –Changing customary units of measure
NOTES: * A review of operations with fractions may or may not be necessary for your students.		
4 th SIX WEEKS	SOL Objectives	Resources
7.4 Solve practical problems using rational numbers (whole numbers, fractions , decimals) and percents, including tips, discounts, sales tax and simple interest (continue)		Ch 8- Applying Percent
7.14 Describe the difference between the theoretical probability of a simple event and the probability found through simulation		Ch 9- Probability http://www.shodor.org/interactivate/activities/AdjustableSpinner/
7.15 Identify the possible arrangements of several objects using a tree diagram or the Fundamental (Basic) Counting Principle		
NOTES:		

2008-2009 Seventh Grade Math Sequence (page 3 of 3)

5 th SIX WEEKS	SOL Objectives	Resources
Review if needed: 6.11 Perimeter and area 6.12 Circumference 6.13 Angles and triangles		Ch 10.1-10.4- Angles, lines, triangles and circle graphs Ch 6.8- Perimeter and area* Ch 6.9- Circumference
7.9 Compare, contrast and classify quadrilaterals (parallelogram, rectangle, square, rhombus, and trapezoid)		
7.10 Identify and draw polygons (5 to 10 sides)		Ch 10.5-10.9b- Geometry <ul style="list-style-type: none"> • Quadrilaterals • Similarity • Tessellations • Transformations
7.11 Determine if quadrilaterals and triangles are similar, and write proportions to express the relationships between corresponding parts of similar polygons		http://www.shodor.org/interactivate/activities/GeneralCoordinates/
7.13 Transformations of polygons in a coordinate plane using rotations and translations.		http://www.shodor.org/interactivate/activities/MazeGame/ Ch 11.4-11.8 Geometry: Measuring 2-D Figures <ul style="list-style-type: none"> • Area of PGF*
7.7 Estimate and find the area of polygons by subdividing; and apply perimeter and area formulas in practical situations		
NOTES: * Geometry formulas are on the Math 8th grade SOL test reference sheet.		
6 th SIX WEEKS	SOL Objectives	Resources
7.8 Solve problems involving the volume and surface area of rectangular prisms and cylinders*		Ch 12.1-12.5 - Geometry: Measuring Three-Dimensional Figures* http://www.shodor.org/interactivate/activities/SurfaceAreaAndVolume/
Review for SOL Test		
8.15 Solve two step equations and inequalities in one variable		Ch 4.4 Two-step linear equations
8.16 Graph a linear equation in two variables in a coordinate plane.		Ch 4.6-4.7 Functions and linear equations; and slope.
8.5 Identify squares and square roots		Ch 11.1-11.2 – Squares and Square Roots
NOTES: * Geometry formulas are on the Math 8th grade SOL test reference sheet.		