



Time4Learning

Online Learning for Homeschool and Enrichment

www.Time4Learning.com

Languages Arts, Math and more

Multimedia Lessons, Interactive Exercises,

Printable Worksheets and Assessments

Student Paced Learning

It's time for learning. And fun!

Math Lesson Plan
8th Grade Curriculum
Total Activities: 175

Chapter -"Number Systems"-This chapter addresses rational and irrational numbers, absolute value and scientific notation.		
Lesson Code	Lesson Title and Description	LA Number
3	Absolute Value-Identify and explain absolute value.	M8005 M8006 M8007
Chapter -"Real Numbers"-This chapter addresses repeating decimals, principal square roots, estimation and simplification of expressions.		
Lesson Code	Lesson Title and Description	LA Number
1	Repeating Decimals to Fractions-Convert repeating decimals to fractions.	M8011 M8012 M8013
3	Compare and Order-Compare and order numbers in many forms including: fractions, decimals, scientific notation, absolute value, and radicals.	M8023 M8024 M8025
Chapter -"Number Theory"-This chapter addresses representing numbers in binary and octal, divisibility rules and the concept of relatively prime.		
Lesson	Lesson Title and Description	LA

Code		Number
Chapter - "Real World Computation"-This chapter addresses real world problems (one-, two- and multi-step problems).		
Lesson Code	Lesson Title and Description	LA Number
1	Operations-Solve real world problems with rational numbers (including integers, decimals and fractions).	M8063 M8064 M8065
2	Real World Problems-Solve real world problems with ratios, rates, proportions, and percents.	M8069 M8070 M8071
3	Multi-Step Problems-Solve real world two- or three- step problems with integers, decimals, fractions, ratios, rates, proportions, and percents.	M8075 M8076 M8077
Chapter - "Expressions and Equations"-This chapter addresses substitution, translation, and evaluation as well as solving linear inequalities.		
Lesson Code	Lesson Title and Description	LA Number
1	Expressions-Substitute rational numbers into expressions and evaluate.	M8081 M8082 M8083
2	Expressions with Exponents-Substitute rational numbers into expressions with exponents and radicals.	M8087 M8088 M8089
Chapter - "Three-Dimensional Geometry"-This chapter addresses the volumes and surface areas of three-dimensional shapes.		
Lesson Code	Lesson Title and Description	LA Number
1	Volume-Find the volume of pyramids, prisms, and cones.	M8145 M8146 M8147
5	Proportional Relationships-Identify the relationship between volume or surface	M8165 M8166

	area and dimension.	M8167
Chapter - "Graphing"-This chapter addresses graphing linear equalities and inequalities.		
Lesson Code	Lesson Title and Description	LA Number
2	Equations to Lines-Graph linear equations in standard form.	M8189 M8190 M8191
3	Linear Inequalities-Identify and graph inequalities on a number line.	M8195 M8196 M8197
Chapter - "Linear Relationships"-This chapter addresses x- and y-intercepts, slope and determining if a function is linear.		
Lesson Code	Lesson Title and Description	LA Number
2	Slope of a Line-Given the graph of a line, determine the slope.	M8207 M8208 M8209
4	Find a Function Rule-Find a function rule to describe a linear relationship using tables of related input-output variables.	M8215 M8216 M8217
5	Determine if a Function is Linear-Using information from a table, graph, or rule, determine if a function is linear and justify.	M8221 M8222 M8223 M8224 M8225 M8226
Chapter - "Real Numbers"-The learner will investigate real numbers.		
Lesson Code	Lesson Title and Description	LA Number
1	Add/Subtract Integers-Review positive and negative values and the number line. Determine absolute value. Add and subtract positive and negative	8059 8101 8235

	integers. Use equivalent expressions to subtract positive and negative integers.	
2	Divisibility -Learn and apply the rules of divisibility. Determine divisibility.	8060 8102 8232
3	Multiply/Divide Integers-Recognize multiplication on a number line. Review rules for signs of products and quotients. Multiply and divide positive and negative integers. Multiply more than two integers. Investigate the commutative property, the multiplicative property of 0, the distributive property, and the associative property.	8061 8103 8236
4	Integers as Exponents-Review the rules for signs in exponential expressions. Identify base and exponent. Evaluate expressions with positive and negative bases. Evaluate expressions with positive and negative exponents. Convert between negative exponents and fractions.	8062 8104 8237
5	Use Powers of Ten -Multiply and divide by powers of ten. Use exponents for powers of ten. Multiply by decimal powers of ten. Apply mental math.	8063 8105 8231
6	Solve Using Add/Subtract -Identify inverse operations. Use addition and subtraction to solve equations. Solve equations with negative numbers. Check work by substituting a solution for the unknown.	8064 8106 8238
7	Rational Numbers Properties -Learn the definition of a rational number. Complete equations. Learn properties of addition and multiplication.	8065 8107 8242
8	Squares and Square Roots -Calculate squares and square roots. Find the principal and negative square roots. Estimate square roots.	8066 8108 8255

Chapter - "Fractions and Mixed Numbers"-The learner will investigate fraction and mixed number computation.		
Lesson Code	Lesson Title and Description	LA Number
1	Multiply Mixed Numbers-Learn and apply steps to multiply fractions. Convert mixed numbers to improper fractions. Use shortcuts with multiplication.	8067 8109 8247
2	Divide Mixed Numbers-Learn and apply steps to divide whole numbers and mixed numbers. Convert mixed numbers to improper fractions. Divide using reciprocals. Simplify answers.	8068 8110 8233
3	GCF and LCM-Identify prime factors. Determine the greatest common factor (GCF) and the least common multiple (LCM).	8069 8111 8241
Chapter - "Fractions, Decimals, Percents"-The learner will investigate fractions, decimals, and percents.		
Lesson Code	Lesson Title and Description	LA Number
1	Estimate by Rounding Decimals-Learn and apply methods of estimation. Estimate sums, differences, products, and quotients.	8070 8112 8230
2	Add/Sub Decimals & Fractions-Use absolute value to add decimals. Add fractions using the least common denominator (LCD). Subtract by adding the opposite value. Apply rules for signs.	8071 8113 8243
3	Percents, Fractions, Decimals-Convert percents, fractions, and decimals. Convert complex percents to decimals and fractions.	8072 8114 8245
Chapter - "Proportions"-The learner will investigate proportions, sales tax, discounts, ratios, and rates.		

Lesson Code	Lesson Title and Description	LA Number
1	Percent Proportions-Set up and solve percent proportions. Use shortcuts with common fractions.	8073 8115 8246
2	Sales Tax and Discount -Set up proportions. Calculate discount, sale price, sales tax, and total cost.	8074 8116 8248
3	Percent of Increase/Decrease-Learn to calculate the amount of increase or decrease. Set up proportions. Calculate percent increase or decrease.	8075 8117 8249
4	Ratio, Rate, and Proportion-Understand ratios, rates, and proportions. Use proportions to solve word problems. Find the unit rate.	8076 8118 8244
Chapter -"Operations/Problem Solving"-The learner will investigate problem solving using operations.		
Lesson Code	Lesson Title and Description	LA Number
1	1-Step Add/Sub Word Problems-Use a 5-step strategy for solving word problems. Add and subtract whole numbers and decimal numbers.	8077 8119
2	Solve Using Multiply/Divide-Identify inverse operations. Use multiplication and division to solve equations. Use reciprocals to solve equations with fractions. Check work by substituting a solution for the unknown.	8078 8120 8239
Chapter -"Equations and Inequalities"-The learner will investigate equations and inequalities.		
Lesson Code	Lesson Title and Description	LA Number
1	Solve 2-Step Equations-Determine the order of operations for two-step equations. Solve two-step equations.	8079 8121 8240

2	Graph Sentences-Solve and graph single and compound inequalities. Reverse the sign when multiplying and dividing by a negative number.	8080 8122 8264
3	Graph Linear Equations-Learn the steps to graph equations. Find x- and y-values. Write ordered pairs. Graph equations on the coordinate plane.	8081 8123 8265
4	Graph Inequalities-Learn to graph inequalities with lines and shading. Solve inequalities. Identify ordered pairs. Plot ordered pairs and shade. Graph inequalities. Recognize correct lines and shading.	8082 8124 8266
Chapter -"Polygons"-The learner will investigate characteristics of two-dimensional figures.		
Lesson Code	Lesson Title and Description	LA Number
1	Lines and Angles-Identify angle relationships. Calculate angle measurements.	8083 8125 8250
2	Polygons-Recognize regular and irregular polygons. Identify types of quadrilaterals. Find the sum of interior angles. Find interior angles in a regular polygon.	8084 8126 8251
3	Congruent/Similar Figures-Define congruence and similarity. Identify corresponding vertices, sides, and angles. Find missing measures for congruent and similar figures.	8085 8127 8252
Chapter -"Perimeter, Circumference, Area"-The learner will investigate perimeter, circumference, and area.		
Lesson Code	Lesson Title and Description	LA Number
1	Perimeter and Area-Learn the formulas for the area of rectangles, parallelograms, triangles, and	8086 8128 8253

	trapezoids. Calculate perimeter and area.	
2	Circles: Circumference & Area-Learn the characteristics of circles. Learn the formulas for circumference and area. Calculate circumference, diameter, radius, and area.	8087 8129 8254
Chapter - "Surface Area and Volume"-The learner will investigate surface area and volume.		
Lesson Code	Lesson Title and Description	LA Number
1	Surface Area: Prisms/Cylinders- Calculate the surface area of cubes, prisms, and cylinders. Investigate faces and edges.	8089
2	Surface Area: Pyramids & Cones- Calculate the surface area of square pyramids, rectangular pyramids, and cones.	8088
3	Volume of Prisms and Cylinders-Learn the formulas for the volume of prisms and cylinders. Calculate the volume of prisms and cylinders. Find the area of the base or the height.	8090
4	Volume of Pyramids and Cones- Recognize types of pyramids. Learn the formulas for the volume of pyramids and cones. Calculate the volume of pyramids and cones.	8091
Chapter - "Right Triangles"-The learner will investigate properties of right triangles.		
Lesson Code	Lesson Title and Description	LA Number
1	Pythagorean Theorem-Learn to apply the Pythagorean theorem. Calculate the length of the hypotenuse or the legs. Determine whether given measurements form a right triangle.	8092 8130 8256

	Determine Pythagorean triples.	
2	Special Right Triangles-Calculate the hypotenuse and leg measurements of special right triangles.	8093 8131 8257
Chapter -"Data Representations"-The learner will investigate graphical data representations.		
Lesson Code	Lesson Title and Description	LA Number
1	Circle Graphs-Determine central angles. Use proportions to determine percentages. Interpret graphs.	8094 8132 8234
2	Histograms-Create frequency charts and histograms. Interpret data from histograms.	8095 8133 8258
3	Scatter Plots-Create scatter plots. Determine correlation. Predict correlation without plotting.	8096 8134 8261
4	Stem-and-Leaf Plots-Create stem-and-leaf plots. Interpret plots. Find mode and median. Use double plots.	8097 8135 8259
5	Box-and-Whisker Plots -Identify extremes, quartiles, median, and range of an ordered set. Graph box-and-whisker plots. Interpret plots. Compare two sets of data.	8098 8136 8260
Chapter -"Custom Curriculum"-Custom Curriculum		
Lesson Code	Lesson Title and Description	LA Number
11	Custom Standard-Custom Standard	
Chapter -"Probability"-The learner will investigate basic concepts of probability.		
Lesson Code	Lesson Title and Description	LA Number
1	Probability of Events-Recognize dependent and independent events.	8099 8137 8262

	Calculate the probability of single and compound independent events. Calculate the probability of dependent events.	
2	Combinations and Permutations - Determine expressions for permutations and combinations. Learn factorial notation. Calculate permutations and combinations.	8100 8138 8263
Chapter -"Problem Solving"-The learner will investigate problem solving strategies.		
Lesson Code	Lesson Title and Description	LA Number
1	Number Combinations -Review strategies to solve a problem. Solve a problem using all possibilities, a table, and patterns.	8139
2	Number Expansion -Review strategies to solve a problem. Solve a problem using a simpler problem, drawings, a table, and patterns.	8140
3	Number Sequences-Review strategies to solve a problem. Solve a problem by finding a pattern and guessing.	8141
4	Area-Review strategies to solve a problem. Solve a problem by using a table, drawings, and guessing.	8142
5	Probability-Solve a problem using a table.	8143
Chapter -"Practice"-This chapter contains additional practice activities.		
Lesson Code	Lesson Title and Description	LA Number
6	Independent Events-Learn the fundamental counting principle. Understand probability and independent events. Calculate the	76286 76287 76382

	probability for single events and independent events.	
--	---	--

Scope & Sequence Copyright. ©2006 CompassLearning, Inc. All rights reserved.