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Math Lesson Plan
7th Grade Curriculum
Total Activities: 339

Chapter -"Number Systems"-This chapter addresses expressing numbers using exponents and scientific notation.		
Lesson Code	Lesson Title and Description	LA Number
1	Exponents-Express whole numbers using exponents.	M7001 M7002 M7003 M7004 M7005 M7006
2	Scientific Notation-Express numbers greater than one using scientific notation and vice versa.	M7007 M7008 M7009 M7010 M7011 M7012
3	Representation-Write numbers in word, standard, expanded, and scientific notation.	M7013 M7014
Chapter -"Rational Operations"-This chapter addresses order of operations, fractions, decimals, percents and estimation.		
Lesson Code	Lesson Title and Description	LA Number
1	Order of Operations-Apply order of	M7015

	operations to simplify numerical expressions.	M7016 M7017 M7018 M7019 M7020
2	Estimation of Whole Numbers-Use estimation to solve problems with whole numbers.	M7021 M7022 M7023 M7024 M7025 M7026
3	Fractions, Decimals, and Percents- Knows relationships and can convert between fractions, decimals, and percents.	M7027 M7028 M7029 M7030 M7031 M7032
4	Estimation-Use estimation to solve problems with whole numbers, fractions, decimals, and percents.	M7033 M7034
Chapter - "Number Theory"-This chapter addresses prime and composite, prime factorization, greatest common factor and least common multiple.		
Lesson Code	Lesson Title and Description	LA Number
1	Prime and Composite-Identify numbers as prime or composite.	M7035 M7036
2	Prime Factorization-Find the prime factorization of whole numbers.	M7037 M7038 M7039 M7040 M7041 M7042
3	GCF and LCM-Find the greatest common factor and least common multiple of two numbers.	M7043 M7044 M7045 M7046 M7047 M7048

Chapter - "Ratio, Proportion and Percent"-This chapter addresses scale, rates, ratios, proportions and percents.		
Lesson Code	Lesson Title and Description	LA Number
1	Ratios and Rates-Identify and use ratios and rates.	M7049 M7050
2	Proportional Relationships-Recognize relationships between ratios, proportions, and percents.	M7051 M7052 M7053 M7054 M7055 M7056
3	Proportions with Tables-Use tables to solve problems with proportions.	M7057 M7058
4	Constant Ratios-Use constant ratios to solve problems.	M7059 M7060
5	Percents-Solve real world problems involving discounts and mark ups.	M7061 M7062 M7063 M7064 M7065 M7066
6	Simple Interest-Solve real world problems involving simple interest.	M7067 M7068 M7069 M7070 M7071 M7072
7	Scale-Identify proportional relationships in scale drawings.	M7073 M7074 M7075 M7076 M7077 M7078
Chapter - "Rational Numbers"-This chapter addresses arithmetic operations on rational numbers, additive inverses and multiplicative inverses.		
Lesson	Lesson Title and Description	LA

Code		Number
1	Additive and Multiplicative Inverses-Identify pairs of additive and multiplicative inverses.	M7079 M7080 M7081 M7082 M7083 M7084
2	Addition and Subtraction-Add and subtract with positive and negative rational numbers.	M7085 M7086 M7087 M7088 M7089 M7090
3	Multiplication and Division-Multiply and divide with positive and negative rational numbers.	M7091 M7092 M7093 M7094 M7095 M7096
4	Operations-Solve real world problems with fractions, decimals, and integers.	M7097 M7098 M7099 M7100 M7101 M7102
5	Explore Addition/Subtraction-Use the Number Line tool to investigate addition and subtraction of integers and decimals.	M7500
6	Explore Properties-Use the Number Line tool to investigate additive inverses and the commutative and associative properties of addition on rational numbers.	M7501
Chapter -"Expressions and Equations"-This chapter addresses simplification of expressions, properties of real numbers, translation, substitution and solving linear equations (one- and two-step).		
Lesson Code	Lesson Title and Description	LA Number

1	Expressions-Simplify and evaluate algebraic expressions using integers.	M7103 M7104
2	Properties-Generalize properties of real numbers to expressions and equations.	M7105 M7106
3	Expressions and Equations-Translate simple one variable word expressions and equations into corresponding symbolic expressions and equations.	M7107 M7108 M7109 M7110 M7111 M7112
4	Algebraic Expressions-Use algebraic expressions to generalize a pattern.	M7113 M7114
5	Simplify Algebraic Expressions-Simplify algebraic expressions with one variable by combining like terms.	M7115 M7116 M7117 M7118 M7119 M7120
6	Substitution-Substitute values for variables in an equation to verify whether the equation is true.	M7121 M7122
7	Solve One-Step Linear Equations-Solve one-step linear equations.	M7302 M7303 M7304 M7305 M7306 M7307
8	Solve Two-Step Linear Equations-Solve two-step linear equations.	M7296 M7297 M7298 M7299 M7300 M7301
Chapter - "Triangles"-This chapter addresses the classification of angles and triangles and the calculation of unknown angles and side lengths in triangles.		
Lesson Code	Lesson Title and Description	LA Number

1	Classify Triangles-Identify and classify triangles.	M7123 M7124
2	Interior and Exterior Angles-Find the measure of an interior or exterior angle using an angle relationship.	M7125 M7126
3	Angle Measurement-Solve angle measurement problems for triangles.	M7127 M7128 M7129 M7130 M7131 M7132
4	Pythagorean Relationship-Demonstrate or identify the Pythagorean relationship using models or diagrams.	M7133 M7134
5	Pythagorean Theorem-Given two sides of a right triangle, find the length of a third side.	M7135 M7136 M7137 M7138 M7139 M7140
Chapter - "Plane Geometry"-This chapter addresses the properties of lines and angles and the calculation of perimeter, circumference and area.		
Lesson Code	Lesson Title and Description	LA Number
1	Perimeter and Area-Find the perimeter and area of two-dimensional figures.	M7141 M7142
2	Area and Circumference-Find the circumference and area of circles.	M7143 M7144
3	Geometric Properties of Lines-Identify and use symbolic notation to denote lines (intersecting, skew, parallel, perpendicular).	M7145 M7146 M7147 M7148 M7149 M7150
4	Angle Measure -Find the measure of an angle using a protractor or angle relationship.	M7151 M7152 M7153

		M7154 M7155 M7156
5	Application of Properties of Lines and Angles-Describe and apply parallelism and perpendicularity in real world contexts.	M7157 M7158
6	Polygons-Compare and describe attributes of regular and nonregular convex polygons (parallelograms, trapezoids, pentagons, hexagons, and octagons).	M7159 M7160
7	Regular Polygon Angle Measurements-Find the measure of the interior angles of a regular polygon.	M7161 M7162
8	Angle Measurement of Polygons-Find the measure of an angle using a protractor or angle relationship (corresponding, complementary, and supplementary).	M7163 M7164
9	Congruent and Similar Polygons-Identify attributes of a figure congruent or similar to a given figure.	M7165 M7166 M7167 M7168 M7169 M7170
10	Explore Symmetry/Reflection-Use the Transformation tool to investigate symmetry and reflections.	M7506
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	Attributes-Identify attributes properties of three-dimensional figures.	M7171 M7172
2	Volume-Calculate the volume of prisms and cylinders.	M7173 M7174

		M7175 M7176 M7177 M7178
3	Surface Area-Calculate the surface area of prisms and cylinders.	M7179 M7180 M7181 M7182 M7183 M7184
Chapter -"Measurement"-This chapter addresses the measurement of rate, distance, time, mass, capacity and estimation and conversion.		
Lesson Code	Lesson Title and Description	LA Number
1	Measurement-Measure length, weight, capacity, and volume using customary or metric units.	M7191 M7192 M7193 M7194 M7195 M7196
2	Mass and Volume-Know the relationship between mass and volume and solve problems.	M7197 M7198
3	Compare Units-Compare units within each system.	M7199 M7200
4	Rate, Time and Distance-Develop and apply $d=rt$ to solve problems for rate, time, and distance.	M7201 M7202 M7203 M7204 M7205 M7206
5	Estimation of Measurements-Estimate measurements of length, weight, volume or capacity.	M7207 M7208 M7209 M7210 M7211 M7212
6	Problem Solving-Perform operations on	M7213

	measurements within each system.	M7214 M7215 M7216 M7217 M7218
7	Conversions-Solve problems involving conversions within the same system.	M7219 M7220 M7221 M7222 M7223 M7224
Chapter - "Graphing"-This chapter addresses plotting points, identifying characteristics of points, the relationship between tables and graphs.		
Lesson Code	Lesson Title and Description	LA Number
1	Ordered Pairs-Identify and plot ordered pairs in four quadrants and along the axes.	M7225 M7226 M7227 M7228 M7229 M7230
2	Quadrants-Identify quadrants and characteristics of points.	M7231 M7232
3	Tables and Graphs-Recognize correspondence between a set of points in a table and a set of points plotted in a coordinate plane.	M7233 M7234
4	Graph Real World Data-Represent real-world data using graphs.	M7235 M7236
5	Function Tables and Graphs-Recognize whether a set of points given in a table or a graph represents a function.	M7237 M7238
6	Explore Points/Quadrants-Use the Coordinate Graphing tool to investigate the characteristics of points, lines and quadrants.	M7502
7	Explore Inequalities-Use the Coordinate	M7504

	Graphing tool to investigate linear inequalities in two variables.	
Chapter -"Linear Relationships"-This chapter addresses interpreting graphs of linear equations.		
Lesson Code	Lesson Title and Description	LA Number
1	Graph Linear Equations-Determine that the graph of a linear equation is a straight line.	M7239 M7240 M7241 M7242 M7243 M7244
2	Interpreting Real World Linear Graphs-Identify points on graphs of linear functions to answer questions about real world situations.	M7245 M7246 M7247 M7248 M7249 M7250
3	Explore Intercepts of Lines-Use the Coordinate Graphing tool to investigate x- and y-intercepts of lines.	M7503
4	Explore Rotation/Translation-Use the Coordinate Graphing tool to investigate rotations and translations of lines.	M7505
Chapter -"Probability"-This chapter addresses odds, theoretical and experimental probabilities, and the probabilities of independent and dependent events.		
Lesson Code	Lesson Title and Description	LA Number
1	Experimental Results-Obtain results using manipulatives and explain the difference between theoretical and experimental results.	M7251 M7252
2	Probability-Calculate probabilities of independent and dependent events.	M7253 M7254 M7255 M7256 M7257

		M7258
3	Odds-Compute odds of simple events.	M7259 M7260 M7261 M7262 M7263 M7264
4	Explore Flipping Coins-Use the Probability tool to investigate the difference between experimental and theoretical probability on coins.	M7507
5	Explore Number Cubes/Spinners-Use the Probability tool to investigate the difference between experimental and theoretical probability on number cubes and spinners.	M7508
Chapter -"Data and Statistics"-This chapter addresses different data representations and the measures of central tendency.		
Lesson Code	Lesson Title and Description	LA Number
1	Data Representations-Interpret and analyze data representations including circle, line, bar, histogram, stem-and-leaf, and box-and-whisker graphs.	M7265 M7266 M7267 M7268 M7269 M7270
2	Mean, Median and Mode-Calculate the range, mean, median, and mode of data from a table, chart, or graph.	M7271 M7272 M7273 M7274 M7275 M7276
3	Apply Mean, Median and Mode-Apply and analyze measures of central tendency (mean, median, and mode).	M7277 M7278
4	Technology-Use technology to analyze and create graphs given a data set.	M7279 M7280

5	Explore Mean/Median/Mode/Range-Use the Data Representation tool to develop the calculation of mean, median, mode and range.	M7510
6	Explore Charts and Graphs-Use the Data Representation tool to investigate histograms, bar charts and circle graphs.	M7509
Chapter -"Custom Curriculum"-Custom Curriculum		
Lesson Code	Lesson Title and Description	LA Number
10	Custom Standard-Custom Standard	
Chapter -"Practice"-This chapter contains additional practice activities.		
Lesson Code	Lesson Title and Description	LA Number
18	Add Whole Numbers -Add whole numbers to 100,000s with and without regrouping. Use columnar addition. Solve addition word problems.	76227
19	Subtract Whole Numbers-Subtract whole numbers to 100,000s with and without regrouping. Solve subtraction word problems.	76228
20	Multiply Whole Numbers -Multiply whole numbers with and without regrouping. Solve multiplication word problems. Decide what information needs to be found in word problems.	76229
21	Divide Whole Numbers-Divide whole numbers with and without remainders. Solve division word problems. Find averages.	76230
14	Estimate Whole Numbers -Estimate sums, differences, and products by rounding numbers to specified place values. Use compatible numbers to estimate quotients.	76231 76232

22	Prime/Composite/Factor -Learn to recognize prime and composite numbers. Make factor trees. Identify prime factors. Simplify using exponents.	76233 76234 76376
17	Greatest Common Factor-Review prime factorization. Find the greatest common factor (GCF).	76235 76236 76377
23	Real Number Properties-Learn to classify numbers by properties.	76237
24	Add Integers-Review positive and negative values and number lines. Learn the rules and operations for adding integers. Add positive and negative integers.	76238 76239 76384
25	Subtract Integers-Review positive and negative values. Convert subtraction problems by using opposite signs. Subtract integers.	76240
26	Multiply/Divide Integers-Learn the rules for positive and negative signs. Multiply and divide integers.	76241
27	Order of Operations-Learn the order of operations. Evaluate expressions. Apply the order of operations rules from left to right.	76242 76243 76374
28	Compare/Order Decimals-Learn to align decimal numbers at the decimal point to compare. Compare numbers by aligning decimal points (tenths, hundredths, thousandths). Use greater than and less than to compare decimals. Order decimal numbers from least to greatest and from greatest to least.	76244
29	Multiply Decimal Numbers -Multiply decimal numbers. Place the decimal point in a product. Add zeros to decimal products.	76245 76370
30	Divide Decimal Numbers-Divide	76246

	decimal numbers. Find averages. Shift the decimal point in the divisor and the dividend. Place the decimal point in a quotient.	76247 76371
31	Estimate Fractions-Estimate sums and differences of mixed numbers and fractions. Round mixed numbers and fractions. Compare fractions.	76248 76249 76372
32	Add/Subtract Fractions-Learn steps for adding and subtracting fractions. Find the least common denominator (LCD). Add and subtract fractions. Simplify answers.	76250
33	Add/Subtract Mixed Numbers-Learn steps to add and subtract mixed numbers. Convert mixed numbers to improper fractions. Regroup fractions to subtract. Simplify answers.	76251
34	Multiply Mixed Numbers-Multiply mixed numbers and fractions. Make improper fractions before multiplying. Learn crossing out shortcut. Find the greatest common factor (GCF) in mixed numbers and fractions.	76252
35	Divide Whole Numbers Fractions-Divide whole numbers by fractions. Find the reciprocals of divisors. Rewrite fraction division problems as multiplication by using the reciprocals of the divisors. Multiply by reciprocals.	76253 76254 76373
36	Divide by Fractions-Divide by fractions. Find the reciprocals of divisors. Rewrite fraction division problems as multiplication by using the reciprocals of the divisors. Multiply by reciprocals.	76255
1	Solve Proportions-Learn to set up and label proportions. Solve proportions by using cross products. Restate solutions. Solve word problems using proportions.	76256 76257 76378
6	Sales Tax and Discount -Convert	76258

	problems to proportions. Learn to calculate discount, sales tax, increase, and decrease. Restate solutions.	76259 76379
37	Solve Using Add/Subtract-Isolate the unknown in equations. Solve by using addition and subtraction. Check by substitution.	76260 76375
38	Solve 2-Step Equations-Learn the order of operations for two-step equations. Solve equations. Check by substitution.	76261
39	Graph Sentences-Review the number line. Solve inequalities. Learn to graph sentences. Check work by substituting answers for the unknown.	76262 76264 76385
10	Graph Equations-Understand coordinate graphs. Find x- and y-values. Write ordered pairs. Graph equations.	76263 76265 76386
40	Measure Angles-Learn to recognize types of angles. Use a protractor to measure angles. Calculate complementary and supplementary angles.	76266
41	Lines and Angles-Learn angle relationships. Calculate angle measurements.	76267
42	Polygons-Learn to recognize types of polygons. Recognize regular and irregular polygons. Learn the types of quadrilaterals. Find the number of triangles in a polygon and the sum of interior angles.	76268
11	Congruent/Similar Figures-Understand congruence and similarity. Identify corresponding vertices, sides, and angles. Find missing measures for congruent and similar figures.	76269
15	Pythagorean Theorem-Learn the Pythagorean theorem. Calculate the length of the hypotenuse or the legs.	76270 76271 76381

	Determine whether given measurements form a right triangle.	
43	Perimeter and Area-Learn the formulas for perimeter. Simplify the formulas for perimeter. Learn the formulas for area. Calculate perimeter and area.	76272
44	Circumference and Area-Learn the formulas for circumference and area. Calculate circumference and area.	76273
8	Surface Area-Explore surface area. Calculate the surface area of cubes, pyramids, cylinders, and prisms.	76274 76275 76380
2	Customary Units-Understand customary units conversion charts. Learn to convert customary measurements. Add and subtract customary measurements. Regroup and simplify customary measurement amounts.	76276
5	Word Problems: Customary-Use a 5-step strategy to solve customary measurement word problems. Convert units of customary measurements.	76277
7	Metric Units-Learn metric units of length, capacity, and weight. Learn to relate metric units. Convert metric measurements.	76278
9	Word Problems: Metric -Use a 5-step strategy to solve metric measurement word problems. Convert units of metric measurement.	76279
45	Misleading Statistics-Learn to examine misleading and incomplete graphs.	76280
4	Read and Make Bar Graphs-Create bar graphs from given data. Interpret information in bar graphs.	76281
46	Broken-Line Graphs-Create broken-line graphs from given data. Label horizontal and vertical axes. Interpret	76282

	information in broken-line graphs.	
12	Read and Make Circle Graphs-Create circle graphs from given data. Interpret information in circle graphs.	76283
13	Stem-and-Leaf Plots-Learn to create stem-and-leaf plots. Interpret plots. Find mode and median.	76284
16	Box-and-Whisker Plots-Identify extremes, quartiles, median, and range of ordered sets. Graph box-and-whisker plots. Interpret box-and-whisker plots.	76285
3	Independent Events-Learn the fundamental counting principle. Understand probability and independent events. Calculate the probability for single events and independent events.	76286 76287 76382
47	Dependent Events-Understand dependent events. Change data without replacement for dependent events. Learn to calculate the probability of dependent events. Use shortcuts to solve equations.	76288 76289 76383
48	Permutations-Understand permutations. Learn factorial notation and P notation. Calculate the number of permutations.	76290
49	Number Combinations-Review strategies to solve a problem. Solve a problem using all possibilities, a table, and patterns.	76291
50	Number Expansion-Review strategies to solve a problem. Solve a problem using a simpler problem, drawings, a table, and patterns.	76292
51	Number Sequences-Review strategies to solve a problem. Solve a problem by finding a pattern and guessing.	76293
52	Area-Review strategies to solve a problem. Solve a problem by using a	76294

	table, drawings, and guessing.	
53	Probability-Solve a problem using a table.	76295

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