Ware Public Schools
MATH CURRICULUM - Grades 5-7

SUBJECT MATTER*: Math - Number Sense and Operations** ***Grade: 5

Standard	Content	Skills	Assessment	Teacher Resources & Notes
NUMBER SENSE AND OPERATIONS STRAND			FOR ALL UNITS: Scott Foresman Addison Wesley Mathematics: ▪ Pre-assessments ▪ Checkpoint Quizzes ▪ Chapter Test ▪ Alternative Assessments ▪ Lesson Quick Quizzes Problem of the Day Daily Mental Math MCAS Questions	FOR ALL UNITS: Scott Foresman Addison Wesley Mathematics: Teacher Resource Aids ▪ Practice ▪ Re-teaching ▪ Enrichment ▪ Chapter Projects ▪ Problems Solving ▪ Cumulative Review Word Wall & Charts Math Strips Series Software Math Video Series Discovery Channel School Video Read It, Draw It, Solve It Investigations Electronic Manipulatives
5.N.1 Demonstrate an understanding of (positive integer) powers of ten, e.g., 10^2, 10^5.	**Powers of Ten** Focus Questions: 1. How can you name the same number in	**The students will be able to:** 1. Use place-value to write multiples of 10, 100, and 10,000 in different but equivalent ways. 2. Write numbers using	Project Assessment Suggestions:	Lesson: **1-5** Text pp. 14 –17 **Enrichment:** "Powers of Ten" p.17 **Materials:** ▪ Calculators

Standard	Content	Skills	Assessment	Teacher Resources & Notes
	different ways? 2. How are place values related?	powers of ten and exponents. Vocabulary: Powers, base, exponents		**Technology:**
5.N.2 Demonstrate an understanding of place value through millions and thousandths.	**Place Value** Focus Questions: 1. What are some ways to represent large numbers? 2. How can you represent decimals? 3. What are equivalent decimals? 4. How can you compare and order whole numbers and decimals?	**The students will be able to:** 1. Write and identify the values of digits in whole numbers through millions. 2. Write and identify the values of decimal digits in decimal digits through thousandths. 3. Write decimals in standard, word, and expanded form through the thousandths place. Vocabulary: Expanded form, standard form, digits, place value, period, rounding, tenths, hundredths, thousandths	Project Assessment Suggestions:	Lesson: **1-1** to **1-5** Text pp. 4–17 Lesson: **1-8** Text pp. 26-27 **Materials:** ▪ Calculators ▪ Grid Paper **Technology:**
5.N.3 Represent and compare large (millions) and small (thousandths) positive numbers in various forms, such as expanded notation without exponents, e.g., 9724 = 9 x 1000 + 7 x 100 + 2 x 10 + 4.	**Numbers in Various Forms** Focus Questions: 1. How can you name the same number in different ways? 2. How are place values related?	**The students will be able to:** 1. Compare and order large numbers (millions). 2. Compare and order small numbers (thousandths). 3. Represent positive numbers in various ways including expanded form. Vocabulary: Expanded notation, hundred, thousand, million, decimal equivalent, tenths, hundredths, thousandths	Project Assessment Suggestions:	Lesson: **1-1** Text pp. 4-5 Lesson: **1-3** Text pp. 8-11 Lesson: **1-5** Text pp. 14-17 **Materials:** ▪ Calculators **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line. *This standard is intentionally the same as standard 6.N.4.*	**Fractions** Focus Questions: 1. How can you use math to compare quantities? 2. What are equal ratios? 3. Are all ratios equal? 4. How can you name part of a whole and part of a set? 5. How can you name a point on number line?	**The students will be able to:** 1. Identify and show fractional parts of regions and sets and locations on a number line. 2. Represent a fraction as a quotient and vice versa. 3. Read and write ratios for various kinds of comparisons. 4. Indicate which situations represent a ratio that is a fraction (part-whole) and not a fraction. 5. Write equal ratios. 6. Tell if two ratios form a proportion Vocabulary: Fraction, numerator, denominator, ratio, equal ratios, proportion, terms	Project Assessment Suggestions:	Lesson: **7-1**, **7-2** Text pp. 394-399 Lesson: **11-1** to **11-3** Text pp. 646 - 653 **Materials:** ▪ Number Line ▪ Grid Paper ▪ Timer **Technology:**
5.N.5 Identify and determine common equivalent fractions (with denominators 2, 4, 5, 10) and mixed numbers (with denominators 2, 4, 5, 10), decimals, and percents (through one hundred percent), e.g., 3/4 = 0.75 = 75%.	**Common Equivalent Fractions** Focus Questions: 1. How do you change from a mixed number to an improper fraction? 2. How can you model the same fraction in more than one way?	**The students will be able to:** 1. Express fractions greater than 1 as mixed numbers or improper fractions. 2. Identify and write equivalent fractions. 3. Find fractions equivalent to a given fraction using models and/or computational procedures. 4. Write a percent for a given situation using a	Project Assessment Suggestions:	Lesson: **7-3** Text pp. 400 – 401 Lesson: **7-7**, **7-8** Text pp. 410-413 Lesson: **11-8** Text pp. 668-669 **Materials:** ▪ Grid paper ▪ Fraction Strips **Technology:** ▪ Electronic Manipulatives

Standard	Content	Skills	Assessment	Teacher Resources & Notes
	3. How do you find equivalent fractions? 4. What does percent mean and how can it be used?	10x10 grid. 5. Name and identify common equivalent fractions, mixed numbers, percents, etc. Vocabulary**:** Equivalent fractions, mixed numbers, improper fractions, percent		
5.N.6 Find and position whole numbers, positive fractions, positive mixed numbers, and positive decimals on a number line.	**Number Line** <u>Focus Questions:</u> 1. How can you locate fractions, decimals, and mixed numbers on the number line? 2. How can you locate fractions, decimals, and mixed numbers on the same number line?	**The students will be able to:** 1. Identify and locate fractions and mixed numbers on a number line. 2. Label a point on a number line using a fraction and a decimal. 3. Write a fraction and a decimal for a point on a number line. Vocabulary: Number line, positive number	Project Assessment Suggestions:	Lesson: **7-5** Text pp. 404 – 405 Lesson: **7-14** Text pp. 430 – 431 **<u>Materials:</u>** ▪ Number Lines ▪ Ruler **<u>Technology:</u>**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.N.7 Compare and order whole numbers, positive fractions, positive mixed numbers, positive decimals, and percents.	**Compare and Order** Focus Questions: 1. How can you compare and order whole numbers? 2. How can you compare and order decimals? 3. How can you tell which fraction is greater? 4. How can you compare and order fractions? 5. How can you compare and order mixed numbers? 6. How can you write a fraction as a decimal? 7. How can you use division to change a fraction to a decimal?	**The students will be able to:** 1. Compare and order whole numbers through the millions. 2. Compare and order decimals through the thousandths 3. Compare and order positive whole numbers, fractions, mixed numbers, decimals, and percents. Vocabulary: Place value, common denominator, benchmark fractions,	Project Assessment Suggestions:	Lesson: **1-2** Text pp. 6-7 Lesson: **1-4** Text pp. 12 – 13 Lesson: **7-11**, **7-12**, **7-13** Text pp. 418 – 429 **Materials:** ▪ 10 x 10 Grids ▪ Fraction Strips **Technology:** ▪ Electronic Manipulatives

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.N.8 Apply the number theory concepts of common factor, common multiple, and divisibility rules for 2, 3, 5, and 10 to the solution of problems. Demonstrate an understanding of the concepts of prime and composite numbers.	**Number Theory** Focus Questions: 1. How can you find all the factors of a number? 2. How can you determine if a number is prime or composite? 3. How can a number be expressed as a product of prime factors? 4. How can you find the greatest common factor (GCF)?	**The students will be able to:** 1. Determine if numbers are divisible by 2, 3, 4, 5, 6, 9, and 10. 2. Identify numbers as either prime or composite. 3. Use divisibility rules to test numbers. 4. List common factors of two or more numbers. 5. List common multiples of two or more numbers. Vocabulary**:** Divisible, factor, divisibility rules, factor pairs, prime numbers, composite numbers, prime factorization, multiples	Project Assessment Suggestions:	Lesson: **3-10**, **3-11** Text pp. 162-167 Lesson: **7-9** Text pp. 414 - 415 **Materials:** ▪ Hundred Chart **Technology:**
5.N.9 Solve problems involving multiplication and division of whole numbers, and multiplication of positive fractions with whole numbers.	**Solving Problems** Focus Questions: 1. What steps can be used to read and understand a problem? 2. How can you make a plan to solve a problem? 3. What are the last steps in solving a	**The students will be able to:** 1.Use appropriate steps to understand and solve a problem. 2. Tell in words what is know and what needs to be determined in given word problems. 3. Give appropriate strategies and alternate strategies for solving word problems. 4. Tell whether and why the work shown for given	Project Assessment Suggestions:	Lesson: **1-6** Text pp. 18 - 19 Lesson: **1-10** Text pp. 32 - 33 Lesson: **1-14** Text pp. 44 - 45 Lesson: **8-9** Text pp. 484 - 487 **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
	problem? 4. How do you work backward to solve a problem?	problems is correct or not. 5. Solve problems that require finding the original times, measurements, or quantities that led to a result that is given. Vocabulary: "Using a Problem Solving Plan", "Make a Table & Look for a Pattern", "Try, Check, & Revise", "Draw a Diagram", "Solve a Simpler Problem", "Write an Equation", "Make an Organized List", "Use Logical Reasoning", "Work Backward", "Make a Graph", Simulate a Problem"		
5.N.10 Demonstrate an understanding of how parentheses affect expressions involving addition, subtraction, and multiplication, and use that understanding to solve problems, e.g., 3 x (4 + 2) = 3 x 6.	**Parentheses** Focus Question: 1. How can properties help you multiply more easily? 2. How do you evaluate expressions with more than one operations?	**The students will be able to:** 1. Mentally compute products of whole numbers using patterns and multiplication properties. 2. Evaluate expressions with three or more numbers and two or more operations. Vocabulary: Distributive Property, parenthesis, order of operations	Project Assessment Suggestions:	Lesson: **2-3** Text pp. 70-71 Lesson: **3-13** Text pp. 172-173 **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.N.11 Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems. *This standard is intentionally the same as standard 6.N.12.*	**Inverse Relationships** Focus Questions: 1. What are inverse operations? 2. How can we use addition and subtraction to solve equations?	**The students will be able to:** 1. Solve equations using inverse operations. (Addition & Subtraction) 2. Identify and solve equations. Vocabulary: Equation, properties of equality, inverse operations	Project Assessment Suggestions:	Lesson: **12-1** Text pp. 696-699 Lesson: **12-2** Text pp. 700-701 **Materials:** **Technology:**
5.N.12 Accurately and efficiently add and subtract whole numbers and positive decimals. Multiply and divide (using double-digit divisors) whole numbers. Multiply positive decimals with whole numbers.	**Whole Numbers** Focus Questions: 1. How do you add and subtract whole numbers and decimals? 2. How do you multiply by a one- and two-digit number? 3. How do you multiply whole numbers by decimals? 4. When do you insert extra zeros in the product? 5. How can you model the multiplication of decimals? 6. How do you multiply decimals by decimals?	**The students will be able to:** 1. Compute sums and differences of two whole numbers greater than 10,000. 2. Compute sums of decimals involving tenths, hundredths, and thousandths. 3. Multiply numbers by a one- and two-digit multiplier. 4. Use partial products and the standard algorithm to multiply whole numbers by decimals. 5. Use grid models to find products of decimals. 6. Use partial products and the standard algorithm to multiply decimals by decimals. Vocabulary: Sum, addend, difference, product, partial product	Project Assessment Suggestions:	Lesson: **1-11** to **1-13** Text pp.36-41 Lesson: **2-4** Text pp. 72-75 Lesson: **2-9** to **2-11**Text pp. 88-97 **Materials:** ▪ Grids **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.N.13 Accurately and efficiently add and subtract positive fractions and mixed numbers with like denominators and with unlike denominators (2, 4, 5, 10 only); multiply positive fractions with whole numbers. Simplify fractions in cases when both the numerator and the - denominator have 2, 3, 4, 5, or 10 as a common factor.	**Add and Subtract Fractions** <u>Focus Questions:</u> 1. How can you write fractions in simplest form? 2. How can you add and subtract fractions with like denominators? 3. How can you use the LCD to add or subtract fractions with unlike denominators? 4. How is adding mixed numbers like adding fractions and whole numbers? 5. How do you subtract a mixed number from a mixed number? 6. How do you subtract a mixed number from a whole number? 7. How do you	**The students will be able to:** 1. Identify fractions that are in simplest form. 2. Find the simplest form of a fraction. 3. Add and subtract fractions with like denominators. 4. Find a common denominator for two fractions with and without fraction strips. 5. Add and subtract mixed numbers with and without renaming. 6. Find the sum of mixed numbers. 7. Find the difference of mixed numbers. 8. Use models or mental math to find fractions of a whole number. 9. Use models or paper and pencil to multiply fractions. 10. Multiply mixed numbers. Vocabulary: Simplest form, numerator, denominator, common denominator, equivalent fractions, mixed numbers,	Project Assessment Suggestions:	Lesson: **7-10** Text pp. 416-417 Lesson**: 8-1** to **8-5** Text pp. 460-473 Lesson: **8-7** to **8-8** Text pp. 476-481 Lesson: **8-9** to **8-13** Text pp.490-501 **<u>Materials:</u>** ▪ Fraction Strips ▪ Counters ▪ Square Sheets of Paper ▪ Red & Yellow colored pencils ▪ Inch Ruler marked in Eigths **<u>Technology:</u>** ▪ Electronic Tools

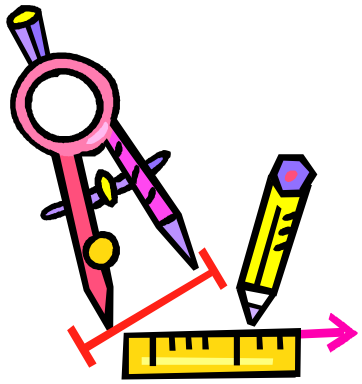
Standard	Content	Skills	Assessment	Teacher Resources & Notes
	multiply fractions using paper and pencil? 8. How can you use a model to find the product of two fractions? 9. How can you find the product of mixed numbers?			
5.N.14 Estimate sums and differences of whole numbers, positive fractions, and positive decimals. Estimate products of whole numbers and products of positive decimals with whole numbers. Use a variety of strategies and judge the reasonableness of the answer.	**Estimation** <u>Focus Questions:</u> 1. How can you estimate sums of whole numbers, decimals, and fractions? 2. How can you estimate differences of whole numbers, decimals, and fractions? 3. Do you need an exact answer or an estimate? 4. What are some ways to estimate products of whole numbers, decimals, and fractions?	**The students will be able to:** 1. Use rounding to estimate sums, differences, and products of whole numbers and decimals. 2. Use front-end estimation to estimate sums and differences. 3. Use compatible numbers to estimate sums, differences, and products of whole numbers and decimals. 4. Identify underestimates and overestimates. Vocabulary: Estimation, front-end estimation, rounding, overestimate, underestimate, rounding, compatible numbers, benchmarks	Project Assessment Suggestions: 1. Snowman Construction	Lesson: **1-9** Text pp. 28-31 Lesson: **2-2** Text pp. 68-69 Lesson: **2-8** Text pp. 86-88 Lesson: **8-6** Text pp. 474-475 Lesson: **8-11**Text pp. 494-495 **<u>Materials:</u>** **<u>Technology:</u>**

SUBJECT MATTER: Math – Patterns, Relationships, and Algebra *Grade:* 5

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.P.1 Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13…; 3, 9, 27... *This standard is intentionally the same as standard 6.P.1.*	**Patterns** Focus Questions: 1. How do you find a rule for a table? 2. What are the patterns?	**The students will be able to:** 1. Identify patterns and find a rule for the pattern. 2. Give missing numbers or figures in a pattern. 3. Use patterns and multiplication properties to mentally compute products of whole numbers. Vocabulary: Function rule, input/output tables	Project Assessment Suggestions:	Lesson: **2-1** Text pp. 66-67 Lesson: **2-14** Text p. 106 - 107 Lesson: **3-4** Text pp. 144-145 **Materials:** ▪ Counters **Technology:**
5.P.2 Replace variables with given values and evaluate/simplify, e.g., 2(❍) + 3 when ❍ = 4. *This standard is intentionally the same as standard 6.P.2.*	**Variables** Focus Questions: 1. What is an algebraic expression? 2. How can you evaluate an algebraic expression?	**The students will be able to:** Use variables to write algebraic expressions. Vocabulary: Variable, algebraic expression, evaluate	Project Assessment Suggestions:	Lesson: **2-12** Text pp. 100-103 **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols, e.g., input-output tables. *This standard is intentionally the same as standard 6.P.4.*	**Real Situations** <u>Focus Questions:</u> 1. How do you find the rule for a table? 2. How do you make a graph for a table of values? 3. How do you use a rule to make a table? 4. How do you make and use a table to solve a problem? 5. How do you graph an equation on a coordinate plane?	**The students will be able to:** 1. Identify patterns and find a rule for the pattern. 6. Use the table or graph to give the output for an input. 7. Create a table of values for a rule and a graph based on a table. 4. Interpret a frequency table 5. Make tables and use them to solve word problems. 6. Make s table of x- and y-values for an equation and then graph the equation. Vocabulary: Variable, table of values, input/output table frequency, table, linear equation, table of x-and y-axis	Project Assessment Suggestions:	Lesson: **2-14** Text pp.106-107 Lesson: **3-15** Text pp. 176-179 Lesson: **5-1** Text pp. 260-261 Lesson: **11-5** Text pp. 660-661 Lesson: **12-10** Text pp. 728-729 **<u>Materials:</u>** ▪ Grid Paper ▪ Ruler ▪ Counters **<u>Technology:</u>**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.P.6 Interpret graphs that represent the relationship between two variables in everyday situations.	**Interpret Graphs** Focus Questions: 1. How do you read a line and bar graph? 2. How do you write a good comparison?	**The students will be able to:** 1. Interpret line graphs and show how data values change over time. 2. Describe trends in data represented by line and double bar graphs? Vocabulary: Line graphs, trend, double bar graphs	Project Assessment Suggestions:	Lesson: **5-3** Text pp. 266-269 Lesson: **5-9** Text pp. 292-293 **Materials:** ▪ Grid Paper ▪ Ruler or Straightedge **Technology:**



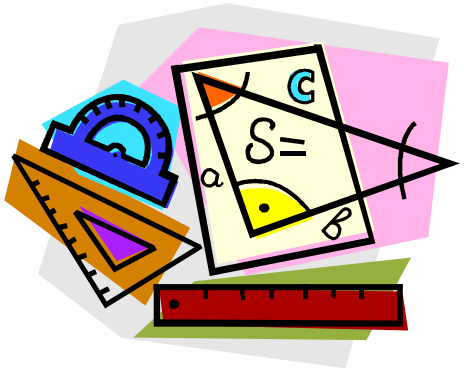
SUBJECT MATTER: Math – Geometry *Grade: 5*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.G.1 Identify, describe, and compare special types of triangles (isosceles, equilateral, right) and quadrilaterals (square, rectangle, parallelogram, rhombus, trapezoid), e.g., recognize that all equilateral triangles are isosceles, but not all isosceles triangles are equilateral.	**Geometry Shapes** Focus Questions: 1. How do you classify triangles? 2. What are some examples of polygons?	**The students will be able to:** 1. Identify and classify polygons. 2. Identify and classify triangles. 3. Identify polygons based on their properties. Vocabulary: Polygon, regular polygon, quadrilateral, pentagon, hexagon, octagon, equilateral triangles, isosceles triangle, scalene triangle, right triangle, acute triangle, obtuse triangle	Project Assessment Suggestions:	Lesson: **6-4**, **6-5** Text pp. 340 –345 Lesson: **6-12** Text pp. 372-373 **Picturing Polygons:** ▪ Investigation 2: "Triangles & Quadrilaterals" ▪ Investigation 3:: "Regular Polygons & Similarity" **Materials:** ▪ Geoboards ▪ Dot Paper ▪ Ruler or Straightedge ▪ Protractor ▪ Scissors **Technology:**
5.G.2 Identify, describe, and compare special types of three-dimensional shapes (cubes, prisms, spheres, pyramids) based on their properties, such as edges and faces.	**Three-Dimensional Shapes** Focus Questions: 1. What is a solid figure? 2. How can you tell one solid figure from another? 3. Can views from different angles help picture a solid?	**The students will be able to:** 1. Describe the number of faces, edges, vertices for a polyhedron. 2. Use features to identify polyhedra and other solids. 3. Identify solids from their nets. 4. Draw front, top, and side views of solids. Vocabulary: Polyhedron, faces, edge, vertex, prism, cylinder, cone, pyramid, sphere, net	Project Assessment Suggestions:	Lesson: **10-1**, **10-2** Text pp. 594-601 **Materials:** ▪ Solid Figures ▪ Grid Paper ▪ Scissors ▪ Tape ▪ Cubes **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.G.3 Identify relationships among points and lines, e.g., intersecting, parallel, perpendicular.	**Points & Lines** Focus Questions: 1. How do you represent basic geometric ideas? 2. What are some special lines?	**The students will be able to:** 1. Identify important geometric terms relating to lines, parts of a line, angles, and planes 2. Distinguish between special types of lines: intersecting, parallel, and perpendicular. Vocabulary: Point, line, line segment, midpoint, ray, plane, parallel lines, intersecting lines, perpendicular lines	Project Assessment Suggestions:	Lesson: **6-1** Text pp.328-331 **Materials:** ▪ Ruler or straightedge **Technology:**
5.G.4 Using ordered pairs of whole numbers (including zero), graph, locate, and identify points, and describe paths on the Cartesian coordinate plane.	**Ordered Pairs** Focus Questions: 1. How do you locate a point on a grid? 2. How do you graph a point? 3. How do you graph an equation on a coordinate plane?	**The students will be able to:** 1. Plot points for ordered pairs on a coordinate grid. 2. Identify the ordered pairs for plotted points. 3. Make a table of x- and y-values for an equation and then graph the equation. Vocabulary: Coordinates, Coordinate plane, ordered pairs, origin, x-axis, y-axis, linear equation	Project Assessment Suggestions:	Lesson: **3-14** Text pp. 174-175 Lesson: **12-9, 12-10** Text pp.724-729 **Materials:** ▪ Grid Paper ▪ Ruler or Straightedge **Technology:**
5.G.5 Describe and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.	**Transformations** Focus Questions: 1. How can a figure be a moved? 2. How can the patterns be drawn?	**The students will be able to:** Determine whether a pair of congruent figures are related by translation, rotation, or reflection. Vocabulary: Transformation,	Project Assessment Suggestions:	Lesson: **6-10** Text pp. 364-367 **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
		translation, rotation, reflection		
5.G.6 Identify and describe line symmetry in two-dimensional shapes, including shapes that have multiple lines of symmetry.	**Line Symmetry** Focus Question: How can you describe and create a line of symmetry?	**The students will be able to:** 1. Identify and make symmetrical figures. 2. Draw a line or lines of symmetry. 3. Apply concepts of symmetry to solve real- 4. world problems. Vocabulary: Symmetric, line of symmetry	Project Assessment Suggestions:	Lesson: **6-11** Text pp. 368-371 Lesson: **6-12** Text pp. 272-272 **Materials:** ▪ Scissors **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.G.7 Determine if two triangles or two quadrilaterals are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.	**Congruent Shapes** Focus Questions: 1. How do you describe figures with the same shape? 2. How do you relate the angles and sides of polygons?	**The students will be able to:** 1. To identify similar and congruent figures. 2. Determine whether a pair of congruent figures are related by translation, rotation, or reflection. Vocabulary: Similar figures, congruent figures, transformation, translation (slide), reflection, rotation (turn)	Project Assessment Suggestions: 1. Geometry Village	Lesson: **6-9, 6-10** Text pp. 360-367 **Materials:** **Technology:**



SUBJECT MATTER: Measurement *Grade: 5*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.M.1 Apply the concepts of perimeter and area to the solution of problems involving triangles and rectangles. Apply formulas where appropriate.	**Area & Perimeter** Focus Questions: 1. How can you find the distance around a shape? 2. How can you use counting square units to find the area of a shape? 3. How can you find the areas of squares and rectangles without counting square units? 4. How can you use a picture to help you solve a problem?	**The students will be able to:** 1. Find the perimeter of a polygon. 2. Find the area of irregular shapes by counting square units 3. Find the area of a rectangle or square by using a formula. 4. Draw pictures that represent the information given in problems. 5. Use area and perimeter to solve real-world problems. Vocabulary: Perimeter, formula, area, base, height	Project Assessment Suggestions:	Lesson: **9-5** Text pp. 540-541 Lesson: **9-7**, **9-8** Text pp. 548-551 Lesson: **9-11** Text pp. 558-559 Lesson: **9-16** Text pp. 572-573 **Materials:** ▪ Geoboards ▪ Dot Paper **Technology:** ▪
5.M.3 Solve problems involving simple unit conversions within a system of measurement.	**Measurement** Focus Questions: 1. What units are used to measure length in the metric system? 2. How can you change from one metric unit to another? 3. How can you find how much time	**The students will be able to:** 1. Change between one customary unit of length and another. 2. Add and subtract customary units of length. 3. Choose the most appropriate metric unit of length. 4. Measure lengths to the nearest centimeter and millimeter. 5. Change from one unit of	Project Assessment Suggestions:	Lesson: **9-1** Text pp. 528-531 Lesson: **9-3**, **9-4** Text pp. 534-539 Lesson: **9-12**, **9-13, 9-14** Text pp. 562-569 Lesson: **9-16** Text pp.572-573 **Measurement Benchmarks:** ▪ Investigation 1: "Measures of Lengths & Distances" ▪ Investigation 3: "It's About Time" **Materials:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
	passes between two events? 4. How can you use elapsed time to find when an event began or ended? 5. How can you read temperatures and find changes in temperatures?	time to another. 6. Use both scales on a thermometer to indicate temperature increases and decreases. 7. Apply measurement skills to solve real-world problems. Vocabulary: Metric System Customary System, meter, kilometer, hectometer, dekameter, decimeter, centimeter, millimeter, elapsed time, Fahrenheit, Celsius		▪ Inch Ruler ▪ Metric Ruler ▪ Thermometers **Technology:**
5.M.4 Find volumes and surface areas of rectangular prisms. *This standard is intentionally the same as standard 6.M.6.*	**Volumes & Surface Areas** Focus Question: How can you find a formula for the surface area of a rectangular prism?	**The students will be able to:** 1. Use a formula to find the surface area of rectangular prisms. 2. Use cubes to find the volume of a rectangular prism 3. Use a formula to determine the volume of a rectangular prism. Vocabulary: Surface area, rectangular prism, volume, cubic units	Project Assessment Suggestions:	Lesson: **10-3** Text pp. 602-603 Lesson: **10-5** Text pp. 610-613 **Materials:** ▪ Grid Paper ▪ Cubes **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.M.5 Find the sum of the measures of the interior angles in triangles by measuring the angles, and without measuring the angles.	**Interior Angles** Focus Questions: 1. How can you measure angles? 2. What is the sum of the measure of all triangles? 3. How can you find a missing angle measure in a triangle?	**The students will be able to:** 1. Find the measure of the interior angles in triangles by measuring and not measuring the angles. 2. Identify and classify triangles. Vocabulary: Angle, protractor, equilateral triangle, isosceles triangles, scalene triangle, right triangle, acute triangle, obtuse triangle	Project Assessment Suggestions:	Lesson: **6-2** Text pp. 332-335 Lesson: **6-5** Text pp. 342-345 **Materials:** ▪ Ruler or Straightedge ▪ Protractor ▪ Scissors **Technology:**

SUBJECT MATTER: Math – Data Analysis, Statistics, and Probability *Grade: 5*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
5.D.1 Given a set of data, find the median, mean, mode, maximum, minimum, and range, and apply to solutions of problems.	**Mean, Median, & Mode** Focus Questions: 1. How can data be described by a single number? 2. Does the mean, median, or mode best describe the data?	**The students will be able to:** 1. Find the mean, median, mode and range of a set of data. 2. Choose the measure that best represents a given set of data. Vocabulary: Average, range, median, mean, mode	Project Assessment Suggestions:	Lesson: **5-6** Text pp. 280-285 **Materials:** ▪ Calculators **Technology:**
5.D.2 Construct and interpret line plots, line graphs, and bar graphs. Interpret and label circle graphs.	**Line Plots,** **Line Graphs,** **Bar Graphs,** **Circle Graphs** Focus Questions: 1. What is a survey? 2. How do you read 3. a bar graph? 4. How do you make a line graph? 5. How do you read a stem-and-leaf plot? 6. When might you make a graph? 7. How do you read a circle graph?	**The students will be able to:** 1. Interpret a line plot and frequency table. 2. Make a bar graph to represent data. 3. Make line graphs to represent data. 4. Read and interpret given line graphs. 5. Construct and interpret stem-and-leaf plots. 6. Make a line plot to solve a problem. 7. Complete circle graphs based on data given. 8. Interpret given circle graphs. Vocabulary: Survey, data, line plot, frequency table, sample, bar graph, scale, axes, interval,	Project Assessment Suggestions:	Lesson: **5-1** to **5-5** Text pp. 260-279 Lesson: **5-7** Text pp. 286 –287 Lesson: **5-13** Text pp. 306 – 307 **Data: Kids Cats, & Ads:** ▪ Investigation 1: "Balancing Act" ▪ Investigation 2: "Examining Cats" **Materials:** ▪ Grid Paper ▪ Blank Circles **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
		line graph, trend, stem-and-leaf plot, stem, leaf, circle graph		
5.D.3 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a number cube) and test the predictions.	**Probability** Focus Questions: 1. What outcomes are likely? 2. What other kinds of events are there? 3. What actually happens when you toss a cube? 4. How does tree diagrams help list outcomes? 5. What is the probability of an event? 6. How can you decide if a game is fair?	**The students will be able to:** 1. Identify events and favorable outcomes. 2. Determine if an outcome is equally likely, impossible, less likely, more likely, or certain. 3. Find all possible outcomes of an event by making a tree diagram or by multiplying. 4. Use fractions to represent the probabilities of events. 5. Use probability to decide if a game is fair or unfair. Vocabulary: Probability, outcome, equally likely, event, certain event, impossible event, sample space, tree diagram	Project Assessment Suggestions:	Lesson: **5-10** Text pp. 296-299 Lesson: **5-11** Text pp. 300-301 Lesson: **5-12** Text pp. 302-305 **Between Never & Always:** ▪ Investigation 2: "Fair & Unfair Games **Materials:** ▪ Cubes ▪ Spinners **Technology:**

SUBJECT MATTER: Math - Number Sense and Operations *Grade:* 6

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			FOR ALL UNITS: Prentice Hall: Mathematics Course 1 • Pre-assessments • Checkpoint Quizzes • Chapter Test • Alternative Assessments • Test Generator (Software) • Lesson Quick Quizzes **Problem of the Day** **Daily Mental Math** **MCAS Questions** ***MCAS Finish Line Grade 6***	FOR ALL UNITS: Prentice Hall: Mathematics Course 1 Prentice Hall: Teacher Resource Aids ▪ Practice ▪ Re-teaching ▪ Enrichment ▪ Chapter Projects ▪ Problems Solving ▪ Cumulative Review ▪ Presentations Plus (Software) Word Wall & Charts Math Strips ***Navigating through Data* Gr. 6-8** **Navigating through Algebra *Gr.6-8*** ***Navigating through Geometry* Gr.6-8**
6.N.1 Demonstrate an understanding of (positive integer) powers of ten, e.g., 10^2, 10^5.	**Powers of Ten**	**The students will be able to:** 1. Use positive exponents. 2. Simplify expressions with exponents. 3. Represent a positive number in expanded notation. Vocabulary: Exponents, power, base, expanded notation, power of 10	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists	Lesson: **2-8** Text pp. 99–104 Scientific Notation **Materials:** ▪ Graphing Calculators **Technology:** Brain Pop: Standard & Scientific Notation, Exponents

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			• Daily Class Work <u>Project Assessment Suggestions:</u>	
6.N.2 Demonstrate an understanding of place value through millions and thousandths.	**Place Value**	**The students will be able to:** 1. Write and compare whole number. 2. Read and write decimals to the thousandth place. <u>Vocabulary</u>: Place value, tenths, hundredths, thousandths	Problem of the Day Lesson Quick Quiz • Formative Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work <u>Project Assessment Suggestions:</u>	Lesson: **1-1**, **1-2** Text pp. 4 – 23 **<u>Materials:</u>** ▪ Explore Decimal Models (10 x 10 grids) ▪ Base 10 blocks **<u>Technology:</u>**
6.N.4 Demonstrate an understanding of fractions as a ratio of whole numbers, as parts of unit wholes, as parts of a collection, and as locations on the number line.	**Fractions** **Proportional Relationships**	**The students will be able to:** 1. Demonstrate that a fraction is a division operation. 2. Write a fraction for a given situation. 3. Draw a fraction for a given situation. 4. Represent a fraction on a number line. 5. Recognize simple proportional relationship. <u>Vocabulary</u>: Ratio, equal ratio, proportion	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work <u>Project Assessment Suggestions:</u>	Lesson: **3-4** "Investigation" Text pp. 132 – 133 Lesson: **6-1** Text pp. 269 – 272 Lesson: **6-3** Text pp. 278 – 282 CMP: *Bits & Pieces* ▪ Investigation 1 "Reporting Progress" **<u>Materials:</u>** ▪ Fraction Factory Pieces ▪ 10 x 10 grid work ▪ Number Lines ▪ Rulers

Standard	Content	Skills	Assessment	Teacher Resources & Notes
				Technology: ▪ Brain Pop: Ratio
6.N.5 Identify and determine common equivalent fractions, mixed numbers, decimals, and percents.	**Common Equivalent Fractions** **Mixed Numbers** **Decimals & Percents**	**The students will be able to:** 1. Find equivalent fractions. 1. Write fractions in simplest form. 2. Write numbers as improper fractions. 3. Write numbers as mixed numbers. Vocabulary: Equivalent fractions, simplest form, percent, improper fractions, mixed numbers	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **3-4** Text pp. 134 – 138 Lesson: **3-5** Text pp. 139 – 142 Lesson: **6-6** Text pp. 234 – 289 **Materials:** ▪ Fraction Factory Pieces **Technology:** ▪ Simplifying Fractions with calculators ▪ Brain Pop: Mixed Numbers
6.N.6 Find and position whole numbers, positive fractions, positive mixed numbers, and positive decimals on a number line.	**Number Line**	**The students will be able to:** 1. Find and position, integers, decimals, fractions, mixed-numbers, and fractions on a number line. Vocabulary: Repeating decimal, terminating decimal	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work	Lesson: **1-3** Text pp. 13 – 17 Lesson: **3-8** Text pp. 153 – 156 Lesson: **10-1** Text pp. 491 – 495 Supplementary lessons are needed - text support is incomplete. **Materials:** ▪ Thermometers ▪ Rulers ▪ Meter Sticks **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			Project Assessment Suggestions:	
6.N.7 Compare and order whole numbers, positive fractions, positive mixed numbers, positive - decimals, and percents.	**Compare and Order**	**The students will be able to:** 1. Compare and order integers, positive fractions, mixed numbers, decimals, and percents. Vocabulary: Integers, mixed numbers, percents	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10–1** Text pp. 491 - 495 Lesson: **3-8** Text pp.153 - 156 **Materials:** ▪ Benchmarks: 0, ½, 1 **Technology:** ▪ Brain Pop: Converting Fractions to Decimals
6.N.8 Apply number theory concepts—including prime and composite numbers, prime factorization, greatest common factor, least common multiple, and divisibility rules	**Number Theory:**	**The students will be able to:** 1. Find factors of a number. 2. Identify numbers divisible by 2, 3, 5, 9, & 10. 3. Identify composite numbers and prime numbers between 1 and 50. 4. Identify Greatest Common	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class	Lessons: **3-1** to **3-3** Text pp. 119 - 138 Sieve of Eratosthenes, text p. 127 CMP*: Prime Time* ▪ Investigation 1, "Factors & Products ▪ Investigation 2, "Whole Number

Standard	Content	Skills	Assessment	Teacher Resources & Notes
for 2, 3, 4, 5, 6, 9, and 10 —to the solution of problems.		Factor (GCF) of two or more numbers. 5. Find the prime factorization of a number. Vocabulary: Divisible, factor, composite number, prime number, prime factorization, greatest common factor (GCF)	Participation • Checklists • Daily Class Work Project Assessment Suggestions:	Patters & Relationships ▪ Investigation 3, "Common Multiples & Common Factors ▪ Investigation 4 , "Factorization: Searching for Factor Strings" **Materials:** ▪ Factor Trees ▪ 100's chart ▪ Divisibility Rule Chart **Technology:** ▪ Brain Pop: Greatest Common Factor
6.N.9 Select and use appropriate operations to solve problems involving addition, subtraction, multiplication, division, and positve integer exponents with whole numbers, and with positive fractions, mixed numbers, decimals, and percents.	**Solving Problems:** **Whole Numbers** **Decimals** **Integers** **Fractions** **Mixed Numbers** **Percents**	**The students will be able to:** Apply operational concepts to real world problems. Vocabulary: "Using a Problem Solving Plan", "Make a Table & Look for a Pattern", "Try, Check, & Revise", "Draw a Diagram", "Solve a Simpler Problem", "Write an Equation", "Make an Organized List", "Use Logical Reasoning", "Work Backward", "Make a Graph", Simulate a Problem"	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Chapter 1 Decimals Text p. 5 - 52 Lesson **2-8** Text Scientific Notation p. 104 Chapter 4 Adding & Subtracting Fractions Text p.170 - 211 Chapter 5 Multiplying & Dividing Fractions Text p. 218 - 263 Lessons: **6-6** to **6-9** Text pp. 294 - 313 **Materials:** **Technology:**
6.N.10 Use the number line to model addition and subtraction of integers, with the exception of subtracting nrgative	**Modeling: Addition and Subtraction of Integers**	**The students will be able to:** Model addition and subtraction of integers on a number line. **Vocabulary:** Opposites, integers, absolute value	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation	Lesson: **10-2** Textp p. 496 - 501 Lesson: **10-3** Text pp. 503 – 508 Activity: "A Race to the End" Text p. 508 **Materials:** ▪ Number Line

Standard	Content	Skills	Assessment	Teacher Resources & Notes
integers.			• Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	▪ Thermometers **Technology:** ▪ Brain Pop: Adding & Subtracting Integers
6.N.11 Apply the Order of Operations for expressions involving addition, subtraction, multiplication, and division with grouping symbols (+, –, x, ÷).	**Order of Operations**	**The students will be able to:** Understand and use the Order of Operation. Vocabulary: Expressions, order of operations	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-10** Text pp. 48 - 52 **Materials:** ▪ Mnomic: Please Excuse My Dear Aunt Sally **Technology:** ▪ Brain Pop: Order of Operations
6.N.12 Demonstrate an understanding of the inverse relationship of addition and subtraction, and use that understanding to simplify computation and solve problems.	**Inverse Operations** **Problem Solving**	**The students will be able to:** Use inverse operations to simplify computations and solve problems. Vocabulary: Inverse operation, Subtraction Property of Equality, Addition Property of Equality	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson**: 2-6** Text pp. 90 – 94 CMP: *Bits & Pieces II* ▪ Investigation 2 "Adding & Subtracting Fractions **Materials:** **Technology:** Brain Pop: Simple Equations, Solving Equations

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.N.13 Accurately and efficiently add, subtract, multiply, and divide (with double-digit divisors) whole numbers and positive decimals.	**Operations with Whole Numbers and Decimals**	**The students will be able to:** 1. Add, subtract, multiply, and divide (double-digit divisors), whole numbers and decimals. 2. Interpret remainders with division. Vocabulary: Commutative Property, Associative Property, Identity Property	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-5** Text pp. 25 - 29 Lesson: **1-7** Text pp. 35 - 39 Lesson: **1-9** Text pp. 43 - 47 CMP, *Bits & Pieces II* Investigations 6-3 & 6-4 **Materials:** **Technology:** Brain Pop: Multiplication, Associative Property, Commutative Property
6.N.14 Accurately and efficiently add, subtract, multiply, and divide positive fractions and mixed numbers. Simplify fractions.	**Fraction and Mixed Number Operations** **Simplify Fractions**	**The students will be able to:** 1. Add, subtract, multiply, and divide fractions and mixed numbers. 2. Simplify fractions. Vocabulary: Numerator, denominator, mixed numbers, reciprocal	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Chapter 4 Adding & Subtracting Fractions Text pp.171 - 213 Chapter 5 Multiplying & Dividing Fractions Text pp. 219 - 263 CMP: *Bits & Pieces II* ▪ Investigation 2, Adding & Subtracting Fractions ▪ Investigation 3, Multiplication with Fractions ▪ Investigation 4, Division with Fractions **Materials:** ▪ Practice Game Text p. 189 "That's Some Sum" ▪ Pattern Blocks ▪ Fraction Bars **Technology:** ▪ Brain Pop: Add/Subtract Fractions, Multiply/Divide Fractions

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.N.15 Add and subtract integers, with the exception of subtracting negative integers.	**Adding & Subtracting Integers**	**The students will be able to:** 1. Add integers with same and different signs. 2. Subtract integers. Vocabulary: Integers, absolute value	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10–2** Text pp. 497 –502 Lesson: **10–3** Text pp. 503 -508 CMP: Bits & Pieces III ▪ Investigation 1, "Decimals-More or Less!" **Materials:** **Technology:** ▪ Brain Pop: Add/Subtract Integers
6.N.16 Estimate results of computations with whole numbers, and with positive fractions, mixed numbers, decimals, and percents. Describe reasonableness of estimates.	**Estimation**	**The students will be able to:** 1. Estimate computations using rounding, compatible numbers, and front-end estimation techniques. 2. Make reasonable Estimations by using whole number computation, nearest ½ and 0. Vocabulary: Estimation, compatible numbers, front-end estimation	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-4** Text pp. 19 – 23 Lesson: **1-5** Text pp. 25 - 29 Lesson: **4-1** Text pp. 171 –174 Lesson: **6-8** Text pp. 303 - 306 CMP: *Bits & Pieces II* ▪ Investigation 1, "Estimating with Fractions" **Materials:** **Technology:** ▪ Brain Pop: Rounding

SUBJECT MATTER: Math – Patterns, Relationships, and Algebra *Grade:* 6

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.P.1 Analyze and determine the rules for extending symbolic, arithmetic, and geometric patterns and progressions, e.g., ABBCCC; 1, 5, 9, 13…; 3, 9, 27...	**Patterns & Sequences**	**The students will be able to:** 1. Extend and analyze a number pattern. 2. Write a rule for a number pattern. 3. Identify patterns in real-world situations. 4. Continue geometric patterns and sequences. Vocabulary: Term, conjecture, function rule	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **2-1** Text pp. 63 - 67 *Navigating Through Data*, Gr. 6-8 **Materials:** Building toothpicks **Technology:**
6.P.2 Replace variables with given values and evaluate/simplify, e.g., 2(❍) + 3 when ❍ = 4.	**Variables**	**The students will be able to:** 1. Use variables and evaluate algebraic expressions. 2. Write and use algebraic expressions. Vocabulary: Numerical expression, variable, algebraic expression, evaluate, equation, solution	Problem of the Day Lesson Quick Quiz Formative Assessment: ▪ Teacher Observation ▪ Questioning ▪ Class Participation Checklists Daily Class Work Project Assessment Suggestions:	Lesson: **2-2** Text pp. 68 - 73 Lesson: **2-3** Text pp. 74 - 78 Lesson: **2-5** Text pp. 84 – 88 Navigating Through Geometry Gr. 6-8: ▪ Indirect Measurement p. 77 ▪ **Materials:** ▪ Algebra Tiles **Technology:** ▪ Brain Pop: Equations with Variables

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.P.3 Use the properties of equality to solve problems with whole numbers, e.g., if ☐ + 7 = 13, then ☐ = 13 – 7, therefore ☐ = 6 ; if 3 x ☐ = 15, then ☐ = 15 ÷ 3, therefore ☐ = 5.	**Properties of Equality**	**The students will be able to:** 1. Solve addition and subtraction equations. 2. Solve multiplication and division equations. Vocabulary: Inverse operations, Properties of Equality	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: Text **2-6** pp. 90 - 94 Lesson: Text **2-7** pp. 95 - 98 **Materials:** **Technology:** ▪ Brain Pop: Solving Equations
6.P.4 Represent real situations and mathematical relationships with concrete models, tables, graphs, and rules in words and with symbols, e.g., input-output tables.	**Real Situations**	**The students will be able to:** 1. Create and interpret a function table. 2. Graph functions 3. Solve problems by making a graph. Vocabulary: Function rule	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10-8** Text pp. 527 - 532 Lesson: **10-9**Text pp. 533 – 536 **Materials:** **Technology:** ▪ Grids ▪ Graphing Calculators
6.P.5 Solve linear equations using concrete models, tables, graphs, and paper-pencil methods.	**Proportional Relationships**	**The students will be able to:** 1. Make a function table and graph a function. 2. Solve problems by making	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists	Lesson: **10 – 8** Text pp. 527 532 Lesson: **10 – 9** Text pp. 533 – 536 **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
		a graph. Vocabulary: Linear equation	• Daily Class Work Project Assessment Suggestions:	▪ Graphing Calculators ▪ Brain Pop: Graphing Linear Equations
6.P.6 Produce and interpret graphs that represent the relationship between two variables in everyday situations.	**Interpret Graphs**	**The students will be able to:** Graph functions that represent real life situations. Vocabulary: Variable, function	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10–8** Text pp. 527 - 532 Lesson: **10 –9** Text pp. 533 - 536 CMP: *Data About Us* ▪ Investigation 2, "Using Graphs to Explore Data" **Materials:** **Technology:** ▪ Graphing Calculators ▪ Grids
6.P.7 Identify and describe relationships between two variables with a constant rate of change. Contrast these with relationships where the rate of change is not constant.	**Rate**	**The students will be able to:** 1. Write and describe relationships that show a constant rate of change using two variables. 2. Then contrast this with relationships that show no constant rate of change. Vocabulary: Rate, unit rate, unit price	Problem of the Day Lesson Quick Quiz • Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lessons: **2-2 to 2-4** Text pp. 68- 82 Lesson: **6-2** Text pp. 273 – 276 CMP: *Data About Us* ▪ Investigation 2, "Using Graphs to Explore Data **Materials:** **Technology:** ▪ Brain Pop: Distance, Rate, and Time

SUBJECT MATTER: Math – Geometry *Grade: 6*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.G.1 Identify polygons based on their properties, including types of interior angles, perpendicular or parallel sides, and congruence of sides, e.g., squares, rectangles, rhombuses, parallelograms, trapezoids, and isosceles, equilateral, and right triangles.	**Geometry Shapes**	**The students will be able to:** Identify and describe polygons based on their properties (angles, sides, etc.). Vocabulary: Angles, vertex, degree, acute angle, right angle, obtuse angle, straight angle, perpendicular angle, polygon, quadrilateral, trapezoid, parallelogram, rectangle, rhombus, square, congruent figures, similar figures	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: Creating Polygon Riddles	Lesson: **8-2** to **8-7** Text pp. 379 – 409 CMP: *Shapes & Designs* ▪ Investigation 1, "Bees & Polygons ▪ Investigation 3, "Polygon Properties & Tiling" Navigation Through Geometry Gr. 6-8 ▪ Using Venn Diagrams p.23 ▪ Exploring Triangles p, 16 ▪ Exploring Shapes with Triangles p. 61 **Literature Connection:** *The Greedy Triangle* by Marilyn Burns **Materials:** **Technology:** ▪ Basic Angle Constructions Text p. 384 - 385 ▪ Protractors & Rulers ▪ Brain Pop: Polygons, Measuring Angles
6.G.2 Identify, describe, and compare special types of three-dimensional shapes (cubes, prisms, spheres,	**Three-Dimensional Shapes**	**The students will be able to:** Identify three-dimensional figures based on their	Problem of the Day Lesson Quick Quiz Formative Assessment: 1. Teacher Observation	Lesson**: 9-7** pp. 462 – 466 *Navigating Through Geometry*, Gr. 6-8

Standard	Content	Skills	Assessment	Teacher Resources & Notes
pyramids) based on their properties, such as edges and faces.		properties. Vocabulary: Three-dimensional figures, faces, prism, cube, pyramid, cylinder, cone, sphere, net	2. Questioning 3. Class Participation Checklists Daily Class Work Project Assessment Suggestions: 1. One, Two, Three Dimensions	Constructing 3-D Figures Solid Figures **Materials:** **Technology:**
6.G.3 Identify relationships among points and lines, e.g., intersecting, parallel, perpendicular.	**Points & Lines**	**The students will be able to:** 1. Identify/name points, lines, segments, and rays. 2. Identify/name parallel, intersecting, perpendicular and skew lines. Vocabulary: Point, line, segment, ray, collinear, plane, intersecting lines, parallel lines, skew lines	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: 1. Line Design Projects 2. Popsicle Stick's Lab	Lesson: **8-1** Text pp. 373- 377 CMP: Shapes and Designs ▪ Investigation 1, "Bees & Polygons" ▪ Investigation 2, "Polygons & Angles" **Materials:** **Technology:** ▪ Software: *Plane Geometry* ▪ Software: *Galaxy Geometry* ▪ Brain Pop: Parallel & Perpendicular Lines
6.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).	**Ordered Pairs**	**The students will be able to:** Name coordinates and graph points on a coordinate plane. Vocabulary: Coordinate plane, quadrants, origin, ordered pairs	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment	Lesson: **10-6** Text pp. 513 – 521 Extension: Reflections in the Coordinate Plane p. 522 CMP: *Data About Us* ▪ Investigation 2, "Using Graphs to Explore" **Materials:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			Suggestions: 1. Birthday Robot Project	**Technology:** ▪ Software: *Galaxy Geometry*
6.G.5 Find the distance between two points on horizontal or vertical number lines.	**Distance & Location**	**The students will be able to:** Determine distances between points on a line. Vocabulary: Horizontal Line, vertical line	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-3** Text pp. 13 – 15 Lesson: **3-7** Text pp. 156 **Materials:** ▪ Number Lines ▪ Ruler **Technology:**
6.G.6 Predict, describe, and perform transformations on two-dimensional shapes, e.g., translations, rotations, and reflections.	**Transformations**	**The students will be able to:** Identify, draw, and perform translations, reflections, and rotations. **Vocabulary:** Image, translation, reflection, line of reflection, rotation, center of rotation	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: Tessellation Project	Lesson: **8-9** Text pp. 415 - 420 Extension" Tessellations p. 420 Navigating Through Geometry, Gr. 6-8 CMP: Shapes & Designs ▪ Investigation 1, "Bees & Polygons **Materials:** **Technology:** ▪ Software: Tessellation Deluxe ▪ Software: *Galaxy Geometry* ▪ Brain Pop: Transformations ▪ M.C. Escher Video

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.G.7 Identify types of symmetry, including line and rotational.	**Line Symmetry**	**The students will be able to:** 1. Find line symmetry. 2. Identify rotational symmetry. Vocabulary: Line symmetry, line of symmetry	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **8-8** Text pp. 410 – 414 CMP: Shapes & Designs ▪ Investigation 1, Bees & Polygons Navigating Through Geometry, Gr. 6-8 ▪ "Explorations with Lines of Symmetry", p.108 - 109 **Materials:** **Technology:** ▪ Mirrors
6.G.8 Determine if two shapes are congruent by measuring sides or a combination of sides and angles, as necessary; or by motions or series of motions, e.g., translations, rotations, and reflections.	**Congruent Shapes**	**The students will be able to:** Identify congruent figures. Vocabulary: Congruent figures, translations, rotations, reflections	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **8-7** to **8-9** Text pp.405 - 420 Navigating Through Geometry, Gr. 6-8 CMP, Ruins of Montarek **Materials:** **Technology:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.G.9 Match three-dimensional objects and their two-dimensional representations,	**Two/Three Dimensional Figures**	**The students will be able to:** 1. Identify three-dimensional figures. 2. Describe three-dimensional figures Vocabulary: Three-dimensional figures, faces, prisms, cube, pyramid, cylinder, cone, sphere, net	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **9-7** Text pages 462 – 466 Investigation: Views of Three-Dimensional Objects Text p.461 CMP: *Covering & Surrounding* Navigating Through Geometry, Gr. 6-8 ▪ Isometric Explorations, p. 65 **Materials:** **Technology;**

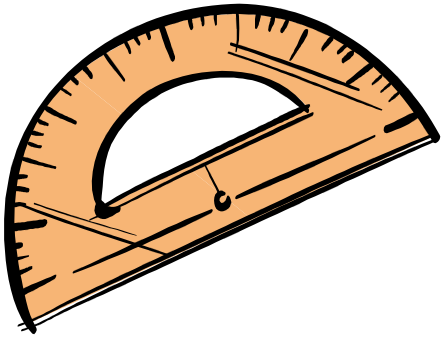
SUBJECT MATTER: Measurement *Grade:* 6

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.M.1 Apply the concepts of perimeter and area to the solution of problems. Apply formulas where appropriate.	**Area & Perimeter**	**The students will be able to:** 1. Estimate the areas of irregular figures. 2. Find the perimeters and areas of rectangles. 3. Find the areas of triangles and parallelograms. 4. Find the areas of complex figures. 5. Find the circumference and area of circles. Vocabulary: Area, perimeter, base, height (triangle & parallelogram), circle, radius, chord, diameter, circumference, pi	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **9-3**, to **9-6** Text pp. 440 – 459 Investigation: Exploring Circles Text p. 451 "Discovering Pi" CMP, *Covering & Surrounding* ▪ Investigation 1, "Design Bumper Cars" ▪ Investigation 2, "Changing Area, Changing Perimeter" **Materials:** **Technology:** ▪ Brain Pop: Area of Polygons, Area of Parallelograms
6.M.2 Identify, measure, describe, classify, and construct various angles, triangles, and quadrilaterals.	**Angles** **Triangles** **Quadrilaterals**	**The students will be able to:** 1. Classify triangles by angles. 2. Classify triangles by sides. 3. Identify polygons. 4. Classify quadrilaterals. Vocabulary: Acute triangle, obtuse triangle, right triangle, congruent segments,	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: 1. 3-D Shape Sort	Lesson**: 8-4**, **8-5** Text pp. 392-400 Activity: Angle Construction Angle Bisectors CMP: *Shapes & Designs* ▪ Investigation 2, "Polygon Angles" ▪ Investigation 3, " Polygon Properties & Tiling" **Materials:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
		equilateral triangle, isosceles triangle, scalene triangle, polygon, quadrilateral, trapezoid, parallelogram, rectangle, rhombus, square		**Technology:** ▪ Brain Pop: Types of Triangles, Polygons
6.M.3 Solve problems involving proportional relationships unit of measurement, e.g.same system unit conversions, scale models, maps, and speed.	**Proportion** **Scale Drawing**	**The students will be able to:** 1. Change units of measurement. 2. Compute with units. 3. Find the scale of a drawing. 4. Find the actual dimensions of a scale drawing. Vocabulary: Proportion, Customary System, scale	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **5-8** Text pp. 254 - 257 Lesson: **6-5** Text pp. 288 - 292 Real World: Applying Measurement Text p. 486 CMP: Shapes & Designs ▪ Investigation 3, " Polygon Properties & Tiling" Supplement Activities: "The Missing Link" The Pip Family **Materials:** ▪ Grids **Technology:** ▪ Brain Pop: Proportions
6.M.4 Find areas of triangles and parallelograms. Recognize that shapes with the same number of sides but different appearances can have the same area. Develop strategies to find the area of more complex shapes.	**Area**	**The students will be able to:** 1. Find the area of triangles and parallelograms. 2. Find the area of complex figures. Vocabulary: Base of triangle, height of triangle, base of parallelogram,	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment	Lesson: **9-4** Text pp. 446 – 450 ▪ Investigations: comparing Areas p. 446 **Materials:** ▪ Grid Paper ▪ Tangram Sets **Technology:** ▪ Software: *Plane Geometry* **Literature Connection:**

Standard	Content	Skills	Assessment	Teacher Resources & Notes
		height of parallelogram	Suggestions:	▪ *Grandfather Tang's Story* by Ann Tompert
6.M.5 Identify, measure, and describe circles and the relationships of the radius, diameter, circumference, and area (e.g., d = 2r, p = C/d), and use the concepts to solve problems.	**Circles**	**The students will be able to:** 1. Identify parts of a circle. 2. Find the circumference of a circle. 3. Find the area of a circle. Vocabulary: Circle, radius, chord, diameter, pi, circumference	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **9-5** & **9-6** Text pp. 452 - 459 Activity: "Deriving Pi" **Materials:** **Technology:** ▪ Brain Pop: Measuring Circles, Pi ▪ Software: *Plane Geometry* **Literature Connection:** ▪ *Sir Cumference and the Great Knight of Angleland* by Cindy Neuschwander
6.M.6 Find volumes and surface areas of rectangular prisms.	**Volume** **Surface Area**	**The students will be able to:** 1. Find the surface area of a rectangular prism. 2. Find the volume of a rectangular prism Vocabulary: Surface area, volume, cubic unit	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **9-8** & **9-9** Text pp. 467 476 Cylinder Exploration with popcorn *Navigating Through Geometry*, Gr. 6-8 ▪ Minimizing Perimeter p. 73 **Materials:** **Technology:** ▪ Brain Pop: Volume of Prisms

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.M.7 Find the sum of the angles in simple polygons (up to eight sides) with and without measuring the angles.	**Angles**	The students will be able to: 1. Find the sum of angles in simple polygons without measuring. 2. Find the sum of angles in simple polygons through measuring angles with a protractor. Vocabulary: Angle, acute, obtuse, right, protractor	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson**: 8-4** & **8-5** Text pp. 392 – 399 *The Missing Link*, Supplementary Activity, "Polygons & Angles CMP: *Shapes & Designs* ▪ Investigation 3, "Polygon Properties & Tiling" **Materials:** ▪ Pattern Blocks: Angle Exploration **Technology:** ▪ Brain Pop: Polygons

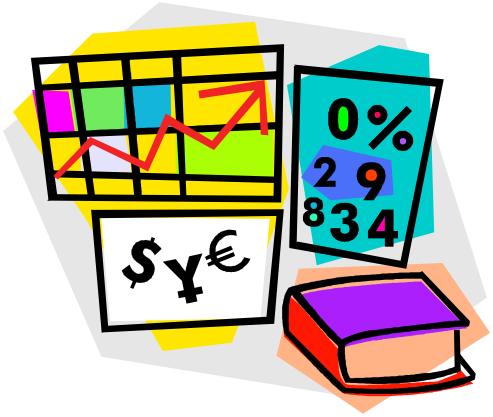


SUBJECT MATTER: Math – Data Analysis, Statistics, and Probability *Grade: 6*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.D.1 Describe and compare data sets using the concepts of median, mean, mode, maximum and minimum, and range.	**Mean, Median, Mode, & Range**	**The students will be able to:** 1. To analyze data using mean, median, mode, and range. Vocabulary: Mean, outlier, median, mode, range	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: 1. Student Questionnaire Projects	Lesson: **7-1** & **7-2** Text pp. 322 – 330 Investigation: "Exploring the Mean" Text p. 321 CMP: *Data About Us* ▪ Investigation 1, "Looking at Data" ▪ Investigation 3, " What Do We Mean by Mean?" **Materials:** ▪ Analyzing Student Questionnaires **Technology:** ▪ Brain Pop: Mean, Median Mode, & Range
6.D.2 Construct and interpret stem-and-leaf plots, line plots, and circle graphs.	**Stem-and Leaf Line Plots, Line Graphs, Bar Graphs, Circle Graphs**	**The students will be able to:** 1. Interpret and construct line plots. 2. Read and construct circle graphs. 3. Construct and use stem-and-leaf plots. Vocabulary: Line plot, circle graph, stem-and-leaf plots	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **7-2** Text pp. 327-328 Lesson: **7-5** Text pp. 341-345 Investigation: "Exploring Circle Graphs" Text p. 341 Lesson: **7-7** Text pp. 352-355 Analyzing Student Questionnaires CMP: Data About Us ▪ Investigation 1, "Looking at Data" ▪ Investigation 2, Using Graphs to Explore Data"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			1. Student Questionnaire Projects	▪ Investigation 3, "What Do We Me by Mean?" **Materials:** **Technology:** ▪ Brain Pop: Graphs ▪ Software: *Graph Club*
6.D.3 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes.	**Tree Diagrams** **Analyzing Outcomes**	**The students will be able to:** 1. Use tree diagrams. 2. Use the counting principal. 3. Find and count permutations. Vocabulary: Tree diagram, counting principal, permutations	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **11-5** & **11–6** Text pp. 568 - 578 CMP: *How Likely Is It* ▪ Investigation 2, "Experimental & Theoretical Probability" ▪ Investigation 4, "Probability, Genetics, & Games" **Materials:** **Technology:** Brain Pop: Probability of Compound Events

Standard	Content	Skills	Assessment	Teacher Resources & Notes
6.D.4 Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event.	**Probability**	**The students will be able to:** 1. Find the probability of an outcome. 2. Find experimental probabilities. 3. Make predictions from probabilities. 4. Make predictions based on a sample. Vocabulary: Equally likely outcomes, event, probability of an event, experimental probability	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lessons: **11-1** to **11-4** Text pp. 547-566 CMP: *How Likely Is It?* ▪ Investigation 2, "Experimental & Theoretical Probability" ▪ Investigation 3, "Making Decisions With Probability" **Materials:** **Technology:** ▪ Brain Pop: Basic Probability



SUBJECT MATTER: Math - Number Sense and Operations *Grade: 7*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
			FOR ALL UNITS: **Prentice Hall: Mathematics Course 2** ▪ Pre-assessments ▪ Checkpoint Quizzes ▪ Chapter Test ▪ Alternative Assessments ▪ Test Generator (Software) ▪ Lesson Quick Quizzes **Problem of the Day** **Daily Mental Math** **MCAS Questions** ***MCAS Finish Line***	**FOR ALL UNITS:** **Prentice Hall: Mathematics Course 2** **Prentice Hall: Teacher Resource Aids** ▪ Practice ▪ Reteaching ▪ Enrichment ▪ Chapter Projects ▪ Problem Solving ▪ Cumulative Review ▪ Presentations Plus (Software) **Word Wall & Charts** Math Strips
7.N.1 Compare, order, estimate, and translate among integers, fractions and mixed numbers (i.e., rational numbers), decimals, and percents. *This standard is intentionally the same as standard 8.N.1.*	**Compare, Order, Estimate Rational Numbers**	**The students will be able to:** 1. Estimate by rounding, compatible numbers, and front-end estimation. 2. Compare/order integers, fractions, mixed numbers, decimals, and percents. **Vocabulary**: Compatible numbers, integers, decimals, improper fractions, mixed numbers, percent, terminating decimals, repeating decimals	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-1** Text pp. 5-9 Lesson: **3-6** Text pp.156-159 Lesson: **3-8** to **3-9** Text pp.156-172 Lesson: **6-1** to **6-3** Text pp.291-304 **Materials:** **Technology:** ▪ Brain Pop: "Rounding" "Converting Fractions to Decimals"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.N.2 Use ratios and proportions in the solution of problems involving unit rates, scale drawings, and reading of maps.	**Ratio** **Proportion**	**The students will be able to:** 1. Write ratios and find equal ratios. 2. Use proportional reasoning to find unit rates and determine unit prices. 3. Create scale drawings using proportion. 4. To use proportions to solve problems involving scale, such as with reading math. **Vocabulary:** Ratio, equal ratio, rate, unit rate, unit price, proportion, scale drawing, scale	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **5-1** to **5-7** Text pp. 241-279 **Materials:** **Technology:** ▪ Brain Pop: "Proportion" "Scale Drawing"
7.N.3 Represent numbers in scientific notation (positive powers of ten only) and use that notation in problem situations.	**Scientific Notation**	**The students will be able to:** 1. Write numbers in scientific notation using powers of 10. 2. Relate scientific notation to real-life situations. **Vocabulary**: Scientific notation, powers of 10	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **3-2** Text pp.136-139 **Materials:** **Technology:** ▪ Brain Pop: "Scientific Notation"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.N.4 Demonstrate an understanding of absolute value, e.g., -3 = 3 = 3. *This standard is intentionally the same as standard 8.N.6.*	**Absolute** **Value**	**The students will be able to:** 1. Find opposites and absolute values 2. Graph and order integers. **Vocabulary**: Absolute value, opposites, integers	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation • Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-6** Text pp. 34-36 **Materials:** **Technology:** ▪ Brain Pop: "Absolute Zero"
7.N.5 Apply the rules of positive integer exponents to the solution of problems. Extend the Order of Operations to include positive integer exponents.	**Integers** **Order of Operations**	**The students will be able to:** 1. Write numbers with exponents. 2. Simplify expressions with exponents. **Vocabulary:** Integer, exponents, power, Order of Operations	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **3-1** Text pp. 131 - 135 **Materials:** **Technology:** ▪ Brain Pop: "Exponents" "Order of Operations"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.N.6 Use the inverse relationships of addition and subtraction, and of multiplication and division, to simplify computations and solve problems, e.g., multiplying by 1 /2 or 0.5 is the same as dividing by 2.	**Inverse Operations**	**The students will be able to:** 1. Use inverse operations to simplify expressions. 2. Use inverse operations to solve equations. **Vocabulary**: Equations, inverse operations, solutions, Inequality Properties	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **2-2** to **2-6** Text pp. 77– 101 **Materials:** **Technology:** ▪ Brain Pop: "Solving Equations" "Simple Equations" "2-Step Equations"
7.N.7 Estimate and compute with fractions (including simplification of fractions), integers, decimals, and percents (including those greater than 100 and less than 1). *This standard is intentionally the same as standard 8.N.10.*	**Computation:** • **Fractions** • **Decimals** • **Integers** **Percents**	**The students will be able to:** 1. Estimate and compute integers. 2. Simplify fractions. 3. Estimate and compute fractions. 4. Estimate and compute decimals. 5. Estimate and compute percents (numbers greater than 100 and less than 1). **Vocabulary:** commissions, percent of change, markup, discount	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-2** & **1-3** Text pp. 11-22 Lesson: **1-7** & **1-8** Text pp. 39-49 Lesson: **4-2** to **4-5** Text pp.192- 212 Lesson: **6-3** to **6-8** Text pp. 301-332 **Materials:** **Technology:** ▪ Brain Pop: "Commutative Property" "Associative Property"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.N.8 Determine when an estimate rather than an exact answer is appropriate and apply in problem situations. *This standard is intentionally the same as standard 8.N.11.*	**Estimate/Exact Answers**	**The students will be able to:** 1. Estimate an answer by using rounding, front-end estimation, and compatible numbers. 2. Estimate length and area. 3. Determine when it's appropriate to use an estimate in problem solving.. **Vocabulary**: Compatible numbers, front-end estimation, rounding, exact answer, area	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-1** Text pp. 5-10 Lesson: **2-2** to **2-4** Text pp.77-92 Lesson: **8-1** Text pp.403-406 **Materials:** **Technology:** ▪ Brain Pop: "Estimating Distance"
7.N.9 Select and use appropriate operations—addition, subtraction, multiplication, division, and positive integer exponents—to solve problems with rational numbers(including negatives). *This standard is intentionally the same as standard 8.N.12.*	**Problem Solving**	**The students will be able to:** To solve word problems with various strategies. **Vocabulary**: Exponent, power, rational numbers **Problem Solving Strategies:** "Using a Problem Solving Plan", "Make a Table & Look for a Pattern", "Try, Check, & Revise", "Draw a Diagram", "Solve a Simpler Problem", "Write an Equation", "Make an Organized List", "Use Logical Reasoning", "Work Backward", "Make a Graph", Simulate a Problem"	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **3-1** & **3-2** Text pp.131-140 Lesson: **3-10** Text pp.173-176 **Materials:** **Technology:** ▪ Brain Pop: "Word Problems" "Problem Solving Using a Table" "Scientific Problem Solving"

SUBJECT MATTER: Math – Patterns, Relationships, and Algebra *Grade: 7*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.P.1 Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic expressions. Include arithmetic and geometric progressions, e.g., compounding. *This standard is intentionally the same as standard 8.P.1.*	**Patterns**	**The students will be able to:** 1. Solve problems by finding and extending a pattern. 2. Recognize and extend arithmetic and geometric sequences. **Vocabulary**: Sequence, arithmetic sequence, geometric sequence, conjecture	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **7-6** Text pp. 374-377 Lesson: **9-1** to **9-3** Text pp. 469-483 **Materials:** ▪ Graphing Calculators **Technology:** ▪ Brain Pop: "Problem Solving Using a Table"
7.P.2 Evaluate simple algebraic expressions for given variable values, e.g., $3a^2 - b$ for $a = 3$ and $b = 7$. *This standard is intentionally the same as standard 8.P.2.*	**Variable Expressions**	**The students will be able to:** Evaluate numerical and algebraic expressions using the Order of Operations. **Vocabulary:** Variable, numerical expression, algebraic expression	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **2-1** Text pp. 71- 75 Lesson: **2-5** Text pp. 93-97 Lesson: **3-1** Text pp. 131-135 **Materials:** **Technology:** ▪ Brain Pop: "Equations with Variables"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.P.3 Create and use symbolic expressions for linear relationships and relate them to verbal, tabular, and graphical representations.	**Linear Relationships**	**The students will be able to:** 1. Solve problems using an equation. 2. Write and solve percent equations. **Vocabulary:** Equation, function table	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **2-7** Text pp.102-105 Lesson: **6-6** Text pp.318-321 Lesson: **6-9** Text pp.333-336 Lesson: **9-5** Text pp.489-492 Lesson: **9-8** Text pp.503-506 **Materials:** **Technology:** ▪ "Three Views of a Function" Text p. 493
7.P.4 Solve linear equations using tables, graphs, models, and algebraic methods.	**Linear Equations**	**The students will be able to:** 1. Solve one-step equations using number sense. 2. Solve equations by addition and subtraction. 3. Solve equations by multiplication and division. 4. Solve two-step equations. 5. Solve problems by writing equations. **Vocabulary:** Equation, open sentence, solution, addition Property of Equality, Subtraction Property of Equality, inverse operation, Multiplication Property of Equality, Division Property of Equality, linear equation, graph of an equation	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **2-2** to **2-7** Text p.77-105 **Investigation:** "Modeling Equations" Text p. 82 (algebra tiles) Lesson: **4-6** Text pp.213-217 Lesson: **6-6** Text pp.318-321 Lesson: **10-2** Text pp.527-531 **Materials:** **Technology:** ▪ Brain Pop: "Graphing Linear Equations" "Solving Equations" "Solving Two-Step Equations"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.P.5 Identify, describe, and analyze linear relationships between two variables. Compare positive rate of change, e.g., $y = 3x + 1$, to negative rate of change, e.g., $y = -3x + 1$.	**Rate of Change**	**The students will be able to:** 1. Solving a problem with combined strategies. 2. Use the slope of a line to analyze the rate of change. **Vocabulary:** Linear relationship, slope, rise, run	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10-3** Text pp. 533-539 Lesson: **10-5** Text pp. 544-547 **Materials:** **Technology:** ▪ Brain Pop: "Slope and Intercept"
7.P.6 Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate. *This standard is intentionally the same as standard 8.P.9.*	**Proportional Relationships**	**The students will be able to:** 1. Find unit rates and unit prices. 2. Test if ratios can form a proportion. 3. Use cross products to a proportion. 4. Use unit rates to solve proportions. 5. Solve proportions involving variables. 6. Use proportional relationships in similar figures to solve problems. 7. Use proportion to solve problems involving scale. **Vocabulary**: Rate, unit rate, unit price, proportion, cross product, similar polygons, indirect measurement, scale, scale drawing	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **5-2** Text pp. 246-250 **Extension:** "Dimensional Analysis" Text p. 251 Lesson: **5-4** to **5-7** Text pp. 256-279 **Writing in Math:** "Writing to Compare" Text p. 266 **Investigation:** "Plan a Trip" Text p. 280 **Test Taking Strategies:** "Using a Variable" Text p. 281 **Materials:** **Technology:** ▪ Brain Pop: "Proportion" "Comparing Prices"

SUBJECT MATTER: Geometry *Grade: 7*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.G.1 Analyze, apply, and explain the relationship between the number of sides and the sums of the interior angle measures of polygons.	**Angles/Sides of Polygons**	**The students will be able to:** 1. Understand, use, and explain the relationship between the number of sides and the sum of the interior angle measures of polygons. **Vocabulary:** Polygon, interior angle	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **7-4** Text pp. 374-377 **Materials:** **Technology:**
7.G.2 Classify figures in terms of congruence and similarity, and apply these relationships to the solution of problems. *This standard is intentionally the same as standard 8.G.2.*	**Congruent Similar Figures**	**The students will be able to:** 1. Identify and work with congruent figures. 2. Identify and find missing lengths in similar figures. **Vocabulary:** Congruent polygon, similar polygon, polygon, indirect measurement	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **5-6** Text pp. 267-272 Lesson: **7-7** Text pp. 348-382 **Materials:** **Technology:** ▪ "Creating Similar Figures" Text p. 273 ▪ Brain Pop: "Similar Triangles"
7.G.3 Demonstrate an understanding of the relationships of angles formed by intersecting lines, including parallel lines cut by a transversal. *This standard is intentionally the same as*	**Angles & Lines**	**The students will be able to:** 1. Identify segments, rays, and lines. 2. Measure and describe angles. 3. Work with pairs of angles formed by intersecting lines.	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work	Lesson: **7-1** Text pp. 347-350 Lesson: **7-2** Text pp. 351-356 **Materials:** **Technology:** ▪ Brain Pop: "Parallel & Perpendicular

Standard	Content	Skills	Assessment	Teacher Resources & Notes
standard 8.G.3.		**Vocabulary:** Point, line ray, segment, plane intersecting lines, parallel lines, skew lines, angle, vertex, acute angle, right angle, obtuse angle, straight angle, complementary, supplementary, adjacent angles, vertical angles, congruent angles	Project Assessment Suggestions: 1. Creative Line Design	Lines"
7.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).	**Coordinate Geometry**	**The students will be able to:** 1. Graph points on the Cartesian coordinate plane 2. Identify the coordinates of points on the Cartesian coordinate plane **Vocabulary:** Coordinate plane, x-axis, y-axis, origin, ordered pair (x,y), x-coordinate, y-coordinate, quadrants, horizontal, vertical	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **10-1** Text pp. 521-525 **Extension:** "Geometry in the Coordinate Plane" Text p. 526 **Materials:** **Technology:**
7.G.5 Use a ruler, protractor, and compass to draw polygons and circles.	**Drawing Polygons & Circles**	**The students will be able to:** 1. Use tools of Geometry to draw polygons and circles. **Vocabulary:** Protractor, compass, angle, angle bisector, midpoint, segment bisector, perpendicular lines, perpendicular bisector, arc, circle, radius, diameter, central angle, chord, semicircle, circle graph	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **7-2** & **7-2** Text pp.351- 361 **Extension:** "Angles and Parallel Lines" p. 362 Lesson: **7-8** & **7-9** Text pp.383 -392 **Test Taking Strategies**: "Drawing a Diagram" p. 393 **Materials:** **Technology:** ▪ Brain Pop: "Measuring Circles"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.G.6 Predict the results of translations and reflections of figures on unmarked or coordinate planes and draw the transformed figure.	**Transform-ations**	**The students will be able to:** 1. To graph and write the rules for translations. 2. To identify lines of symmetry and graph reflections. 3. Identify rotational symmetry and rotate a figure about a point. **Vocabulary:** Translation, transformation, image, prime notation, line symmetry, line of symmetry, reflection, line of reflection, rotation, center of rotation, rotational symmetry, angle of rotation	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	**Investigation:** "Exploring Slides, Flips, and Turns" p. 548 Lesson: **10-6** to **10-8** Text pp. 549-562 **Test-Taking Strategies:** "Answering True/False Questions" Text p. 563 **Materials:** **Technology:** ▪ Brain Pop: "Transformations"
7.G.7 Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces. *This standard is intentionally the same as standard 8.G.7.*	**Three-Dimensional Figures**	**The students will be able to:** Identify solid figures by their physical appearance, distinguishing characteristics, and spatial relationships. **Vocabulary:** Three-dimensional figure, face, edge, prism, bases of a prism, height of a prism, cube, cylinder, bases of cylinder, height of cylinder, pyramid, vertex of a pyramid, base of a pyramid, cone, base of a cone, vertex of a cone, sphere, center of a sphere	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions: 1. Net Construction Projects	Lesson: **8-7** Text pp.437-440 **Extension:** "Three Views of an Object" p. 441 **Materials:** **Technology:**

SUBJECT MATTER: Math – Measurement *Grade: 7*

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.M.1 Select, convert (within the same system of measurement), and use appropriate units of measurement or scale. *This standard is intentionally the same as standard 8.M.1.*	**Measurement Conversions** **(same system)**	**The students will be able to:** 1. Use and change metric units of measure. 2. Use and change units of length, capacity, and weight. 3. Estimate length . **Vocabulary:** Metric System, Customary System, length, capacity, weight	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-4** Text pp. 23-29 **Extra Practice:** Metric Units pp. 709-711 Lesson: **4-8** Text pp. 222-225 Lesson: **8-1** Text pp. 403-406 **Materials:** **Technology:**
7.M.2 Given the formulas, convert from one system of measurement to another. Use technology as appropriate. *This standard is intentionally the same as standard 8.M.2.*	**Measurement Conversions** **(Different Systems)**	**The students will be able to:** Using given formulas, convert units of measurement from one system to another. **Vocabulary:** Metric System, Customary System, Celsius, Fahrenheit	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	**Extension:** "Estimating in Different Systems" Text p. 226 **Test Taking Strategy:** "Using Estimation" Text p.511 Example 2 **Materials:** **Technology:** ▪ Brain Pop: "Imperial vs. Metric"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.M.3 Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter and circumference of parallelograms, trapezoids, and circles. Given the formulas, determine the surface area and volume of rectangular prisms and cylinders. Use technology as appropriate.	**Area, Perimeter, Circumference, & Surface Area**	**The students will be able to:** 1. Estimate the area of a figure. 2. Use appropriate formulas to find the areas of triangles, parallelograms, and trapezoids. 3. Find the areas of irregular figures. 4. Find the area and circumference of a circle. 5. Apply formulas and procedures to find various measures (perimeter, area, length of side(s), etc. 6. Draw a net. 7. Find the surface areas of rectangular prisms and cylinders. 8. Find the volume of a rectangular prism and a cylinder. **Vocabulary:** Area, perimeter, circumference, surface area, volume, parallelograms, height of parallelogram, base of parallelogram, triangle, base of triangle, height of triangle, trapezoid, base of trapezoid, height of trapezoid, circle, circumference, pi, rectangular prisms, cylinders, net, surface area, volume, cubic unit	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **8-1** to **8-4** Text pp. 403-424 Lesson: **8-8** to **8-9** Text pp. 442-458 Lesson: **9-9** Text pp. 507-510 **Materials:** **Technology:** ▪ Brain Pop: "Area of Polygons" "Area of Parallelogram" "Volume of Prism" "Volume of Cylinders"

SUBJECT MATTER: Math – Data Analysis, Statistics, and Probability *Grade:* 7

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.D.1 Select, create, interpret, and utilize the following tabular and graphical representations of data: circle graphs, Venn diagrams, stem-and-leaf plots, tables, and charts.	**Graphs, Tables, & Charts**	**The students will be able to:** 1. Organize and use a frequency table. 2. Construct and interpret histograms, scatterplots, line plots, Venn diagrams, box-and-whisker plot, and stem-and-leaf plots. 3. To construct and analyze circle graphs. **Vocabulary:** Frequency table, line plot, histogram, scatter plot, trend, positive trend, negative trend, stem-and-leaf plot, circle graph	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **11-1** to**11-3**Text pp.573-570 Lesson: **11-8** Text pp. 613-619 Lesson: **7-9** Text pp. 388-392 **Extension Activity:** "Venn Diagrams" p. 591 **Materials:** **Technology:** ▪ Brain Pop: "Graphs"
7.D.2 Find, describe, and interpret appropriate measures of central tendency (mean, median, and mode) and spread (range) that represent a set of data. Use these notions to compare different sets of data. *This standard is intentionally the same as standard 8.D.3.*	**Mean, Median, Mode, & Range**	**The students will be able to:** 1. Find, describe, and interpret the mean, median, mode, and range of a set of data. 2. Identify misleading graphs and statistics. **Vocabulary**: Range, mean, median, mode, outlier	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **1-7** Text pp. 39-44 Lesson: **1-10** Text pp.56-60 Lesson: **11-7** Text pp. 606 – 612 **Materials:** **Technology:** ▪ Brain Pop: "Mean, Median, Mode, & Range"

Standard	Content	Skills	Assessment	Teacher Resources & Notes
7.D.3 Use tree diagrams, tables, organized lists, and area models to compute probabilities for simple compound events, e.g., multiple coin tosses or rolls of number cubes.	**Probability**	**The students will be able to:** 1. To find the probability of an event. 2. To find the experimental probability using simulations. 3. To use the Counting Principle to find the number of outcomes. 4. Find the probability of dependent and independent events. 5. To solve probability problems using an organized list or a simulation. **Vocabulary:** Outcome, event, theoretical probability, experimental probability, complement, odds in favor, odds against, sample space, counting principle, compound event, independent events, dependent events	Problem of the Day Lesson Quick Quiz Formative Assessment: • Teacher Observation • Questioning • Class Participation Checklists • Daily Class Work Project Assessment Suggestions:	Lesson: **12-1** to **12-3** Text pp. 629-646 **Investigation**: "Exploring Experimental Probability" Text pp. 635-641 Lesson: **12-4** to **12-5** Text pp. 647-658 **Materials:** **Technology:** ▪ "Random Numbers" Text p. 642 ▪ Brain Pop: "Basic Probability" "Probability of Compound Events" "Probability of Independent Events"