

**Classroom Jeopardy!® Math Operations, Measurement, and Geometry (Middle School)
Standards and Correlation Document**

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Topic	Games/Categories	Source of Standard	Standard
Problem solving skills and real-world problems	<i>Solves real-world problems with addition, subtraction, multiplication and division</i> • Math Operations Game 1: Picnic Problems • Math Operations Game 2: Multiplication in Action	NCTM Principles and Standards for School Mathematics, Problem Solving Standards for Grades 6-8	• solve problems that arise in mathematics and in other contexts
		NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	• work flexibly with fractions, decimals, and percents to solve problems
	<i>Calculates the value of a group of coins</i> • Math Operations Game 1: Coin Count	McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 1, Level III (Grade 6-8)	Benchmark 4 Formulates a problem, determines information required to solve the problem, chooses methods for obtaining this information, and sets limits for acceptable solutions Benchmark 5 Represents problem situations in and translates among oral, written, concrete, pictorial, and graphical forms
	<i>Given the number and value of a group of coins, identifies the type of number of each coin in the group</i> • Math Operations Game 1: 25 Cents		1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.
	<i>Given a real-world situation, formulates a math problem necessary to find the needed information, including computing percentages and averages</i> • Math Operations Game 2: What's Your Problem?	California State Board of Education K-12 Content Standards, Grade 6 and Grade 7 Mathematics, Mathematical Reasoning	• knows the appropriate operations to solve real-world problems involving whole numbers, decimals, and fractions. • solves real-world problems involving whole numbers, fractions, decimals, and common percents using one or two-step problems.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations	2 (F) select and use appropriate operations to solve problems and justify the selections
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	• knows the appropriate operation to solve real-world problems involving fractions, decimals, and integers. • solves real-world problems involving decimals and fractions using two- or three-step problems.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Number sense, concepts and operations	2 (A) select and use appropriate operations to solve problems and justify the selections

		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> • knows the appropriate operations to solve real-world problems involving integers, ratios, rates, proportions, numbers expressed as percents, decimals, and fractions. • solves real-world problems involving integers, ratios, proportions, numbers expressed as percents, decimals, and fractions in two- or three-step problems. • knows the relationships among fractions, decimals, and percents given a real-world context.
Mathematical symbols and language	<i>Recognizes mathematical symbols</i> <ul style="list-style-type: none"> • Math Operations Game 1: Name that Symbol <i>Understands vocabulary related to operations and numbers</i> <ul style="list-style-type: none"> • Math Operations Game 2: All the Answers • Math Operations Game 2: Double-Duty Words • Measurement and Geometry Game 3: “Q” Terms 	McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 1, Level III (Grade 6-8)	<p>Benchmark 5 Represents problem situations in and translates among oral, written, concrete, pictorial, and graphical forms</p> <p>Benchmark 8 Understands the role of written symbols in representing mathematical ideas and the use of precise language in conjunction with the special symbols of mathematics</p>
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level II (Grade 3-5)	Benchmark 1 Vocabulary Terms number theory, prime number, composite number, factor, multiple, odd, even, divisibility, greatest common factor, least common multiple, prime factorization
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level III (Grade 6-8)	<p>Benchmark 1 Vocabulary Terms equivalent representation, whole number, positive, negative, fraction, ratio, decimal, percent, scientific notation, exponential, integer</p> <p>Benchmark 7 Vocabulary Terms ratio, proportion, percent, rate</p>
		NCTM Principles and Standards for School Mathematics, Communication Standards for Grades 6-8	• use the language of mathematics to express mathematical ideas precisely.
		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Mathematical Reasoning	2.5 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Place value	<i>Given a place value, identifies the correct digit in a number</i> <ul style="list-style-type: none"> • Math Operations Game 1: Place Value Puzzles <i>Translates expanded notation to standard notation</i> <ul style="list-style-type: none"> • Math Operations Game 1: Xpanded Know-Tation 	McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level III (Grade 6-8)	Benchmark 2 Understands the characteristics and properties (e.g., order relations, relative magnitude, base-ten place values) of the set of rational numbers and its subsets (e.g., whole numbers, fractions, decimals, integers)
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations	• reads and writes whole numbers and decimals in expanded form.

Compare and order numbers, including fractions, decimals, percents, and positive and negative numbers	<p><i>Compares fractions and inserts greater than, less than or equals to express relative size</i></p> <ul style="list-style-type: none"> • Math Operations Game 1: Compare Fractions <p><i>Identifies a number that is greater than one number and less than another</i></p> <ul style="list-style-type: none"> • Math Operations Game 2: In Betweens <p><i>Orders fractions or decimals from smallest to largest</i></p> <ul style="list-style-type: none"> • Math Operations Game 1: Small to Large 	NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	<ul style="list-style-type: none"> • compare and order fractions, decimals, and percents efficiently and find their approximate locations on a number line
		California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Number Sense	1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Number, operation, and quantitative reasoning	1 (A) compare and order non-negative rational numbers
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	1 (A) compare and order integers and positive rational numbers
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> • compares and orders integers, fractions, decimals, numbers with exponents, and numbers expressed as percents or in scientific notation, including ordering on a number line.
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Number, operation, and quantitative reasoning	1 A) compare and order rational numbers in various forms including integers, percents, and positive and negative fractions and decimals
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> • compares and orders fractions, decimals, integers, and radicals using graphic models, number lines, and symbols. • compares and orders numbers expressed in absolute value, scientific notation, integers, percents, numbers with exponents, fractions, decimals, radicals, and ratios.
Convert fractions, decimals, and percents	<p><i>Expresses a fraction as a decimal</i></p> <ul style="list-style-type: none"> • Math Operations Game 2: Fraction to Decimal <p><i>Finds the value of a variable in an equation with fractions and decimals</i></p> <ul style="list-style-type: none"> • Math Operations Game 1, Final Jeopardy! 	NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	<ul style="list-style-type: none"> • work flexibly with fractions, decimals, and percents to solve problems
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level III (Grade 6-8)	Benchmark 1 Understands the relationships among equivalent number representations (e.g., whole numbers, positive and negative integers, fractions, ratios, decimals, percents, scientific notation, exponentials) and the advantages and disadvantages of each type of representation
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations	<ul style="list-style-type: none"> • knows the relationships among fractions, decimals, and percents and expresses a given quantity in a variety of ways, such as fractions, decimals, or numbers expressed as percents.
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Number, operation, and quantitative reasoning	1 (B) generate equivalent forms of rational numbers including whole numbers, fractions, and decimals

		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Number Sense	1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications. 1.5 Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	1 (B) convert between fractions, decimals, whole numbers, and percents mentally, on paper, or with a calculator
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> knows the relationships among fractions, decimals, and percents. expresses a given quantity in a variety of ways (for example, integers, fractions, decimals, numbers expressed as a percent, numbers expressed in scientific notation, ratios).
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> knows the relationships among fractions, decimals, and percents given a real-world context.
Ratios and proportions	<p><i>Given a real-world situation, determines a ratio</i></p> <ul style="list-style-type: none"> Math Operations Game 1: Fraction Action <p><i>Applies knowledge of proportional relationships between similar figures to determine the measure of missing sides:</i></p> <ul style="list-style-type: none"> Measurement and Geometry Game 3: Missing Measures <p><i>Applies knowledge of proportional relationships in geometry to complete analogies</i></p> <ul style="list-style-type: none"> Measurement and Geometry Game 2: This Is to That 	NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	<ul style="list-style-type: none"> understand and use ratios and proportions to represent quantitative relationships develop, analyze, and explain methods for solving problems involving proportions, such as scaling and finding equivalent ratios.
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level III (Grade 6-8)	Benchmark 7 Understands the concepts of ratio, proportion, and percent and the relationships among them
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 3, Level III (Grade 6-8)	Benchmark 5 Uses proportional reasoning to solve mathematical and real-world problems (e.g., involving equivalent fractions, equal ratios, constant rate of change, proportions, percents)
		California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Number Sense	1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$). 1.3 Use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Number, operation, and quantitative reasoning	2 (C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates

		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Patterns, relationships, and algebraic thinking	3 (A) use ratios to describe proportional situations 3 (B) represent ratios and percents with concrete models, fractions, and decimals
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations	<ul style="list-style-type: none"> knows proportional relationships and describes such relationships in words, tables, or graphs.
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	2 (D) use division to find unit rates and ratios in proportional relationships such as speed, density, price, recipes, and student-teacher ratio 3 (B) estimate and find solutions to application problems involving proportional relationships such as similarity, scaling, unit costs, and related measurement units.
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Number, operation, and quantitative reasoning	1 (B) select and use appropriate forms of rational numbers to solve real-life problems including those involving proportional relationships
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement	<ul style="list-style-type: none"> finds measures of length, weight or mass, and capacity or volume using proportional relationships and properties of similar geometric figures.
Rates	<i>Uses proportional reasoning to solve real world problems related to rate, distance and time</i> <ul style="list-style-type: none"> Measurement and Geometry Game 2: Getting There Measurement and Geometry Game 3: Going Places 	NCTM Principles and Standards for School Mathematics, Measurement Standards for Grades 6-8	<ul style="list-style-type: none"> solve simple problems involving rates and derived measurements for such attributes as velocity and density.
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 4, Level III (Grade 6-8)	Benchmark 1 Understands the basic concept of rate as a measure (e.g., miles per gallon)
		California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Number Sense	1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$).
		California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Algebra and Functions	2.2 Demonstrate an understanding that <i>rate</i> is a measure of one quantity per unit value of another quantity. 2.3 Solve problems involving rates, average speed, distance, and time.
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Number, operation, and quantitative reasoning	2 (C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates
		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Algebra and Functions	4.2 Solve multistep problems involving rate, average speed, distance, and time or a direct variation.
		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Measurement and Geometry	<ul style="list-style-type: none"> 1.3 Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.

		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	2 (D) use division to find unit rates and ratios in proportional relationships such as speed, density, price, recipes, and student-teacher ratio
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement	<ul style="list-style-type: none"> develops and uses the distance formula in solving real-world problems ($d = rt$).
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Patterns, relationships, and algebraic thinking	3 (B) estimate and find solutions to application problems involving percents and proportional relationships such as similarity and rates.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement	<ul style="list-style-type: none"> applies formulas for finding rates, distance, time, and angle measures.
Factors, multiples, prime numbers	<p><i>Identifies the missing factor in the prime factorization of a composite number</i></p> <ul style="list-style-type: none"> Math Operations Game 2: Prime Factor Lineup <p><i>Knows rules of divisibility</i></p> <ul style="list-style-type: none"> Math Operations Game 2: Does It Divide? <p><i>Identifies prime numbers</i></p> <ul style="list-style-type: none"> Math Operations Game 2: Pick the Prime <p><i>Finds the greatest common factor</i></p> <ul style="list-style-type: none"> Math Operations Game 2: Greatest Common Factor <p><i>Finds the lowest common denominator</i></p> <ul style="list-style-type: none"> Math Operations Game 2: Final Jeopardy! 	NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	<ul style="list-style-type: none"> use factors, multiples, prime factorization, and relatively prime numbers to solve problems
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 2, Level III (Grade 6-8)	Benchmark 4 Uses number theory concepts (e.g., divisibility and remainders, factors, multiples, prime, relatively prime) to solve problems
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Number, operation, and quantitative reasoning	1 (E) identify factors and multiples including common factors and common multiples.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations	<ul style="list-style-type: none"> knows if numbers (less than or equal to 100) are prime or composite. finds the greatest common factor and least common multiple of two or more numbers. determines the prime factorization of a number less than or equal to 100. uses divisibility rules.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Number Sense, Concepts and Operations	<ul style="list-style-type: none"> knows if numbers are prime or composite and determines the prime factorization of a composite number. finds the greatest common factor and least common multiple of two or more numbers. applies number theory concepts, including divisibility rules, to solve real-world or mathematical problems.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Number Sense, Concepts and Operations	<ul style="list-style-type: none"> knows if numbers are relatively prime. applies number theory concepts, including divisibility rules, to solve real-world or mathematical problems.

Arithmetic operations	<p><i>Uses computation to find solutions to addition, subtraction, multiplication and division problems with positive whole numbers</i></p> <ul style="list-style-type: none"> • Math Operations Game 1: Plus and Minus • Math Operations Game 1: Divide and Conquer • Math Operations Game 1: Coin Count • Math Operations Game 1: Mega Multiples • Math Operations Game 2: Multiplication in Action 	NCTM Principles and Standards for School Mathematics, Number and Operations Standards for Grades 6-8	<ul style="list-style-type: none"> • understand the meaning and effects of arithmetic operations with fractions, decimals, and integers • understand and use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems.
	<p><i>Demonstrates understanding of effects of arithmetic operations by inserting appropriate operation symbol in a mathematical expression</i></p> <ul style="list-style-type: none"> • Math Operations Game 2: Math Operations <p><i>Solves real-world problems with addition, subtraction, multiplication and division</i></p> <ul style="list-style-type: none"> • Math Operations Game 1: Picnic Problems • Math Operations Game 2: Multiplication in Action <p><i>Uses computation to find solutions to addition, subtraction, multiplication and division problems with decimal numbers</i></p> <ul style="list-style-type: none"> • Math Operations Game 2: Decimal Computation <p><i>Solves real-world problems using mixed units (e.g., feet and inches)</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Mixed Measures 	McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 3, Level III (Grade 6-8)	<p>Benchmark 1 Adds, subtracts, multiplies, and divides whole numbers, fractions, decimals, integers, and rational numbers</p>
	<p>California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Number Sense</p>	<p>2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.</p> <p>2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations (e.g., $5/8 \div 15/16 = 5/8 \times 16/15 = 2/3$).</p> <p>2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.</p> <p>2.4 Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).</p>	
	<p>Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6</p>	<p>2 (A) model addition and subtraction situations involving fractions with objects, pictures, words, and numbers</p> <p>2 (B) use addition and subtraction to solve problems involving fractions and decimals</p> <p>2 (C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates</p>	
	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Number Sense, Concepts and Operations</p>	<ul style="list-style-type: none"> • knows, and uses models or pictures to show, the effects of the four basic operations on whole numbers, fractions, mixed numbers, and decimals. 	
	<p>California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Number Sense</p>	<p>1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.</p> <p>2.2 Add and subtract fractions by using factoring to find common denominators.</p>	

		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Number, operation, and quantitative reasoning	2 (A) represent multiplication and division situations involving fractions and decimals with concrete models, pictures, words, and numbers 2 (B) use addition, subtraction, multiplication, and division to solve problems involving fractions and decimals 2 (C) use models to add, subtract, multiply, and divide integers and connect the actions to algorithms
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> knows the effects of the four basic operations on whole numbers, fractions, mixed numbers, and decimals.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement	<ul style="list-style-type: none"> performs operations on measurements within either the metric or customary system (for example, finds three times 27 inches and expresses the answer in yards).
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Number, operation, and quantitative reasoning	2 (B) add, subtract, multiply, and divide rational numbers in problem situations
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Number sense, concepts and operations	<ul style="list-style-type: none"> knows the effects of the four basic operations on whole numbers, fractions, mixed numbers, decimals, and integers.
Two- and three-dimensional figures	<i>Demonstrates understanding of vocabulary related to figures and attributes of figures</i> <ul style="list-style-type: none"> Measurement and Geometry Game 1: Circle Lingo Measurement and Geometry Game 1: Which Unit? Measurement and Geometry Game 1: “P” Terms Measurement and Geometry Game 3: Geometry Riddles Measurement and Geometry Game 3: Spot the “Not” Measurement and Geometry Game 3: Double-Duty Words 	NCTM Principles and Standards for School Mathematics, Geometry Standards for Grades 6-8	<ul style="list-style-type: none"> precisely describe, classify, and understand relationships among types of two- and three-dimensional objects using their defining properties
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 5, Level III (Grade 6-8)	<p>Benchmark 3 Understands the defining properties of triangles (e.g., the sum of the measures of two sides of a triangle must be greater than the measure of the third side)</p> <p>Benchmark 2 Understands the defining properties of three-dimensional figures (e.g., a cube has edges with equal lengths, faces with equal areas and congruent shapes, right angle corners)</p> <p>Vocabulary Terms dimensionality, figure, solid, cube, prism, pyramid, cylinder, cone, shape property</p>
		California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Measurement and Geometry	2.0 Students identify and describe the properties of two-dimensional figures. 2.3 Draw quadrilaterals and triangles from given information about them (e.g., a quadrilateral having equal sides but no right angles, a right isosceles triangle).
	<i>Understands defining attributes of two-dimensional figures</i> <ul style="list-style-type: none"> Measurement and Geometry Game 1: Polygon Power 		

	<p><i>Classifies figures as 2-dimensional or 3-dimensional</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: 2-D or 3-D? 	Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement	<ul style="list-style-type: none"> • classifies triangles according to the measurement of their angles and according to the length of their sides.
	<p><i>Understands defining attributes and properties of three-dimensional figures</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Super Solids 	Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Geometry and Spatial Sense	<ul style="list-style-type: none"> • identifies, draws, and uses symbolic notation to denote the attributes of two-dimensional geometric figures (including points, parallel and perpendicular lines, planes, rays, and parts of a circle). • knows the attributes and properties of three-dimensional figures (including rectangular solids and cylinders).
	<p><i>Classifies triangles by their side and angle measurements</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Triangle Types 	Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Geometry and spatial reasoning	<p>6 (B) use properties to classify shapes including triangles, quadrilaterals, pentagons, and circles</p> <p>6 (C) use properties to classify solids, including pyramids, cones, prisms, and cylinders</p>
	<p><i>Classifies quadrilaterals by their side and angle measurements</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Classy Quadrilaterals • Measurement and Geometry Game 3: “Q” Terms 	Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • compares and describes the attributes of regular and irregular polygons (for example, parallelogram, trapezoid, pentagon, hexagon). • identifies and classifies triangles and quadrilaterals. • knows the attributes of and draws three-dimensional figures (pyramid, cone, sphere, hemisphere).
	<p><i>Identifies side and angle measurement attributes (parallel and perpendicular sides) of classes of triangles and quadrilaterals</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Polygon Sides 	Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Geometry and Spatial Sense	<ul style="list-style-type: none"> • compares regular and irregular polygons and two- and three-dimensional shapes. • knows the properties of two- and three-dimensional figures.
Planes and lines	<p><i>Demonstrates understanding of vocabulary related to planes, lines and portions of lines</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: “P” Terms • Measurement and Geometry Game 2: One Word Wonders • Measurement and Geometry Game 3: Double-Duty Words 	Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Geometry and Spatial Sense	<ul style="list-style-type: none"> • identifies, draws, and uses symbolic notation to denote the attributes of two-dimensional geometric figures (including points, parallel and perpendicular lines, planes, rays, and parts of a circle).
	<p><i>Identifies side and angle measurement attributes (parallel and perpendicular sides) of classes of triangles and quadrilaterals</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Polygon Sides 	Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • identifies, draws, and uses symbolic notation to denote the basic properties of geometric terms including lines (intersecting, skew, parallel, perpendicular), two-dimensional figures, and congruent figures. • describes and applies the properties of parallelism, perpendicularity, and symmetry in real-world contexts.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Geometry and Spatial Sense	<ul style="list-style-type: none"> • uses the properties of parallelism, perpendicularity, and symmetry in solving real-world problems.

<p>Perimeter, circumference, area, surface area and volume</p>	<p><i>Demonstrates mastery of vocabulary related to perimeter, circumference, area, surface area and volume</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Which Unit? • Measurement and Geometry Game 1: What's the Word? • Measurement and Geometry Game 2: This Is to That 	<p>NCTM Principles and Standards for School Mathematics, Geometry Standards for Grades 6-8</p>	<ul style="list-style-type: none"> • use two-dimensional representations of three-dimensional objects to visualize and solve problems such as those involving surface area and volume
	<p><i>Applies knowledge of perimeter formulas to find perimeter and side lengths of polygons</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Perimeter Puzzles 	<p>NCTM Principles and Standards for School Mathematics, Measurement Standards for Grades 6-8</p>	<ul style="list-style-type: none"> • develop and use formulas to determine the circumference of circles and the area of triangles, parallelograms, trapezoids, and circles and develop strategies to find the area of more-complex shapes • develop strategies to determine the surface area and volume of selected prisms, pyramids, and cylinders
	<p><i>Categorizes area formulas by type of polygon</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Area Codes 	<p>McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 4, Level III (Grade 6-8)</p>	<p>Benchmark 2 Solves problems involving perimeter (circumference) and area of various shapes (e.g., parallelograms, triangles, circles)</p> <p>Benchmark 7 Understands formulas for finding measures (e.g., area, volume, surface area)</p>
	<p><i>Applies knowledge of formulas to find area and surface area of polygons</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Area Action • Measurement and Geometry Game 2: Final Jeopardy! 	<p>California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Measurement and Geometry</p>	<p>1.1 Understand the concept of a constant such as π; know the formulas for the circumference and area of a circle.</p> <p>1.3 Know and use the formulas for the volume of triangular prisms and cylinders (area of base x height); compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.</p>
	<p><i>Applies knowledge of formulas to find volume of figures</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Find the Volume 	<p>Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Geometry and spatial reasoning</p>	<p>6 (C) describe the relationship between radius, diameter, and circumference of a circle.</p>
	<p><i>Categorizes volume formulas by type of figure</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Volume Formulas 	<p>Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Patterns, relationships, and algebraic thinking</p>	<p>4 (B) generate formulas to represent relationships involving perimeter, area, volume of a rectangular prism, etc., from a table of data.</p>
		<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement</p>	<ul style="list-style-type: none"> • uses concrete and graphic models to create formulas for finding perimeter and area. • solves real-world or mathematical problems involving perimeter or area and how these are affected by changes in the dimensions of the figure.
		<p>California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Measurement and Geometry</p>	<p>2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.</p>
		<p>Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Patterns, relationships, and algebraic thinking</p>	<p>4 (A) generate formulas involving conversions, perimeter, area, circumference, volume, and scaling</p>

		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Geometry and spatial reasoning	7 The student is expected to estimate measurements and solve application problems involving length (including perimeter and circumference), area, and volume.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement	<ul style="list-style-type: none"> • uses concrete or graphic models to create formulas for finding volumes and surface areas of solids (prisms and cylinders). • solves and explains problems involving perimeter, area, or circumference or the surface area or volume of prisms and cylinders.
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Measurement	8 (A) find surface area of prisms and cylinders using concrete models and nets (two-dimensional models) (B) connect models to formulas for volume of prisms, cylinders, pyramids, and cones (C) estimate answers and use formulas to solve application problems involving surface area and volume.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement	<ul style="list-style-type: none"> • uses concrete and graphic models to explore and derive formulas for surface area and volume of three-dimensional regular shapes, including pyramids, prisms, and cones.
Measurement units and tools	<p><i>Identifies the attribute that units of measurement are used to express</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Units and Uses <p><i>Orders units of measurement according to level of precision</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Get Precise <p><i>Selects unit of appropriate type to express a specified attribute</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Which Unit? <p><i>Identifies unit of appropriate size and type</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Famous Measures 	NCTM Principles and Standards for School Mathematics, Measurement Standards for Grades 6-8	<ul style="list-style-type: none"> • understand both metric and customary systems of measurement • understand, select, and use units of appropriate size and type to measure angles, perimeter, area, surface area, and volume. • select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 4, Level III (Grade 6-8)	<p>Benchmark 3 Understands the relationships among linear dimensions, area, and volume and the corresponding uses of units, square units, and cubic units of measure</p> <p>Benchmark 6 Selects and uses appropriate units and tools, depending on degree of accuracy required, to find measurements for real-world problems</p>
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement	<ul style="list-style-type: none"> • uses concrete manipulatives or constructs models of square units (such as square inch and square meter) for measuring area and cubic units (such as cubic centimeter or cubic yard) for measuring volume. • selects an appropriate measurement tool (for example, scales, rulers, thermometers, measuring cups, protractors, gauges).

	<p><i>Identifies which attribute specific tools measure:</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Measure with Me <p><i>Identifies units in the metric system</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Spot the “Not” 	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement</p>	<ul style="list-style-type: none"> • measures length, weight or mass, and capacity or volume using customary or metric units. • knows the precision of different measuring instruments and determines the appropriate precision unit for a given situation. • selects the appropriate unit of measurement when solving real-world problems (for example linear, square, and cubic units). • selects a measurement tool (for example, scales, rulers, thermometers, measuring cups, protractors, gauges) appropriate to a given situation. • knows relationships between metric units of mass and capacity (for example, one cubic centimeter of water weighs one gram).
		<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement</p>	<ul style="list-style-type: none"> • selects the appropriate unit of measure for a given situation. • knows the precision of different measuring instruments and determines the appropriate precision unit for a given situation. • selects and uses appropriate instruments, technology, and techniques to measure quantities and dimensions to a specified degree of accuracy.
<p>Conversion of measurement units</p>	<p><i>Converts from larger to smaller units within customary or metric measurement system</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Can You Convert? • Measurement and Geometry Game 1: Conversion Challenge • Measurement and Geometry Game 2: This Is to That • Measurement and Geometry Game 3: “Q” Terms <p><i>Converts from smaller to larger units within a measurement system</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Final Jeopardy! <p><i>Solves real-world problems using mixed units (e.g., feet and inches)</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Mixed Measures 	<p>NCTM Principles and Standards for School Mathematics, Measurement Standards for Grades 6-8</p>	<ul style="list-style-type: none"> • understand relationships among units and convert from one unit to another within the same system
		<p>McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 4, Level III (Grade 6-8)</p>	<p>Benchmark 4 Solves problems involving units of measurement and converts answers to a larger or smaller unit within the same system (i.e., standard or metric)</p>
		<p>California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Algebra and Functions</p>	<p>2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).</p>
		<p>California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Measurement and Geometry</p>	<p>1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).</p> <p>2.4 Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or $[1 \text{ ft}^2] = [144 \text{ in}^2]$, 1 cubic inch is approximately 16.38 cubic centimeters or $[1 \text{ in}^3] = [16.38 \text{ cm}^3]$).</p>
		<p>Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Patterns, relationships, and algebraic thinking</p>	<p>4 (A) generate formulas involving conversions, perimeter, area, circumference, volume, and scaling</p>
		<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement</p>	<ul style="list-style-type: none"> • changes one customary or metric unit of measurement to another within the same system.

		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement	<ul style="list-style-type: none"> • compares units of measurement within a system (metric or customary). • solves problems using the metric or customary system involving conversions within the same system.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement	<ul style="list-style-type: none"> • solves problems using the conversion of measurements within either the customary or the metric system. • solves problems using mixed units within each system, such as feet and inches, hours and minutes.
Pythagorean Theorem	<p><i>Demonstrates knowledge of vocabulary related to right triangles and Pythagorean Theorem</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Geometry Riddles <p><i>Uses the Pythagorean theorem to find the length of the hypotenuse of a right triangle</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Final Jeopardy! 	McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 5, Level III (Grade 6-8)	Benchmark 7 Understands the basic concept of the Pythagorean theorem
		NCTM Principles and Standards for School Mathematics, Geometry Standards for Grades 6-8	<ul style="list-style-type: none"> • create and critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.
		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Measurement and Geometry	3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • demonstrates the Pythagorean relationship in right triangles using models or diagrams (for example, manipulatives, dot, graph, or isometric paper). • given two sides of a right triangle, uses the Pythagorean Theorem to find the length of the third side.
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Geometry and spatial reasoning	7 (C) use pictures or models to demonstrate the Pythagorean Theorem
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Measurement	9 (A) use the Pythagorean Theorem to solve real-life problems
		Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Geometry and Spatial Sense	<ul style="list-style-type: none"> • applies the Pythagorean Theorem in real-world problems (for example, finds the relationship among sides in 45o – 45° and 30° – 60° right triangles).
Congruence and similarity	<p><i>Defines relationships among angles and sides of congruent and similar figures:</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Congruent or Similar? 	NCTM Principles and Standards for School Mathematics, Geometry Standards for Grades 6-8	<ul style="list-style-type: none"> • understand relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects
		McRel Content Knowledge Standards and Benchmarks, Mathematics, Standard 5, Level III (Grade 6-8)	Benchmark 6 Understands the mathematical concepts of similarity (e.g., scale, proportion, growth rates) and congruency

	<p><i>Applies knowledge of congruence and similarity to determine the measure of missing angles and sides:</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Missing Measures 	California State Board of Education K-12 Content Standards, Grade 6 Number Sense	1.3 Use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • recognizes and draws congruent and similar figures.
		California State Board of Education K-12 Content Standards, Grade 7 Mathematics, Measurement and Geometry	3.4 Demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Geometry and spatial reasoning	6 (D) use critical attributes to define similarity.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • recognizes, draws, and describes congruent and similar figures.
		Texas Essential Knowledge and Skills, 111.24 Mathematics, Grade 8, Measurement	9 (B) use proportional relationships in similar shapes to find missing measurements.
Angles	<p><i>Defines classifications of angles and know that the sum of the angles of a triangle is 180 degrees</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: All the Angles • Measurement and Geometry Game 1: What's the Word? <p><i>Applies knowledge of angle relationships in triangles to identify a missing angle</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Mystery Angle <p><i>Understands definition of complementary and supplementary angles:</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: This Is to That • Measurement and Geometry Game 3: Spot the "Not" 	California State Board of Education K-12 Content Standards, Grade 6 Mathematics, Measurement and Geometry	2.2 Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.
		Texas Essential Knowledge and Skills, 111.22 Mathematics, Grade 6, Geometry and spatial reasoning	6 (A) use angle measurements to classify angles as acute, obtuse, or right
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement	<ul style="list-style-type: none"> • determines the measure of a missing angle using angle relationships.
		Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Measurement	<ul style="list-style-type: none"> • measures angles using a protractor and names angles according to their measure (including acute, right, obtuse, straight).
		Texas Essential Knowledge and Skills, 111.23 Mathematics, Grade 7, Geometry and spatial reasoning	6 (A) use angle measurements to classify pairs of angles as complementary or supplementary
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Measurement	<ul style="list-style-type: none"> • finds the measure of an angle by measuring with a protractor or applying angle relationships (for example, corresponding, complementary, supplementary, interior, exterior).
		Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense	<ul style="list-style-type: none"> • creates and solves angle measurement problems for triangles. • determines the measure of various types of angles using a protractor or angle relationships (including complementary, supplementary, and vertical angles).

	<p><i>Applies knowledge of complementary and supplementary angles to figure the measure of a missing angle:</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 2: Angle Pairs 	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Measurement</p>	<ul style="list-style-type: none"> • applies formulas for finding rates, distance, time, and angle measures.
		<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Geometry and Spatial Sense</p>	<ul style="list-style-type: none"> • determines and justifies the measures of various types of angles based upon geometric relationships in two- and three-dimensional shapes.
Symmetry	<p><i>Identifies symmetrical forms</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 1: Spotting Symmetry 	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Sixth Grade, Geometry and spatial sense</p>	<ul style="list-style-type: none"> • describes and applies the property of symmetry in figures.
	<p><i>Knows different types of symmetry (rotational and reflectional)</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Spot the “Not” 	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Seventh Grade, Geometry and spatial sense</p>	<ul style="list-style-type: none"> • describes and applies the properties of parallelism, perpendicularity, and symmetry in real-world contexts.
	<p><i>Knows definitions of reflectional and rotational symmetry and classifies letters as having reflectional or rotational symmetry</i></p> <ul style="list-style-type: none"> • Measurement and Geometry Game 3: Sorts of Symmetry 	<p>Florida Dept. of Education Sunshine State Standards, Mathematics, Eighth Grade, Geometry and Spatial Sense</p>	<ul style="list-style-type: none"> • uses the properties of parallelism, perpendicularity, and symmetry in solving real-world problems.