







































































































	<b>Identify and Describe Shapes</b>	<i>Understand and use names of shapes when identifying objects.</i>										
		<i>Name three-dimensional objects using informal, descriptive vocabulary (e.g., "cube" for box, "ice cream cone" for cone.)</i>										
	<b>Analyze, Compare, and Create Shapes</b>	<i>Compare two-dimensional shapes, in different sizes and orientations, using informal language.</i>										
		<i>Create shapes during play by building, drawing, etc.</i>										
		<i>Combine simple shapes to form larger shapes.</i>										

		WOW! Zone	Avionics	Earth & Weather	River of Knowledge	Energy & Fossils	Kids in the Kitchen	Engineering	Brain Power	Sound & Light	Drive to Excel	InspireWorks
Counting and Cardinality	Know number names and the count sequence	Count to 100 by ones and by tens.										
		Count forward beginning from a given number within the known sequence. (instead of beginning at 1)										
		Write numbers 0-20. Represent a number of objects with a written numeral 0-20.										
	Count to tell the number of objects	Understand the relationship between numbers and quantities; connect counting to cardinality										
		Count to answer, "how many" questions about as many as 20 things arranged in a line, a rectangular array, or circle.										
	Compare numbers	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group										
		Compare two numbers between 1 and 10 presented as written numerals										
Operations and Algebraic Thinking	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.										
		Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.										
		Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).										
		For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.										

























































		<i>Fluently add and subtract within 5.</i>										
<b>Number and Operations in Base Ten</b>	<b>Work with numbers 11-19 to gain foundations for place value</b>	<i>Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., <math>18 = 10 + 8</math>); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</i>										
<b>Measurement and Data</b>	<b>Describe and Compare Measureable Attributes</b>	<i>Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</i>										
		<i>Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference</i>										
	<b>Classify objects and count the number of objects in each category</b>	<i>Classify objects into given categories; count the numbers of objects in each category and sort the category by count</i>										
<b>Geometry</b>	<b>Identify and Describe Shapes</b>	<i>Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</i>										
		<i>Correctly name shapes regardless of their orientations or overall size.</i>										
		<i>Identify shapes as 2D or 3D</i>										
	<b>Analyze, compare, create, and compose shapes</b>	<i>Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).</i>										
		<i>Model shapes in the world by building shapes from components and drawing shapes</i>										
		<i>Compose simple shapes to form larger shapes</i>										

		WOW! Zone	Avionics	Earth & Weather	River of Knowledge	Energy & Fossils	Kids in the Kitchen	Engineering	Brain Power	Sound & Light	Drive to Excel	InspireWorks
Operations and Algebraic Thinking	Represent and solve problems involving addition and subtraction	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem										
		Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.										
	Understand and apply properties of operations and the relationship between addition and subtraction	Apply properties of operations as strategies to add and subtract										
		Understand subtraction as an unknown-addend problem										
	Add and subtract within 20	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).										
		Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies										
	Work with addition and subtraction equations	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false										
		Determine the unknown whole number in an addition or subtraction equation relating three whole numbers										
Numbers and Operations in Base Ten	Extend the counting sequence	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.										
	Understand place value	Understand that the two digits of a two-digit number represent amounts of tens and ones.										
		Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$										

	<b>Use place value understanding and properties of operations to add and subtract</b>	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten										
		Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used										
		Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction										
<b>Measurement and Data</b>	<b>Measure lengths indirectly and by iterating length units</b>	Order three objects by length; compare the lengths of two objects indirectly by using a third object.										
		Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps										
	<b>Tell and write time</b>	Tell and write time in hours and half-hours using analog and digital clocks										
	<b>Represent and interpret data</b>	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another										
<b>Geometry</b>	<b>Reason with shapes and their attributes</b>	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes										
		Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape										
		Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares										




































Measurement and Data	Measure and estimate lengths in standard units	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes										
		Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen										
		Estimate lengths using units of inches, feet, centimeters, and meters										
		Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit										
	Relate addition and subtraction to length	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units										
		Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram										
	Work with time and money	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.										
		Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately										
	Represent and interpret data	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number unit										
		Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph										
Geometry	Reason with shapes and their attributes	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes										







Number and Operations in Base Ten	Use place value understanding and properties of operations to perform multi-digit arithmetic	Use place value understanding to round whole numbers to the nearest 10 or 100										
		Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction										
		Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations										
Number of Operations-Fractions	Develop understanding of fractions as numbers	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $a/b$ as the quantity formed by $a$ parts of size $1/b$										
		Understand a fraction as a number on the number line; represent fractions on a number line diagram										
		Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size										
Measurement and Data	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes										
		Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem										
	Represent and interpret data	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs										
		Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters										



















































	<b>Geometric measurement: understand concepts of angle and measure angles</b>	<i>Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement</i>										
		<i>Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure</i>										
		<i>Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems</i>										
<b>Geometry</b>	<b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles</b>	<i>Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures</i>										
		<i>Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles</i>										
		<i>Recognize a line of symmetry for a two dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry</i>										


























<p><b>Geometry</b></p>	<p><b>Solve real-world and mathematical problems involving area, surface area, and volume</b></p>	<p><i>Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems</i></p>											
		<p><i>Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas <math>V = lwh</math> and <math>V = bh</math> to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems</i></p>											
		<p><i>Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems</i></p>											
		<p><i>Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems</i></p>											
<p><b>Statistics and Probability</b></p>	<p><b>Develop understanding of statistical variability</b></p>	<p><i>Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers</i></p>											
		<p><i>Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape</i></p>											
		<p><i>Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number</i></p>											
	<p><b>Summarize and describe distributions</b></p>	<p><i>Display numerical data in plots on a number line, including dot plots, histograms, and box plots</i></p>											
		<p><i>Summarize numerical data sets in relation to their context</i></p>											





Statistics and Probability	Use random sampling to draw inferences about a population	<p>Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences</p>										
		<p>Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions</p>										
	Draw informal comparative inferences about two populations	<p>Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability</p>										
		<p>Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations</p>										
	Investigate chance processes and develop, use, and evaluate probability models	<p>Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around <math>\frac{1}{2}</math> indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event</p>										
		<p>Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability</p>										
		<p>Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy</p>										
		<p>Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation</p>										





	Analyze and solve linear equations and pairs of simultaneous linear equations	Solve linear equations in one variable										
		Analyze and solve pairs of simultaneous linear equations										
Functions	Define, evaluate, and compare functions	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output										
		Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions)										
		Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear										
	Use functions to model relationships between quantities	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two $(x, y)$ values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values										
		Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally										
Geometry	Understand congruence and similarity using physical models, transparencies, or geometry software	Verify experimentally the properties of rotations, reflections, and translations	