

## Grade 6 Curriculum and Instructional Gap Analysis

### Implementation Year 2014-2015

Revised TEKS (2012) Strands	Curriculum Gap Analysis  <i>What new content moves into the grade 6 curriculum in 2014-2015?</i>	Instructional Gap Analysis  <i>Considering previous years of instruction, what student expectations will a grade 6 student not have experienced by 2014-2015?</i>
Number and operations	<ul style="list-style-type: none"> <li>Use a visual representation to describe the relationship between whole numbers, integers, and rational numbers. 6(2)(A)</li> <li>Compare and order <b>rational numbers</b> including integers and <b>negative fractions and decimals</b> with and without a number line. <b>Identify absolute value.</b> 6(2)(B), 6(2)(C), 6(2)(D)</li> <li>Extend representations for division to include fraction notation such as <math>a/b</math> represents the same number as <math>a \div b</math> where <math>b \neq 0</math>. 6(2)(E)</li> <li>Add, subtract, multiply, and divide integers with and without models. 6(3)(C), 6(3)(D)</li> <li><b>Multiply and divide positive rational numbers. This includes fractions and decimals.</b> 6(3)(A), 6(3)(B), 6(3)(E)</li> </ul>	<ul style="list-style-type: none"> <li>Solve with proficiency for quotients of up to <b>4 digit dividends by a 2 digit divisor.</b> 5(3)(C)</li> <li><b>Represent and solve for products of decimals to the hundredths.</b> 5(3)(D), 5(3)(E)</li> <li><b>Represent and solve for quotients of decimals to the hundredths.</b> 5(3)(F), 5(3)(G)</li> <li><b>Represent and solve multiplication of a whole number and a fraction.</b> 5(3)(I)</li> <li><b>Represent and solve with fluency addition and subtraction of fractions with unequal denominators.</b> 5(3)(H), 5(3)(K)</li> <li><b>Represent and divide whole numbers by unit fractions and unit fractions by whole numbers.</b> 5(3)(J), 5(3)(L)</li> </ul>
Proportionality	<ul style="list-style-type: none"> <li>Use multiple representations to differentiate additive vs. multiplicative relationships. 6(4)(A)</li> <li>Apply <b>qualitative</b> and quantitative <b>reasoning</b> to solve <b>prediction and comparison</b> real-world problems involving ratios and rates. 6(4)(B)</li> <li>Represent problems using scale factors, tables, <b>graphs</b>, and proportions. 6(5)(A)</li> <li>Solve problems involving percents. 6(5)(B) <i>Note: Percent increase and/or decrease is in grade 7.</i></li> </ul>	<ul style="list-style-type: none"> <li>Convert measures within a measurement system. 5(7)(A) <i>Note: Use appropriate rational numbers.</i></li> </ul>
Expressions, equations, and relationships	<ul style="list-style-type: none"> <li>Identify independent and dependent quantities from tables and graphs. 6(6)(A)</li> <li>Represent situations using verbal descriptions, tables, <b>graphs</b>, and equations. 6(6)(C)</li> <li>Apply order of operations <b>with exponents.</b> 6(7)(A)</li> <li>Distinguish between expressions and equations using multiple representations and determine if expressions are equivalent using multiple representations and properties of operations. 6(7)(B), 6(7)(C), 6(7)(D)</li> <li>Extended knowledge of triangles to include sum of angles of a triangle, <b>relationships between side lengths and angle measures of triangles, and determine when three lengths form a triangle.</b> 6(8)(A)</li> <li>Write one-variable, one-step equations and <b>inequalities</b> to represent constraints or conditions within problems. 6(9)(A)</li> <li>Represent solutions for one-variable, one-step equations and <b>inequalities on number lines.</b> 6(9)(B)</li> <li>Write corresponding real-world problems given one-variable, one-step equations or <b>inequalities.</b> 6(9)(C)</li> <li>Model and solve one-variable, one-step equations and <b>inequalities</b> that represent problems, including geometric concepts. 6(10)(A)</li> <li>Determine if given value(s) make(s) one-variable, one-step equations and <b>inequalities</b> true. 6(10)(B)</li> </ul>	<ul style="list-style-type: none"> <li>Identify, illustrate, and measure angles. 4(6)(C), 4(7)(A), 4(7)(B), 4(7)(C), 4(7)(D), 4(7)(E)</li> <li>Generate additive and/or multiplicative number patterns given a rule and graph. 5(4)(C)</li> <li>Recognize additive vs. multiplicative number patterns from tables or <b>graphs.</b> 5(4)(D)</li> <li>Order of operations with grouping symbols and without exponents. 5(4)(E), 5(4)(F)</li> <li>Represent and solve problems related to perimeter and/or area and related to volume. 5(4)(H)</li> </ul>



Revised TEKS (2012) Strands	Curriculum Gap Analysis <i>What new content moves into the grade 6 curriculum in 2014-2015?</i>	Instructional Gap Analysis <i>Considering previous years of instruction, what student expectations will a grade 6 student not have experienced by 2014-2105?</i>
<i>Measurement and data</i>	<ul style="list-style-type: none"><li>Graph in <b>all four quadrants</b> using ordered pairs of rational numbers. 6(11)(A)</li><li>Represent and interpret numeric data graphically, including dot plots, stem-and-leaf plots, <b>histograms</b>, and <b>box plots</b>. 6(12)(A), 6(13)(A)</li><li>Use graphical representation of numeric data to describe the center, spread, and <b>shape</b> of the data distribution. 6(12)(B)</li><li>Summarize numeric data with numerical and graphical summaries, including <b>mean</b>, median, range, and <b>interquartile range</b>. 6(12)(C)</li><li>Summarize categorical data with numerical and graphical summaries including mode, <b>relative frequency tables</b>, and <b>percent bar graph</b>. 6(12)(D)</li><li>Distinguish between situations that yield variability and those that do not. 6(13)(B)</li></ul>	<ul style="list-style-type: none"><li>Classify 2-dimensional figures in a hierarchy of sets &amp; subsets using graphic organizers. 5(5)(A)</li><li>Graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table. 5(8)(C)</li><li>Represent categorical data with bar graphs or <b>frequency tables</b>, and numerical data with <b>dot plots or stem and leaf plots</b>. 5(9)(A)</li><li>Represent discrete paired data on a scatter plot. 5(9)(B)</li><li>Solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem and leaf plot, or scatter plot. 5(9)(C)</li></ul>
<i>Personal financial literacy</i>	<ul style="list-style-type: none"><li>Compare the features and costs of a checking account and a debit card offered by different financial institutions. 6(14)(A)</li><li>Distinguish between debit cards and credit cards. 6(14)(B)</li><li>Balance a check register. 6(14)(C)</li><li>Explain why it is important to establish a positive credit history. 6(14)(D)</li><li>Describe the information on a credit report. 6(14)(E)</li><li>Describe the value of credit reports. 6(14)(F)</li><li>Explain various methods to pay for college. 6(14)(G)</li><li>Compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training. 6(14)(H)</li></ul>	<ul style="list-style-type: none"><li>Reference the Vertically Aligned TEKS Charts.</li></ul>

## Grade 7 Curriculum and Instructional Gap Analysis Implementation Year 2014-2015

Revised TEKS (2012) Strands	Curriculum Gap Analysis  <i>What new content moves into the grade 7 curriculum in 2014-2015?</i>	Instructional Gap Analysis  <i>Considering previous years of instruction, what student expectations will a grade 7 student not have experienced by 2014-2015?</i>
Number and operations	<ul style="list-style-type: none"> <li>Use a visual representation to describe relationships between sets of rational numbers. 7(2)(A)</li> <li>Add, subtract, multiply, and divide <b>rational numbers</b> fluently and apply and extend to solve problems. <b>This now includes negative fractions and negative decimals.</b> 7(3)(A), 7(3)(B)</li> </ul>	<ul style="list-style-type: none"> <li>Use a visual representation to describe the relationship between whole numbers, integers, and rational numbers. 6(2)(A)</li> <li>Compare and order <b>rational numbers</b> including integers and <b>negative fractions and decimals</b> with and without a number line. <b>Identify absolute value.</b> 6(2)(B), 6(2)(C), 6(2)(D)</li> <li><b>Multiply and divide positive rational numbers. This includes fractions and decimals.</b> 5(3)(D), 5(3)(E), 5(3)(F), 5(3)(G), 5(3)(I), 5(3)(J), 5(3)(L), 6(2)(E), 6(3)(A), 6(3)(B), 6(3)(E)</li> <li>Add, subtract, multiply, and divide integers fluently with and without models. 6(3)(C), 6(3)(D)</li> </ul>
Proportionality	<ul style="list-style-type: none"> <li>Determine the constant of proportionality (<math>k = y/x</math>) within mathematical and real-world problems. 7(4)(C)</li> <li>Convert between measurement systems. 7(4)(E)</li> <li>Describe <math>\pi</math> as the ratio of the circumference of a circle to its diameter. 7(5)(B) <i>Note: Students in grade 7 in 2014-2015 will have seen this skill in grade 6 during 2013-2014.</i></li> <li>Represent sample spaces for simple and compound events using lists and tree diagrams. <b>This includes dependent compound events.</b> 7(6)(A)</li> <li>Select and use different simulations to represent simple and compound events with and without technology. <b>This includes dependent compound events.</b> 7(6)(B)</li> <li>Make predictions and determine solutions using experimental data and theoretical probability for simple and compound events. <b>This includes dependent compound events.</b> 7(6)(C), 7(6)(D)</li> <li>Find the probabilities of a simple event and its complement. 7(6)(E) <i>Note: Students in grade 7 in 2014-2015 will have seen this skill in grade 6 during 2013-2014.</i></li> <li>Solve problems using data in bar graphs, dot plots, and circle graphs, <b>including part-to-whole and part-to-part comparisons and equivalents.</b> 7(6)(G)</li> <li>Solve problems using <b>qualitative</b> and quantitative predictions and comparisons from simple experiments. 7(6)(H)</li> <li>Determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces. <b>This includes dependent compound events.</b> 7(6)(I)</li> </ul>	<ul style="list-style-type: none"> <li>Use multiple representations to differentiate additive vs. multiplicative relationships. 6(4)(A)</li> <li>Apply <b>qualitative</b> and quantitative <b>reasoning</b> to solve <b>prediction and comparison</b> real-world problems involving ratios and rates. 6(4)(B)</li> <li>Represent problems using scale factors, tables, <b>graphs</b>, and proportions. 6(5)(A)</li> <li>Solve problems involving percents. 6(5)(B) <i>Note: Percent increase and/or decrease is in grade 7.</i></li> </ul>

Revised TEKS (2012) Strands	Curriculum Gap Analysis  <i>What new content moves into the grade 7 curriculum in 2014-2015?</i>	Instructional Gap Analysis  <i>Considering previous years of instruction, what student expectations will a grade 7 student not have experienced by 2014-2105?</i>
<i>Expressions, equations, and relationships</i>	<ul style="list-style-type: none"> <li>Represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form of <math>y = mx + b</math>. 7(7)(A)</li> <li>Provide multiple representations to justify why the volumes of rectangular and triangular pyramids are <math>1/3</math> of the volume of related rectangular and triangular prisms with the same base area and height. 7(8)(A), 7(8)(B)</li> <li>Use and connect models to formulas for the circumference and area of circles. 7(8)(C) <i>Note: Students in grade 7 in 2014-2015 will have seen this skill in grade 6 during 2013-2014.</i></li> <li>Solve problems involving volume of prisms and <b>pyramids</b>. 7(9)(A)</li> <li>Solve problems with lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism and triangular pyramid by determining the area of the shape's net. 7(9)(D)</li> <li>Write one-variable, two-step equations and <b>inequalities</b> to represent problems. 7(10)(A)</li> <li>Represent solutions for one-variable, two-step equations and <b>inequalities on number lines</b>. 7(10)(B)</li> <li>Write corresponding real-world problems given one-variable, two-step equations and <b>inequalities</b>. 7(10)(C)</li> <li>Model and solve one-variable, two-step equations and <b>inequalities</b>, and determine if given value(s) make(s) one-variable, two-step equations and <b>inequalities</b> true. 7(11)(A), 7(11)(B)</li> <li>Write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships. 7(11)(C)</li> </ul>	<ul style="list-style-type: none"> <li>Identify independent and dependent quantities from tables and graphs. 6(6)(A)</li> <li>Represent situations using verbal descriptions, tables, <b>graphs</b>, and equations. 6(6)(C)</li> <li>Apply order of operations <b>with exponents</b>. 6(7)(A)</li> <li>Distinguish between expressions and equations using multiple representations and determine if expressions are equivalent using multiple representations and properties of operations. 6(7)(B), 6(7)(C), 6(7)(D)</li> <li>Extended knowledge of triangles to include sum of angles of a triangle, <b>relationships between side lengths and angle measures of triangles, and determine when three lengths form a triangle</b>. 6(8)(A)</li> <li>Write one-variable, one-step equations and <b>inequalities</b> to represent constraints or conditions within problems. 6(9)(A)</li> <li>Represent solutions for one-variable, one-step equations and <b>inequalities on number lines</b>. 6(9)(B)</li> <li>Write corresponding real-world problems given one-variable, one-step equations or <b>inequalities</b>. 6(9)(C)</li> <li>Model and solve one-variable, one-step equations and <b>inequalities</b> that represent problems, including geometric concepts 6(10)(A)</li> <li>Determine if given value(s) make(s) one-variable, one-step equations and <b>inequalities</b> true. 6(10)(B)</li> </ul>
<i>Measurement and data</i>	<ul style="list-style-type: none"> <li>Compare the shape, center, and spread of two groups of numeric data using comparative box plots and dot plots. 7(12)(A)</li> <li>Compare two populations based on data in random samples from these populations. 7(12)(C)</li> </ul>	<ul style="list-style-type: none"> <li>Graph in <b>all four quadrants</b> using ordered pairs of rational numbers. 6(11)(A)</li> <li>Represent and interpret numeric data graphically, including dot plots, stem-and-leaf plots, <b>histograms</b>, and <b>box plots</b>. 6(12)(A), 6(13)(A)</li> <li>Determine and represent the mean of a set of data 6(12)(B), 6(12)(C).</li> <li>Use graphical representation of numeric data to describe the center, spread, and <b>shape</b> of the data distribution. 6(12)(B)</li> <li>Summarize numeric data with numerical and graphical summaries, including <b>mean</b>, median, range, and <b>interquartile range</b>. 6(12)(C) <i>The current TEKS expect students to use concrete and pictorial models to determine the mean of a set of data.</i></li> <li>Summarize categorical data with numerical and graphical summaries including mode, <b>relative frequency tables</b>, and <b>percent bar graph</b>. 6(12)(D)</li> <li>Distinguish between situations that yield variability and those that do not. 6(13)(B)</li> </ul>
<i>Personal financial literacy</i>	<ul style="list-style-type: none"> <li>Calculate sales tax for a given purchase and <b>income tax</b> for earned wages. 7(13)(A)</li> <li>Identify components of a personal budget and calculate percentages of each component. 7(13)(B)</li> <li>Create and organize a financial assets and liabilities record and construct a net worth statement. 7(13)(C)</li> <li>Use a family budget estimator to determine budget and wage needs for a family to meet its basic needs. 7(13)(D)</li> <li>Calculate and compare simple interest and compound interest earnings. 7(13)(E)</li> <li>Analyze and compare monetary incentives. 7(13)(F)</li> </ul>	<ul style="list-style-type: none"> <li>Reference the Vertically Aligned TEKS Charts.</li> </ul>

## Grade 8 Curriculum and Instructional Gap Analysis

### Implementation Year 2014-2015

Revised TEKS (2012) Strands	Curriculum Gap Analysis	Instructional Gap Analysis
	<p><i>What new content moves into the grade 8 curriculum in 2014-2015?</i></p>	<p><i>Considering previous years of instruction, what student expectations will a grade 8 student not have experienced by 2014-2015?</i></p>
Number and operations	<ul style="list-style-type: none"> <li>Use visual representation to describe relationships between sets of real numbers. 8(2)(A)</li> <li>Order a set of <b>real</b> numbers in context. 8(2)(D)</li> </ul>	<ul style="list-style-type: none"> <li>Use a visual representation to describe relationships between sets of rational numbers. 7(2)(A)</li> <li>Add, subtract, multiply, and divide <b>rational numbers</b> fluently and apply and extend to solve problems. <b>This now includes negative fractions and negative decimals.</b> 7(3)(A), 7(3)(B)</li> </ul>
Proportionality	<ul style="list-style-type: none"> <li>Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation. 8(3)(A)</li> <li>Use similar right triangles to develop an understanding of slope, given as the rate comparing the change in <math>y</math>-values to the change in <math>x</math>-values <math>\left(\frac{y_2 - y_1}{x_2 - x_1}\right)</math>. 8(4)(A)</li> <li><b>Interpret unit rate as the slope of the line that models a proportional relationship.</b> 8(4)(B)</li> <li><b>Use data from a table or graph to determine rate of change or slope and <math>y</math>-intercept in context.</b> 8(4)(C)</li> <li>Contrast bivariate sets of data that suggest a linear relationship with those that do not suggest a linear relationship from a graphical representation. 8(5)(C)</li> <li><b>Identify functions using sets of ordered pairs, tables, mappings, and graphs.</b> 8(5)(G)</li> </ul>	<ul style="list-style-type: none"> <li>Represent discrete paired data on a scatter plot. 5(9)(B)</li> <li><b>Identify independent and dependent quantities from tables and graphs.</b> 6(6)(A)</li> <li>Graph in all four quadrants using ordered pairs of <b>rational numbers.</b> 6(11)(A)</li> <li><b>Determine the constant of proportionality (<math>k = y/x</math>) within mathematical and real-world problems.</b> 7(4)(C)</li> <li>Convert between measurement systems. 7(4)(E)</li> <li>Describe <math>\pi</math> as the ratio of the circumference of a circle to its diameter. 7(5)(B) <i>Note: Students in grade 7 in 2014-2015 will have seen this skill in grade 6 during 2013-2014.</i></li> <li>Represent sample spaces for simple and compound events using lists and tree diagrams. <b>This includes dependent compound events.</b> 7(6)(A)</li> <li>Select and use different simulations to represent simple and compound events with and without technology. <b>This includes dependent compound events.</b> 7(6)(B)</li> <li>Make predictions and determine solutions using experimental data and theoretical probability for simple and compound events. <b>This includes dependent compound events.</b> 7(6)(C), 7(6)(D)</li> <li>Find the probabilities of a simple event and its complement. 7(6)(E) <i>Note: Students in grade 7 in 2014-2015 will have seen this skill in grade 6 during 2013-2014.</i></li> <li>Solve problems using data in bar graphs, dot plots, and circle graphs, <b>including part-to-whole and part-to-part comparisons and equivalents.</b> 7(6)(G)</li> <li>Solve problems using <b>qualitative</b> and quantitative predictions and comparisons from simple experiments. 7(6)(H)</li> <li>Determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces. <b>This includes dependent compound events.</b> 7(6)(I)</li> </ul>
Expressions, equations, and relationships	<ul style="list-style-type: none"> <li>Determine the distance between two points on a coordinate plane using the Pythagorean Theorem. 8(7)(D)</li> <li>Write and solve (with and without models) one-variable equations and inequalities with variables on both sides using rational number coefficients and constants. 8(8)(A), 8(8)(C)</li> <li>Write a real-world problem given an equation or inequality with variables on both sides using rational number coefficients and constants. 8(8)(B)</li> <li>Use everyday language to establish facts about angle sum of triangles, exterior angles of triangles, angles created when parallel lines are cut by a transversal, and angle-angle criterion for similarity of triangles. 8(8)(D)</li> <li>Solve linear systems of equations using graphs. 8(9)(A)</li> </ul>	<ul style="list-style-type: none"> <li>Write, solve, and <b>represent on a number line</b> one-variable, one-step and two-step equations or <b>inequalities.</b> 6(9)(A), 6(9)(B), 6(10)(A), 7(10)(A), 7(10)(B), 7(11)(A)</li> <li>Write a real-world problem given an equation or <b>inequality.</b> 6(9)(C), 7(10)(C)</li> <li>Determine if a given value makes an equation or inequality true. 6(10)(B), 7(11)(B)</li> <li>Represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form of <math>y = mx + b</math>. 7(7)(A)</li> <li>Connect models of pyramids to their volume formulas. 7(8)(A), 7(8)(B)</li> <li>Solve problems involving volume of prisms and <b>pyramids.</b> 7(9)(A)</li> <li>Use nets to determine lateral and total surface area of specified solids. 7(9)(D)</li> <li>Write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships. 7(11)(C)</li> </ul>

Revised TEKS (2012) Strands	Curriculum Gap Analysis <i>What new content moves into the grade 8 curriculum in 2014-2015?</i>	Instructional Gap Analysis <i>Considering previous years of instruction, what student expectations will a grade 8 student not have experienced by 2014-2015?</i>
<i>Two-dimensional Shapes</i>	<ul style="list-style-type: none"> <li>Generalize properties of orientation and congruence of transformations, including rotations. 8(10)(A)</li> <li>Differentiate between those transformations that preserve congruence and those that do not, including rotations. 8(10)(B)</li> <li>Explain the effect of a transformation of a 2-dimensional shape on a coordinate plane using an algebraic representation, <b>including rotations</b>. 8(10)(C)</li> </ul>	<ul style="list-style-type: none"> <li>Graph in <b>all four quadrants</b> using ordered pairs of rational numbers. 6(11)(A)</li> </ul>
<i>Measurement and data</i>	<ul style="list-style-type: none"> <li>Determine mean absolute deviation and compare to elements of the data set. 8(11)(B)</li> <li>Simulate generating random samples from a population with known characteristics. 8(11)(C)</li> </ul>	<ul style="list-style-type: none"> <li>Represent and interpret numeric data graphically, including dot plots, stem-and-leaf plots, <b>histograms</b>, and <b>box plots</b>. 6(12)(A), 6(13)(A)</li> <li>Summarize numeric data with numerical and graphical summaries, including mean, median, range, and interquartile range. 6(12)(C)</li> <li>Summarize categorical data with numerical and graphical summaries including mode, relative frequency tables, and percent bar graph. 6(12)(D)</li> <li>Compare the shape, center, and spread of two groups of numeric data using comparative box plots and dot plots. 7(12)(A)</li> <li>Compare two populations based on data in random samples from these populations. 7(12)(C)</li> </ul>
<i>Personal financial literacy</i>	<ul style="list-style-type: none"> <li>Solve real-world problems comparing how interest rate and loan length affect the cost of credit. 8(12)(A)</li> <li>Calculate the total cost of repaying a loan. 8(12)(B)</li> <li>Explain how small amounts of money invested regularly grow over time. 8(12)(C)</li> <li>Calculate and compare simple interest and compound interest earnings. 8(12)(D)</li> <li>Identify and explain the advantages and disadvantages of different payment methods. 8(12)(E)</li> <li>Analyze situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and costs of financial irresponsibility. 8(12)(F)</li> <li>Estimate the cost of a 2-year and 4-year college education. 8(12)(G)</li> </ul>	<ul style="list-style-type: none"> <li>Reference the Vertically Aligned TEKS Charts.</li> </ul>