



Secondary Mathematics Grade 5

Unit I: Mathematical Thinking		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.</p> <p>The student is expected to:(A)use place value to read, write, compare, and order whole numbers through the 999,999,999,999;</p> <p>(5.3) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>The student is expected to:</p> <p>(A) use addition and subtraction to solve problems involving whole numbers and decimals;</p> <p>(B) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology);</p> <p>(D) identify common factors of a set of whole numbers; and</p> <p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to: (A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams; and</p> <p>(B) identify prime and composite numbers using concrete</p>	<p>Factor Square Multiple Array Rectangle Prime number Composite number Square Root Variable Equation Landmark Tenths Hundredths Thousandths Billions Area Perimeter</p>	<p>How many ways can you arrange the tiles to create arrays for the number 36?</p> <p>Compare the arrays of the numbers 32 and 36.</p> <p>Explain why your predictions worked or didn't work.</p> <p>What could you have done differently?</p> <p>What do you notice about the array for one? How is it different from other numbers?</p> <p>How did you use factors of 100 to find factors of 1,000?</p> <p>Why does it work to multiply a factor of 100 by 10?</p> <p>How did you find the numbers that fit the clues?</p> <p>Will every multiplication problem create a rectangular array? Why or why not?</p>



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Unit I: Mathematical Thinking		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(A) identify the mathematics in everyday situations;</p> <p>(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;</p> <p>(C) select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>(5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.</p> <p>The student is expected to:</p> <p>(A) relate informal language to mathematical language and symbols.</p> <p>(B) explain and record observations using objects, words, pictures, numbers, and technology; and</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(B) justify why an answer is reasonable and explain the solution process.</p>		



Secondary Mathematics Grade 5

Unit 2: Building on Numbers You Know		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.</p> <p>The student is expected to:</p> <p>(A) use place value to read, write, compare, and order whole numbers through the 999,999,999,999; and</p> <p>(5.3) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>The student is expected to:</p> <p>(A) use addition and subtraction to solve problems involving whole numbers and decimals;</p> <p>(B) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology);</p> <p>(C) use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology), including interpreting the remainder within a given context;</p> <p>(D) identify common factors of a set of whole numbers; and</p> <p>(E) model situations using addition and/or subtraction involving fractions with like denominators using concrete objects, pictures, words, and numbers.</p> <p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p> <p>(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p>	<p>Multiples</p> <p>Factors</p> <p>Estimate</p> <p>Approximate</p> <p>Product</p> <p>Difference</p> <p>Sum</p> <p>Divisible</p>	<p>How many different strategies can you come up with to solve a subtraction problem? Write them down.</p> <p>How many different strategies can you come up with to find the solution to a division problem? Compare the different strategies and give an example of when one would be better than another. Explain.</p> <p>Did you find when writing multiplication expressions that one way worked better than another? Explain.</p> <p>Which steps were difficult for you why? Find a way to simplify it.</p> <p>How are multiplication and division related?</p>



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Unit 2: Building on Numbers You Know		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to: (A) identify the mathematics in everyday situations;</p> <p>(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;</p> <p>(C) select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>(5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.</p> <p>The student is expected to:</p> <p>(A) explain and record observations using objects, words, pictures, numbers, and technology; and</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(B) justify why an answer is reasonable and explain the solution process.</p>		



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Unit 3: Name That Portion Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals.</p> <p>The student is expected to:</p> <p>(B) use place value to read, write, compare, and order decimals through the thousandths place.</p> <p>(5.2) Number, operation, and quantitative reasoning. The student uses fractions in problem solving situations.</p> <p>The student is expected to:</p> <p>(A) generate a fraction equivalent to a given fraction such as $\frac{1}{2}$ and $\frac{3}{6}$ or $\frac{4}{12}$ and $\frac{1}{3}$;</p> <p>(B) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number;</p> <p>(C) compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators; and</p> <p>(D) use models to relate decimals to fractions that name tenths, hundredths, and thousandths.</p> <p>(5.3) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve meaningful problems.</p> <p>The student is expected to:</p> <p>(A) use addition and subtraction to solve problems involving whole numbers and decimals;</p> <p>(E) model situations using addition and/or subtraction involving fractions with like denominators using concrete objects, pictures, words, and numbers.</p> <p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p>	<p>Decimal Fraction Percent Equivalent Numerator Denominator Improper Fraction Mixed Number</p>	<p>In what ways are fractions and decimals alike?</p> <p>How can you tell how many fractional pieces it takes to make a whole?</p> <p>Why does the fraction piece get smaller as the denominator gets bigger?</p> <p>How many methods can you find to convert fractions to decimals? List them.</p> <p>Describe in words how you know when one decimal/fraction is larger/smaller than another? Justify your answer.</p>



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Unit 3: Name That Portion Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p> <p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(A) identify the mathematics in everyday situations;</p> <p>(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(A) make generalizations from patterns or sets of examples and nonexamples; and</p> <p>(B) justify why an answer is reasonable and explain the solution process.</p>		



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Unit 4: Between Never and Always Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p> <p>(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p> <p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.12) Probability and statistics. The student describes and predicts the results of a probability experiment.</p> <p>The student is expected to:</p> <p>(A) use fractions to describe the results of an experiment;</p> <p>(B) use experimental results to make predictions; and</p> <p>(C) list all possible outcomes of a probability experiment such as tossing a coin.</p> <p>(5.13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>The student is expected to:</p> <p>(A) use tables of related number pairs to make line graphs;</p> <p>(B) describe characteristics of data presented in tables and graphs including median, mode, and range; and</p> <p>(C) graph a given set of data using an appropriate graphical representation such as a picture or line graph.</p>	<p>Likely Unlikely Certain Impossible Probability Possible Outcomes</p>	<p>Describe how you could make a spinner that had four equally likely outcomes. What fraction of the circle would each section be? Create a drawing of your spinner.</p> <p>Design a spinner with five spaces so that the chance of landing in one space is twice the chance of landing in each of the other four spaces.</p>



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Unit 5: Patterns of Change Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p> <p>(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p>	<p>Evaluate</p>	<p>Create your own pattern using numbers. Trade with another group, solve and evaluate their pattern.</p> <p>How can you change the pattern to make it grow faster?</p> <p>Give an example of how patterns help you solve problems.</p>



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Unit 6: Data: Kids, Cats, and Ads Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.2) Number, operation, and quantitative reasoning. The student uses fractions in problem solving situations.</p> <p>The student is expected to:</p> <p>(B) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number;</p> <p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.</p> <p>The student is expected to:</p> <p>(A) use tables of related number pairs to make line graphs;</p> <p>(B) describe characteristics of data presented in tables and graphs including median, mode, and range; and</p> <p>(C) graph a given set of data using an appropriate graphical representation such as a picture or line graph.</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p>	<p>Mean Median Mode Range Line Plot Outliers Typical Sample Size x-axis y-axis Vertical Horizontal</p>	<p>How do graphs help you interpret data?</p> <p>Why is it important to evaluate all aspects of a graph?</p> <p>Cat Problem: Find characteristics that do not go together and explain why.</p> <p>Do you notice any similarities to humans?</p>



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Unit 6: Data: Kids, Cats, and Ads Investigation 1		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.</p> <p>The student is expected to:</p> <p>(A) explain and record observations using objects, words, pictures, numbers, and technology; and</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(A) make generalizations from patterns or sets of examples and nonexamples; and</p> <p>(B) justify why an answer is reasonable and explain the solution process.</p>		



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Unit 7: Measurement Benchmarks		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.10) Measurement. The student applies measurement concepts involving length (including perimeter), area, capacity/volume, and weight/mass to solve problems.</p> <p>The student is expected to:</p> <p>(A) perform simple conversions within the same measurement system (SI (metric) or customary);</p> <p>(B) connect models for perimeter, area, and volume with their respective formulas; and</p> <p>(C) select and use appropriate units and formulas to measure length, perimeter, area, and volume.</p> <p>(5.11) Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).</p> <p>The student is expected to:</p> <p>(A) solve problems involving changes in temperature; and</p> <p>(B) solve problems involving elapsed time.</p>	<p>Inch Foot Yard Ounces Pound Ton Gallon Quart Pint Cup Fluid Ounces Kilometer (Liter, Gram) Meter (Liter, Gram) Centimeter Millimeter (Liter, Gram) Density Seconds Minutes Hours Week Month Year Decade Century Millennium</p>	<p>When would it be good to use metric measurement versus standard? Explain why.</p> <p>When is it necessary to use exact measures instead of estimated measures? Support your answer.</p> <p>Items of weight may have different volumes. Explain why and give examples.</p> <p>Give examples of how measurement is meaningful to people.</p> <p>If you find one measurement, how can you find the others without measuring?</p>



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Unit 7: Measurement Benchmarks		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>(5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.</p> <p>The student is expected to:</p> <p>(A) explain and record observations using objects, words, pictures, numbers, and technology; and</p>		

Unit 8: Picturing Polygons		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p> <p>(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.</p> <p>(5.7) Geometry and spatial reasoning. The student generates geometric definitions using critical attributes.</p> <p>The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures.</p> <p>(5.8) Geometry and spatial reasoning. The student models transformations.</p> <p>The student is expected to:</p> <p>(A) sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid; and</p> <p>(5.9) Geometry and spatial reasoning. The student recognizes the connection between ordered pairs of numbers and locations of points on a plane.</p>	<p>Polygon Triangle Isosceles Triangle Scalene Triangle Equilateral Triangle Quadrilateral Pentagon Hexagon Heptagon Octagon Nonagon Decagon Parallelogram Rhombus Trapezoid Parallel Perpendicular Intersecting x-axis y-axis Horizontal Vertical Ordered Pairs Quadrant I Vertex (Vertices) Base Face Edge Prism Pyramid Right Angle Acute Angle</p>	<p>Compare the types of triangles and create a visual aid. Justify.</p> <p>Are all 3-sided polygons triangles? Explain.</p> <p>Explain the difference between 2-dimensional and 3-dimensional.</p> <p>Why is it important to classify polygons? Angles?</p>



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Unit 8: Picturing Polygons		
TEKS	Content/Vocabulary	Guiding Questions
<p>The student is expected to locate and name points on a coordinate grid using ordered pairs of whole numbers</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>(5.15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.</p> <p>The student is expected to:</p> <p>(A) explain and record observations using objects, words, pictures, numbers, and technology; and</p> <p>(B) relate informal language to mathematical language and symbols.</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(A) make generalizations from patterns or sets of examples and nonexamples; and</p> <p>(B) justify why an answer is reasonable and explain the solution process.</p>	<p>Obtuse Angle Plane Ray Transformations (translation, Rotation, reflection) Symmetry 2-Dimensional/3-Dimensional</p>	



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Unit 9: Containers and Cubes		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.</p> <p>The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.</p> <p>(5.7) Geometry and spatial reasoning. The student generates geometric definitions using critical attributes.</p> <p>The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures.</p> <p>(5.8) Geometry and spatial reasoning. The student models transformations.</p> <p>The student is expected to:</p> <p>(A) sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid; and</p> <p>(B) identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid.</p>	<p>Cubes Rectangular Prism Volume Square Units Cubic Units</p>	<p>Describe two situations in which you would want to know the volume of something.</p> <p>How do the units of measure for volume compare to the units of measure for area? Perimeter?</p> <p>Can you always determine the perimeter of a figure if you know its area? Can you determine the area of a figure if you know its perimeter? How are area and perimeter related?</p> <p>Create a net for a 3D object with a volume of 18 sq. in.?</p> <p>Explain the relationship between volume and surface area. Defend your theory.</p>



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Unit 9: Containers and Cubes		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.10) Measurement. The student applies measurement concepts involving length (including perimeter), area, capacity/volume, and weight/mass to solve problems.</p> <p>The student is expected to:</p> <p>(A) perform simple conversions within the same measurement system (SI (metric) or customary);</p> <p>(B) connect models for perimeter, area, and volume with their respective formulas;</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(A) identify the mathematics in everyday situations;</p> <p>(C) select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and</p> <p>(D) use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>(5.16) Underlying processes and mathematical tools. The student uses logical reasoning.</p> <p>The student is expected to:</p> <p>(A) make generalizations from patterns or sets of examples and nonexamples; and</p>		



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Unit 10: Prime Time (Connected Math)		
TEKS	Content/Vocabulary	Guiding Questions
<p>(6.1) Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.</p> <p>The student is expected to:</p> <p>(B) generate equivalent forms of rational numbers including whole numbers, fractions, and decimals;</p> <p>(D) write prime factorizations using exponents;</p> <p>(E) identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers; and</p> <p>(F) identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers.</p> <p>(6.2) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve problems and justify solutions.</p> <p>The student is expected to:</p> <p>(C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates;</p> <p>(E) use order of operations to simplify whole number expressions (without exponents) in problem solving situations.</p>	<p>Prime Least Common Multiples Greatest Common Factor Exponent Square Root</p>	<p>What strategy/strategies can you use to make sure you have found all the factors without missing any?</p> <p>Is it possible to create a Venn diagram using 3 characteristics of numbers? Support your answer with facts.</p> <p>When is the LCM the product of two numbers?</p> <p>When is the LCM neither the product of the 2 numbers nor one of the numbers?</p> <p>Generate a string of factors with a product of 100.</p> <p>Explain how a string with three factors relates to a string with four factors.</p> <p><u>Locker Game</u> When all the students have finished, which locker doors are open? Make a conjecture about the answer to this question. Then describe a strategy you might use to try to find the answer.</p>



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Unit 10: Prime Time (Connected Math)		
TEKS	Content/Vocabulary	Guiding Questions
<p>(6.10) Probability and statistics. The student uses statistical representations to analyze data.</p> <p>The student is expected to:</p> <p>(D) solve problems by collecting, organizing, displaying, and interpreting data.</p> <p>(6.11) Underlying processes and mathematical tools. The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;</p> <p>(D) select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.</p> <p>(6.13) Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.</p> <p>The student is expected to:</p> <p>(A) make conjectures from patterns or sets of examples and nonexamples; and</p> <p>(B) validate his/her conclusions using mathematical properties and relationships.</p>		



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Unit 11: Hands-On Equations		
TEKS	Content/Vocabulary	Guiding Questions
<p>(5.5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships.</p> <p>The student is expected to:</p> <p>(A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams; and</p> <p>(5.14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school.</p> <p>The student is expected to:</p> <p>(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;</p> <p>(6.3) Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.</p> <p>The student is expected to:</p> <p>(A) use ratios to describe proportional situations;</p>	<p>Equation Variable</p>	<p>When would you need to find the value of a missing quantity in everyday life?</p> <p>Describe two different ways to solve the problem.</p> <p>How do you determine what information is needed to solve the problem?</p> <p>In what ways can you prove your answer?</p>



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Unit 11: Hands-On Equations		
TEKS	Content/Vocabulary	Guiding Questions
<p>(6.4) Patterns, relationships, and algebraic thinking. The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.</p> <p>The student is expected to:</p> <p>(A) use tables and symbols to represent and describe proportional and other relationships such as those involving conversions, arithmetic sequences (with a constant rate of change), perimeter and area; and</p> <p>(6.5) Patterns, relationships, and algebraic thinking. The student uses letters to represent an unknown in an equation.</p> <p>The student is expected to formulate equations from problem situations described by linear relationships.</p>		