


Mathletics

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Texas Essential Knowledge and Skills

Grades K – 8

Mathletics Curriculum Alignment

Introduction

At Mathletics, we are committed to providing students, teachers and schools with high-quality learning resources that align with the most up-to-date curricula.

Our team of educational publishers has created a course that specifically follows the Texas Essential Knowledge and Skills for Mathematics (adopted 2012). You can be assured that students have access to relevant and targeted content.

Mathletics courses consist of topics based on domains, clusters and standards. The courses also include 'review' topics to provide additional learning support through targeted revision of topics from the previous grade level.

Standards are generally covered by Mathletics online practice and fluency activities. However, when a standard is best addressed by teacher directed activities, it is indicated in this document. Such activities may be explored using the Mathletics online ebooks, videos and interactives or through our engaging rich learning tasks.

This document outlines the curriculum alignment and acts as a useful guide when using Mathletics in your school.

August 2018

Texas Essential Knowledge and Skills for Mathematics from Texas Education Agency; available from tea.texas.gov; accessed July 2018

Kindergarten

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system. The student is expected to:		
Standard	**Student Expectations**	**Activities**
K.2A	count forward and backward to at least 20 with and without objects;	Counting Up to 20 1 to 30 Counting Forward Going Up Going Down Counting Back Within 20 Counting Backward Before, After and Between to 20 Order Numbers to 10 Order Numbers to 20
K.2B	read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures;	Reading Numbers to 30 Matching Numbers to 10 Matching Numbers to 20 Making Teen Numbers Make Numbers Count
K.2C	count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order;	How Many? Dot Display How Many Dots? Count to 5
K.2D	recognize instantly the quantity of a small group of objects in organized and random arrangements;	How Many? Dot Display How Many Dots? Concept of Zero
K.2E	generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20;	More, Less or the Same to 10 More, Less or the Same to 20 Picture Graphs: More or Less
K.2F	generate a number that is one more than or one less than another number up to at least 20;	Order Numbers to 10 Order Numbers to 20
K.2G	compare sets of objects up to at least 20 in each set using comparative language;	Picture Graphs: Who has the Goods? More, Less or the Same to 10 More, Less or the Same to 20
K.2H	use comparative language to describe two numbers up to 20 presented as written numerals;	Arranging Numbers
K.2I	compose and decompose numbers up to 10 with objects and pictures.	Adding to 5 Subtracting From 5 Adding to Ten All about Ten Subtracting from Ten Adding to Make 5 and 10

Number and operations. The student applies mathematical process standards to develop an understanding of addition and subtraction situations in order to solve problems. The student is expected to:		
K.3A	**model the action of joining to represent addition and the action of separating to represent subtraction;**	**Model Addition** **Model Subtraction**
K.3B	**solve word problems using objects and drawings to find sums up to 10 and differences within 10;**	**Adding to 10 Word Problems**
K.3C	**explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.**	**Adding to 5** **Subtracting From 5** **Adding to Ten** **All About Ten** **Subtracting from Ten** **Model Subtraction** **Model Addition** **Adding to Make 5 and 10** **Adding to 10 Word Problems**
Number and operations. The student applies mathematical process standards to identify coins in order to recognize the need for monetary transactions. The student is expected to:		
K.4	**identify U.S. coins by name, including pennies, nickels, dimes, and quarters.**	**Pennies, Nickels, and Dimes**
Algebraic reasoning. The student applies mathematical process standards to identify the pattern in the number word list. The student is expected to:		
K.5	**recite numbers up to at least 100 by ones and tens beginning with any given number.**	**Going Up** **Count by Tens**
Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:		
K.6A	**identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles;**	**Collect Simple Shapes** **Collect the Shapes**
K.6B	**identify three-dimensional solids, including cylinders, cones, spheres, and cubes, in the real world;**	**Match the Solid 1** **Match the Solid 2**
K.6C	**identify two-dimensional components of three-dimensional objects;**	**Relate Shapes and Solids**
K.6D	**identify attributes of two-dimensional shapes using informal and formal geometric language interchangeably;**	**Count Sides and Corners**
K.6E	**classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size;**	**Same and Different** **Sort It** **Collect Simple Shapes** **Collect the Shapes** **Collect the Objects**
K.6F	**create two-dimensional shapes using a variety of materials and drawings.**	**Teacher directed**
Geometry and measurement. The student applies mathematical process standards to directly compare measurable attributes. The student is expected to:		
K.7A	**give an example of a measurable attribute of a given object, including length, capacity, and weight.**	**Hot or Cold?** **Everyday Length** **Everyday Mass** **How Full?**
K.7B	**compare two objects with a common measurable attribute to see which object has more of/less of the attribute and describe the difference.**	**Which Holds More?** **Compare Length** **Hot or Cold?**
Data analysis. The student applies mathematical process standards to collect and organize data to make it useful for interpreting information. The student is expected to:		
K.8A	**collect, sort, and organize data into two or three categories;**	**Sorting Data**

K.8B	use data to create real-object and picture graphs;	Teacher directed
K.8C	draw conclusions from real-object and picture graphs.	Picture Graphs: Who has the Goods? Read Graphs
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
K.9A	identify ways to earn income;	Teacher directed
K.9B	differentiate between money received as income and money received as gifts;	Teacher directed
K.9C	list simple skills required for jobs;	Teacher directed
K.9D	distinguish between wants and needs and identify income as a source to meets one's wants and needs.	Teacher directed

Grade 1

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:		
Standard	**Student Expectations**	**Activities**
1.2A	recognize instantly the quantity of structured arrangements;	Greater or Less to 100
1.2B	use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones;	Make Numbers Count Make Big Numbers Count Making Numbers Count Making Teen Numbers Repartition Two-digit Numbers
1.2C	use objects, pictures, and expanded and standard forms to represent numbers up to 120;	Place Value 1
1.2D	generate a number that is greater than or less than a given whole number up to 120;	Going Up Going Down 1 More, 2 Less 1 More, 10 Less 10 More, 10 Less Before, After & Between to 100
1.2E	use place value to compare whole numbers up to 120 using comparative language;	Arranging Numbers
1.2F	order whole numbers up to 120 using place value and open number lines;	Number Line Order
1.2G	represent the comparison of two numbers to 100 using the symbols >, <, or =.	Compare Numbers to 20 Compare Numbers to 50 Compare Numbers to 100
Number and operations. The student applies mathematical process standards to develop and use strategies for whole number addition and subtraction computations in order to solve problems. The student is expected to:		
1.3A	use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99;	Teacher directed
1.3B	use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as 2 + 4 = [ ]; 3 + [ ] = 7; and 5 = [ ] – 3;	Related Facts 1 Add and Subtract Problems
1.3C	compose 10 with two or more addends with and without concrete objects;	Adding to Make 5 and 10
1.3D	apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10;	Fact Families: Add and Subtract All about Ten All about Twenty Doubles and Near Doubles Doubles and Halves to 20 Add 3 Numbers Using Bonds to 10
1.3E	explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences;	All about Twenty Doubles and Halves to 20 Doubles and Near Doubles Adding in any Order Add and Subtract Problems
1.3F	generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.	Problems: Add and Subtract Word Problems: Add and Subtract

Number and operations. The student applies mathematical process standards to identify coins, their values, and the relationships among them in order to recognize the need for monetary transactions. The student is expected to:		
1.4A	**identify U.S. coins, including pennies, nickels, dimes, and quarters, by value and describe the relationships among them;**	**Pennies, Nickels and Dimes**
1.4B	**write a number with the cent symbol to describe the value of a coin;**	**Teacher directed**
1.4C	**use relationships to count by twos, fives, and tens to determine the value of a collection of pennies, nickels, and/or dimes.**	**Count Money (USD)** **Skip Counting with Coins**
Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:		
1.5A	**recite numbers forward and backward from any given number between 1 and 120;**	**Going Up** **Going Down** **Counting Forward** **Counting Backward**
1.5B	**skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set;**	**Count by Twos** **Count by Fives** **Count by Tens** **Count by 2s, 5s and 10s**
1.5C	**use relationships to determine the number that is 10 more and 10 less than a given number up to 120;**	**10 More, 10 Less**
1.5D	**represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences;**	**Add and Subtract Using Graphs** **Adding to 10 Word Problems** **Add and Subtract Problems**
1.5E	**understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s);**	**Composing Numbers to 10** **Composing Numbers to 20** **Composing Additions to 20**
1.5F	**determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation;**	**Related Facts 1** **Missing Numbers**
1.5G	**apply properties of operations to add and subtract two or three numbers.**	**Commutative Property of Addition** **Adding In Any Order** **Add 3 Numbers Using Bonds to 10**
Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:		
1.6A	**classify and sort regular and irregular two-dimensional shapes based on attributes using informal geometric language;**	**Teacher directed**
1.6B	**distinguish between attributes that define a two-dimensional or three-dimensional figure and attributes that do not define the shape;**	**Collect Simple Shapes** **Collect the Shapes** **Collect the Objects** **Count Sides and Corners**
1.6C	**create two-dimensional figures, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons;**	**Teacher Directed**
1.6D	**identify two-dimensional shapes, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons and describe their attributes using formal geometric language;**	**Collect the Shapes** **Collect Simple Shapes**
1.6E	**identify three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes), and triangular prisms, and describe their attributes using formal geometric language;**	**Collect the Objects** **Collect the Objects 1**
1.6F	**compose two-dimensional shapes by joining two, three, or four figures to produce a target shape in more than one way if possible;**	**Teacher directed**
1.6G	**partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words;**	**Halves** **Halves and Quarters**

1.6H	identify examples and non-examples of halves and fourths.	Is it Half?
Geometry and measurement. The student applies mathematical process standards to select and use units to describe length and time. The student is expected to:		
1.7A	use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement;	Which Measuring Tool? Compare Length Everyday Length Comparing Length
1.7B	illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other;	Measuring Length with Blocks
1.7C	measure the same object/distance with units of two different lengths and describe how and why the measurements differ;	Teacher directed
1.7D	describe a length to the nearest whole unit using a number and a unit;	Measuring Length with Blocks
1.7E	tell time to the hour and half hour using analog and digital clocks.	Set Time to the Hour Set Time to the Half Hour
Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:		
1.8A	collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts;	Teacher directed
1.8B	use data to create picture and bar-type graphs;	Sorting Data Making Picture Graphs: With Scale
1.8C	draw conclusions and generate and answer questions using information from picture and bar-type graphs.	Sorting Data Bar Graphs 1 Bar Graphs 2 Picture Graphs: More or Less Pictographs
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
1.9A	define money earned as income;	Teacher directed
1.9B	identify income as a means of obtaining goods and services, oftentimes making choices between wants and needs;	Teacher directed
1.9C	distinguish between spending and saving;	Teacher directed
1.9D	consider charitable giving.	Teacher directed

Grade 2

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:		
Standard	**Student Expectations**	**Activities**
2.2A	use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones;	Place Value 2 Repartition Two-digit Numbers Model Numbers
2.2B	use standard, word, and expanded forms to represent numbers up to 1,200;	Place Value 2 Model Numbers Repartition Two-digit Numbers Place Value Partitioning Understanding Place Value 1
2.2C	generate a number that is greater than or less than a given whole number up to 1,200;	Which is Bigger? Which is Smaller?
2.2D	use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =);	Which is Bigger? Which is Smaller?
2.2E	locate the position of a given whole number on an open number line;	Number Lines Number Line Order
2.2F	name the whole number that corresponds to a specific point on a number line.	Number Lines Number Line Order
Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:		
2.3A	partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words;	Halves Halves and Quarters
2.3B	explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part;	Teacher directed
2.3C	use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole;	Teacher directed
2.3D	identify examples and non-examples of halves, fourths, and eighths.	Is it Half?
Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:		
2.4A	recall basic facts to add and subtract within 20 with automaticity;	Addition Addition Facts Addictive Addition Subtraction Facts to 18 Simple Subtraction Fact Families: Add and Subtract

2.4B	add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations;	Mental Addition Complements to 50 and 100 Column Addition 1 Add Two 2-Digit Numbers Add Numbers: Regroup a Ten Add Two 2-Digit Numbers: Regroup Add Three 2-Digit Numbers Add Three 2-Digit Numbers: Regroup Subtract Numbers Subtract Numbers: Regroup 2-Digit Differences 2-Digit Differences: Regroup Mental Subtraction Decompose Numbers to Subtract
2.4C	solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms;	Bar Model Problems 1 Bar Model Problems 2
2.4D	generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000.	Teacher directed
Number and operations. The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:		
2.5A	determine the value of a collection of coins up to one dollar;	Count Money (USD) How Much Money? (USD)
2.5B	use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.	Count Money (USD) How Much Money? (USD)
Number and operations. The student applies mathematical process standards to connect repeated addition and subtraction to multiplication and division situations that involve equal groupings and shares. The student is expected to:		
2.6A	model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined;	Groups Multiplication Arrays Multiplication Problems 1
2.6B	model, create, and describe contextual division situations in which a set of concrete objects is separated into equivalent sets.	Divide Into Equal Groups Making Equal Groups Fill the Jars
Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:		
2.7A	determine whether a number up to 40 is even or odd using pairings of objects to represent the number;	Odd or Even
2.7B	use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200;	10 More, 10 Less Missing Numbers 1
2.7C	represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem.	Problems: Add and Subtract Problems: Addition and Subtraction Add and Subtract Problems
Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:		
2.8 A	create two-dimensional shapes based on given attributes, including number of sides and vertices;	Count Sides and Corners
2.8B	classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language;	Collect the Objects Collect the Objects 1

2.8C	classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices;	Collect the Polygons Collect More Shapes Collect the Shapes Collect the Shapes 1 Collect the Shapes 2 Count Sides and Corners
2.8D	compose two-dimensional shapes and three-dimensional solids with given properties or attributes;	Teacher directed
2.8E	decompose two-dimensional shapes such as cutting out a square from a rectangle, dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts.	Teacher directed
Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time. The student is expected to:		
2.9A	find the length of objects using concrete models for standard units of length;	Measuring Length with Blocks
2.9B	describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object;	Teacher directed
2.9C	represent whole numbers as distances from any given location on a number line;	Teacher directed
2.9D	determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes;	Measuring Length How Long Is That (Customary)? Inches, Feet, Yards
2.9E	determine a solution to a problem involving length, including estimating lengths;	Teacher directed
2.9F	use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number and the unit;	Area of Shapes Bigger or Smaller Shape
2.9G	read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.	Five Minute Times What is the Time?
Data analysis. The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:		
2.10A	explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category;	Read Graphs Bar Graphs 1
2.10B	organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more;	Making Picture Graphs: With Scale Picture Graphs: single-unit scale
2.10C	write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one;	Bar Chart Add and Subtract Using Graphs Bar Graphs 1
2.10D	draw conclusions and make predictions from information in a graph.	Bar Graphs 1
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
2.11A	calculate how money saved can accumulate into a larger amount over time;	Teacher directed
2.11B	explain that saving is an alternative to spending;	Teacher directed
2.11C	distinguish between a deposit and a withdrawal;	Teacher directed
2.11D	identify examples of borrowing and distinguish between responsible and irresponsible borrowing;	Teacher directed
2.11E	identify examples of lending and use concepts of benefits and costs to evaluate lending decisions;	Teacher directed

2.11F	**differentiate between producers and consumers and calculate the cost to produce a simple item.**	**Teacher directed**

Grade 3

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to:		
3.2A	compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate;	Place Value 3 Understanding Place Value 2 Understanding Place Value 3 Expanded Notation Expanding Numbers
3.2B	describe the mathematical relationships found in the base-10 place value system through the hundred thousands place;	Place Value 1 (×10 and ÷10)
3.2C	represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers;	Nearest Ten? Nearest Hundred? Nearest Thousand? Rounding Numbers
3.2D	compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =.	Greater Than or Less Than 1 Put in Order 1
Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to:		
3.3A	represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines;	Model Fractions Shade Fractions Halves and Quarters Thirds and Sixths What Fraction Is Shaded 1
3.3B	determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line;	Identifying Fractions on a Number Line
3.3C	explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number;	Shade Fractions Model Fractions
3.3D	compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b;	Teacher directed
3.3E	solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8;	Make Fair Shares Partition into Equal Parts
3.3F	represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines;	Equivalent Fraction Wall 1 Shading Equivalent Fractions
3.3G	explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model;	Equivalent Fractions on a Number Line 1
3.3H	compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models.	Compare Fractions 1a Compare Fractions 1b Comparing Fractions 1

Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:		
3.4A	solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction;	Add Three 2-Digit Numbers Add Three 2-Digit Numbers: Regroup Add 3-Digit Numbers Add 3-Digit Numbers: Regroup Add Multi-Digit Numbers 1 Mental Addition Strategies for Column Addition 2-Digit Differences: Regroup 3-Digit Differences 3-Digit Differences: 1 Regrouping 3-Digit Differences: 2 Regroupings 3-Digit Differences with Zeros Column Subtraction Mental Subtraction Complements to 50 and 100 Pyramid Puzzles 1 Pyramid Puzzles 2
3.4B	round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems;	Estimate Sums Estimate Differences
3.4C	determine the value of a collection of coins and bills;	How Much Money? (USD) Who's got the Money? Money-Totalling (USD)
3.4D	determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to 10 by 10;	Groups of Two Groups of Three Groups of Four Groups of Five Groups of Six Groups of Seven Groups of Eight Groups of Nine Groups of Ten Multiplication Arrays Arrays 1
3.4E	represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting;	Skip Counting Frog Jump Multiplication Multiplication Grids Model Multiplication to 5 x 5
3.4F	recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts;	Times Tables Fact Families: Multiply and Divide
3.4G	use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties;	Multiply: 2-Digit by 1-Digit

3.4H	determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally;	Dividing Twos Dividing Threes Dividing Fours Dividing Fives Dividing Sixes Dividing Sevens Dividing Eights Dividing Nines Dividing Tens Divide Into Equal Groups Making Equal Groups
3.4I	determine if a number is even or odd using divisibility rules;	Odd and Even Numbers 1 Divisibility Tests
3.4J	determine a quotient using the relationship between multiplication and division;	Related Facts 2 Fact Families: Multiply and Divide
3.4K	solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts.	Problems: Multiply and Divide Multiplication Problems 1
Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to:		
3.5A	represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations;	Bar Model Problems 1 Bar Model Problems 2 Mental Addition Mental Subtraction Compensation - Add Compensation - Subtract
3.5B	represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations;	Problems: Multiply and Divide Frog Jump Multiplication Frog Jump Division Multiplication Grids Related Facts 2 Fact Families: Multiply and Divide Multiplication Problems 1
3.5C	describe a multiplication expression as a comparison such as 3 x 24 represents 3 times as much as 24;	Teacher directed
3.5D	determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product;	Problems: Multiply and Divide Missing Numbers: x and ÷ facts
3.5E	represent real-world relationships using number pairs in a table and verbal descriptions.	Teacher directed
Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to:		
3.6A	classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language;	Collect the Shapes 2 Collect More Shapes Collect the Polygons Collect the Objects 2 How many Edges? How Many Faces? How many Corners?
3.6B	use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories;	Collect the Shapes 2

3.6C	determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row;	Area of Shapes
3.6D	decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area;	Area: Compound Figures
3.6E	decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape.	Teacher directed
Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to:		
3.7A	represent fractions of halves, fourths, and eighths as distances from zero on a number line;	Identifying Fractions on a Number Line
3.7B	determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems;	Perimeter Perimeter of Shapes Perimeter: Squares and Rectangles Perimeter Detectives 1
3.7C	determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes;	Elapsed Time
3.7D	determine when it is appropriate to use measurements of liquid volume (capacity) or weight;	Cups, Pints, Quarts, Gallons Ounces and Pounds
3.7E	determine liquid volume (capacity) or weight using appropriate units and tools.	How Full? How Heavy?
Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:		
3.8A	summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals;	Teacher directed
3.8B	solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.	Bar Graphs 2 Interpreting Tables Dot Plots Picture Graphs: with scale & half symbols
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
3.9A	explain the connection between human capital/labor and income;	Teacher directed
3.9B	describe the relationship between availability or scarcity of resources and how that impacts cost;	Teacher directed
3.9C	identify the costs and benefits of planned and unplanned spending decisions;	Teacher directed
3.9D	explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest;	Teacher directed
3.9E	list reasons to save and explain the benefit of a savings plan, including for college;	Teacher directed
3.9F	identify decisions involving income, spending, saving, credit, and charitable giving.	Teacher directed

Grade 4

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:		
4.2A	interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left;	Place Value 1 (x 10 and ÷ 10) Place Value 2 (x 10 and ÷ 10)
4.2B	represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals;	Place Value to Millions Numbers from Words to Digits 2 Decimals from Words to Digits 1 Decimal Place Value Expanded Notation Expanding Numbers
4.2C	compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =;	Comparing Numbers
4.2D	round whole numbers to a given place value through the hundred thousands place;	Nearest Thousand? Rounding Numbers
4.2E	represent decimals, including tenths and hundredths, using concrete and visual models and money;	Decimals on the Number Line Money-Totalling (USD) Who's got the Money?
4.2F	compare and order decimals using concrete and visual models to the hundredths;	Decimal Order Decimal Order 1 Comparing Decimals Comparing Decimals 1
4.2G	relate decimals to fractions that name tenths and hundredths;	Teacher directed
4.2H	determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line.	Decimals on the Number Line
Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. The student is expected to:		
4.3A	represent a fraction a/b as a sum of fractions 1/b, where a and b are whole numbers and b > 0, including when a > b;	Teacher directed
4.3B	decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations;	Teacher directed
4.3C	determine if two given fractions are equivalent using a variety of methods;	Equivalent Fraction Wall 1 Equivalent Fraction Wall 2 Equivalent Fractions Shading Equivalent Fractions Equivalent Fractions on a Number Line 2
4.3D	compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or <;	Compare Fractions 1b Comparing Fractions 1 Comparing Fractions 2
4.3E	represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations;	Add Like Fractions Subtract Like Fractions Add Like Mixed Numbers Subtract Like Mixed Numbers

4.3F	evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole;	Teacher directed
4.3G	represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.	Identifying Fractions on a Number Line Decimals on the Number Line
Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:		
4.4A	add and subtract whole numbers and decimals to the hundredths place using the standard algorithm;	Add Decimals 1 Subtract Decimals 1
4.4B	determine products of a number and 10 or 100 using properties of operations and place value understandings;	Multiply Multiples of 10
4.4C	represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15;	Multiply 2 Digits Area Model Double and Halve to Multiply
4.4D	use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties;	Multiply: 1-Digit Number Multiply: 1-Digit Number, Regroup Multiply 2 Digits Area Model
4.4E	represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations;	Teacher directed
4.4F	use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor;	Divide: 1-Digit Divisor 1 Divide: 1-Digit Divisor, Remainder Divide: 1-Digit Divisor 2
4.4G	round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers;	Estimate Quotients Estimate Differences Estimate Products Estimate Sums
4.4H	solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.	Problems: Multiply and Divide Problems: Times and Divide Multiply and Divide Problems 1
Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:		
4.5A	represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity;	Bar Model x ÷ Bar Model Problems 1 Bar Model Problems 2 Word Problems with Letters
4.5B	represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence;	Table of Values
4.5C	use models to determine the formulas for the perimeter of a rectangle ($l + w + l + w$ or $2l + 2w$), including the special form for perimeter of a square ($4s$) and the area of a rectangle ($l \times w$);	Perimeter Perimeter: Squares and Rectangles Area of Shapes
4.5D	solve problems related to perimeter and area of rectangles where dimensions are whole numbers.	Perimeter: Squares and Rectangles Area of Squares and Rectangles Calculate Area of Shapes (inches, feet, yards) Perimeter Detectives 1

Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to:		
4.6A	**identify points, lines, line segments, rays, angles, and perpendicular and parallel lines;**	**What Line am I? Right Angle Relation What Type of Angle?**
4.6B	**identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure;**	**Symmetry Symmetry or Not? Line of Symmetry**
4.6C	**apply knowledge of right angles to identify acute, right, and obtuse triangles;**	**Triangles: Acute, Right, Obtuse Triangle - Tasters**
4.6D	**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.**	**Collect the Shapes 2 Collect More Shapes**
Geometry and measurement. The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees. The student is expected to:		
4.7A	**illustrate the measure of an angle as the part of a circle whose center is at the vertex of the angle that is "cut out" by the rays of the angle. Angle measures are limited to whole numbers;**	**Teacher directed**
4.7B	**illustrate degrees as the units used to measure an angle, where 1/360 of any circle is one degree and an angle that "cuts" n/360 out of any circle whose center is at the angle's vertex has a measure of n degrees. Angle measures are limited to whole numbers;**	**Teacher directed**
4.7C	**determine the approximate measures of angles in degrees to the nearest whole number using a protractor;**	**Estimating Angles Measuring Angles**
4.7D	**draw an angle with a given measure;**	**Teacher directed**
4.7E	**determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures.**	**Teacher directed**
Geometry and measurement. The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. The student is expected to:		
4.8A	**identify relative sizes of measurement units within the customary and metric systems;**	**Which Unit of Measure? Cups, Pints, Quarts, Gallons Ounces and Pounds Inches, Feet, Yards**
4.8B	**convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table;**	**Converting cm and mm Grams and Kilograms Converting Units of Mass Meters and Kilometers Customary Units of Length Milliliters and Liters Customary Units of Capacity**
4.8C	**solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.**	**Time Mentals Mass Word Problems Money Problems: Four Operations**

Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:		
4.9A	**represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions;**	**Teacher directed**
4.9B	**solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot.**	**Dot Plots** **Stem-and-Leaf Plots: Concept** **Interpreting Tables** **Tally Charts**
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
4.10A	**distinguish between fixed and variable expenses;**	**Teacher directed**
4.10B	**calculate profit in a given situation;**	**Teacher directed**
€4.10C	**compare the advantages and disadvantages of various savings options;**	**Teacher directed**
4.10D	**describe how to allocate a weekly allowance among spending; saving, including for college; and sharing;**	**Teacher directed**
4.10E	**describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending.**	**Teacher directed**

Grade 5

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value. The student is expected to:		
5.2A	represent the value of the digit in decimals through the thousandths using expanded notation and numerals;	Decimal Place Value Decimals from Words to Digits 1 Decimals from Words to Digits 2
5.2B	compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or =;	Decimal Order 1 Decimal Order 2
5.2C	round decimals to tenths or hundredths.	Rounding Decimals 1
Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:		
5.3A	estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division;	Estimate Sums Estimate Differences Estimation: Add and Subtract Estimate Products Estimate Quotients Estimation: Multiply and Divide
5.3B	multiply with fluency a three-digit number by a two-digit number using the standard algorithm;	Multiply: 2-Digit Number, Regroup Long Multiplication
5.3C	solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm;	Long Division Divide: 2-Digit Divisor, Remainder
5.3D	represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models;	Multiply Decimals: Area Model Multiply Decimals 1
5.3E	solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers;	Multiply Decimal by Decimal
5.3F	represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models;	Teacher directed
5.3G	solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm;	Divide Decimal by Whole Number
5.3H	represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations;	Add Unlike Fractions Subtract Unlike Fractions Add Unlike Mixed Numbers Subtract Unlike Mixed Numbers
5.3I	represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models;	Model Fractions to Multiply Multiply Fraction by Whole Number Multiply: Whole Number and Fraction
5.3J	represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as 1/3 ÷ 7 and 7 ÷ 1/3 using objects and pictorial models, including area models;	Divide Fractions Visual Model Divide by a Unit Fraction

Grade 5

Knowledge and Skills		
5.3K	add and subtract positive rational numbers fluently;	Add Decimals 1 Subtract Decimals 1 Add: No Common Denominator Subtract: No Common Denominator Add Multi-Digit Numbers 1 Add Multi-Digit Numbers 2 Subtracting Colossal Columns
5.3L	divide whole numbers by unit fractions and unit fractions by whole numbers.	Divide by a Unit Fraction
Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:		
5.4A	identify prime and composite numbers;	Prime or Composite?
5.4B	represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity;	Writing Equations Write an Equation: Word Problems Word Problems with Letters
5.4C	generate a numerical pattern when given a rule in the form y = ax or y = x + a and graph;	Pattern Rules and Tables
5.4D	recognize the difference between additive and multiplicative numerical patterns given in a table or graph;	Teacher directed
5.4E	describe the meaning of parentheses and brackets in a numeric expression;	Teacher directed
5.4F	simplify numerical expressions that do not involve exponents, including up to two levels of grouping;	Order of Operations 1 (PEDMAS)
5.4G	use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ($V = l \times w \times h$, $V = s \times s \times s$, and $V = Bh$);	How many Blocks?
5.4H	represent and solve problems related to perimeter and/or area and related to volume.	Perimeter Detectives 1 Area: Squares and Rectangles
Geometry and measurement. The student applies mathematical process standards to classify two-dimensional figures by attributes and properties. The student is expected to:		
5.5	classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties.	Collect the Shapes 2 Collect the Polygons Collect More Shapes
Geometry and measurement. The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to:		
5.6A	recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible;	How many Blocks? Volume of Solids and Prisms – 1cm³ blocks
5.6B	determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base.	Volume: Cuboid 1 Volume: Rectangular Prisms 1

Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to:		
5.7	**solve problems by calculating conversions within a measurement system, customary or metric.**	**Converting Units of Length Customary Units of Length Meters and Kilometers Converting Units of Mass Customary Units of Weight 1 Customary Units of Weight 2 Customary Units of Capacity Milliliters and Liters**
Geometry and measurement. The student applies mathematical process standards to identify locations on a coordinate plane. The student is expected to:		
5.8A	**describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin;**	**Teacher directed**
5.8B	**describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane;**	**Coordinate Graphs: 1st Quadrant**
5.8C	**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.**	**Coordinate Graphs: 1st Quadrant**
Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:		
5.9A	**represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots;**	**Teacher directed**
5.9B	**represent discrete paired data on a scatterplot;**	**Data Analysis: Scatter Plots**
5.9C	**Solve one- and two-step problems using data from a frequency table, dot plot, Bar graph, stem-and-leaf plot, or scatter plot.**	**Bar Graphs 2 Dot Plots Stem-and-Leaf Plots: Concept Tally Charts**
Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:		
5.10A	**define income tax, payroll tax, sales tax, and property tax;**	**Teacher directed**
5.10B	**explain the difference between gross income and net income;**	**Teacher directed**
5.10C	**identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments;**	**Teacher directed**
5.10D	**develop a system for keeping and using financial records;**	**Teacher directed**
5.10E	**describe actions that might be taken to balance a budget when expenses exceed income;**	**Teacher directed**
5.10F	**balance a simple budget.**	**Teacher directed**

Grade 6

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to:		
Standard	**Student Expectations**	**Activities**
6.2A	classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers;	Teacher directed
6.2B	identify a number, its opposite, and its absolute value;	Absolute Value
6.2C	locate, compare, and order integers and rational numbers using a number line;	Integers on a Number Line Comparing Integers Comparing Integers (<, =, >) Ordering Integers (Number Line) Identifying Fractions on a Number Line Mixed and Improper Fractions on a Number Line Decimals on the Number Line
6.2D	order a set of rational numbers arising from mathematical and real-world contexts;	Ordering Fractions 1 Comparing Integers (<, =, >)
6.2E	extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$.	Teacher directed
Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:		
6.3A	recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values;	Teacher directed
6.3B	determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one;	Multiplying Fractions Multiply Fraction by Whole Number Multiply Mixed Numbers
6.3C	represent integer operations with concrete models and connect the actions with the models to standardized algorithms;	Teacher directed
6.3D	Add, subtract, multiply, and divide integers fluently;	Add Integers Subtract Integers Integers: Add and Subtract Integers: Multiply and Divide More with Integers Multiplying and Dividing Integers
6.3E	multiply and divide positive rational numbers fluently.	Divide Fractions by Fractions 1 Divide Fractions by Fractions 2 Dividing Fractions Multiplying Fractions Multiply Two Fractions 1 Divide Decimal by Whole Number Divide Decimal by Decimal

Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:		
6.4A	**compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships;**	**Teacher directed**
6.4B	**apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates;**	**Rate Word Problems Ratio Word Problems Average Speed Best Buy**
6.4C	**give examples of ratios as multiplicative comparisons of two quantities describing the same attribute;**	**Solve Proportions Ratios Simplify Ratios: 2 Whole Numbers Ratio Word Problems Equivalent Ratios**
6.4D	**give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients;**	**Rates**
6.4E	**represent ratios and percents with concrete models, fractions, and decimals;**	**Modeling Percentages**
6.4F	**represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers;**	**Common Fractions as Percentages**
6.4G	**generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money;**	**Percents and Decimals Percentages to Fractions (with and without simplification) Fractions to Percentages (Non-Calculator)**
6.4H	**convert units within a measurement system, including the use of proportions and unit rates.**	**Converting Units of Length Meters and Kilometers Customary Units of Length Customary Units of Capacity Customary Units of Weight 2**
Proportionality. The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to:		
6.5A	**represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions;**	**Rate Word Problems Proportional Relationships Ratio Word Problems y=ax Scale**
6.5B	**solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models;**	**Percentage Word Problems Percentage of a Quantity Percentage of an amount using fractions (<100%) Solve Percent Equations Quantities to Percentages (no units)**
6.5C	**use equivalent fractions, decimals, and percents to show equal parts of the same whole.**	**Match Decimals and Percentages Common Fractions as Percentages Mixed decimal, percentage and fraction conversions Equivalent Ratios Equivalent Fractions**

Expressions, equations, and relationships. The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to:		
6.6A	**identify independent and dependent quantities from tables and graphs;**	**Teacher directed**
6.6B	**write an equation that represents the relationship between independent and dependent quantities from a table;**	**Find the Pattern Rule** **Pattern Rules and Tables**
6.6C	**Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.**	**y=ax**
Expressions, equations, and relationships. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:		
6.7A	**generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization;**	**Prime Factoring** **Find the Factor** **Product of Prime Factors** **Integers: Order of Operations (PEDMAS)** **Order of Operations 1 (PEDMAS)** **Order of Operations 2 (PEDMAS)**
6.7B	**distinguish between expressions and equations verbally, numerically, and algebraically;**	**Teacher directed**
6.7C	**determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations;**	**Teacher directed**
6.7D	**generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.**	**Using the Distributive Property** **Addition Properties** **Multiplication Properties**
Expressions, equations, and relationships. The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to:		
6.8A	**extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle;**	**Angle Measures in a Triangle** **Angle Sum of a Triangle** **Exterior Angles of a Triangle**
6.8B	**model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes;**	**Teacher directed**
6.8C	**write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers;**	**Area: Squares and Rectangles** **Area: Parallelograms** **Area: Triangles** **Area: Right Triangles** **Area: Compound Figures** **Volume: Rectangular Prisms 1**
6.8D	**determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.**	**Area: Squares and Rectangles** **Area: Parallelograms** **Area: Triangles** **Area: Right Triangles** **Area: Compound Figures** **Volume: Rectangular Prisms 1**
Expressions, equations, and relationships. The student applies mathematical process standards to use equations and inequalities to represent situations. The student is expected to:		
6.9A	**write one-variable, one-step equations and inequalities to represent constraints or conditions within problems;**	**Writing Equations** **Write an Equation: Word Problems**
6.9B	**represent solutions for one-variable, one-step equations and inequalities on number lines;**	**Inequalities on a Number Line: Basics** **Inequalities on a Number Line: Mixed Basics**

6.9C	write corresponding real-world problems given one-variable, one-step equations or inequalities.	Teacher directed
Expressions, equations, and relationships. The student applies mathematical process standards to use equations and inequalities to solve problems. The student is expected to:		
6.10A	model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts;	Solve Equations: Add, Subtract 1 Solve Equations: Multiply, Divide 1 Solve One-Step Inequalities 1
6.10B	determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.	Teacher directed
Measurement and data. The student applies mathematical process standards to use coordinate geometry to identify locations on a plane. The student is expected to:		
6.11	graph points in all four quadrants using ordered pairs of rational numbers.	Coordinate Graphs Ordered Pairs Graphing from a Table of Values Graphing from a Table of Values 2
Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:		
6.12A	represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;	Dot Plots Stem and Leaf Plots: Concept Histograms Box-and-Whisker Plots 1
6.12B	use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution;	Median from Stem and Leaf Plot
6.12C	summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution;	Mean Median Data Extremes and Range Calculating Interquartile Range
6.12D	summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution.	Mean Median Mode Mode from Stem and Leaf Plot Data Extremes and Range Calculating Interquartile Range
Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to solve problems. The student is expected to:		
6.13A	interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots;	Dot Plots Stem and Leaf Plots: Concept Histograms Box-and-Whisker Plots 1
6.13B	distinguish between situations that yield data with and without variability.	Teacher directed
Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:		
6.14A	compare the features and costs of a checking account and a debit card offered by different local financial institutions;	Teacher directed
6.14B	distinguish between debit cards and credit cards;	Teacher directed
6.14C	balance a check register that includes deposits, withdrawals, and transfers;	Teacher directed
6.14D	explain why it is important to establish a positive credit history;	Teacher directed
6.14E	describe the information in a credit report and how long it is retained;	Teacher directed
6.14F	describe the value of credit reports to borrowers and to lenders;	Teacher directed

6.14G	**explain various methods of pay for college, including through savings, grants, scholarships, student loans, and work-study ;**	**Teacher directed**
6.14H	**compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income.**	**Teacher directed**

Grade 7

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to:		
Standard	**Student Expectations**	**Activities**
7.2	**extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers.**	**Teacher directed**
Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to:		
7.3A	**add, subtract, multiply, and divide rational numbers fluently;**	**Integers: Add and Subtract Integers: Multiply and Divide Add Decimals: Different Signs Add Mixed Numbers: Signs Can Differ Subtract Negative Mixed Numbers Multiply Two Fractions 2 Divide Fractions by Fractions 2 Divide Mixed Numbers with Signs**
7.3B	**apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.**	**More Fraction Problems**
Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:		
7.4A	**Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$;**	**Best Buy Distance Travelled Average Speed Conversion Graphs Rate Word Problems Rates y=ax**
7.4B	**calculate unit rates from rates in mathematical and real-world problems;**	**Rates Proportional Relationships**
7.4C	**determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems;**	**Teacher directed**
7.4D	**solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems;**	**Percentage Word Problems Percentage Error Percentage Change: Increase and Decrease Percent Increase and Decrease Commission Profit and Loss Best Buy Successive Discounts Simple Interest**

7.4E	convert between measurement systems, including the use of proportions and the use of unit rates.	Converting Units of Length Meters and Kilometers Customary Units of Length Customary Units of Capacity Customary Units of Weight 2
Proportionality. The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to:		
7.5A	generalize the critical attributes of similarity, including ratios within and between similar shapes;	Similar Figures Similar Figures 1
7.5B	describe π as the ratio of the circumference of a circle to its diameter;	Teacher directed
7.5C	solve mathematical and real-world problems involving similar shape and scale drawings.	Scale Factor Scale Measurement Floor Plans Perimeter, Area, Dimension Change
Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to:		
7.6A	represent sample spaces for simple and compound events using lists and tree diagrams;	Counting Principle How many Combinations? Counting Techniques 1
7.6B	select and use different simulations to represent simple and compound events with and without technology;	Teacher directed
7.6C	make predictions and determine solutions using experimental data for simple and compound events;	Dice and Coins Simple Probability Find the Probability Introductory Probability Probability Tables Probability-Replacement Probability-No Replacement
7.6D	make predictions and determine solutions using theoretical probability for simple and compound events;	Chance Dial Probability Scale
7.6E	find the probabilities of a simple event and its complement and describe the relationship between the two;	Complementary Events
7.6F	use data from a random sample to make inferences about a population;	Teacher directed
7.6G	solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents;	Divided Bar Graphs Sector Graph Calculations Dot Plots
7.6H	solve problems using qualitative and quantitative predictions and comparisons from simple experiments;	Teacher directed
7.6I	determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.	Teacher directed
Expressions, equations, and relationships. The student applies mathematical process standards to represent linear relationships using multiple representations. The student is expected to:		
7.7	represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$.	Modeling Linear Relationships Reading Values from a Line Determining a Rule for a Line Equation of a Line 1 Which Straight Line?

Expressions, equations, and relationships. The student applies mathematical process standards to develop geometric relationships with volume. The student is expected to:		
7.8A	**model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect that relationship to the formulas;**	**Teacher directed**
7.8B	**explain verbally and symbolically the relationship between the volume of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to the formulas;**	**Teacher directed**
7.8C	**use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas.**	**Teacher directed**
Expressions, equations, and relationships. The student applies mathematical process standards to solve geometric problems. The student is expected to:		
7.9A	**solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids;**	**Volume: Rectangular Prisms 1** **Volume: Triangular Prisms** **Volume: Pyramids** **Volume: Prisms**
7.9B	**determine the circumference and area of circles;**	**Circumference: Circles** **Area: Circles 1**
7.9C	**determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles;**	**Area: Composite Shapes** **Area: Compound Figures**
7.9D	**solve problems involving the 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.**	**Nets** **Surface Area: Triangular Prisms** **Surface Area: Rectangular Prisms** **Surface Area: Rectangular Pyramids**
Expressions, equations, and relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:		
7.10A	**write one-variable, two-step equations and inequalities to represent constraints or conditions within problems;**	**Writing Equations** **Write an Equation: Word Problems**
7.10B	**represent solutions for one-variable, two-step equations and inequalities on number lines;**	**Graphing Inequalities on Number Line**
7.10C	**write a corresponding real-world problem given a one-variable, two-step equation or inequality.**	**Teacher directed**
Expressions, equations, and relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:		
7.11A	**model and solve one-variable, two-step equations and inequalities;**	**Solve Two-Step Equations** **Solve Two-Step Inequalities**
7.11B	**determine if the given value(s) make(s) one-variable, two-step equations and inequalities true;**	**Teacher directed**
7.11C	**write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships.**	**Angle Sum of a Triangle** **Quadrilaterals: Angle Sums with Equations** **Equal, Complement, or Supplement?** **Vertically Opposite: Value of x**
Measurement and data. The student applies mathematical process standards to use statistical representations to analyze data. The student is expected to:		
7.12A	**compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads;**	**Box-and-Whisker Plots 2**
7.12B	**use data from a random sample to make inferences about a population;**	**Teacher directed**

7.12C	compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations.	Teacher directed
Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:		
7.13A	calculate the sales tax for a given purchase and calculate income tax for earned wages;	Teacher directed
7.13B	identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget;	Teacher directed
7.13C	create and organize a financial assets and liabilities record and construct a net worth statement;	Teacher directed
7.13D	use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby;	Teacher directed
7.13E	calculate and compare simple interest and compound interest earnings;	Teacher directed
7.13F	analyze and compare monetary incentives, including sales, rebates, and coupons.	Teacher directed

Grade 8

Knowledge and Skills		
Number and operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:		
8.2A	extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers;	Teacher directed
8.2B	approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line;	Irrational Numbers Estimating Square Roots Square Roots Square Roots 1
8.2C	convert between standard decimal notation and scientific notation;	Scientific Notation Scientific Notation 1 Scientific Notation 2 Ordering Scientific Notation Scientific notation to decimal
8.2D	order a set of real numbers arising from mathematical and real-world contexts.	Teacher directed
Proportionality. The student applies mathematical process standards to use proportional relationships to describe dilations. The student is expected to:		
8.3A	generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation;	Similar Figures Similar Triangles Using Similar Triangles
8.3B	compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane;	Teacher directed
8.3C	use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation.	Scale Factor
Proportionality. The student applies mathematical process standards to explain proportional and non-proportional relationships involving slope. The student is expected to:		
8.4A	use similar right triangles to develop an understanding that slope, *m*, given as the rate comparing the change in *y*-values to the change in *x*-values, $(y_2 - y_1)/ (x_2 - x_1)$, is the same for any two points (x_1, y_1) and (x_2, y_2) on the same line;	Gradient Slope of a Line
8.4B	graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship;	y=ax
8.4C	use data from a table or graph to determine the rate of change or slope and *y*-intercept in mathematical and real-world problems.	Equation of a Line 1 Modeling Linear Relationships

Proportionality. The student applies mathematical process standards to use proportional and non-proportional relationships to develop foundational concepts of functions. The student is expected to:		
8.5A	**represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$;**	**Determining a Rule for a Line y=ax**
8.5B	**represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$, where $b \neq 0$;**	**Graphing from a Table of Values Graphing from a Table of Values 2 Determining a Rule for a Line Equation of a Line 1 Which Straight Line? Modeling Linear Relationships**
8.5C	**contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation;**	**Teacher directed**
8.5D	**use a trend line that approximates the linear relationship between bivariate sets of data to make predictions;**	**Teacher directed**
8.5E	**solve problems involving direct variation;**	**Direct Variation Modeling Linear Relationships**
8.5F	**distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$, where $b \neq 0$;**	**Teacher directed**
8.5G	**identify functions using sets of ordered pairs, tables, mappings, and graphs;**	**Vertical Line Test**
8.5H	**identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems;**	**Teacher directed**
8.5I	**write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations.**	**Equation from Point and Gradient Equation of a Line 1 Which Straight Line? Modeling Linear Relationships Determining a Rule for a Line**
Expressions, equations, and relationships. The student applies mathematical process standards to develop mathematical relationships and make connections to geometric formulas. The student is expected to:		
8.6A	**describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height;**	**Teacher directed**
8.6B	**model the relationship between the volume of a cylinder and a cone having both congruent bases and heights and connect that relationship to the formulas;**	**Teacher directed**
8.6C	**use models and diagrams to explain the Pythagorean theorem.**	**Teacher directed**
Expressions, equations, and relationships. The student applies mathematical process standards to use geometry to solve problems. The student is expected to:		
8.7A	**solve problems involving the volume of cylinders, cones, and spheres;**	**Volume: Cylinders Volume: Cones Volume: Spheres**
8.7B	**use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders;**	**Surface Area: Rectangular Prisms Surface Area: Triangular Prisms Surface Area: Cylinders**

8.7C	use the Pythagorean Theorem and its converse to solve problems;	Pythagoras: Find a Short Side (rounding needed) Pythagoras: Find a Short Side (integers only) Pythagoras: Find a Short Side (decimal values) Pythagoras and Perimeter Pythagorean Triads Find Slant Height Pythagorean Theorem Pythagoras' Theorem
8.7D	determine the distance between two points on a coordinate plane using the Pythagorean Theorem.	Distance Between Two Points
Expressions, equations, and relationships. The student applies mathematical process standards to use one-variable equations or inequalities in problem situations. The student is expected to:		
8.8A	write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants;	Teacher directed
8.8B	write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants;	Teacher directed
8.8C	model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants;	Equations with Grouping Symbols Solving More Equations Equations with Fractions Equations with Decimals Equations to Solve Problems Equations: Variables Both Sides
8.8D	use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.	Angles on Parallel Lines Parallel Lines Introduction to Angles on Parallel Lines 1 Introduction to Angles on Parallel Lines 3 Angles and Parallel Lines Vertically Opposite Angles: Unknown Values Vertically Opposite: Value of x Exterior Angles of a Triangle Using Similar Triangles Similar Triangles Angle Measures in a Triangle Angle Sum of a Triangle
Expressions, equations, and relationships	The student applies mathematical process standards to use multiple representations to develop foundational concepts of simultaneous linear equations. The student is expected to:	
8.9	identify and verify the values of x and y that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations.	Solve Systems by Graphing Simultaneous Linear Equations
Two-dimensional shapes. The student applies mathematical process standards to develop transformational geometry concepts. The student is expected to:		
8.10A	generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane;	Flip, Slide, Turn Transformations Rotations: Coordinate Plane Transformations: Coordinate Plane Congruent Figures (Dot Grid) Congruent Figures (Grid)

8.10B	**differentiate between transformations that preserve congruence and those that do not;**	**Teacher directed**
8.10C	**explain the effect of translations, reflections over the *x*- or *y*-axis, and rotations limited to 90°, 180°, 270°, and 360° as applied to two-dimensional shapes on a coordinate plane using an algebraic representation;**	**Teacher directed**
8.10D	**model the effect on linear and area measurements of dilated two-dimensional shapes.**	**Scale Factor**
Measurement and data. The student applies mathematical process standards to use statistical procedures to describe data. The student is expected to:		
8.11A	**construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data;**	**Data Analysis: Scatter Plots** **Scatter Plots**
8.11B	**determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points;**	**Difference and Deviation from Mean** **Interpreting Standard Deviation** **Calculating Standard Deviation**
8.11C	**simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected.**	**Teacher directed**
Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:		
8.12A	**solve real-world problems comparing how interest rate and loan length affect the cost of credit;**	**Teacher directed**
8.12B	**calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator;**	**Teacher directed**
8.12C	**explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time;**	**Teacher directed**
8.12D	**calculate and compare simple interest and compound interest earnings;**	**Teacher directed**
8.12E	**identify and explain the advantages and disadvantages of different payment methods;**	**Teacher directed**
8.12F	**analyze situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and the costs of financial irresponsibility;**	**Teacher directed**
8.12G	**estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan to accumulating the money needed to contribute to the total cost of attendance for at least the first year of college.**	**Teacher directed**

Mathletics

3P Learning