



At a Glance: Mathematics Continuum

This document represents the version of the Dynamic Learning Maps Essential Elements released summer 2013.

STANDARD: COUNTING AND CARDINALITY				
Grade	Kindergarten			
Core Cluster	Know number names and the count sequence.	Count to tell the number of objects.	Count to tell the number of objects.	Compare numbers.
Essential Elements	EEK.CC.1. Starting with one, count to 10 by ones.	EEK.CC.4. Demonstrate one-to-one correspondence pairing each object with one and only one number and each name with only one object.	EEK.CC.5. Count out up to three objects from a larger set, pairing each object with one and only one number name to tell how many.	EEK.CC.6. Identify whether the number of objects in one group is more or less than (when the quantities are clearly different) or equal to the number of objects in another group.
Essential Elements	EEK.CC.2. N/A			EEK.CC.7. N/A
Essential Elements	EEK.CC.3. N/A			

STANDARD: OPERATIONS AND ALGEBRAIC THINKING

Grade	Kindergarten	Grade 1		Grade 2		
Core Cluster	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Represent and solve problems involving addition and subtraction.	Add and subtract within 20.	Represent and solve problems involving addition and subtraction.	Add and subtract within 20.	Work with equal groups of objects to gain foundations for multiplication.
Essential Element	EEK.OA.1. Represent addition as “putting together” or subtraction as “taking from” in everyday activities.	EE1.OA.1.a. Use language to describe putting together and taking apart, aspects of addition and subtraction.	EE1.OA.5.a. Use manipulatives or visual representations to indicate the number that results when adding one more.	EE2.OA.1. Add and subtract to solve real world one-step story problems from 0-20 when the result is unknown.	EE2.OA.2. N/A (See EE2.NBT.7)	EE2.OA.3. Equally distribute even numbers of objects between two groups.
Essential Element	EEK.OA.2. N/A	EE1.OA.1.b. Recognize two groups that have the same or equal quantity.	EE1.OA.5.b. Apply knowledge of “one less” to subtract one from the numbers.			EE2.OA.4. Use addition to find the total number of objects arranged within equal groups up to a total of 10.
Essential Element	EEK.OA.3. N/A	EE1.OA.2. Use “putting together” to solve problems with two sets.	EE1.OA.6. N/A			
Essential Element	EEK.OA.4. N/A	EE1.OA.3. N/A				
Essential Element	EEK.OA.5. N/A					

STANDARD: OPERATIONS AND ALGEBRAIC THINKING

Grade	Grade 3				Grade 4			Grade 5			
Core Cluster	Represent and solve problems involving multiplication and division.	Understand properties of multiplication and the relationship between multiplication and division.	Multiply and divide within 100.	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	Use the four operations with whole numbers to solve problems.	Gain familiarity with factors and multiples.	Generate and analyze patterns.	Write and interpret numerical expressions	Analyze patterns and relationships.	Understand the place value system.	Perform operations with multi-digit whole numbers and with decimals to hundredths.
Essential Element	EE3.OA.1-2. Use repeated addition and equal groups to find the total number of objects to find the sum.	EE3.OA.5. N/A (Multiplication begins at grade 4).	EE3.OA.7. N/A (Multiplication begins grade 4 and division begins in grade 5).	EE3.OA.8. Solve one-step real-world problems using addition or subtraction within 20.	EE4.OA.1-2. Demonstrate the connection between repeated addition and multiplication.	EE4.OA.4. Show one way to arrive at product.	EE4.OA.5. Use repeating patterns to make predictions.	EE5.OA.1-2. N/A	EE5.OA.3. Identify and extend numerical patterns.	EE5.NBT.1. Compare numbers to each other based on place value groups by composing and decomposing to 99.	EE5.NBT.5. Multiply whole numbers up to 5×5 .
Essential Element	EE3.OA.3. See EE3.OA.1. for repeated addition, a foundational skill for multiplication and division. (Multiplication begins in grade 4 and division begins in grade 5).	EE3.OA.6. N/A (Division begins at grade 5).		EE3.OA.9. Identify arithmetic patterns.	EE4.OA.3. Solve one-step real-world problems using addition or subtraction within 100.					EE5.NBT.2. Recognize patterns in the number of zeros when multiplying a number by powers of 10.	EE5.NBT.6-7. Illustrate the concept of division using fair and equal shares.
Essential Element	EE3.OA.4. Solve addition and subtraction problems when result is unknown with number 0-30.									EE5.NBT.3. Round two-digit whole numbers to the nearest 10 from 0-90.	
Essential Element										EE5.NBT.4. Round money to a nearest dollar.	

STANDARD: NUMBERS AND OPERATIONS IN BASE TEN

Grade	Kindergarten	Grade 1			Grade 2	
Core Cluster	Work with numbers 11-19 to gain foundations for place value.	Extend the counting sequence.	Understand place value.	Use place value understanding and properties of operations to add and subtract.	Understand place value.	Use place value understanding and properties of operations to add and subtract.
Essential Element	EEK.NBT.1. N/A (See EEK.NBT.1.4 and EEK.NBT.1.6)	EE1.NBT.1.a. Count by ones.	EE1.NBT.2. Create sets of 10.	EE1.NBT.4. Compose numbers less than or equal to five in more than one way.	EE2.NBT.1. Represent numbers through 30 with sets of tens and ones with objects in columns or arrays.	EE2.NBT.5.a. Identify the meaning of the "+" sign (i.e., combine, plus, add), and the "=" sign (equal).
		EE1.NBT.1.b. Count as many as 10 objects and represent the quantity with the corresponding numeral.	EE1.NBT.3. Compare two groups of 10 or fewer items when the quantity of items in each group is similar.	EE1.NBT.5. N/A (See EE1.OA.5.a and EE1.OA.5.b)	EE2.NBT.2.a. Count from 1 to 30 (count with meaning; cardinality).	EE2.NBT.5.b. Using concrete examples, compose and decompose numbers up to 10 in more than one way.
				EE1.NBT.6. Decompose numbers less than or equal to five in more than one way.	EE2.NBT.2.b. Name the next number in a sequence between 1 and 10.	EE2.NBT.6-7. Use objects, representations, and numbers (0-20) to add and subtract.
					EE2.NBT.3. Identify number symbols 1 to 30.	
					EE2.NBT.4. Compare sets of objects and numbers using appropriate vocabulary (more, less, equal).	

STANDARD: NUMBERS AND OPERATIONS IN BASE TEN

Grade	Grade 3	Grade 4		Grade 5	
Core Cluster	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Generalize place value understanding for multi-digit whole numbers.	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Understand the place value system.	Perform operations with multi-digit whole numbers and with decimals to hundredths.
Essential Element	EE3.NBT.1. Use decade numbers (10, 20, 30) as benchmarks to demonstrate understanding of place value for numbers 0 - 30.	EE4.NBT.1. See EE.5.NBT.1	EE4.NBT.4. Add and subtract double-digit whole numbers.	EE5.NBT.1. Compare numbers up to 99 using base ten models.	EE5.NBT.5. Multiply whole numbers up to 5×5 .
	EE3.NBT.2. Demonstrate understanding of place value to tens.	EE4.NBT.2. Compare whole numbers ($<$, $>$, $=$).		EE5.NBT.2. Use the number of zeros in numbers that are powers of 10 to determine which values are equal, greater than, or less than.	EE5.NBT.6-7. Illustrate the concept of division using fair and equal shares.
	EE3.NBT.3. Count by tens using models such as objects, base ten blocks, or money.	EE4.NBT.3. Round one- and two-digit whole numbers from 0-50 to the nearest 10.		EE5.NBT.3. Compare whole numbers up to 100 using symbols ($<$, $>$, $=$).	
				EE5.NBT.4. Round two-digit whole numbers to the nearest 10 from 0 - 90.	

STANDARD: MEASUREMENT AND DATA								
Grade	Kindergarten	Grade 1			Grade 2			
Core Cluster	Describe and compare measurable attributes.	Measure lengths indirectly and by iterating length units.	Tell and write time.	Represent and interpret data.	Measure and estimate lengths in standard units.	Relate addition and subtraction to length.	Work with time and money.	Represent and interpret data.
Essential Element	EEK.MD.1-3. Classify objects according to attributes (big/small, heavy/light).	EE1.MD.1-2. Compare lengths to identify which is longer/shorter, taller/shorter*.	EE1.MD.3.a. Demonstrate an understanding of the terms "tomorrow, yesterday, and today."	EE1.MD.4. Organize data into categories by sorting.	EE2.MD.1. Measure the length of objects using non-standard units.	EE2.MD.5. Increase or decrease length by adding or subtracting unit(s).	EE2.MD.7. Identify on a digital clock the hour that matches a routine activity.	EE2.MD.9-10. Create picture graphs from collected measurement data.
Essential Element			EE1.MD.3.b. Demonstrate understanding of tomorrow, yesterday, and today		EE2.MD.3-4. Order by length using non-standard units.	EE2.MD.6. Use a number line to add one more unit of length.	EE2.MD.8. Recognize that money has value.	
Essential Element			EE1.MD.3.c. Identify activities that come next, before, and after.					
Essential Element			EE1.MD.3.d. Demonstrate an understanding that telling time is the same every day.					

STANDARD: MEASUREMENT AND DATA

STANDARD: MEASUREMENT AND DATA								
Grade	Grade 3		Grade 4			Grade 5		
Core Cluster	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	Represent and interpret data.	Geometric measurement: understand concepts of angle and measure angles.	Convert like measurement units within a given measurement system.	Represent and interpret data.	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition
Essential Element	EE3.MD.1. Tell time to the hour on a digital clock.	EE3.MD.5-7. N/A (Area begins at grade 6).	EE4.MD.1. Identify the smaller measurement units that comprises a larger unit within a measurement system (inches/foot, centimeter/meter, minutes/hour).	EE4.MD.4.a. Insert data into a preconstructed bar graph template.	EE4.MD.5. Recognize angles in geometric shapes.	EE5.MD.1.a. Tell time using an analog or digital clock to the half or quarter hour.	EE5.MD.2.a. Represent and interpret data on a picture, line plot, or bar graph.	EE5.MD.3-5. Identify common three-dimensional shapes.
Essential Element	EE3.MD.2. Identify the appropriate measurement tool to solve one-step word problems involving mass and volume.	EE3.MD.8. N/A (Perimeter begins at grade 7).	EE4.MD.2.a. Tell time to the half hour using a digital or to the hour using an analog clock.	EE4.MD.4.b. Interpret data from a picture or bar graph.	EE4.MD.6. Identify angles as larger and smaller.	EE5.MD.1.b. Use standard units to measure weight and length of objects.		EE5.MD.4-5. Determine the volume of a rectangular prism by counting units of measure (unit cubes).
Essential Element	EE3.MD.3. Use picture or bar graph data to answer questions about data.	EE3.MD.4. Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.	EE4.MD.2.b. Measure mass or volume using standard tools.			EE5.MD.1.c. Indicate relative value of collections of coins		

Essential Element			EE4.MD.2.c. Use standard measurement to compare lengths of objects.					
Essential Element			EE4.MD.2.d. Identify coins (penny, nickel, dime, quarter) and their values.					
Essential Element			EE4.MD.2.e. See EE4.MD.2d.					
Essential Element			EE4.MD.3 Determine the area of square or rectangle by counting units of measure (unit squares).					

STANDARD: GEOMETRY

Grade	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	
Core Cluster	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	Reason with shapes and their attributes.	Reason with shapes and their attributes.	Reason with shapes and their attributes.	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	Graph points on the coordinate plane to solve real-world and mathematical problems.	Understand ratio concepts and use ratio reasoning to solve problems.
Essential Element	EEK.G.1. Identify words of proximity to describe the relative position.	EE1.G.1. Identify the relative position of objects that are on, off, in, and out	EE2.G.1. Identify common two-dimensional shapes: square, circle, triangle, and rectangle.	EE3.G.1. Describe attributes of two-dimensional shapes.	EE4.G.1. Recognize parallel lines and intersecting lines.	EE5.G.1-4. Sort two-dimensional figures and identify the attributes (angles, number of sides, corners, color) they have in common.	EE6.RP.1. Demonstrate a simple ratio relationship.
Essential Element	EEK.G.2-3. Match shapes of same size and orientation (circle, square, rectangle, triangle)	EE1.G.2. Sort shapes of same size and orientation (circle, square, rectangle, triangle).		EE3.G.2. Recognize that shapes can be partitioned into equal areas.	EE4.G.2. Describe the defining attributes of two-dimensional shapes.		
Essential Element		EE1.G.3. Put together two pieces to make a shape that relates to the whole (i.e., two semicircles to make a circle, two squares to make a rectangle).			EE4.G.3. Recognize that lines of symmetry partition shapes into equal shapes.		

STANDARD: GEOMETRY

Grade	Grade 6	Grade 7		Grade 8		
Core Cluster	Solve real-world and mathematical problems involving area, surface area, and volume.	Draw construct, and describe geometrical figures and describe the relationships between them.	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	Understand congruence and similarity using physical models, transparencies, or geometry software.	Understand and apply the Pythagorean Theorem.	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.
Essential Element	EE6.G.1. Solve real world and mathematical problems about volume using unit squares.	EE7.G.1. Match two similar geometric shapes that are proportional in size and in the same orientation.	EE7.G.4. Determine the perimeter of a rectangle by adding the measures of the sides.	EE8.G.1. Recognize translations, rotations, and reflections of shapes.	EE8.G.6-8. N/A	EE8.G.9. Use the formulas for perimeter, area, and volume to solve real-world and mathematical problems (limited to perimeter and area of rectangles and volume of rectangular prisms).
Essential Element	EE6.G.2. Solve real-world and mathematical problems about volume using unit cubes.	EE7.G.2. Recognize geometric shapes with given conditions.	EE7.G.5. Recognize angles that are acute, obtuse, and right.	EE8.G.2. Identify shapes that are congruent.		
Essential Element		EE7.G.3. Match a two-dimensional shape with a three-dimensional shape that shares an attribute.	EE7.G.6. Determine the area of a rectangle using the formula for length x width, and confirm the result using tiling or partitioning into unit squares.	EE8.G.4. Identify similar shapes with and without rotation.		
				EE8.G.5. Compare measures of angles to a right angle (greater than, less than, or equal to).		

	STANDARD: GEOMETRY—CONGRUENCE		STANDARD: GEOMETRY— EXPRESSING GEOMETRIC PROPERTIES AND EQUATIONS
Grade	High School		High School
Core Cluster	Experiment with transformations in the plane.	Understand congruence in terms of rigid motions.	Use coordinates to prove simple geometric theorems algebraically.
Essential Element	EE.G-CO.1. Know the attributes of perpendicular lines, parallel lines, and line segments, angles; and circles.	EE.G-CO.6-8. Identify corresponding congruent and similar parts of shapes.	EE.G-PE.7. Find perimeters and areas of squares and rectangles to solve real-world problems.
Essential Element	EE.G-CO.4-5. Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent.		

	STANDARD: GEOMETRY— GEOMETRIC MEASUREMENT AND DIMENSION		STANDARD: GEOMETRY— MODELING WITH GEOMETRY
Grade	High School		High School
Core Cluster	Explain volume formulas, and use them to solve problems.	Visualize relationships between two-dimensional and three-dimensional objects.	Apply geometric concepts in modeling situations.
Essential Element	EE.G-GMD.1-3. Make a prediction about the volume of a container, the area of a figure, and the perimeter of a figure, and then test the prediction using formulas or models.	EE.G-GMD.4 Identify the shapes of two-dimensional cross-sections of three-dimensional objects.	EE.G-MG.1-3. Use properties of geometric shapes to describe real-life objects.

STANDARD: NUMBER AND OPERATIONS—FRACTIONS

Grade	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4		Grade 5	
Core Cluster				Develop understanding of fractions as numbers.	Extend understanding of fraction equivalence and ordering.	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	Use equivalent fractions as a strategy to add and subtract fractions.	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
Essential Element				EE3.NF.1-3. Differentiate a fractional part from a whole.	EE4.NF.1-2. Identify models of one half ($1/2$) and one fourth ($1/4$).	EE4.NF.3. Differentiate between whole and half.	EE5.NF.1. Identify models of halves ($1/2$, $2/2$) and fourths ($1/4$, $2/4$, $3/4$, $4/4$).	EE5.NF.3. N/A (See EE5.NF.1)
Essential Element							EE5.NF.2. Identify models of thirds ($1/3$, $2/3$, $3/3$) and tenths ($1/10$, $2/10$, $3/10$, $4/10$, $5/10$, $6/10$, $7/10$, $8/10$, $9/10$, $10/10$).	EE5.NF.4-5. N/A
Essential Element								EE5.NF. 6-7. N/A

This standard begins at Grade 6.

STANDARD: THE NUMBER SYSTEM						
Grade	Grade 6			Grade 7		Grade 8
Core Cluster	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	Compute fluently with multi-digit numbers and find common factors and multiples.	Apply and extend previous understandings of numbers to the system of rational numbers.	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Apply properties of operations as strategies to add and subtract rational numbers.	Know that there are numbers that are not rational, and approximate them by rational numbers.
Essential Element	EE6.NS.1. Compare the relationships between two unit fractions.	EE6.NS.2. Apply the concept of fair share and equal shares to divide.	EE6.NS.5-8. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero).	EE7.NS.1. Add fractions with like denominators (halves, thirds, fourths, and tenths) so the solution is less than or equal to one.	EE7.NS.2.a. Solve multiplication problems with products to 100.	EE8.NS.1. Subtract fractions with like denominators (halves, thirds, fourths, and tenths) with minuends less than or equal to one.
Essential Element		EE6.NS.3. Solve two factor multiplication problems with products up to 50 using concrete objects and/or calculators			EE7.NS.2.b. Solve division problems with divisors up to five and also with a divisor of 10 without remainders.	EE8.NS.2a. Express a fraction with a denominator of 100 as a decimal.
Essential Element		EE6.NS.4. N/A			EE7.NS.2.c-d. Express a fraction with a denominator of 10 as a decimal.	EE8.NS.2.b. Compare quantities represented as decimals in real-world examples to hundredths.
Essential Element					EE7.NS.3. Compare quantities represented as decimals in real-world examples to tenths.	

	STANDARD: THE NUMBER SYSTEM— NUMBER AND QUANTITY		STANDARD: THE NUMBER SYSTEM— QUANTITIES	STANDARD: THE NUMBER SYSTEM— THE COMPLEX NUMBER SYSTEM
Grade	High School		High School	High School
Core Cluster	Extend the properties of exponents to rational exponents.	Use properties of rational and irrational numbers.	Reason quantitatively, and use units to solve problems.	Perform arithmetic operations with complex numbers
Essential Element	EE.N-RN.1. Determine the value of a quantity that is squared or cubed.	N/A	EE.N-Q.1-3. Express quantities to the appropriate precision of measurement.	EE.N-CN.2.a Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers.
Essential Element				EE.N-CN.2.b. Solve real world problems involving addition and subtraction of decimals, using models when needed.
Essential Element				EE.N-CN.2.c Solve real-world problems involving multiplication of decimals and whole numbers using models when needed.

This standard begins at Grade 6.

STANDARD: EXPRESSIONS AND EQUATIONS								
Grade	Grade 6			Grade 7		Grade 8		
Core Cluster	Apply and extend previous understandings of arithmetic to algebraic expressions.	Reason about and solve one-variable equations and inequalities.	Represent and analyze quantitative relationships between dependent and independent variables.	Use properties of operations to generate equivalent expressions.	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Expressions and Equations. Work with radicals and integer exponents.	Understand the connections between proportional relationships, lines, and linear equations.	Analyze and solve linear equations and pairs of simultaneous linear equations.
Essential Element	EE6.EE.1-2. Identify equivalent number sentences.	EE6.EE.5-7. Match an equation to a real-world problem in which variables are used to represent numbers.	EE6.EE.9. N/A	EE7.EE.1. Use the properties of operations as strategies to demonstrate that expressions are equivalent.	EE7.EE.3-4. Use the concept of equality with models to solve one-step addition and subtraction equations.	EE8.EE.1-4. Identify the meaning of an exponent (limited to exponents of 2 and 3).	EE8.EE.5-6. Graph a simple ratio using the x and y axis points when given the ratio in standard form (2:1) and convert to 2/1.	EE8.EE.7. Solve algebraic expressions using simple addition and subtraction.
Essential Element	EE6.EE.3. Apply the properties of addition to identify equivalent numerical expressions.			EE7.EE.2. Identify an arithmetic sequence of whole numbers with a whole number common difference.		EE8.EE.2. Identify a geometric sequence of whole numbers with a whole number common ratio.		EE8.EE.8. N/A (See EE.8.EE.5-6)
Essential Element						EE8.EE.3-4. Compose and decompose whole numbers up to 999.		

	STANDARD: EXPRESSIONS AND EQUATIONS ALGEBRA—SEEING STRUCTURE IN EQUATIONS		STANDARD: EXPRESSIONS AND EQUATIONS ALGEBRA—CREATING EQUATIONS	STANDARD: EXPRESSIONS AND EQUATIONS ALGEBRA—REASONING WITH EQUATIONS AND INEQUALITIES
Grade	High School		High School	High School
Core Cluster	Interpret the structure of expressions.	Write expressions in equivalent forms to solve problems.	Create equations that describe numbers or relationships.	Represent and solve equations and inequalities graphically.
Essential Element	EE.A-SSE.1. Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.	EE.A-SSE.3. Solve simple algebraic equations with one variable using multiplication and division.	EE.A-CED.1. Create an equation involving one operation with one variable, and use it to solve a real-world problem.	EE.A-REI.10-12. Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.
Essential Element		EE.A-SSE.4. Determine the successive term in a geometric sequence given the common ratio.	EE.A-CED.2-4. Solve one-step inequalities.	
Essential Element				

This standard begins at Grade 6.

STANDARD: STATISTICS AND PROBABILITY						
Grade	Grade 6		Grade 7			Grade 8
Core Cluster	Develop understanding of statistical variability.	Summarize and describe distributions.	Use random sampling to draw inferences about a population.	Draw informal comparative inferences about two populations.	Investigate chance processes and develop, use, and evaluate probability models.	Investigate patterns of association in bivariate data.
Essential Element	EE6.SP.1-2. Display data on a graph or table that shows variability in the data.	EE6.SP.4. N/A (See EE6.SP.1-2)	EE7.SP.1-2. Answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student.	EE7.SP.3. Compare two sets of data within a single data display such as a picture graph, line plot, or bar graph.	EE7.SP.5-7. Describe the probability of events occurring as possible or impossible.	EE8.SP.1-3. N/A
Essential Element	EE6.SP.3. N/A	EE6.SP.5. Summarize data distributions shown in graphs or tables.				EE8.SP.4. Construct a graph or table from given categorical data and compare data categorized in the graph or table.

	STANDARD: STATISTICS AND PROBABILITY— INTERPRETING CATEGORICAL AND QUANTITATIVE DATA	STANDARD: STATISTICS AND PROBABILITY— MAKING INFERENCES AND JUSTIFYING CONCLUSIONS	STANDARD: STATISTICS AND PROBABILITY— CONDITIONAL PROBABILITY AND THE RULES OF PROBABILITY
Grade	High School	High School	High School
Core Cluster	Summarize, represent, and interpret data on a single count or measurement variable.	Understand and evaluate random processes underlying statistical experiments.	Understand independence and conditional probability, and use them to interpret data.
Essential Element	EE.S-ID.1-2. Given data, construct a simple graph (line, pie, bar, or picture) or table, and interpret the data.	EE.S-IC.1-2. Determine the likelihood of an event occurring when the outcomes are equally likely to occur.	EE.S-CP.1-5. Identify when events are independent or dependent.
Essential Element	EE.S-ID.3. Interpret general trends on a graph or chart.		
Essential Element	EE.S-ID.4. Calculate the mean of a given data set (limit the number of data points to fewer than five.)		

STANDARD: RATIOS AND PROPORTIONAL RELATIONSHIPS

Grade	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Core Cluster							Analyze proportional relationships and use them to solve real-world and mathematical problems.
Essential Element							EE7.RP.1-3. Use a ratio to model or describe a relationship.

STANDARD: FUNCTIONS										
Grade	Kinder- garten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	
Core Cluster									Define, evaluate, and compare functions.	Use functions to model relationships between quantities.
Essential Element									EE8.F.1-3. Given a function table containing at least 2 completed ordered pairs, identify a missing number that completes another ordered pair (limited to linear functions).	EE8.F.4. Determine the values or rule of a function using a graph or a table.
Essential Element										EE8.F.5. Describe how a graph represents a relationship between two quantities.

	STANDARD: FUNCTIONS— INTERPRETING FUCTIONS		STANDARD: FUNCTIONS— BUILDING FUNCTIONS	STANDARD: FUNCTIONS— LINEAR, QUADRATIC, AND EXPONENTIAL MODELS
Grade	High School		High School	High School
Core Cluster	Understand the concept of a function, and use function notation.	Interpret functions that arise in applications in terms of the context.	Build a function that models a relationship between two quantities.	Construct and compare linear, quadratic, and exponential models and solve problems.
Essential Element	EE.F-IF.1-3. Use the concept of function to solve problems.	EE.F-IF.4-6. Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.	EE.F-BF.1. Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.	EE.F-LE.1-3. Model a simple linear function such as $y=mx$ to show tha these functions increase by equal amounts over equal intervals.
Essential Element			EE.F-BF.2. Determine an arithmetic sequence with whole numbers when provided a recrusive rule.	



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