Idaho Extended Standards Draft
Extended Content Indicators
Grade 7
Mathematics

Standard 1: Number and Operation - Students in Grade 7 read, write, compare, order, and place on a number line: rational numbers, including integers, fractions, and decimals, and absolute values. Students solve problems requiring the conversion between simple decimals, fractions, and percents. Students add, subtract, multiply, and divide whole numbers, fractions, and decimals and students evaluate numerical expressions using the order of operations with whole numbers and decimals. Students explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer.

Extended Standard 1: Students in Grade 7 read, write, compare, order, and place on a number line: positive and negative whole numbers, fractions, and decimals. With or without the use of a calculator, students solve problems with simple decimals, fractions, and percents and evaluate numerical expressions using the order of operations with whole numbers. Students determine when estimation is appropriate.

Topic	GR	Goals	Objectives	Essence	Extended Content Indicators
	7.M.1.1	Understand and use numbers.	7.M.1.1.1 Compare magnitudes and relative magnitudes of rational numbers, including integers, fractions, and decimals. (327.01.a , 327.01.c)		7.M.1.1.1A Recognize the magnitude of difference between small and large whole numbers and decimals.
			7.M.1.1.2 Solve problems requiring the conversion between simple decimals, fractions, ratios, and percents. (327.01.b)		7.M.1.1.2A Recognize corresponding common fractions and percents.
			7.M.1.1.3 Locate the position of rational numbers on a number line. (327.01.e)		7.M.1.1.3A Create a number line with positive rational numbers.
			7.M.1.1.4 Rewrite multiple factors using exponents. (327.02.c)		7.M.1.1.4A Recognize exponents as a representation of a very large number.
			7.M.1.1.5 Apply the number theory concepts of primes, composites, and prime factorization and find the Least Common Multiple (LCM) and the Greatest Common Factor (GCF). (327.01.d)		7.M.1.1.5 A Use repeated addition models to match the Least Common Multiple (LCM) and the Greatest Common Factor (GCF).
			7.M.1.1.6 Recognize pertinent information for problem solving. (328.01.b)		7.M.1.1.6A Identify pertinent information needed to solve a one-step problem.
			7.M.1.1.7 Describe the use of integers in real-world situations.		7.M.1.1.7 A Identify positive and negative numbers in real-world situations

| | | | 7.M.1.1.8 Use appropriate vocabulary. | | 7.M.1.1.8 A Use appropriate vocabulary. |

Standard 1: Number and Operation - Students in Grade 7 read, write, compare, order, and place on a number line: rational numbers, including integers, fractions, and decimals, and absolute values. Students solve problems requiring the conversion between simple decimals, fractions, and percents. Students add, subtract, multiply, and divide whole numbers, fractions, and decimals and students evaluate numerical expressions using the order of operations with whole numbers and decimals. Students explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer.

Extended Standard 1: Students in Grade 7 read, write, compare, order, and place on a number line: positive and negative whole numbers, fractions, and decimals. With or without the use of a calculator, students solve problems with simple decimals, fractions, and percents and evaluate numerical expressions using the order of operations with whole numbers. Students determine when estimation is appropriate.

Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	7.M.1.2	Perform computations accurately.	7.M.1.2.1 Recall the common equivalent fractions, decimals, and percents of halves, fourths, and tenths.		7.M.1.2.1 A Match common equivalent fractions, decimals, and percents i.e. half (1/2, .50 or 50%)
			7.M.1.2.2 Add, subtract, multiply, and divide whole numbers, fractions and decimals; and add, multiply, and divide integers. (327.02.a, 327.02.d)		7.M.1.2.2 A Add, subtract, multiple or divide single digit whole numbers or positive integers, with or without the use of a calculator or manipulatives.
			7.M.1.2.3 Evaluate whole numbers in exponential form.		7.M.1.2.3 A Recognize models of multiples as exponents, i.e. using concrete objects, pictures or student preferred items, use a tray to count multiples of equal groups.
			7.M.1.2.4 Evaluate numerical expressions using the order of operations with whole numbers and decimals. (327.02.b)		7.M.1.2.4 A Solve single digit addition, subtraction and multiplication problems that include parentheses, using calculator or manipulatives if necessary.
			7.M.1.2.5 Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (327.02.e)		7.M.1.2.5 A Choose concrete objects, symbolic systems or calculator to solve addition or subtractions problems.
			7.M.1.2.6 Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations. (328.01.a)		7.M.1.2.6 A Use a variety of common math computation strategies to solve real life problems.

			7.M.1.2.7 Use appropriate vocabulary and notations. (327.02.f)		7.M.1.2.7 A Use appropriate vocabulary.

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Extended Standard 1: Students in Grade 7 read, write, compare, order, and place on a number line: positive and negative whole numbers, fractions, and decimals. With or without the use of a calculator, students solve problems with simple decimals, fractions, and percents and evaluate numerical expressions using the order of operations with whole numbers. Students determine when estimation is appropriate.

Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	7.M.1.3	Estimate and judge reasonableness of results.	7.M.1.3.1 Estimate to predict computation results. (327.03.a)		7.M.1.3.1A Use estimation to select a reasonable answer to a real world problem involving whole numbers.
			7.M.1.3.2 Explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer. (327.03.b)		7.M.1.3.2 A Identify daily activities where estimation is appropriate.
			7.M.1.3.3 Identify whether a given estimate is an overestimate or underestimate. (327.03.c)		7.M.1.3.3 A Explore over and under estimation through daily living activities.
			7.M.1.3.4 Use a four-function calculator to solve complex grade-level problems.		7.M.1.3.4 A Use a calculator to solve problems.
			7.M.1.3.5 Formulate conjectures and discuss why they must be or seem to be true. (328.02.c)		7.M.1.3.5 A Formulate a guess to a problem and then show why it seems to be true.
			7.M.1.3.6 Use appropriate vocabulary and notations. (327.03.d)		7.M.1.3.6A Use appropriate vocabulary.

Standard 2: Concepts and Principles of Measurement - Students in Grade 7 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve problems involving perimeter and area of rectangles and squares. Students compare units and explain their relationship to one another and to real world applications.

Extended Standard 2: Students in Grade 7 select and use appropriate units and tools to make formal measurements. Students indicate perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve simple problems involving perimeter or area of rectangles and squares. Students compare units and their relationship to one another and to real world applications.

Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	7.M.2.1	Understand and use U.S. customary and metric measurements.	7.M.2.1.1 Select and use appropriate units and tools to make formal measurements in both systems. (329.01.a)		7.M.2.1.1A Select and use appropriate units and tools to make formal measurements.
			7.M.2.1.2 Apply estimation of measurement to real-world and content problems using standard measuring devices. (329.01.b)		7.M.2.1.2 A Estimate length, time, weight, capacity, temperature, or capacity (volume) in real-world problems.
			7.M.2.1.3 Explain the differences between perimeter, area, and volume (capacity) and their measures within both systems. (329.01.c)		7.M.2.1.3 A Estimate and understand volume permanence in real world settings, i.e. using manipulatives (ex. rice, water) to explore various shaped containers to estimate volume
			7.M.2.1.4 Given the formulas, find the perimeter, circumference, or area of triangles, circles, and quadrilaterals. (331.01.e)		7.M.2.1.4 A Compare area and perimeter of real world surfaces, e.g around the room, around the city, around a box or ball.
			7.M.2.1.5 Convert units of measurement within each system. (329.01.e)		7.M.2.1.5 A Identify equivalent units of measurement.
			7.M.2.1.6 Solve problems involving perimeter and area of rectangles and triangles. (329.01.d)		7.M.2.1.6 A Calculate simple problems with perimeter or area of rectangles and triangles.
			7.M.2.1.7 Use appropriate vocabulary and notations. (329.01.f)		7.M.2.1.7 A Use appropriate vocabulary.

Standard 2: Concepts and Principles of Measurement - Students in Grade 7 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve problems involving perimeter and area of rectangles and squares. Students compare units and explain their relationship to one another and to real world applications.

Extended Standard 2: Students in Grade 7 select and use appropriate units and tools to make formal measurements. Students indicate perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve simple problems involving perimeter or area of rectangles and squares. Students compare units and their relationship to one another and to real world applications.

Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	7.M.2.2	Apply the concepts of rates, ratios, and proportions.	7.M.2.2.1 Explain rates and their relationship to ratios, and use proportions to solve problems represented with a diagram. (329.02.a, 329.03.a)		7.M.2.2.1A Match a rate (how often) represented in a real world situation, i.e. once a day.
			7.M.2.2.2 Reduce rates to unit rates.		7.M.2.2.2 A Apply a rate to a real world situation.

Standard 2: Concepts and Principles of Measurement - Students in Grade 7 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve problems involving perimeter and area of rectangles and squares. Students compare units and explain their relationship to one another and to real world applications.

Extended Standard 2: Students in Grade 7 select and use appropriate units and tools to make formal measurements. Students indicate perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve simple problems involving perimeter or area of rectangles and squares. Students compare units and their relationship to one another and to real world applications.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.2.3	Apply dimensional analysis.	7.M.2.3.1 Identify properly constructed dimensional analysis conversions. (329.04.a)		7.M.2.3.1 A Identify simple dimensions of an object, i.e. height, width, length.

Standard 2: Concepts and Principles of Measurement - Students in Grade 7 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve problems involving perimeter and area of rectangles and squares. Students compare units and explain their relationship to one another and to real world applications.

Extended Standard 2: Students in Grade 7 select and use appropriate units and tools to make formal measurements. Students indicate perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve simple problems involving perimeter or area of rectangles and squares. Students compare units and their relationship to one another and to real world applications.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.2.4	Apply appropriate techniques and tools to determine measurements.	No objectives at this grade level.		No objectives at this grade level.

Standard 3: Concepts and Language of Algebra and Functions - Students in Grade 7 use variables in simple expressions and equations and students use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.

Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objectives	Essence	Extended Content Indicators
	7.M.3.1	Use algebraic symbolism as a tool to represent mathematical relationships.	7.M.3.1.1 Use variables in simple expressions and equations. (330.01.a)		7.M.3.1.1 A Use the idea of a variable as an unknown quantity using a letter or symbol in a simple equation.
			7.M.3.1.2 Translate simple word statements into algebraic expressions and equations. (330.01.b)		7.M.3.1.2 A Translate simple word statements into numeric expressions.
			7.M.3.1.3 Use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. (330.01.c)		7.M.3.1.3 A Identify relationships using vocabulary or symbols of "<," ">,""=," "≠."

Standard 3: Concepts and Language of Algebra and Functions - Students in Grade 7 use variables in simple expressions and equations and students use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.

Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.3.2	Evaluate algebraic expressions.	7.M.3.2.1 Evaluate simple numeric and algebraic expressions using commutative, associative, identity, zero, inverse, distributive, and substitution properties. (330.02.a)		7.M.3.2.1 A Evaluate simple numeric and algebraic expressions using commutative, identity, zero, inverse properties.
			7.M.3.2.2 Use the order of operations in evaluating simple algebraic expressions. (330.02.b)		7.M.3.2.2 A Solve two problems in the order of operations given.

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Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.3.3	Solve algebraic equations and inequalities.	7.M.3.3.1 Solve one-step equations. (330.03.a)		7.M.3.3.1A Solve one-step equations, using concrete objects or a calculator when necessary.

Standard 3: Concepts and Language of Algebra and Functions - Students in Grade 7 use variables in simple expressions and equations and students use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.

Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.3.4	Understand the concept of functions.	7.M.3.4.1 Extend patterns involving rational numbers and describe the rule that generates the pattern. (333.01.a)		7.M.3.4.1.A Extend simple patterns involving rational numbers, including decimals, as inputs.
			7.M.3.4.2 Explain how a change in one quantity impacts a change in another quantity. (333.01.b)		7.M.3.4.2..A Identify when a change in one quantity impacts a change in another quantity.
			7.M.3.4.3 Use appropriate vocabulary and notations. (333.01.c)		7.M.3.4.3 A Use appropriate vocabulary.

Standard 3: Concepts and Language of Algebra and Functions - Students in Grade 7 use variables in simple expressions and equations and students use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.

Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.3.5	Represent equations, inequalities and functions in a variety of formats.	7.M.3.5.1 Represent a simple set of data in a table, as a graph, and as a mathematical relationship. (333.02.a)		7.M.3.5.1 A Identify a graphic or pictorial representation of a set, using concrete manipulatives when necessary.

Standard 3: Concepts and Language of Algebra and Functions - Students in Grade 7 use variables in simple expressions and equations and students use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.

Extended Standard 3: Students in Grade 7 use variables in simple expressions and equations and students use the vocabulary and/or symbols of "<," ">," and "=" to express relationships. With or without the use of a calculator, students follow the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students identify simple patterns and match a rule that generates the pattern.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.3.6	Apply functions to a variety of problems.	7.M.3.6.1 Use patterns and linear functions to represent and solve simple problems. (333.03.a)		7.M.3.6.1 A Identify patterns and linear functions that represent simple problems.

Standard 4: Concepts and Principles of Geometry - Students in Grade 7 describe and classify relationships among types of one-, two-, and three-dimensional geometric figures using their defining properties. Students draw and measure various angles and shapes using appropriate tools and students identify congruence, similarities, and line symmetry of shapes. Students identify and plot points on a coordinate plane.

Extended Standard 4: Students in Grade 7 identify relationships among types of one-, two-, and three- dimensional geometric figures using their defining properties. Students recognize angles and shapes and students identify congruence, similarities, and line symmetry of shapes. Students identify a point on a coordinate plane.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.4.1	Apply concepts of size, shape, and spatial relationships.	7.M.4.1.1 Classify relationships among types of one- and two-, dimensional geometric figures, using their defining properties. (331.01.a)		7.M.4.1.1.A Classify one- and two-, dimensional geometric figures, using their defining properties.
			7.M.4.1.2 Draw and measure various angles and shapes using appropriate tools. (331.01.b)		7.M.4.1.2.A Select the appropriate tool to draw or measure various angles and shapes.
			7.M.4.1.3 Apply fundamental concepts, properties, and relationships among points, lines, rays, planes, and angles. (331.01.c)		7.M.4.1.3.A Differentiate between points, lines, rays, and angles.
			7.M.4.1.4 Explain and model the effects of reflections, translations, and rotations on various shapes. (331.01.g)		7.M.4.1.4.A Replicate the effects of reflections, translations, or rotations on various shapes.
			7.M.4.1.5 Identify congruence, similarities, and line symmetry of shapes. (331.01.d)		7.M.4.1.5.A Arrange shapes to show congruence, similarities, and line symmetry of shapes.
			7.M.4.1.6 Describe the concept of surface area and volume (capacity). (331.01.f)		7.M.4.1.6.A Recognize the concept of surface area or volume (capacity).
			7.M.4.1.7 Use appropriate vocabulary and symbols. (331.01.h)		7.M.4.1.7 A Recognize appropriate vocabulary and symbols.

Standard 4: Concepts and Principles of Geometry - Students in Grade 7 describe and classify relationships among types of one-, two-, and three-dimensional geometric figures using their defining properties. Students draw and measure various angles and shapes using appropriate tools and students identify congruence, similarities, and line symmetry of shapes. Students identify and plot points on a coordinate plane.

Extended Standard 4: Students in Grade 7 identify relationships among types of one-, two-, and three- dimensional geometric figures using their defining properties. Students recognize angles and shapes and students identify congruence, similarities, and line symmetry of shapes. Students identify a point on a coordinate plane.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.4.2	Apply the geometry of right triangles.	No objectives at this grade level.		No objectives at this grade level.

Standard 4: Concepts and Principles of Geometry - Students in Grade 7 describe and classify relationships among types of one-, two-, and three-dimensional geometric figures using their defining properties. Students draw and measure various angles and shapes using appropriate tools and students identify congruence, similarities, and line symmetry of shapes. Students identify and plot points on a coordinate plane.

Extended Standard 4: Students in Grade 7 identify relationships among types of one-, two-, and three- dimensional geometric figures using their defining properties. Students recognize angles and shapes and students identify congruence, similarities, and line symmetry of shapes. Students identify a point on a coordinate plane.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.4.3	Apply graphing in two dimensions.	7.M.4.3.1 Identify and plot points on a coordinate plane.		7.M.4.3.1.A Identify an ordered pair in the first quadrant on a coordinate plane.

Standard 4: Concepts and Principles of Geometry - Students in Grade 7 describe and classify relationships among types of one-, two-, and three-dimensional geometric figures using their defining properties. Students draw and measure various angles and shapes using appropriate tools and students identify congruence, similarities, and line symmetry of shapes. Students identify and plot points on a coordinate plane.

Extended Standard 4: Students in Grade 7 identify relationships among types of one-, two-, and three- dimensional geometric figures using their defining properties. Students recognize angles and shapes and students identify congruence, similarities, and line symmetry of shapes. Students identify a point on a coordinate plane.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.4.4	Represent and graph linear relationships.	No objectives at this grade level.		No objectives at this grade level.
	7.M.4.5	Use reasoning skills.	No objectives at this grade level.		No objectives at this grade level.

Standard 5: Data Analysis, Probability, and Statistics - Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.

Extended Standard 5: Students in the Grade 7 read and interpret simple tables, charts, and graphs. Using models or templates, students collect, organize and display data in tables, charts and graphs. Students determine simple measures of central tendency – median and mode – with sets of data and students perform and record results of simple probability experiments.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.5.1	Understand data analysis.	7.M.5.1.1 Read and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (332.01.a)		7.M.5.1.1.A Read and interpret charts and graphs, including line graphs, bar graphs, frequency tables, or circle graphs.
			7.M.5.1.2 Explain conclusions drawn from tables, charts, and graphs. (332.01.b)		7.M.5.1.2.A Explain conclusions drawn from tables, charts, or graphs.
			7.M.5.1.3 Use appropriate vocabulary and notations. (332.01.c)		7.M.5.1.3 A Use appropriate vocabulary.

Standard 5: Data Analysis, Probability, and Statistics - Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.

Extended Standard 5: Students in the Grade 7 read and interpret simple tables, charts, and graphs. Using models or templates, students collect, organize and display data in tables, charts and graphs. Students determine simple measures of central tendency – median and mode – with sets of data and students perform and record results of simple probability experiments.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.5.2	Collect, organize, and display data.	7.M.5.2.1 Collect, organize, and display data with appropriate notation in tables, charts and graphs, including scatter plots, broken line graphs, line plots, bar graphs, and stem-and-leaf plots. (332.02.a)		7.M.5.2.1.A Collect, organize, and display the data with appropriate notation in charts or graphs.

Standard 5: Data Analysis, Probability, and Statistics - Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.

Extended Standard 5: Students in the Grade 7 read and interpret simple tables, charts, and graphs. Using models or templates, students collect, organize and display data in tables, charts and graphs. Students determine simple measures of central tendency – median and mode – with sets of data and students perform and record results of simple probability experiments.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.5.3	Apply simple statistical measurements.	7.M.5.3.1 Determine the measures of central tendency – mean, median and mode – with sets of data. (332.03.a)		7.M.5.3.1.A Find the median and mode – with simple sets of data.
			7.M.5.3.2 Discuss distribution of data, including range, frequency, gaps, and clusters. (332.03.b)		7.M.5.3.2.A Identify or locate distribution of data, including range and frequency.

Standard 5: Data Analysis, Probability, and Statistics - Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.

Extended Standard 5: Students in the Grade 7 read and interpret simple tables, charts, and graphs. Using models or templates, students collect, organize and display data in tables, charts and graphs. Students determine simple measures of central tendency – median and mode – with sets of data and students perform and record results of simple probability experiments.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.5.4	Understand basic concepts of probability.	7.M.5.4.1 Predict, perform, and record results of simple probability experiments. (332.04.a)		7.M.5.4.1.A Perform and record results of simple probability experiments.
			7.M.5.4.2 Recognize equally likely outcomes. (332.04.c)		7.M.5.4.2.A Recognize equally likely outcomes.
			7.M.5.4.3 Explain that probability ranges from impossible to certain (0% to 100%).		7.M.5.4.3.A Identify events that have probability ranges from low to high extremes.
			7.M.5.4.4 Use the language of probability. (332.04.b)		7.M.5.4.4.A Use the language of probability.

Standard 5: Data Analysis, Probability, and Statistics - Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.

Extended Standard 5: Students in the Grade 7 read and interpret simple tables, charts, and graphs. Using models or templates, students collect, organize and display data in tables, charts and graphs. Students determine simple measures of central tendency – median and mode – with sets of data and students perform and record results of simple probability experiments.

Topic	Gr	Goal	Objective	Essence	Extended Content Indicators
	7.M.5.5	Make predictions or decisions based on data.	7.M.5.5.1 Make predictions based on simple theoretical probabilities. (332.05.a)		7.M.5.5.1A Recognize predictions based on simple theoretical probabilities.
			7.M.5.5.2 Use appropriate vocabulary and notations. (332.05.b)		7.M.5.5.2 A Use appropriate vocabulary.