Support for Alternate Academic Achievement Standards

MATHEMATICS, ENGLISH LANGUAGE ARTS AND SCIENCE • GRADES 9-12

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Relationships between Quantities and Reasoning with Equations			
Cluster: Reason quantitatively and use units to solve problems.			
A.M.A1HS.1 Express quantities to the appropriate precision of measurement (e.g., measure a pencil to the nearest inch).	Accurately measure an item using the appropriate unit of measurement.	Accurately measure items using units (i.e. squares).	Choose the appropriate tool for the measurement of an item.
A.M.1HS.2 Define appropriate quantities for the purpose of descriptive modeling.	Define the terms used to determine dimensions.	Choose the correct term for a specific quantity (e.g. gallons, miles, grams, etc.).	Choose the correct term for what is measured by specific tools.(e.g. ruler to inches and measuring cup to ounces, etc.)
A.M.A1HS.3 Choose the appropriate unit of measurement (e.g., determine when to use feet/inches/meter, cups/gallons/liter, ounces/pounds/gram, etc.).	Choose the appropriate unit of measurement for a specific task.	Choose the correct tool to measure given items.	Choose the correct tool for measurement (e.g., a ruler, yardstick, measuring cup), given choice(s).
Cluster: Interpret the structure of expressions.			
A.M.A1HS.4 Identify an algebraic expression involving at least one arithmetic operation to represent a real-world problem.	Identify the correct algebraic expression with at least one operation to represent a real-world problem.	Identify the correct symbol for an operation to use in real-world problem.	Identify the correct symbol that represents an operation for a real-world problem.
Cluster: Create equations that describe numbers or relationships.			
A.M.A1HS.5 Given a real-world problem situation, write, read, and/or solve one-step addition and subtraction equations for an unknown number, with a variable standing for the unknown (e.g., $8.50 + c = $12).	Create and solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Choose the correct symbol that represents an operation for a real-world problem.

A.M.A1HS.6 Determine solutions to equations that model real-world problem situations with two unknowns (e.g., given a set of options, find solutions for x + y = $6.25).	With two unknowns, determine the solution for real-world problems.	With two unknowns, determine the correct equation for a solution to real-world problems.	Determine what is unknown in real-world problems.
A.M.A1HS.7 Demonstrate an understanding of terms such as "at least" and "fewer than" in solving real-world problems.	Uses the appropriate mathematical symbol, based on the terminology in a problem using equations and inequalities. when solving real-world problems.	Determine the appropriate mathematical symbol to use based on the terminology in real-world problems.	Choose which mathematical symbol to use in real-world problems given choices.
A.M.A1HS.8 Solve two-step word problems, represent these problems using formulas with a letter standing for the unknown quantity.	create and solve two-step algebraic equations using a letter for the unknown quantity, when given a word problem.	Solve a word problem using two-step algebraic equations.	Recognizes a letter can stand for a quantity.
Cluster: Understand solving equations as a process of reasoning and explaining the reasoning.			
A.M.A1HS.9 Demonstrate each step in solving a one or two-step equation.	Write each step needed in solving a one- or two-step equation.	Determine which steps are needed for a one- or two-step equation.	Determine if one or two steps are needed to solve an equation.
Linear and Exponential Relationships			
Cluster: Represent and solve equations and inequalities graphically.			
A.M.A1HS.10 Interpret the meaning of a point on the graph of a linear function (e.g., 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).	Determine what number is represented by a point on a graph.	Determine what number is represented by a point on a graph when given choices.	State what the point on a graph represents.
A.M.A1HS.11 Interpret the meaning of the intersection of the two graphs.	Identify that the point of intersection of two graphs is the solution to both equations.	Identify the ordered pair of the point of intersection.	Identify the point at which two graphs intersect.

A.M.A1HS.12	Use visual cue cards and a graphing calculator to graph solutions to linear inequalities.	Follow step-by-step instructions to graph a solution to linear inequalities on a graphing calculator.	Correctly enter numbers in a calculator.
With the assistance of a graphing calculator and visual cue cards as needed, graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality) and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.			

Cluster: Understand the concept of a function.

A.M.A1HS.13	Using a calculator and a visual cue card of function rules, solve real-world problems involving proportional relationships.	Using a calculator and a visual cue card of function rules, input numbers to determine the answer to a real-world proportional relationship.	Determine that as you purchase more items, the price will go up in specific intervals. The more you purchase the more money you will need.
Using a calculator and a visual cue card of function rules that describe proportional relationships, solve real-world problems (e.g., Unit Cost x Number of Items = Total Cost).			
A.M.A1HS.14	Using a calculator and visual cue cards of function rules, solve real-world problems.	Determine which function rule would be used to solve a specific real-world problem.	Correctly enter numbers in a calculator.
Using a calculator and a visual cue card of function rules, solve real-world problems (e.g., given a $10 off coupon, use Sales Price = Original Price – Discount to find the Sales Price).			
A.M.A1HS.15 Determine the missing values in arithmetic sequences. Instructional Note: Limit the common ratio in arithmetic sequences to integers (e.g., 20, 18, 16, ___, 12, 8, … or 3, 7, 11, 15, ___, 23, …).	Find the missing values in an arithmetic sequence.	Determine the missing values in an arithmetic sequence given choices.	Determine what object is missing in a sequence.

Cluster: Interpret functions that arise in applications in terms of a context.

A.M.A1HS.16	Determine the rate of change when given linear functions on a graph.	When given more than one function represented on a graph, determine which function has the greater rate of change.	Determine if a function's rate of change (line on a graph) is increasing or decreasing when the function is represented on a graph.
Interpret data from graphs that represent linear functions with different rates of change and interpret which has the greater rate of change. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative.			

A.M.A1HS.17 Given real-world measures, demonstrate an understanding of domains (e.g., there are seven days in a week; twelve months in a year; twelve inches in a foot).	State the correct number of items in each domain regarding the passage of time from minutes in an hour to months in a year, as well as the number of single units in a larger unit of measurement.	Sort given items into the correct domain.	Select the correct number of items in a particular domain (i.e. 7 days in a week).
A.M.A1HS.18 Calculate and interpret the rate of change of a function presented as a table (e.g., the following table has a rate of change of -2).	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table, state whether it is increasing or decreasing.	Determine when a table shows change versus no change.

Items Bought	Money Remaining
0	$20
1	$18
2	$16
3	$14

Cluster: Analyze representations of functions.

A.M.A1HS.19 With the assistance of a graphing calculator and visual cue cards as needed, graph functions expressed symbolically and show key features of the graph. Instructional Note: Focus on linear functions.	Using a graphing calculator and a visual cue card, determine the rate of change when given linear functions on a graph.	Using a graphing calculator and a visual cue card, when given more than one function, determine which function has the greater rate of change.	Identify key features of a graph.
A.M.A1HS.20 Identify information for two functions represented in different tables (e.g., Store A's Discount Table and Store B's Discount Table).	Compare information for two functions represented in different tables.	Enter information for two functions into different tables.	Identify information to be used in function tables.

Cluster: Build a function that models a relationship between two quantities.

A.M.A1HS.21 Given a linear function represented by a table, determine the rate of change and add additional values to extend the table.	When given a function represented in a table, calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.

Items Bought	Cost
0	$0.00
1	$0.50
2	$1.00
3	$1.50
4	$2.00

A.M.A1HS.22 Determine the common ratio in arithmetic sequences (e.g., recognize that "down 2" would describe the common ratio for a sequence such as 20, 18, 16, 14, 12… and write it as -2.)	Determine the common ratio for a sequence.	Determine whether the ratio is positive or negative.	Choose the next number in an arithmetic sequence given choices.

Cluster: Compare linear and exponential models and solve problems.

A.M.A1HS.23 Given a graph, distinguish between linear functions and exponential functions.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.
A.M.A1HS.24 From a given list recognize linear and exponential functions, including arithmetic sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.
A.M.A1HS.25 Given two tables representing linear real-world function, determine which is increasing at a greater rate.	Given two tables of linear real-world functions, choose the one increasing at a greater rate.	Given two tables of linear real-world functions, choose the one increasing at a greater rate.	Given two tables of linear real-world functions, choose the one increasing at a greater rate.

Cluster: Interpret expressions for functions in terms of the situation they model			
A.M.A1HS.26 Interpret the parameters in a linear function in terms of a context. Instructional Note: Limit to linear functions.	Determine constants (e.g. slope, y-intercept, etc.) of linear functions for different contexts.	Determine the slope of a linear function for different contexts.	Given choices of context, determine which linear function is described.

Descriptive Statistics

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.			
A.M.A1HS.27 Represent data with dot plots on a number line.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.
A.M.A1HS.28 Given a dot plot, identify the maximum value, the minimum value, and the mode.	Identify the highest number represented, the lowest number represented, and the most repeated number.	Identify where the highest and lowest dots are located on the dot plot.	Identify that the dot represents a value on a dot plot.
A.M.A1HS.29 Interpret differences in graphs of data sets.	Given representations of data sets, compare and contrast data.	Given representations of data sets, compare similarities of data.	Match a graph to a given data set.

Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables.			
A.M.A1HS.30 Sort data or objects according to characteristics, similarities, and/or associations. Interpret frequencies in the context of the data (e.g., after surveying students, regarding their favorite ice cream flavor, answer related questions).	Conduct a survey and chart information. Then, answer questions regarding the information on the chart.	Fill in squares on a graph to represent given data.	Sort data or objects according to given characteristics.
A.M.A1HS.31 Represent data of frequency using tally charts in real world situations.	Place tally marks when charting data.	Demonstrates one-to-one correspondence between data and tally marks.	Use manipulatives to represent a number.
Cluster: Distinguish between cause and effect.			
A.M.A1HS.32 In real world situations, distinguish between the cause and the effect.	Determine which is the cause and which is the effect in a real world situation.	Identify situations that have cause and effect outcomes in a real-world situation.	Identify that a change has occurred.

Expressions and Equations

Cluster: Interpret the structure of equations.

A.M.A1HS.33 Given a real world problem and a choice of two algebraic expressions involving arithmetic operations, identify the algebraic expression that models the situation.	When given two algebraic expressions, identify the correct algebraic expression to model a given real-world problem.	When given two algebraic expressions, identify the one with the correct operational symbols.	When given two algebraic expressions, identify the expression with the correct numbers.

Cluster: Write expressions in equivalent forms to solve problems.

A.M.A1HS.34 Solve an algebraic expression involving arithmetic operations to represent a real-world problem (e.g., Jan has $10. She buys a loaf of bread for $2 and a gallon of milk. She now has $5. What is the cost of the milk?)	Solve an algebraic expression which represents a real-world problem.	When given the solution, solve equation to check for accuracy.	Determine what question is being asked in a real-world problem.

Cluster: Create equations that describe numbers or relationships.

A.M.A1HS.35 Determine solutions to equations that model real-world problem situations with two unknowns (e.g., given a set of options, find solutions for x + y = $6.25).	Solve equations with two unknowns when given a set of options.	When given the solutions, solve equation to check for accuracy.	Determine what the unknowns represent in a real-world problem.

Cluster: Solve equations that describe numbers or relationships

A.M.A1HS.36 Given choices and use of a calculator, solve quadratic equations in one variable by inspection (e.g., for $x^2 = 49$).	Memorize perfect squares to 10.	Create a model or drawing demonstrating that a square is a number multiplied by itself.	Use manipulatives to represent perfect squares to 10.

Linear Functions and Modeling

Cluster: Use properties of rational and irrational numbers.

A.M.A1HS.37 Solve addition, subtraction, multiplication, and division real-world problems involving whole numbers and decimals (i.e., money) using visuals and/or a calculator.	Solve addition, subtraction, multiplication, and division real-world problems using whole numbers and decimals.	Solve addition and subtraction real-world problems using whole numbers and decimals.	Solve addition and subtraction real-world problems using whole numbers.

Cluster: Interpret functions that arise in applications in terms of a context.			
A.M.A1HS.38 Given a real-world function, find the possible values of the domain (e.g., Could you work 10 days a week? How many days a week can you work?).	Identify the limits of real-world domains.	Choose the correct value for the limits of specific real-world domains when given choices.	Count the number of specific values of a given domain.
Cluster: Analyze representations of functions.			
A.M.A1HS.39 Compare two functions represented in different tables (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions.	Compare two functions represented in different tables to answer questions.	Answer questions based on information presented in two tables representing functions.	Identify what information is represented in two tables.

Support for WV Alternate Academic Achievement Standards
High School Algebra II, Traditional Pathway

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Polynomial Relationships			
Interpret the structure of expressions.			
A.M.A2HS.1 Identify an algebraic expression involving arithmetic operations to represent a real-world problem.	Choose the correct algebraic expression with at least one operation to represent a real-world problem.	Choose the correct symbol for an operation to use in a real-world problem.	Choose the correct symbol that represents an operation for a real-world problem.
AM.A2HS.2 In real world problem situations, combine mixed numbers (i.e., recipes). Instructional Note: Limit to halves.	With a calculator, combine mixed numbers.	Using manipulatives to model combining wholes and halves, state the expression.	Using manipulatives, combine wholes and halves.
A.M.A2HS.3 Interpret the meaning of the intersection of the two graphs. Instructional Note: Include linear and polynomial functions.	Understand that the point of intersection of two graphs is the solution to both equations.	Identify the ordered pair of the point of intersection.	Identify the point at which two graphs intersect.
Modeling with Functions			
Create equations that describe numbers or relationships.			
A.M.A2HS.4 Create linear equations and inequalities in one variable and use them to solve problems.	Given linear equations and inequalities with one variable and graphic representations, solve real-world problems.	Given calculator and formula for linear equations or inequalities with one variable, solve real-world problems.	Identify the appropriate equality or inequality sign in an equation.
A.M.A2HS.5 Create linear equations in two variables to represent relationships between quantities and graph equations on coordinate axes with labels and scales.	Create two variable linear equations and graph on a coordinate plane.	Given two variable linear equations and graph, describe the results in terms of whether the lines will intersect or be parallel.	Identify lines as being either parallel or intersecting.

A.M.A2HS.6 Solve multi-step word problems, represent these problems using formulas with a letter standing for the unknown quantity. Assess the reasonableness of answers.	Solve equations with two unknowns when given a set of options.	Solve an equation to check for accuracy when given the solution.	Determine what the unknowns represent in a real-world problem.
Cluster: Interpret functions that arise in applications in terms of a context.			
A.M.A2HS.7 Given a linear function represented by a table, determine the rate of change and find missing value. For example:	When given a function represented in a table, calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.

Items Bought	Cost
1	$5
2	$7
3	
4	$11
	$13
6	

A.M.A2HS.8 Given real-world measures, demonstrate an understanding of domains and list possible values of domains.	Identify the limits of real-world domains.	Choose the correct value for the limits of specific real-world domains when given choices.	Count the number of specific values of a given domain.
Cluster: Analyze functions using different representations.			
A.M.A2HS.9 Compare and contrast two functions represented in different tables (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions.	Compare and contrast two functions represented in different tables to answer questions.	Answer questions based on information presented in two tables representing functions.	Identify what information is represented in two tables.

Cluster: Build a function that models a relationship between two quantities.

A.M.A2HS.10 Given a real-world situation, complete a given table to answer questions. For example: | Items Bought	Cost
			Given partial data, complete the remaining parts of the table.	Given a completed table about a real-world situation, answer questions pertaining to the information.	Identify the components of the completed table in relation to a real-world situation.
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Inferences and Conclusions from Data

Summarize, represent, and interpret data on a single count or measurement variable.

A.M.A2HS.11 Test predictions involving real-world events (e.g., experimental probability).	Set up and collect data involving a predicted event.	collect data for a given event, given a scenario.	Perform task to elicit data for event probability (e.g. pulling cubes from bag).

Understand and evaluate random processes underlying statistical experiments.

A.M.A2HS.12 Approximate the likelihood of an event based on its probability (e.g., given a weather forecast, determine if it is likely to rain) and make appropriate real-world choices.	Answer questions using the words likely or unlikely.	Given choice(s), pick which is unlikely to occur.	Given choice(s), pick which is likely to occur.
A.M.A2HS.13 Revise original predictions if necessary when predicting real-world events.	Determine source of error and correct prediction for real-world events.	If prediction was incorrect, determine source of error.	Determine if prediction was correct.

Cluster: Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

A.M.A2HS.14 Draw conclusions from a given representation of data in real world situations.	Answer questions about a given representation of data in real world situations.	Describe and discuss results and observations regarding a set of data from real world situations.	Determine which item was more/less represented from given data sets.

A.M.A2HS.15 Use data from a survey to make assumptions about a larger population (e.g., from a survey about favorite color given to a small number of students in a school, assume that the results hold for the school).	Draw conclusions from collected data to determine if that data would translate to a larger sample size.	Discuss data collected from smaller sample sizes.	Discuss that a small group can be a representation of a large group.
A.M.A2HS.16 Use data from a randomized experiment to make real world predictions.	Predict whether the sample randomized experiment would hold true in other real-world applications.	Answer questions regarding a randomized experiment.	Discuss whether an experiment is randomized or not.
Cluster: Use probability to evaluate outcomes of decisions.			
AM.A2HS.17 Use probabilities to make fair decisions.	Determine probability of fair outcomes when using dice or coin.	Discuss whether a method of selection would be fair.	Determine method of making fair decisions based on probabilities.
AM.A2HS.18 Analyze decisions and outcomes based on probability concepts.	Determine outcomes of choices made from predicted events.	Answer questions about decisions based on probability concepts.	Determine clothing choices based on weather predictions.

Support for WV Alternate Academic Achievement Standards
Geometry, Traditional Pathway

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Congruence and Constructions			
Cluster: Experiment with transformations in the plane.			
A.M.GHS.1 Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles.	Identify and/or illustrate perpendicular lines, parallel lines, line segments, angles, and circles.	Identifies images of perpendicular lines, parallel lines, line segments, angles, and circles.	Given choice(s), identifies perpendicular lines, parallel lines, line segments, angles, and circles.
A.M.GHS.2 Using manipulatives, translate, rotate, and/or reflect a geometric figure.	Use manipulatives to demonstrate what translate, rotate, and/or reflect mean.	Use manipulatives to demonstrate what translate, rotate and/or reflect mean.	Use manipulatives to demonstrate what translate, rotate, and/or reflect mean.
A.M.GHS.3 Given a rectangle, parallelogram, trapezoid, or regular polygon manipulative, recognize the rotations and reflections that carry it onto itself.	Using manipulatives, place a rotated and/or reflected manipulative on top of the original to determine if it aligns exactly.	Given a rotated and/or reflected manipulative, determine if it lines up to the original.	When shown examples of reflected and/or rotated manipulatives, determine if it aligns to the original.
A.M.GHS.4 Recognize that a geometric shape and its translated/rotated/reflected shape are congruent.	When given shapes that have been translated/rotated/reflected, identify the shapes that are congruent.	When given shapes that have been translated/rotated/reflected, identify the shapes that are identical in form.	When given three shapes, identify the two congruent (identical) shapes.
A.M.GHS.5 Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Given a traced shape, demonstrate translation, rotation, and/or reflection.
Cluster: Identify congruent angles.			
A.M.GHS.6 Given parallel lines cut by a transversal, identify congruent angles.	Identify congruent angles from given parallel lines cut by a transversal.	Using rules and generic examples, match the rule to the specific angles created when transversals cut parallel lines.	Identify angles created by a transversal cutting through parallel lines.

Cluster: Identify geometric figures.			
A.M.GHS.7 From a list of examples, identify perpendicular line segments, parallel line segments, angles, and circles. Introduce real world situations involving perpendicular line segments, parallel line segments, angles, and circles (e.g., intersecting or parallel streets).	Given real world examples, identify perpendicular line segments, parallel line segments, angles, and circles.	Match real-world examples of perpendicular line segments, parallel line segments, angles, and circles.	Using flash cards, identify perpendicular line segments, parallel line segments, angles and circles.

Similarity			
Cluster: Understand similarity in terms of similarity transformations.			
A.M.GHS.8 Given two figures, decide if they are similar.	Given shapes, sort based on shape and size.	Given shapes, sort based on size.	Given shapes, sort based on shape.
Extending to Three Dimensions			
Cluster: Use measurement and volume formulas to solve problems.			
A.M.GHS.9 Measure quantities accurately (e.g., follow a recipe).	Choose the correct measurement tool to use for the situation and designated amount.	Choose the correct type of measurement tool (e.g., measuring cups for water, tablespoons for spices). May not identify correct measuring cup size.	Given choice(s), choose the correct measurement tool for the designated activity.
A.M.GHS.10 Given a list of volume formulas for cylinders, pyramids, cones and spheres identify the correct formula to solve real-world problems.	Given a list of volume formulas with pictures for cylinders and pyramids, identify the correct formula to solve real-world problems.	Given a list of volume formulas with pictures for cones and spheres identify the correct formula to solve real-world problems.	Given pictures of shapes, choose the correct shape in a real-world problem.
Cluster: Visualize the relation between two dimensional and three-dimensional objects.			
A.M.GHS.11 Identify the shapes of two-dimensional cross-sections of three-dimensional objects.	Given pictures/graphics of real-world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects (e.g. outline of triangle to picture of a pyramid).	Given real-world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects. (e.g., outline of circle to picture of a ball).	Given real-world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects (e.g. ice cube to a square outline).

Cluster: Apply geometric concepts in modeling situations.5			
A.M.GHS.12 Use properties of geometric shapes to describe real world objects.	Given pictures/graphics of real-world objects, describe the shape in terms of geometric properties.	Given real-world objects, match and discuss the geometric properties of the shapes.	Given real-world objects, sort the geometric shapes to their descriptor (e.g. circle to clock face).

Coordinates, Area, and Perimeter

Cluster: Use coordinates and determine area and perimeter.

A.M.GHS.13 Given coordinates, identify the geometric shapes using proper terminology.	Graph the points from given coordinates and identify shapes using proper terminology.	Given points on graph, first predict shape and then connect points to create geometric shape.	Given points on graph, connect points to create geometric shape.
A.M.GHS.14 From a list of several examples of points on a directed line segment between two given points, determine which one partitions the segment in a given ratio. Instructional Note: Limit to halves and thirds.	Create a number line and identify half and third points.	Given a number line, determine the half and third points on the line.	Count the lines between two given points of a line segment on a number line.
A.M.GHS.15 Find perimeters and areas of squares and rectangles to solve real-world problems.	Using a formula and calculator, determine area and perimeter of two- dimensional shapes.	Using manipulatives and calculator, determine area and perimeter of two- dimensional shapes.	Using manipulatives, represent area of two dimensional shapes.

Applications of Probability

Cluster: Make predictions.

A.M.GHS.16 Make predictions involving real world cause-and-effect situations.	Answer questions using the words likely or unlikely.	Given choice(s), pick which is unlikely to occur.	Given choice(s), pick which is likely to occur.
A.M.GHS.17 Recognize that two events A and B are independent.	Give examples of independent events.	Given examples of events, determine if they are independent.	Discuss two events that are independent.

Cluster: Use probability to evaluate outcomes of decisions.			
A.M.GHS.18 Use probabilities to make fair decisions in real world situations (e.g., drawing by lots or using a random number generator).	Determine probability of fair outcomes when using dice or coin.	Discuss whether a method of selection would be fair.	Determine method of making fair decisions based on probabilities.

Modeling with Geometry

Cluster: Visualize relationships between two dimensional and three-dimensional objects and apply geometric concepts in modeling situations.			
A.M.GHS.19 • Sketch a scale model using graph paper as needed (e.g., the layout of their house). • Interpret a scale model (e.g., locate specific rooms on a diagram of the school).	Sketch or create on computer, a scale model of a building and identify various locations and items.	Given a scale model/map of a building, identify various locations and items.	Given a scale model and pictures of objects, recreate a space they are familiar with.

Support for WV Alternate Academic Achievement Standards

Support for WV Alternate Academic Achievement Standards
Transitions for Seniors, Traditional Pathway

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Number and Quantity – The Real Number System			
Extend the properties of exponents to rational exponents.			
A.M.TMS.1 Express quantities to the appropriate precision of measurement (e.g., measure a pencil to the nearest inch).	Measure an item using the appropriate unit of measurement.	Measure items using units (i.e. squares).	Choose the appropriate tool for the measurement of an item.
A.M.TMS.2 Choose the appropriate unit of measurement (e.g., determine when to use feet/inches/meter, cups/gallons/liter, ounces/pounds/gram).	Determine the appropriate unit of measurement for a specific task.	Choose the correct tool to measure given items.	Choose the correct tool for measurement (e.g., a ruler, yardstick, measuring cup), given choice(s).
Algebra – Seeing Structure in Expressions			
Write expressions in equivalent forms to solve problems.			
A.M.TMS.3 Solve an algebraic expression involving arithmetic operations to represent a real-world problem (e.g., Jan has $10. She buys a loaf of bread for $2 and a gallon of milk. She now has $5. What is the cost of the milk?)	Create and solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Choose the correct symbol that represents an operation for a real-world problem.

Understand the connections between proportional relationship, lines, and linear equations.			
A.M.TMS.4 Recognize and represent proportional relationships between quantities on graphs. In real world problem situations, decide whether two quantities are in a proportional relationship (e.g. If Dan walks one block each morning, how many blocks does he walk in one week?).	Answer questions about proportional relationships between quantities on graphs.	Use manipulatives to demonstrate a proportional relationship.	Attend to and discuss proportional relationships between quantities on graphs.
A.M.TMS.5 Given a table of values depicting a proportional relationship or an arithmetic sequence, determine missing values.	Given the equation determine the missing value on a table depicting proportional relationships or an arithmetic sequence.	Answer questions about a given table of values depicting a proportional relationship.	Attend to and discuss the relationship between numbers on a table.

A.M.MTS.6	Using a calculator, solve addition, subtraction, and multiplication equations with one variable. (instructional note: address all bullet points)	Using a calculator and given formula, solve addition, subtraction, and multiplication equations with one variable. (instructional note: address all bullet points)	Identify the variable in an addition, subtraction, or multiplication problem. (instructional note: address all bullet points)
• Given a real world problem situation, write, read, and/or solve one-step addition and subtraction equations for an unknown whole number and/or decimal money amounts, with a variable standing for the unknown (e.g., $20- c = $13 How much did I spend?). (Focus on money) • Given a one-step addition or subtraction equation with two unknowns, create true statements. (e.g., given x + y = 7, create statements such as 2 + 5 = 7 and 3 + 4 = 7) Instructional Note: Limit to whole numbers. • Solve simple one-step word problems involving multiplication that have whole numbers or fractional remainders and understand what the fractional remainder means (e.g., Molly and her friend have 13 cookies and want to equally distribute the cookies between them, how much would each person get and how many are left over?). • Match two-step word problems posed with whole numbers and having whole-number answers using the four operations with the correct symbolic representation (e.g., two times a number plus one equals five matches 2 x b + 1 = 5).			

Algebra – Creating Equations

Create equations that describe numbers or relationships.

A.M.TMS.7 • Given a real-world problem situation, write, read, and/or solve one-step addition and subtraction equations for an unknown number, with a variable standing for the unknown (e.g., $8.50 + c = 12$). • Create linear equations and inequalities in one variable and use them to solve problems.	Create and solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Choose the correct symbol that represents an operation for a real-world problem.
A.M.TMS.8 Create linear equations in two variables to represent relationships between quantities and graph equations on coordinate axes with labels and scales.	Create two variable linear equations and graph on a coordinate plane.	Given two variable linear equations and graph, describe the results in terms of whether the lines will intersect or be parallel.	Identify lines as being either parallel or intersecting.
A.M.TMS.9 Demonstrate an understanding of terms such as "at least" and "fewer than" in solving real-world problems.	Use the appropriate mathematical symbol when solving real-world problems based on the terminology in the problem using equations and inequalities.	Determine the appropriate mathematical symbol to use based on the terminology in real-world problems.	Choose which mathematical symbol to use in real-world problems given choices.
A.M.TMS.10 Solve multi-step word problems, represent these problems using formulas with a letter standing for the unknown quantity. Assess the reasonableness of answers.	Given a word problem, create and solve multi-step algebraic equations using a letter for the unknown quantity.	Solve a word problem using multi-step algebraic equations.	Recognizes a letter can stand for a quantity.

Algebra – Reasoning with Equations and Inequalities

Solve equations in one variable.

A.M.TMS.11 Demonstrate each step in solving a one or two-step equation.	Write each step needed in solving a one or two-step equation.	Determine which steps are needed for a one or two-step equation.	Determine if one or two steps are needed to solve an equation.

A.M.TMS.12 Given choices and use of a calculator, solve quadratic equations in one variable by inspection (e.g., for $x^2 = 49$).	Memorize perfect squares to 10.	Create a model or drawing demonstrating that a square is a number multiplied by itself.	Use manipulatives to represent perfect squares to 10.
Solve systems of equations.			
A.M.TMS.13 Interpret the meaning of the intersection of the two graphs. Instructional Note: Include linear and polynomial functions.	Identify that the point of intersection of two graphs is the solution to both equations.	Identify the ordered pair of the point of intersection.	Identify the point at which two graphs intersect.
Represent and solve equations and inequalities graphically.			
A.M.TMS.14 With the assistance of a graphing calculator and visual cue cards as needed, graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality) and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	Use visual cue cards and a graphing calculator to graph solutions to linear inequalities.	Follow step-by-step instructions to graph a solution to linear inequalities on a graphing calculator.	Enter numbers in a calculator.
Functions – Interpreting Functions			
Understand the concept of a function.			
A.M.TMS.15 Using a calculator and a visual cue card of function rules that describe proportional relationships, solve real-world problems (e.g., Unit Cost x Number of Items = Total Cost).	Using a calculator and a visual cue card of function rules, solve real-world problems involving proportional relationships.	Using a calculator and a visual cue card of function rules, input numbers to determine the answer in a real-world proportional relationship.	Identify that as you purchase more items, the price will go up in specific intervals. The more you purchase the more money you will need.
Interpret functions that arise in applications in terms of the context.			
A.M.TMS.16 Determine the common ratio in arithmetic sequences (e.g., recognize that "down 2" would describe the common ratio for a sequence such as 20, 18, 16, 14, 12… and write it as -2.)	Determine the common ratio for a sequence.	Determine whether the ratio is positive or negative.	Given choice(s), choose the next number in an arithmetic sequence.

A.M.TMS.17 Interpret the parameters in a linear function in terms of a context. Instructional Note: Limit to linear functions.	Determine constants (e.g. slope, y-intercept, etc) of linear functions for different contexts.	Determine the slope of a linear function for different contexts.	Given choices of context, determine which linear function is described.
A.M.TMS.18 Given a linear function represented by a table, determine the rate of change and find missing value (e.g.,	When given a function represented in a table, calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.

Items Bought	Cost
1	$5
2	$7
3	
4	$11
	$13
6	

A.M.TMS.19 Given a graph, distinguish between linear functions and exponential functions.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.

Analyze representations of functions.			
A.M.TMS.20 • Given a function rule and the input value, determine the output. • Given graphical representations determine if the graph is a straight line or not a straight line. (Staying within Quadrant I.)	Answer simple questions about a linear function represented by a table. Given a graphical representation, identify the straight line.	Read and discuss a linear function represented by a table. Given a curved line and a straight line, determine the differences.	Model and discuss a linear function represented by a table. Using a straight line and an unrelated object, identify the straight line.
A.M.TMS.21 Demonstrate an understanding of an increase or decrease on a graph.	Answer questions about an increase or decrease on a graph.	Identify an increase or decrease on a graph.	Attend to and discuss an increase or decrease on a graph.

A.M.TMS.22 — With the assistance of a graphing calculator and visual cue cards as needed, graph functions expressed symbolically and show key features of the graph. Instructional Note: Focus on linear functions.	Using a graphing calculator and a visual cue card, determine the rate of change when given linear functions on a graph.	Using a graphing calculator and a visual cue card, when given more than one function, determine which function has the greater rate of change.	Identify key features of a graph.
A.M.TMS.23 — Given two tables representing linear real-world function, determine which is increasing at a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.
A.M.TMS.24 — Compare and contrast two functions represented in different tables or graphs (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions.	Compare and contrast two functions represented in different tables to answer questions.	Answer questions based on information presented in two tables representing functions.	Identify what information is represented in two tables.

Functions - Building Functions

Build a function that models a relationship between two quantities.

A.M.TMS.25 — From a given list recognize linear and exponential functions, including arithmetic sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.
A.M.TMS.26 — Given a real-world situation, complete a given table to answer questions. For example: Items Bought / Cost (empty table)	Given partial data, complete the remaining parts of the table.	Given a completed table about a real-world situation, answer questions pertaining to the information.	Identify the components of the completed table in relation to a real-world situation.

Geometry - Geometric Measuring and Dimension

Explain volume formulas and use them to solve problems.

A.M.TMS.27 Measure quantities accurately (e.g., follow a recipe).	Choose the correct measurement tool to use for the situation and designated amount.	Choose the correct type of measurement tool (eg., measuring cups for water, tablespoons for spices). May not identify correct measuring cup size.	Choose the correct measurement tool for the designated activity, given choice(s).

Geometry – Expressing Geometric Properties with Equations

Use measurement to solve problems.

A.M.TMS.28 Given coordinates, identify the geometric shapes using proper terminology.	Graph the points from given coordinates and identify shape using proper terminology.	Given points on graph, first predict shape and then connect points to create geometric shape.	Given points on graph, connect points to create geometric shape.
A.M.TMS.29 Find perimeters and areas of squares and rectangles to solve real-world problems.	Using formula and calculator, determine area and perimeter of two dimensional shapes.	Using manipulatives and calculator, determine area and perimeter of two dimensional shapes.	Using manipulatives, represent area of two dimensional shapes.

Use coordinates and determine area and perimeter.

A.M.TMS.30 Use scale models to demonstrate an understanding of geometric concepts. • Sketch a scale model using graph paper as needed (e.g., the layout of their house). • Interpret a scale model (e.g., locate specific rooms on a diagram of the school).	Sketch or create on computer, a scale model of a building and identify various locations and items.	Given scale model/map of a building, identify various locations and items.	Given scale model and pictures of objects, recreate a space they are familiar with.

Statistics and Probability - Interpreting Categorical & Quantitative Data

Summarize, represent, and interpret data on two categorical and quantitative variables.

A.M.TMS.31 Represent data of frequency using tally charts in real world situations.	Place tally marks when charting data.	Demonstrates one-to-one correspondence between data and tally marks.	Use manipulatives to represent a number.

A.M.TMS.32 Sort data or objects according to characteristics, similarities, and/or associations. Interpret frequencies in the context of the data (e.g., after surveying students, regarding their favorite ice cream flavor, answer related questions).	Given sorted data, interpret frequencies in the context of the data.	Given sorted data, answer questions about the context of the data.	Sort objects according to characteristics, similarities, and/or associations.
A.M.TMS.33 Represent data with dot plots on a number line.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.
A.M.TMS.34 Given a dot plot, identify the maximum value, the minimum value, and the mode.	Identifies the highest number represented, the lowest number represented and the most repeated number.	Identifies where the highest and lowest dot are located on the dot plot.	Identify that the dot represents a value on a dot plot.
A.M.TMS.35 Interpret differences in graphs of data sets.	Given representations of data sets, compare and contrast data.	Given representations of data sets, compare similarities of data.	Match a graph to a given data set.
A.M.TMS.36 In real world situations, distinguish between the cause and the effect.	Determine which is the cause and which is the effect in a real world situation.	Identify situations that have cause and effect outcomes in a real-world situation.	Recognize that a change has occurred.

Statistics and Probability - Interpreting Categorical & Quantitative Data

Understand and evaluate random processes underlying statistical experiments

A.M.TMS.37 Approximate the likelihood of an event based on its probability (e.g., given a weather forecast, determine if it is likely to rain) and make appropriate real-world choices.	Answer questions using the words likely or unlikely.	Given choice(s), determine which is unlikely to occur.	Given choice(s), determine which is likely to occur.

Support for WV Alternate Academic Achievement Standards
High School Mathematics I, Integrated Pathway

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Relationships between Quantities			
Reason quantitatively and use units to solve problems.			
A.M.1HS.1 Express quantities to the appropriate precision of measurement (e.g., measure a pencil to the nearest inch).	Measure an item using the appropriate unit of measurement.	Measure items using units (i.e. squares).	Choose the appropriate tool for the measurement of an item.
A.M.1HS.2 Define appropriate quantities for the purpose of descriptive modeling.	Define the terms used to determine dimensions.	Choose the correct term for a specific quantity.(e.g. gallons, miles, grams, etc.)	Choose the correct term for what is measured by specific tools.(e.g. ruler to inches and measuring cup to ounces, etc.)
A.M.1HS.3 Choose the appropriate unit of measurement (e.g., determine when to use feet/inches/meter, cups/gallons/liter, ounces/pounds/gram, etc.).	Determine the appropriate unit of measurement for a specific task.	Choose the correct tool to measure given items.	Choose the correct tool for measurement (e.g., a ruler, yardstick, measuring cup), given choice(s).
Cluster: Interpret the structure of expressions.			
A.M.1HS.4 Identify an algebraic expression involving at least one arithmetic operation to represent a real-world problem.	Choose the correct algebraic expression with at least one operation to represent a real-world problem.	Choose the correct symbol for an operation to use in real-world problem.	Choose the correct symbol that represents an operation for a real-world problem.
Cluster: Create equations that describe numbers or relationships.			
A.M.1HS.5 Given a real-world problem situation, write, read, and/or solve one-step addition and subtraction equations for an unknown number with a variable standing for the unknown (e.g., $8.50 + c = $12).	Create and solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Solve a one-step algebraic equation for a real-world problem using addition or subtraction.	Choose the correct symbol that represents an operation for a real-world problem.

A.M.1HS.6 Determine solutions to equations that model real-world problem situations with two unknowns (e.g., given a set of options, find solutions for x + y = $6.25).	With two unknowns, determine the solution for real-world problems.	With two unknowns, determine the correct equation for a solution to real-world problems.	Determine what is unknown in real-world problems.
A.M.1HS.7 Demonstrate an understanding of terms such as "at least" and "fewer than" in solving real-world problems.	Use the appropriate mathematical symbol when solving real-world problems based on the terminology in the problem using equations and inequalities.	Determine the appropriate mathematical symbol to use based on the terminology in real-world problems.	Choose which mathematical symbol to use in real-world problems given choices.
A.M.1HS.8 Solve two-step word problems, represent these problems using formulas with a letter standing for the unknown quantity.	Given a word problem, create and solve two-step algebraic equations using a letter for the unknown quantity.	Solve a word problem using two-step algebraic equations.	Recognizes a letter can stand for a quantity.
Cluster: Represent and solve equations and inequalities graphically.			
A.M.1HS.9 Interpret the meaning of a point on the graph of a linear function (e.g., 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).	Determine what number is represented by a point on a graph.	Determine what number is represented by a point on a graph when given choices.	State what the point on a graph represents.

A.M.1HS.10 Interpret the meaning of the intersection of the two graphs.	Identify that the point of intersection of two graphs is the solution to both equations.	Identify the ordered pair of the point of intersection.	Identify the point at which two graphs intersect.
A.M.1HS.11 With the assistance of a graphing calculator and visual cue cards as needed, graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality) and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	Use visual cue cards and a graphing calculator to graph solutions to linear inequalities.	Follow step-by-step instructions to graph a solution to linear inequalities on a graphing calculator.	Enter numbers in a calculator.

Cluster: Understand the concept of a function.			
A.M.1HS.12 Using a calculator and a visual cue card of function rules that describe proportional relationships, solve real-world problems (e.g., Unit Cost x Number of Items = Total Cost).	Use visual cue cards and a graphing calculator to graph solutions to linear inequalities.	Follow step-by-step instructions to graph a solution to linear inequalities on a graphing calculator.	Enter numbers in a calculator.
A.M.1HS.13 Using a calculator and a visual cue card of function rules, solve real-world problems (e.g., given a $10 off coupon, use Sales Price = Original Price – Discount to find the Sales Price).	Using a calculator and visual cue cards of function rules, solve real-world problems.	Determine which function rule would be used to solve a specific real-world problem.	Enter numbers in calculator.
A.M.1HS.14 Determine the missing values in arithmetic sequences. Instructional Note: Limit the common ratio in arithmetic sequences to integers (e.g., 20, 18, 16, ___, 12, 8, ... or 3, 7, 11, 15, ___, 23, ...).	Determine the missing values in an arithmetic sequence.	Given choice(s), determine the missing values in an arithmetic sequence. given choices.	Determine what object is missing in a sequence.
Cluster: Interpret functions that arise in applications in terms of a context.			
A.M.1HS.15 Interpret data from graphs that represent linear functions with different rates of change and interpret which has the greater rate of change. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative.	Determine the rate of change when given linear functions on a graph.	When given more than one function represented on a graph, determine which function has the greater rate of change.	Determine if a function's rate of change (line on a graph) is increasing or decreasing when the function is represented on a graph.
A.M.1HS.16 Given real-world measures, demonstrate an understanding of domains (e.g., there are seven days in a week; twelve months in a year; twelve inches in a foot).	States the correct number of items in each domain regarding the passage of time from minutes in an hour to months in a year as well as the number of single units in a larger unit of measurement.	Sort given items into the correct domain.	Select the correct number of items in a particular domain. (i.e. 7 days in a week)

A.M.1HS.17	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table, state whether it is increasing or decreasing.	Determine when a table shows change versus no change.
Calculate and interpret the rate of change of a function presented as a table (e.g., the following table has a rate of change of -2).			

Items Bought	Money Remaining
0	$20
1	$18
2	$16
3	$14

Cluster: Analyze functions using different representations.			
A.M.1HS.18	Using a graphing calculator and a visual cue card, determine the rate of change when given linear functions on a graph.	Using a graphing calculator and a visual cue card, when given more than one function, determine which function has the greater rate of change.	Student will identify key features of a graph.
With the assistance of a graphing calculator and visual cue cards as needed, graph functions expressed symbolically and show key features of the graph. Instructional Note: Focus on linear functions.			
A.M.1HS.19	Compare information for two functions represented in different tables.	Enter information for two functions into different tables.	Identify information to be used in function tables.
Identify information for two functions represented in different tables (e.g., Store A's Discount Table and Store B's Discount Table).			

Cluster: Build a function that models a relationship between two quantities.

A.M.1HS.20 Given a linear function represented by a table, determine the rate of change and add additional values to extend the table.	When given a function represented in a table, calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.
Items Bought **Money Remaining** 0 $0.00 1 $0.50 2 $1.00 3 $1.50 4 $2.00			
A.M.1HS.21 Determine the common ratio in arithmetic sequences (e.g., recognize that "down 2" would describe the common ratio for a sequence such as 20, 18, 16, 14, 12... and write it as -2).	Determine the common ratio for a sequence.	Determine whether the ratio is positive or negative.	Choose the next number in an arithmetic sequence given choices.

Cluster: Compare linear and exponential models and solve problems.

A.M.1HS.22 Given a graph, distinguish between linear functions and exponential functions.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.	Given a graph, decide if it is a linear function or an exponential function.
A.M.1HS.23 From a given list recognize linear and exponential functions, including arithmetic sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.	Given information, distinguish between linear and exponential functions.
A.M.1HS.24 Given two tables representing linear real-world function, determine which is increasing at a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.	Given two tables of linear real-world functions, choose the one increasing with a greater rate.

A.M.1HS.25 Interpret the parameters in a linear function in terms of a context. Instructional Note: Limit to linear functions.	Determine constants (e.g. slope, y-intercept, etc.) of linear functions for different contexts.	Determine the slope of a linear function for different contexts.	Given choices of context, determine which linear function is described.

Reasoning with Equations

Cluster: Understand solving equations as a process of reasoning and explain the reasoning.

A.M.1HS.26 Demonstrate each step in solving a one or two step equation.	Given a word problem, create and solve two-step equations.	Solve a word problem using two-step equations.	Solve a word problem using one-step equations.

Descriptive Statistics

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

A.M.1HS.27 Represent data with dot plots on a number line.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.	Place dot plots on a number line to represent data.
A.M.1HS.28 Given a dot plot, identify the maximum value, the minimum value, and the mode.	Identify the highest number represented, the lowest number represented and the most repeated number.	Identify where the highest and lowest dot are located on the dot plot.	Identify that the dot represents a value on a dot plot.
A.M.1HS.29 Interpret differences in graphs of data sets.	Given representations of data sets, compare and contrast data.	Given representations of data sets, compare similarities of data.	Identify that graphs represent data.

Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables.

A.M.1HS.30 Sort data or objects according to characteristics, similarities, and/or associations. Interpret frequencies in the context of the data (e.g., after surveying students, regarding their favorite ice cream flavor, answer related questions).	Conduct a survey, chart information, and answer questions regarding the information on the chart.	Fill in squares on a graph to represent given data.	Sort data or objects according to given characteristics.
A.M.1HS.31 Represent data of frequency using tally charts in real world situations.	Place tally marks when charting data.	Demonstrates one-to-one correspondence between data and tally marks.	Uses manipulatives to represent a number.

Cluster: Distinguish between cause and effect.			
A.M.1HS.32 In real world situations, distinguish between the cause and the effect.	Determine which is the cause and which is the effect in a real world situation.	Identify situations that have cause and effect outcomes in a real-world situation.	Recognize that a change has occurred.

Transformations

Cluster: Experiment with transformations in the plane.

A.M.1HS.33 Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles.	Identify and/or illustrates perpendicular lines, parallel, line segments, angles, and circles.	Identify images of perpendicular lines, parallel, lines, line segments, angles, and circles.	Identify perpendicular lines, parallel lines, line segments, angles, and circles, given choice(s).
A.M.1HS.34 Using manipulatives, translate, rotate, and/or reflect a geometric figure.	Use manipulatives to demonstrate what translate, rotate, and/or reflect mean.	Use manipulatives to demonstrate what translate, rotate and/or reflect mean.	Use manipulatives to demonstrate what translate, rotate, and/or reflect mean.
A.M.1HS.35 Given a rectangle, parallelogram, trapezoid, or regular polygon manipulative, recognize the rotations and reflections that carry it onto itself.	Using manipulatives, place a rotated and/or reflected manipulative on top of the original to determine if it aligns exactly.	Given a rotated and/or reflected manipulative, the student will determine if it lines up to the original.	When shown examples of reflected and/or rotated manipulatives, the student will determine if it aligns to the original.
A.M.1HS.36 Recognize that a geometric shape and its translated/rotated/reflected shape are congruent.	When given shapes that have been translated/rotated/reflected, identify the shapes that are congruent.	When given shapes that have been translated/rotated/reflected identify the shapes that are the identical in form.	When given three shapes, identify the two congruent (identical) shapes.
A.M.1HS.37 Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Trace a given geometric shape to demonstrate translation, rotation, and/or reflection.	Given a traced shape, demonstrate translation, rotation, and/or reflection.

Cluster: Solve real-world problem situations involving parallel line segments, perpendicular line segments, angles, and circles.

A.M.1HS.38 From a list of examples, identify perpendicular line segments, parallel line segments, angles, and circles. Introduce real world situations involving perpendicular line segments, parallel line segments, angles, and circles (e.g., intersecting or parallel streets).	Given real world examples, identify perpendicular line segments, parallel line segments, angles, and circles.	Match real-world examples of perpendicular line segments, parallel line segments, angles, and circles.	Using flash cards identify perpendicular line segments, identify parallel line segments, angles and circles.

Support for WV Alternate Academic Achievement Standards

Coordinates and Measurement

Use coordinates and determine area and perimeter.

A.M.1HS.39 Given coordinates, identify the geometric shapes using proper terminology.	Graph the points from given coordinates and identify shape using proper terminology.	Given points on graph, first predict shape and then connect points to create geometric shape.	Given points on graph, connect points to create geometric shape.
A.M.1HS.40 Find perimeters and areas of squares and rectangles to solve real-world problems.	Using formula and calculator, determine area and perimeter of two dimensional shapes.	Using manipulatives and calculator, determine area and perimeter of two dimensional shapes.	Using manipulatives, represent area of two dimensional shapes.

Support for WV Alternate Academic Achievement Standards
High School Mathematics II, Integrated Pathway

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Relationships between Quantities			
Apply operations of rational numbers to solve problems.			
A.M.2HS.1 Solve addition, subtraction, multiplication, and division real-world problems involving whole numbers and decimals (i.e., money) using visuals and/or a calculator.	Solve addition, subtraction, multiplication, and division real-world problems using whole numbers and decimals.	Solve addition and subtraction real-world problems using whole numbers and decimals.	Solve addition and subtraction real-world problems using whole numbers.
Linear Functions and Modeling			
Interpret functions that arise in applications in terms of a context.			
A.M.2HS.2 Given a linear function represented by a table, determine the rate of change and find missing value. For example: 	Items Bought	Cost
---	---
1	$5
2	$7
3	
4	$11
	$13
6			When given a function represented in a table, calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.

A.M.2HS.3 Given a real-world function, find the possible values of the domain (e.g., Could you work 10 days a week? How many days a week can you work?).	Identify the limits of real-world domains.	Choose the correct value for the limits of specific real-world domains when given choices.	Count the number of specific values of a given domain.

Cluster: Analyze representation of functions.

A.M.2HS.4 Compare two functions represented in different tables (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions.	Compare two functions represented in different tables to answer questions.	Answer questions based on information presented in two tables representing functions.	Identify what information is represented in two tables.

Cluster: Build a function that models a relationship between two quantities.

A.M.2HS.5 Given a real-world situation, complete a given table. For example: Items Bought / Cost table	Given partial data, complete the remaining parts of the table.	Given a completed table about a real-world situation, answer questions pertaining to the information.	Identify the components of the completed table in relation to a real-world situation.

Cluster: Construct and compare linear models and solve problems.

A.M.2HS.6 Given two tables representing linear real-world function, determine which is increasing at a greater rate.	Given a table representing linear real-world , calculate the rate of change and fill in the chart with additional values.	When given a function represented in a table, calculate the rate of change.	When given a function represented in a table and given choices, chose the correct number needed to extend the table.

Expressions and Equations

Cluster: Interpret the structure of expressions.

A.M.2HS.7			
Given a real-world problem and a choice of two algebraic expressions involving arithmetic operations, identify the algebraic expression that models the situation.	When given two algebraic expressions, identify the algebraic expression to model a given real-world problem.	When given two algebraic expressions, identify the one with the correct operational symbols.	When given two algebraic expressions, identify the expression with the correct numbers.

Cluster: Write expressions in equivalent forms to solve problems.

A.M.2HS.8			
Solve an algebraic expression involving arithmetic operations to represent a real-world problem (e.g., Jan has $10. She buys a loaf of bread for $2 and a gallon of milk. She now has $5. What is the cost of the milk?)	Solve an algebraic expression which represents a real-world problem.	When given the solution, solve an equation to check for accuracy.	Determine what question is being asked in a real-world problem.

Cluster: Create equations that describe numbers or relationships.

A.M.2HS.9			
Determine solutions to equations that model real-world problem situations with two unknowns (e.g., given a set of options, find solutions for x + y + $2 = $6.25).	Solve equations with two unknowns when given a set of options.	When given the solutions, solve an equation to check for accuracy.	Determine what the unknowns represent in a real-world problem.
A.M.2HS.10			
Solve multi-step word problems, represent these problems using formulas with a letter standing for the unknown quantity. Assess the reasonableness of answers.	Given a word problem, create and solve multi-step algebraic equations using a letter for the unknown quantity.	Solve a word problem using multi-step algebraic equations.	Recognizes a letter can stand for a quantity.

Cluster: Solve equations in one variable.

A.M.2HS.11			
Given choices and use of a calculator, solve quadratic equations in one variable by inspection (e.g., for $x^2 = 49$).	Memorize perfect squares to 10.	Create a model or drawing demonstrating that a square is a number multiplied by itself.	Use manipulatives to represent perfect squares to 10.

Applications of Probability

Cluster: Make predictions.

A.M.2HS.12 Make predictions involving real world cause-and-effect situations.	Answer questions using the words likely or unlikely.	Given choice(s), determine which is unlikely to occur.	Given choice(s), determine which is likely to occur.
A.M.2HS.13 Recognize that two events A and B are independent.	Give examples of independent events.	Given event examples, determine if they are independent.	Discuss that two events are independent.
A.M.2HS.14 Use probabilities to make fair decisions in real world situations (e.g., drawing by lots or using a random number generator).	Determine probability of fair outcomes when using dice or coin.	Discuss whether a method of selection would be fair.	Determine method of making fair decisions based on probabilities.

Similarity, Parallel Lines, and Coordinates

Cluster: Understand similarity in terms of similarity transformations.

A.M.2HS.15 Given two figures, decide if they are similar.	Given shapes, sort based on shape and size.	Given shapes, sort based on size.	Given shapes, sort based on shape.

Cluster: Identify congruent angles.

A.M.2HS.16 Given parallel lines cut by a transversal, identify congruent angles.	Identify congruent angles from given parallel lines cut by a transversal.	Using rules and generic examples, match the rule to the specific angles created when transversals cut parallel lines.	Identify angles created by a transversal cutting through parallel lines.

Cluster: Use coordinates to partition line segments.

A.M.2HS.17 From a list of several examples of points on a directed line segment between two given points, determine which one partitions the segment in a given ratio. Limit to halves and thirds.	Create number line and identify half and third points.	Given a number line, determine the half and third points on the line.	Count the lines between two given points of a line segment on a number line.

Measurement and Volume

Cluster: Use measurement and volume formulas to solve problems.

A.M.2HS.18 Measure quantities accurately (e.g., follow a recipe).	Choose the measurement tool to use for the situation and designated amount.	Choose the type of measurement tool (e.g., measuring cups for water, tablespoons for spices). May not identify correct measuring cup size.	Given choice(s), select the correct measurement tool for the designated activity.
A.M.2HS.19 Given a list of volume formulas for cylinders, pyramids, cones, and spheres identify the correct formula to solve real-world problems.	Given a list of volume formulas with pictures for cylinders and pyramids identify the correct formula to solve real-world problems.	Given a list of volume formulas with pictures for cones and spheres identify the correct formula to solve real-world problems.	Given pictures of shapes, choose the shape in a real-world problem.

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Inferences and Conclusions from Data			
Cluster: Summarize, represent, and interpret data on a single count or measurement variable.			
A.M.3HS.1 Test predictions involving real-world events (e.g., experimental probability).	Set up and collect data involving a predicted event.	Given a scenario, collect data for a given event.	Perform task to elicit data for event probability. (e.g. pulling cubes from bag)
Cluster: Understand and evaluate random processes underlying statistical experiments.			
A.M.3HS.2 Approximate the likelihood of an event based on its probability (e.g., given a weather forecast, determine if it is likely to rain) and make appropriate real-world choices.	Answer questions using the words likely or unlikely.	Given choice(s), determine which is unlikely to occur.	Given choice(s), determine which is likely to occur.
A.M.3HS.3 Revise original predictions if necessary when predicting real-world events.	Determine source of error and correct prediction for real-world events.	If prediction was incorrect, determine source of error.	Determine if prediction was correct.
Cluster: Make inferences and justify conclusions from sample surveys, experiments, and observational studies.			
A.M.3HS.4 Draw conclusions from a given representation of data in real world situations.	Answer questions about a given representation of data in real world situations.	Describe and discuss results and observations regarding a set of data from real world situations.	Determine which item was more/less represented from given data sets.
A.M.3HS.5 Use data from a survey to make assumptions about a larger population (e.g., from a survey about favorite color given to a small number of students in a school, assume that the results hold for the school).	Draw conclusions from collected data to determine if that data would translate to a larger sample size.	Discuss data collected from smaller sample sizes.	Determine that a small group can be a representation of a large group.

A.M.3HS.6 Use data from a randomized experiment to make real world predictions.	Predict whether the sample randomized experiment would hold true in other real-world applications.	Answer questions regarding a randomized experiment.	Discuss whether an experiment is randomized or not
Cluster: Use probability to evaluate outcomes of decisions.			
A.M.3HS.7 Use probabilities to make fair decisions	Determine probability of fair outcomes when using dice or coin.	Discuss whether a method of selection would be fair.	Determine method of making fair decisions based on probabilities.
A.M.3HS.8 Analyze decisions and outcomes based on probability concepts.	Answer questions on outcomes of choices made from predicted events.	Answer questions about decisions based on probability concepts.	Determine clothing choices based on weather predictions.

Linear and Polynomial Relationships			
Cluster: Interpret the structure of expressions.			
A.M.3HS.9 Identify an algebraic expression involving arithmetic operations to represent a real-world problem.	Choose the correct algebraic expression with at least one operation to represent a real-world problem.	Choose the correct symbol for an operation to use in real-world problem.	Choose the correct symbol that represents an operation for a real-world problem.
Cluster: Apply rational expressions.			
A.M.3HS.10 In real world problem situations, combine mixed numbers (i.e., recipes). Instructional Note: Limit to halves.	With a calculator, combine mixed numbers.	Using manipulatives to model combining wholes and halves, state the expression	Using manipulatives, combine wholes and halves.
Cluster: Represent and solve equations graphically.			
A.M.3HS.11 Interpret the meaning of the intersection of the two graphs. Instructional Note: Include linear and polynomial functions.	Identify that the point of intersection of two graphs is the solution to both equations.	Identify the ordered pair of the point of intersection.	Identify the point at which two graphs intersect.

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Mathematical Modeling

Create equations that describe numbers or relationships.

A.M.3HS.12 Create linear equations and inequalities in one variable and use them to solve problems.	Given linear equations and inequalities with one variable and graphic representations, solve real world problems.	Given calculator and formula for linear equations or inequalities with one variable, solve real world problems.	Identify the appropriate equality or inequality sign in an equation.
A.M.3HS.13 Create linear equations in two variables to represent relationships between quantities and graph equations on coordinate axes with labels and scales.	Create two variable linear equations and graph on a coordinate plane.	Given two variable linear equations and graph, describe the results in terms of whether the lines will intersect or be parallel.	Identify lines as being either parallel or intersecting.

Cluster: Interpret functions that arise in applications in terms of a context.

A.M.3HS.14 Given real-world measures, demonstrate an understanding of domains and list possible values of domains.	States the correct number of items in each domain regarding the passage of time from minutes in an hour to months in a year as well as the number of single units in a larger unit of measurement.	Sort given items into the correct domain.	Select the correct number of items in a particular domain. (i.e. 7 days in a week)

Cluster: Analyze functions using different representations.

A.M.3HS.15 Compare and contrast two functions represented in different tables or graphs (e.g., Store A's Discount Table and Store B's Discount Table) to answer questions.	Compare and contrast two functions represented in different tables to answer questions.	Answer questions based on information presented in two tables representing functions.	Identify what information is represented in two tables.

Cluster: Build a function that models a relationship between two quantities.

A.M.3HS.16 Given a real-world situation, complete a given table to answer questions. For example:	Given partial data, complete the remaining parts of the table.	Given a completed table about a real-world situation, answer questions pertaining to the information.	Identify the components of the completed table in relation to a real-world situation.
Items Bought / Cost (table)			

Cluster: Visualize relationships between two dimensional and three-dimensional objects.

A.M.3HS.17 Identify the shapes of two-dimensional cross-sections of three-dimensional objects.	Given pictures/graphics of real world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects (e.g. outline of triangle to picture of a pyramid).	Given real world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects (e.g. outline of circle to picture of a ball).	Given real world objects, match the shapes of two-dimensional cross-sections of three-dimensional objects (e.g. ice cube to a square outline).

Cluster: Apply geometric concepts in modeling situations.

A.M.3HS.18 Use properties of geometric shapes to describe real world objects.	Given pictures/graphics of real world objects, describe the shape in terms of geometric properties.	Given real world objects, match and discuss the geometric properties of the shapes.	Given real world objects, sort the geometric shapes to their descriptor (e.g. circle to clock face)
A.M.3HS.19 • Sketch a scale model using graph paper as needed (e.g., the layout of their house). • Interpret a scale model (e.g., locate specific rooms on a diagram of the school).	Sketch or create on computer, a scale model of a building and identify various locations and items.	Given scale model/map of a building, identify various locations and items.	Given scale model and pictures of objects, recreate a space they are familiar with.

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Reading			
Cluster: Key Ideas and Details			
A.ELA.9.1 Ask and/or answer questions about key ideas; such as who, what, when, and where, to demonstrate understanding of key details and literary text.	Ask or answer literal and inferential questions such as who, what, when, and where, from a literary text. Refer to text for answers.	Ask or answer literal questions such as who, what, when, and where, from a literary text. Refer to text for answers	Given choice(s), identify a character or an idea from a literary text.
A.ELA.9.2 Summarize literary texts using key details from the text, determine the central idea of the story.	Determine central idea of a text, using supporting details.	Given choice(s), select an image or idea related to the text.	Given choice(s), select an image or idea related to the text.
A.ELA.9.3 Describe characters in a literary story (e.g., their traits, motivations, or feelings) and draw on specific details in the literary text (e.g., character's thoughts, words, or action).	Describe characters utilizing text details to justify description.	Describe character traits.	Given choice(s), select a main character.
A.ELA.9.4 Ask and answer questions about key ideas, such as who, what, when, and where to demonstrate understanding of key details in informational texts.	Ask or answer literal and inferential questions, such as who, what, when, and where, from an informational text. Refer to text for answers.	Ask or answer literal questions, such as who, what, when, and where, from an informational text. Refer to text for answers.	Given choice(s), identify a character or idea from an informational text.
A.ELA.9.5 Demonstrate an understanding of the central idea of an informational text; summarize the key details.	Determine central idea of an informational text with supporting details.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the informational text.

A.ELA.9.6 Describe individuals, events, or pieces of information in an informational text and draw on specific details in informational text (e.g., sequence of events, individuals' words or actions).	Describe characters utilizing details from an informational text to justify description.	Describe character traits from an informational text.	Given choice(s), select a character from an informational text.
Cluster: Craft and Structure			
A.ELA.9.7 Determine the meaning of words or phrase in literary text and their impact on meaning and tone.	Describe meaning of words or phrases in literary texts.	Given choice(s), choose the meaning of words or phrases from literary texts.	Given choice(s), select the meaning of words or phrases from literary texts.
A.ELA.9.8 Identify how structure of a literary text creates mystery, tension, or surprise.	Identify story elements that create mystery, tension, or surprise.	Identify a sentence in a literary text that creates mystery, tension, or surprise.	Identify when a text conveys a specific emotion (e.g. utilize emotion cards).
A.ELA.9.9 Identify who is telling the story at various points in a literary text and determine point of view.	Identify the narrator/point of view using specific examples in a literary text.	Identify words that indicate the narrator/point of view in a literary text.	Given choice(s), select who is telling the story in a literary text.
A.ELA.9.10 Identify words or phrases in informational text that suggest meaning and tone.	Indicate words or phrases in informational text that suggest meaning and tone.	Given choice(s), select the words or phrases that suggest meaning and tone from an informational text.	Given choice(s), select the meaning of words or phrases from informational texts.
A.ELA.9.11 Identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text.	Identify specific sentences which develop the main idea/claim of an informational text.	Given choice(s), identify supporting details to a specific claim from a particular sentence(s) or paragraph(s) of an informational text.	Given choice(s), identify a claim found in an informational text.
A.ELA.9.12 Identify the main purpose of informational text, including what the author wants to answer, explain, or describe.	Identify the main purpose of informational text.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the main purpose/idea of informational text.

A.ELA.9.13 Identify similarities and differences between a literary text and visual elements or multimedia presentations of the literary text to demonstrate understanding of its characters, setting, or plot.	Identify ways in which a literary text is similar and different than the visual or multimedia presentations of the literary text.	Identify whether both the literary text and the visual or multimedia presentations of the literary text contain certain elements.	Given choice(s), identify the literary text, visual element, or multimedia presentation of the text that contains specific detail(s) or element(s).
A.ELA.9.14 Use information gained from illustrations (e.g., maps or photographs) and/or the words in an informational text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).	Utilizing informational illustrations or text, describe/discuss what inferences can be drawn.	Utilizing informational illustrations with text, determine which one best describes the illustration.	Given choice(s), utilizing informational illustrations with text, determine which one best describes the illustration.
A.ELA.9.15 Describe how evidence supports specific claims the author makes in an informational text.	Identify specific sentences within an informational text that show support of a specific claim.	Given choice(s), identify which evidence supports a specific claim in an informational text.	Given choice(s), identify an item or idea from an informational text.

Cluster: Range of Reading and Text Complexity

A.ELA.9.16 Read and demonstrate understanding of literature, including stories, dramas, and poetry, while engaged in individual or group readings of appropriately challenging literary texts.	Demonstrate an understanding of assigned literary selections.	Given choice(s), identify an understanding of the theme for various stories, dramas, and poetry.	Given choice(s), identify an element of the literary text (e.g. picture, symbol, or word).
A.ELA.9.17 Read and demonstrate understanding of appropriately challenging informational texts, including social studies, science, and technical texts, while engaged in individual or group readings.	Demonstrate an understanding of assigned informational texts, including social studies, science, and technical texts.	Given choice(s), identify an understanding of the theme/concept/idea for various informational texts, including social studies, science, and technical texts.	Given choice(s), identify an element of the informational texts (e.g. picture, symbol, or word).

Writing

Cluster: Text Types and Purposes

A.ELA.9.18			
Use drawing, dictating, and/or writing to compose opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, and supply a reason for the opinion; provide a sense of closure.	Given text on a topic, indicate opinion and reason through drawing, dictation, and/or writing.	Given text on a topic, indicate opinion through drawing, dictation, and/or writing.	Given choice(s), indicate preference.
A.ELA.9.19	Given facts and definitions on a topic, create informative/explanatory texts and justify reasoning through drawing, dictation, and/or writing.	Given facts and definitions on a topic, create informative/explanatory text through drawing, dictation, and/or writing.	Given information on a specific topic, identify a related drawing, orally recorded passage, and/or writing.
Use drawing, dictating, and/or writing to compose informative/explanatory texts by introducing a topic and using facts and definitions to develop points; provide a sense of closure.			
A.ELA.9.20	Create a sequence of events providing a detailed description of actions, thoughts, or feelings with a clear beginning, middle, and ending.	Given at least three sentence strips or pictures, identify a sequence of events showing beginning, middle, and end.	Given pictures, select the beginning and the ending items of a sequence.
Use drawing, dictating and/or writing to narrate a well-elaborated event or short sequence of events, including details to describe actions, thoughts, or feelings; provide a sense of closure.			

Cluster: Production and Distribution of Writing

A.ELA.9.21			
Produce writing in which the development and organization are appropriate to task and purpose.	Produce writing that is organized clearly.	Use a graphic organizer to illustrate development and organization in the writing process.	Given choice(s), identify an item that demonstrates proper use of the writing process.
A.ELA.9.22	Illustrate the ability to find and fix mistakes in one's own writing.	Illustrate the ability to find and/or fix mistakes in a written document.	Given choice(s), identify the correct punctuation.
Strengthen writing by planning, revising, editing, rewriting, or trying a new approach.			
A.ELA.9.23	With collaboration, create a digital product using information.	With collaboration, type information or input photos relating to a topic into a preset digital tool for production and publishing.	With collaboration, choose a word or picture to input using a digital tool for production and publishing.
Use a variety of digital tools to produce and publish writing, including collaboration with peers.			

Cluster: Research to Build and Present Knowledge			
A.ELA.9.24 Conduct a short research project drawing on several sources to answer a question.	Use multiple sources to conduct research on a given topic.	Use multiple sources to fill in a graphic organizer on a given topic.	Given choice(s), choose a picture or word that relates to a given topic in research material.
A.ELA.9.25 Recall information from experiences or gather information from print and digital sources; sort evidence into provided categories.	After gathering information, sort the information into provided categories.	Sort given information into specific categories.	Given choice(s), choose a photo or word that represents a provided category.
A.ELA.9.26 Draw evidence from literary or informational texts to support writing. · Apply grade 9 reading standards to literary (e.g., "identify who is telling the story at various points in a literary text and determine point of view"). · Apply grade 9 reading standards to nonfiction and other informational texts (e.g., "identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text").	Use evidence from given text to support writing.	Choose the appropriate information from a text to support an idea.	Given choice(s), choose a photo or word that was referred to in the text.
Cluster: Range of Writing			
A.ELA.9.27 Write routinely for a range of discipline-specific tasks, purposes, and audiences.	Complete writing assignments on a routine basis.	Convey ideas, either in written or pictorial format.	Identify an item/event/reason to write about.

Speaking and Listening

Cluster: Comprehension and Collaboration

A.ELA.9.28 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on a variety of grade 9 topics and issues and appropriately challenging texts. • Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion). • Respond appropriately to the comments of others through two or more exchanges. Ask questions to clear up any confusion about the topics and texts under discussion.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately using proper conversational etiquette and rules.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately.	Engage or listen during discussions.
A.ELA.9.29 Given information presented in diverse media or format, determine the main ideas and supporting details.	Determine the main idea(s) of diverse media presentations.	Given information presented in single media or format, determine a single main idea.	Given choice(s), choose an item which represents a topic.
A.ELA.9.30 After listening to a speaker, ask questions to demonstrate level of comprehension, gather additional information, or deepen understanding of a topic or issue.	Formulate and ask questions of a speaker to gather additional information or understanding.	Given a set of questions, choose an appropriate question for a speaker.	Given choice(s), choose a question for a speaker.

Cluster: Presentation of Knowledge and Ideas

A.ELA.9.31 Speaking audibly, report on a topic or text, and/or tell a story or recount an experience with appropriate facts and relevant, descriptive details.	Present relevant information with supportive detail.	Present at least one supportive detail on a given event.	Given choice(s), choose an item/ topic to share with an audience.

A.ELA.9.32 Include multimedia components (e.g., graphics, images, music, and/or sound) and visual displays in presentations to enhance ideas, thoughts, and feelings.	Present information using multimedia components to enhance ideas, thoughts, and feelings.	Present information using multimedia components to share information.	Present pictures or other multimedia components.
A.ELA.9.33 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	Use complete sentences to provide requested detail or clarification.	Respond to a request appropriately.	Use a word or symbol representation for communication.

Language

Cluster: Conventions of Standard English

| A.ELA.9.34

Demonstrate understanding of the conventions of Standard English grammar and usage when writing or speaking.

· Use nouns, pronouns, verbs, adjectives, and adverbs.

· Form and use regular and irregular plural nouns.

· Form and use regular and irregular verbs.

· Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.

· Ensure subject-verb agreement.

· Use coordinating and subordinating conjunctions to produce simple, and compound and/or complex sentences. | Communicate ideas and needs without grammatical errors. | Communicate ideas and needs with minor grammatical errors. | Communicate needs and wants. |

A.ELA.9.35 Demonstrate understanding of conventions of Standard English capitalization, spelling, and punctuation when writing. Use commas properly with a coordinating or subordinating conjunction when creating compound or complex sentences.	Communicate ideas in writing using sentence variety, proper punctuation, and correct spelling.	Communicate ideas in writing using simple sentences with proper punctuation.	Given example sentence(s), choose the item that follows the rules of standard English.
Cluster: Knowledge of Language			
A.ELA.9.36 Use knowledge of language and its conventions when writing, speaking, reading, or listening. - Choose words and phrases to convey ideas precisely. - Choose punctuation for effect. - Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informational discourse is appropriate (e.g., small-group discussion).	Communicate effectively in numerous situations, demonstrating the knowledge that language changes with context.	Communicate effectively in numerous situations, but without changing (formal vs informal, precision of language, etc.) as context changes.	Communicate using one word, symbol, or sound.
Cluster: Vocabulary Acquisition and Use			
A.ELA.9.37 Determine or clarify the meaning of unknown words choosing from a range of strategies: - Use context to determine the meaning of unknown words. - Identify and use roots words and the words that result when affixes are added or removed. - Consult reference materials (dictionaries, online vocabulary supports) to clarify the meaning of unfamiliar words encountered when reading.	Demonstrate correct use of appropriate reference materials, from a variety of options, to determine or clarify new words from reading and writing activities.	Engage with provided reference material when encountering and using new words in reading and writing activities.	Given choice(s), identify different reference resources (e.g. dictionary, atlas/map book).

A.ELA.9.38 Demonstrate understanding of figurative language, word relationship, and nuances in word meanings. • Demonstrate understanding of the use of multiple meaning words. • Interpret figurative language, including similes and metaphors, in context.	Understand and use figurative language and multiple meaning words.	Given examples and non-examples, identify figurative language examples.	Given choice(s), identify figurative language examples.
A.ELA.9.39 Acquire and accurately use conversational, general academic, and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, and stammered).	Use appropriate word choices in describing actions, emotions, or states of being.	Given choice(s), effectively communicate.	Indicate a word choice to complete a sentence.

Support for WV Alternate Academic Achievement Standards
English/Language Arts • Grade 10

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Reading			
Key Ideas and Details			
A.ELA.10.1 Ask and/or answer questions about key ideas; such as who, what, when, and where, to demonstrate understanding of key details in literary text, refer to the text as the basis for the answers.	Ask or answer literal and inferential questions such as who, what, when, and where, from a literary text. Refer to text for answers.	Ask or answer literal questions such as who, what, when, and where, from a literary text. Refer to text for answers.	Given choice(s), identify a character or an idea from a literary text.
A.ELA.10.2 Summarize literary texts using key details from the text; determine the central idea(s) of the story.	Determine central idea of a text with supporting details.	Given choice(s), select an image or idea related to the text.	Given choice(s), select an image or idea related to the text.
A.ELA.10.3 Describe characters in a literary story (e.g. their traits, motivations, or feelings) drawing on specific details in the literary text (e.g. a character's thoughts, words, or actions).	Describe characters utilizing text details to justify description.	Describe character traits.	Given choice(s), select the main character.
A.ELA.10.4 Ask and answer questions about key ideas; such as who, what, when to demonstrate understanding of key details in information texts, refers to the text as the basis for the answers.	Ask or answer literal and inferential questions, such as who, what, when, and where, from an informational text, referring to text for answers.	Ask or answer literal questions, such as who, what, when, and where, from an informational text, referring to text for answers.	Given choice(s), identify a character or idea from an informational text.

A.ELA.10.5 Demonstrate an understanding of the central idea of an informational text; summarize the key details.	Determine central idea of an informational text with supporting details.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the informational text.
A.ELA.10.6 Describe individuals, events, or pieces of information in an informational text drawing on specific details in informational text (e.g., sequence of events, individual's words or actions).	Describe characters utilizing details from an informational text to justify description.	Describe character traits from an informational text.	Given choice(s), select the main character from an informational text.

Craft and Structure

A.ELA.10.7 Determine the meaning of words or phrases in literary text and their impact on meaning and tone.	Describe meaning of words or phrases in literary texts.	Given choice(s), choose the meaning of words or phrases from literary texts.	Given choice(s), select the meaning of words or phrases from literary texts.
A.ELA.10.8 Identify how structure of a literary text creates mystery, tension, or surprise.	Recognize story elements that create mystery, tension, or surprise.	Identify a sentence in a literary text that creates mystery, tension, or surprise.	Recognize when a text conveys a specific emotion (e.g. utilize emotion cards).
A.ELA.10.9 Identify the points of view of individual characters.	Identify the narrator/point of view using specific examples in a literary text.	Identify words that indicate the narrator/point of view in a literary text.	Given choice(s), select who is telling the story in a literary text.
A.ELA.10.10 Identify words or phrases in informational text that suggest meaning and tone.	Indicate words or phrases in informational text that suggests meaning and tone.	Given choice(s), choose the words or phrases that suggest meaning and tone from an informational text.	Given choice(s), select the meaning of words or phrases from informational texts.
A.ELA.10.11 Identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text.	Identify specific sentences which develop the main idea/claim of an informational text.	Given choice(s), identify supporting details for a specific claim from a particular sentence(s) or paragraph(s) of an informational text.	Given choice(s), identify a claim found in an informational text.

Support for WV Alternate Academic Achievement Standards

A.ELA.10.12 Identify the main purpose of informational text, including what the author wants to answer, explain, or describe.	Identify the main purpose of informational text.	Given choice(s), select an image or idea related to an informational text.	Given choice(s), select an image or idea related to the main purpose/idea of an informational text.
Integration of Knowledge and Ideas			
A.ELA.10.13 Identify similarities and differences between a literary text and visual elements or multimedia presentations of the literary text to demonstrate understanding of its characters, setting, or plot.	Identify ways in which a literary text is similar and different than the visual or multimedia presentations of that literary text.	Identify whether both the literary text and the visual or multimedia presentations of the literary text contain similar elements.	Given choice(s), identify the literary text, visual element, or multimedia presentation of the text that contains specific detail(s) or element(s).
A.ELA.10.14 Use information gained from illustrations (e.g., maps or photographs) and/or the words in an informational text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).	Utilizing informational illustrations or text, describe/discuss what inferences can be drawn.	Utilizing informational illustrations with text, determine which one best describes the illustration.	Given choice(s) utilizing informational illustrations with text, determine which one best describes the illustration.
A.ELA.10.15 Describe how evidence supports specific claims the author makes in an informational text.	Identify specific sentences within an informational text that support a specific claim.	Given choice(s), determine which evidence from an information text supports a specific claim.	Given choice(s), identify an item or idea from an informational text.
Range of Reading and Text Complexity			
A.ELA.10.16 Read and demonstrate understanding of literature, including stories, dramas, and poetry, while engaged in individual or group readings of appropriately challenging literary texts.	Demonstrate an understanding of assigned literary selections.	Given choice(s), identify the theme for various stories, dramas, and poetry.	Given choice(s), identify an element of a literary text (e.g. picture, symbol, or word).
A.ELA.10.17 Read and demonstrate understanding of appropriately challenging informational texts, including social studies, science, and technical texts, while engaged in individual or group readings.	Demonstrate an understanding of assigned informational texts, including social studies, science, and technical texts.	Given choice(s), identify the theme/concept/idea for various informational texts, including social studies, science, and technical texts.	Given choice(s), identify an element of an informational text (e.g. picture, symbol, or word).

Writing

Text Types and Purposes

A.ELA.10.18 Use drawing, dictating, and/or writing to compose opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, and supply a reason for the opinion; provide a sense of closure.	Given text on a topic, indicate personal opinion and provide a reason through drawing, dictation, and/or writing.	Given text on a topic, indicate personal opinion through drawing, dictation, and/or writing.	Given choice(s), indicate personal preference.
A.ELA.10.19 Use drawing, dictating, and/or writing to compose informative/explanatory texts by introducing a topic and using facts and definitions to develop points; provide a sense of closure.	Given facts and definitions on a topic, create informative/explanatory texts and justify reasoning through drawing, dictation, and/or writing.	Given facts and definitions on a topic, create informative/explanatory text through drawing, dictation, and/or writing.	Given information on a specific topic, identify a related drawing, orally recorded passage, and/or writing.
A.ELA.10.20 Use drawing, dictating, and/or writing to narrate a well-elaborated event or short sequence of events, including details to describe actions, thoughts, or feelings; provide a sense of closure.	Create a sequence of events providing detailed description of actions, thoughts, or feelings with a clear beginning, middle, and end.	Given choice(s), identify a sequence of events showing beginning, middle, and end.	Given choice(s), select the beginning and the ending items of a sequence.

Production and Distribution of Writing

A.ELA.10.21 Produce writing in which the development and organization are appropriate to task and purpose.	Produce writing with clear organization.	Use a graphic organizer to illustrate development and organization in the writing process.	Given choice(s), identify an item that demonstrates proper use of the writing process.
A.ELA.10.22 Strengthen writing by planning, revising, editing, rewriting, or typing a new approach.	Illustrate the ability to find and fix mistakes in their own writing.	Illustrate the ability to find and/or fix mistakes in a provided, written document.	Given choice(s), identify correct punctuation.
A.ELA.10.23 Use a variety of digital tools to produce and publish writing, including collaboration with peers	With collaboration, create a digital product using information.	With collaboration, type information or input photos relating to a topic into a preset digital tool for production and publishing.	With collaboration, choose a word or picture to input using a digital tool for production and publishing.

Research to Build and Present Knowledge			
A.ELA.10.24 Conduct a short research project drawing on several sources to answer a question.	Use multiple resources to conduct research on a given topic.	Use multiple sources to fill in a graphic organizer on a given topic.	Given choice(s), choose a picture or word that relates to a given topic in research material.
A.ELA.10.25 Recall information from experiences or gather information from print and digital sources; sort evidence into provided categories.	After gathering information, sort the information into established categories.	Sort given information into specific categories.	Given choice(s), choose a photo or word that represents a established category.
A.ELA.10.26 Draw evidence from literary or informational texts to support writing. · Apply grade 10 reading standards to literature (e.g., "summarize literary texts using key details from the text; determine the central idea(s) of the story"). · Apply grade 10 reading standards to informational texts (e.g., "describe how evidence supports specific claims the author makes in an informational text.").	Use evidence from given text to support writing.	Choose the appropriate information from a text to support an idea.	Given choice(s), choose a photo or word that was referred to in the text.
Range of Writing			
A.ELA.10.27 Write routinely for a range of discipline-specific tasks, purposes, and audiences.	Complete writing assignments on a routine basis.	Convey ideas, either in written or pictorial format.	Identify an item/event/reason to write about.

Speaking and Listening

Comprehension and Collaboration

A.ELA.10.28 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on a variety of grade 10 topics and issues and appropriately challenging texts. · Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion). · Respond appropriately to the comments of others through two or more exchanges. · Ask questions to clear up any confusion about the topics and texts under discussion.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately using proper conversational etiquette and rules.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately.	Engage or listen during discussions.
A.ELA.10.29 Given information presented in diverse media or format, determine the main ideas and supporting details.	Determine the main idea(s) of diverse media presentations.	Given information presented in a single medium or format, determine a single main idea.	Given choice(s), choose item which represents topic.
A.ELA.10.30 After listening to a speaker, ask questions to demonstrate level of comprehension, gather additional information, or deepen understanding of a topic or issue.	Formulate and ask questions of a speaker to gather additional information or understanding.	Given a set of questions, choose an appropriate question for a speaker.	Given choice(s), choose an appropriate question for speaker.

Presentation of Knowledge and Ideas

A.ELA.10.31 Speaking audibly, report on a topic or text and/or tell a story or recount an experience with appropriate facts and relevant, descriptive details.	Present relevant information with supporting detail.	Present at least one supporting detail on a given event.	Given choice(s), choose item/topic to share with audience.

A.ELA.10.32 Include multimedia components (e.g., graphics, images, and/or sound) and visual displays in presentations to enhance ideas, thoughts, and feelings.	Present information using multimedia components to enhance ideas, thoughts, and feelings.	Present information using multimedia components to share information.	Present pictures or other multimedia components.
A.ELA.10.33 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	Use complete sentences to provide requested detail or clarification.	Respond appropriately to a request..	Use a word or pictorial representation for communication.

Language			
Conventions of Standard English			
A.ELA.10.34 Demonstrate understanding of the conventions of Standard English grammar and usage when writing or speaking. ・ Use nouns, pronouns, verbs, adjectives, and adverbs. ・ Form and use regular and irregular plural nouns. ・ Form and use regular and irregular verbs. ・ Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses. ・ Ensure subject-verb agreement. ・ Use coordinating and subordinating conjunctions to produce simple and compound and/or complex sentences.	Communicate ideas and needs without grammatical errors.	Communicate ideas and needs with minor grammatical errors.	Communicate needs and wants.

A.ELA.10.35 Demonstrate understanding of conventions of Standard English capitalization, spelling, and punctuation when writing. · Use commas properly with coordinating or subordinating conjunction when creating compound or complex sentences. · Spell most single-syllable words correctly and apply knowledge of word chunks in spelling longer words.	Communicate ideas in writing using sentence variety, proper punctuation, and correct spelling.	Communicate ideas in writing using simple sentences with proper punctuation.	Given example sentence(s), choose the item that follows rules of standard English.
Knowledge of Language			
A.ELA.10.36 Use knowledge of language and its conventions when writing, speaking, reading, or listening. · Choose words and phrases to convey ideas precisely. · Choose punctuation for effect. · Differentiate between context that calls for formal English (e.g., presenting ideas) and situations where informational discourse is appropriate (e.g., small-group discussion).	Communicate effectively in numerous situations, demonstrating the knowledge that language changes with context.	Communicate effectively in numerous situations, but without changing language as context changes.	Communicates using one word, symbol, or sound.

Vocabulary Acquisition and Use			
A.ELA.10.37 Determine or clarify the meaning of unknown words choosing from a range of strategies: · Use context to determine the meaning of unknown words. · Identify and use root words and the words that result when affixes are added or removed. · Consult reference materials (dictionaries, online vocabulary supports) to clarify the meaning of unfamiliar words encountered when reading.	Demonstrate, for new words in reading and writing activities, the correct use of appropriate reference materials from a variety of options.	Engage with provided reference material when encountering and using new words in reading and writing activities.	Given choice(s), identify different reference resources (e.g. dictionary, atlas/map, book).
A.ELA.10.38 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. · Demonstrate understanding of the use of multiple meaning words. · Interpret figurative language, including similes and metaphors, in context.	Understand and use figurative language and multiple-meaning words.	Given examples and non-examples, identify figurative language samples.	Given choice(s), identify figurative language examples.
A.ELA.10.39 Acquire and accurately use conversational, general academic, and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, and stammered).	Use appropriate word choices in describing actions, emotions, or states of being.	Indicate a word choice to complete a sentence.	Given choice(s), select a word to complete a sentence.

Support for WV Alternate Academic Achievement Standards
English/Language Arts • Grade 11

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Reading			
Cluster: Key Ideas and Details			
A.ELA.11.1 Ask and/or answer questions about key ideas; such as who, what, when, and where, to demonstrate understanding of key details in literary text; refer to the next as the basis for the answer.	Ask or answer literal and inferential questions such as who, what, when, and where, from a literary text, referring to text for answers.	Ask or answer literal questions such as who, what, when, and where, from a literary text, referring to text for answers.	Given choice(s), identify a character or an idea from a literary text.
A.ELA.11.2 Summarize literary texts using key details from the text; determine the central idea(s) of the story.	Determine, using supporting details, the central idea of a text.	Given choice(s), select an image or idea related to the text.	Given choice(s), select an image or idea related to the text.
A.ELA.11.3 Describe how characters in a story respond to major events and challenges in literary text.	Describe characters utilizing text details to justify description.	Describe character traits.	Given choice(s), select a main character.
A.ELA.11.4 Ask and answer questions about key ideas; such as who, what, when, where to demonstrate understanding of key details in informational texts referring to the text as the basis for the answers.	Ask or answer literal and inferential questions, such as who, what, when, and where, from an informational text, referring to the text for answers.	Ask or answer literal questions such as who, what, when, and where, from an informational text, referring to the text for answers.	Given choice(s), identify a character or an idea from an informational text.
A.ELA.11.5 Demonstrate an understanding of the central idea of an informational text; summarize the key details.	Determine, suing supporting details, the central idea of an informational text with supporting details.	Given choice(s), select the central idea in an informational text.	Given choice(s), select an image or idea related to the informational text.

A.ELA.11.6 Describe the interactions between two individuals, events, ideas, or pieces of information in an informational text.	Describe interactions utilizing an informational text details to justify description.	Describe interactions from an informational text.	Given choice(s), select an individual event, idea, or a piece of information from an informational text.
Cluster: Craft and Structure			
A.ELA.11.7 Determine the meaning of the words or phrases in literary text and their impact on meaning and tone.	Describe meaning of words or phrases in literary texts.	Given choice(s), select the meaning for words or phrases in literary texts.	Given choice(s), match words or phrases to their meaning in literary texts.
A.ELA.11.8 Identify how specific parts of a literary text contribute to its overall structure.	Recognize story elements that create mystery, tension, or surprise within the overall structure.	Identify a sentence in a literary text that creates mystery, tension, or surprise that contributes within the overall structure.	Given choice(s), recognize when a text conveys a specific emotion (e.g. utilize emotion cards) within the overall structure.
A.ELA.11.9 Identify the points of view of individual characters.	Identify the narrator/point of view in a literary text and support choice using specific examples.	Identify words that indicate the narrator/point of view in a literary text.	Given choice(s), select who is telling the story in a literary text.
A.ELA.11.10 Determine the meaning of words and phrases as they are used in an informational text.	Indicate words or phrases in informational text that suggest meaning and tone.	Given choice(s), choose the words or phrases that suggest meaning and tone from an informational text.	Given choice(s), select the meaning for words or phrases from informational texts.
A.ELA.11.11 Identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text.	Identify specific sentences which develop the main idea/claim of an informational text.	Given choice(s), identify supporting details to a specific claim from a particular sentence(s) or paragraph(s) of an informational text.	Given choice(s), identify a claim found in an informational text.
A.ELA.11.12 Identify the main purpose of informational text, including what the author wants to answer, explain, or describe.	Identify the main purpose of informational text.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the main purpose/idea of informational text.

Cluster: Integration of Knowledge and Ideas

A.ELA.11.13 Identify similarities and differences between a literary text and visual elements or multimedia presentations of the literary text to demonstrate understanding of its characters, setting, or plot.	Identify ways in which a literary text is similar and different than the visual or multimedia presentations of the literary text.	Identify whether both the literary text and the visual or multimedia presentations of the literary text contain certain elements.	Given choice(s), select the literary text, visual element, or multimedia presentation of the text that contains specific detail(s) or element(s).
A.ELA.11.14 Use information gained from illustrations (e.g., maps or photographs) and/or the words in an informational text to demonstrate understanding of the text (e.g., where, when, why, ad how key events occur).	Use informational illustrations or text to describe/discuss what inferences can be drawn.	Use informational illustrations with text to determine which one best describes the illustration.	Given choice(s), use informational illustrations with text to determine which one best describes the illustration.
A.ELA.11.15 Describe how evidence supports specific claims the author makes in an informational text.	Identify specific sentences within an informational text that support a specific claim.	Given choice(s), determine which evidence supports a specific claim in an informational text.	Given choice(s), identify an item or idea from an informational text.

Cluster: Range of Reading and Text Complexity

A.ELA.11.16 Read and demonstrate understanding of literature, including stories, dramas, and poetry, while engaged in individual or group readings of appropriately challenging literary texts.	Demonstrate understanding of assigned literary selection.	Given choice(s), identify the theme for various stories, dramas, and poetry.	Given choice(s), identify an element of the literary text (e.g. picture, symbol, or word).
A.ELA.11.17 Read and demonstrate understanding for appropriately challenging informational texts, including social studies, science, and technical texts, while engaged in individual or group readings.	Demonstrate an understanding of assigned informational texts, including social studies, science, and technical texts.	Given choice(s), identify theme/concept/idea for various informational texts, including social studies, science, and technical texts.	Given choice(s), identify an element of the informational texts (e.g. picture, symbol, or word).

Writing

Cluster: Text Types and Purposes

A.ELA.11.18 Use drawing, dictating, and/or writing to compose opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, and supplying a reason for the opinion; provide a sense of closure.	Given text on a topic, use drawing, dictation, and/or writing to indicate personal opinion and to provide a reason for that opinion.	Given text on a topic, indicate personal opinion through drawing, dictation, and/or writing.	Given choice(s), indicate a preference.
A.ELA.11.19 Use drawing, dictating, and/or writing to compose informative/explanatory texts by introducing a topic, using facts and definition to develop points, and providing a sense of closure.	Given facts and definitions for a topic, create informative/explanatory texts and justify reasoning through drawing, dictation, and/or writing.	Given facts and definitions for a topic, create informative/explanatory text through drawing, dictation, and/or writing.	Given information on a specific topic, identify a related drawing, orally recorded passage, and/or piece of writing.
A.ELA.11.20 Use drawing, dictating, and/or writing to narrate a well-elaborated event or short sequence of events, including details to describe actions, thoughts or feelings and providing a sense of closure.	Create a sequence of events providing detailed description of actions, thoughts, or feelings with a clear beginning, middle, and end.	Given choice(s), identify a sequence of events showing beginning, middle, and end.	Given choice(s), select the beginning and the ending items of a sequence.

Cluster: Production and Distribution of Writing

A.ELA.11.21 Produce writing in which the development and organization are appropriate to task and purpose.	Produce writing with clear organization.	Use a graphic organizer to illustrate development and organization in the writing process.	Given choice(s), identify an item that demonstrates proper use of the writing process.
A.ELA.11.22 Strengthen writing by planning, revising, editing, rewriting, or trying a new approach.	Illustrate the ability to find and fix mistakes in their own writing.	Illustrate the ability to find and/or fix mistakes in a provided document.	Given choice(s), identify an item which provides correct punctuation.
A.ELA.11.23 Use a variety of digital tools to produce and publish writing, including collaboration with peers.	With collaboration, create a digital product using information.	With collaboration, type information or input photos relating to a topic into a preset digital tool for production and publishing.	With collaboration, choose a word or picture to input using a digital tool for production and publishing.

Cluster: Research to Build and Present Knowledge

A.ELA.11.24 Conduct a short research project drawing on several sources to answer a question.	Use multiple sources to conduct research on a given topic.	Use multiple sources to fill in a graphic organizer on a given topic.	Given choice(s), choose a picture or word that relates to a given topic in research material.
A.ELA.11.25 Recall information from experiences or gather information from print and digital sources; sort evidence into provided categories.	After gathering information, sort the information into provided categories.	Sort given information into specific categories.	Given choice(s), choose a photo or word that represents a provided category.
A.ELA.11.26 Draw evidence from literary or informational texts to support writing. • Apply grade 11 reading standards to literature (e.g., "describe how characters in a story respond to major events and challenges in literary text"). • Apply grade 11 reading standards to nonfiction and other informational texts (e.g., "identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text).	Use evidence from given text to support writing.	Choose the appropriate information from a text to support an idea.	Given choice(s), choose a photo or word that was referred to in the text.

Cluster: Range of Writing

A.ELA.11.27 Write routinely for a range of discipline-specific tasks, purposes, and audiences.	Complete writing assignments on a routine basis.	Conveys ideas, either in written or pictorial format.	Identify an item/event/reason to write about.

Cluster: Comprehension and Collaboration			
A.ELA.11.28 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on a variety of grade 11 topics and issues and appropriately challenging texts. • Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion). • Respond appropriately to the comments of others through two or more exchanges. • Ask questions to clear up any confusion about the topics and texts under discussion.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately using proper conversational etiquette and rules.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately.	Engage or listen during discussions.
A.ELA.11.29 Given information presented in diverse media or format, determine the main idea and supporting details.	Determine the main idea(s) of diverse media presentations.	Given information presented in single medium or format, determine a single main idea.	Given choice(s), choose an item which represents topic.
A.ELA.11.30 After listening to a speaker, ask questions to demonstrate level of comprehension, gather additional information, or deepen understanding of a topic or issue.	Formulate and ask questions of a speaker to gather additional information or understanding.	Given a set of questions, choose an appropriate question for a speaker.	Given choices(s), choose a question for a speaker.
Cluster: Presentation of Knowledge and Ideas			
A.ELA.11.31 Speaking audibly, report on a topic or text, and/or tell a story or recount an experience with appropriate facts and relevant, descriptive details.	Present relevant information with supporting detail.	Present at least one supporting detail on a given event.	Given choices(s), choose item/ topic to share with audience.

A.ELA.11.32 Include multimedia components (e.g., graphics, images, music, and/or sound) and visual displays in presentations to enhance ideas, thoughts, and feelings.	Present information using multimedia components to enhance ideas, thoughts, and feelings.	Present information using multimedia components to share information.	Present pictures or other multimedia components.
A.ELA.11.33 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	Use complete sentences to provide requested detail or clarification.	Respond appropriately to a request.	Use a word or pictorial representation for communication.

Language

Cluster: Conventions of Standard English

A.ELA.11.34 Demonstrate understanding of the conventions of Standard English grammar and usage when writing or speaking. • Use nouns, pronouns, verbs, adjectives, and adverbs. • Form and use regular and irregular plural nouns. • Form and use regular and irregular verbs. • Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses. • Ensure subject-verb agreement. • Use coordinating and subordinating conjunctions to produce simple and compound and/or complex sentences.	Communicate ideas and needs without grammatical errors.	Communicate ideas and needs with minor grammatical errors.	Communicate needs and wants.

A.ELA.11.35	Communicate ideas in writing using sentence variety, proper punctuation, and correct spelling.	Communicate ideas in writing using simple sentences with proper punctuation.	Given example sentence(s), choose the item following rules of standard English.
Demonstrate understanding of the conventions of Standard English grammar and usage when writing or speaking. · Use nouns, pronouns, verbs, adjectives, and adverbs. · Form and use regular and irregular plural nouns. · Form and use regular and irregular verbs. · Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses. · Ensure subject-verb agreement. · Use coordinating and subordinating conjunctions to produce simple and compound and/or complex sentences.			

Cluster: Knowledge of Language

A.ELA.11.36 Use knowledge of language and its conventions when writing, speaking, reading, or listening.	Communicate effectively in numerous situations demonstrating the knowledge that language changes with context.	Communicate effectively in numerous situations, but without changing language as context changes.	Communicate using one word, symbol, or sound.
· Choose words and phrases to convey ideas precisely. · Choose punctuation for effect. · Differentiate between contexts that call for formal English (e.g., presenting ideas) and situation where informational discourse is appropriate (e.g., small-group discussion).			

Cluster: Vocabulary Acquisition and Use			
A.ELA.11.37 Determine or clarify the meaning of unknown words choosing from a range of strategies. • Use context to determine the meaning of unknown words. • Identify and use root words and the words that result when affixes are added or removed. • Consult reference materials (dictionaries, online vocabulary supports to clarify the meaning of unfamiliar words encountered when reading.	Demonstrate, for new words in reading and writing activities, correct use of appropriate reference materials from a variety of options.	Engage with provided reference material when encountering and using new words in reading and writing activities.	Given choice(s), identify different reference resources (dictionary, atlas/map, book)
A.ELA.11.38 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. • Demonstrate understanding of the use of multiple meaning words. • Interpret figurative language, including similes and metaphors, in context.	Understand and use figurative language and multiple-meaning words.	Given examples and non-examples, identify figurative language examples.	Given choice(s), identify figurative language examples.
A.ELA.11.39 Acquiring and accurately use conversational, general academic, and domain-specific words and phrases, including those that signal precise actions, emotions, or state of being (e.g., quizzed, whined, and stammered).	Uses appropriate word choices when describing actions, emotions, or states of being.	Indicate a word choice to complete a sentence.	Given choice(s), communicate effectively.

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Reading			
Cluster: Key Ideas and Details			
A.ELA.12.1 Ask and/or answer questions about key ideas; such as who, what, when, and where, to demonstrate understanding of key details in literary text; refer to the text as the basis for the answers.	Ask or answer literal and inferential questions; such as who, what, when, and where, from a literary text.	Given choice(s), ask or answer literal questions; such as who, what, when, and where, from a literary text.	Given choice(s), identify character or idea from a literary text.
A.ELA.12.2 Summarize literary texts using key details from the text; determine the central idea(s).	Determine central idea of a text with supporting details.	Given choice(s), select an image or idea related to the text.	Given choice(s), select an image or idea related to the text.
A.ELA.12.3 Describe how characters in a story respond to major events and challenges in literary text.	Describe characters utilizing text details to justify description.	Describe character traits.	Given choice(s), select main character.
A.ELA.12.4 Ask and answer questions about key ideas; such as who, what, when, where to demonstrate understanding of key details in informational texts referring to the text as the basis for the answers.	Ask or answer literal and inferential "wh" questions from an informational text.	Ask or answer literal "wh" questions from an informational text.	Given choice(s), identify character or idea from an informational text.
A.ELA.12.5 Demonstrate an understanding of the central idea of an informational text; summarize the key details.	Determine central idea of an informational text with supporting details.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the informational text.

A.ELA.12.6 Describe the interactions between two individuals, events, ideas, or pieces of informational in an informational text.	Describe interactions utilizing an informational text details to justify description.	Describe interactions from an informational text.	Given choice(s), select an individual, event, idea, or piece of information from an informational text.
Cluster: Craft and Structure			
A.ELA.12.7 Determine the meaning of words or phrases in literary texts and their impact on meaning and tone.	Describe literary texts.	Given choice(s), choose the meaning for words or phrases from literary texts.	Given choices, select the meaning for words or phrases from literary texts.
A.ELA.12.8 Identify how specific parts of a literary text contribute to its overall structure.	Identify story elements such as the creation of mystery, tension, or surprise within the overall structure.	Identify a sentence in a literary text that creates mystery, tension, or surprise within the overall structure.	Identify when a text conveys a specific emotion (e.g. utilize emotion cards) within the overall structure.
A.ELA.12.9 Identify the points of view of individual characters.	Identify the narrator/point of view using specific examples in a literary text.	Identify words that indicate the narrator/point of view in a literary text.	Given choice(s), elects who is telling the story in a literary text.
A.ELA.12.10 Determine the meaning of words and phrases as they are used in an informational text.	Indicate words or phrases in informational text that suggest meaning and tone.	Given choice(s), choose the words or phrases that suggest meaning and tone from an informational text.	Given choice(s), select the meaning for words or phrases from informational texts.
A.ELA.12.11 Identify how ideas or claims are developed by particular sentence(s) or paragraph(s) of an informational text.	Identify specific sentences which develop the main idea/claim of an informational text.	Identify supporting details to a specific claim given choices from particular sentence(s) or paragraph(s) of an informational text.	Given choice(s), identify a claim found in an informational text.
I A.ELA.12.12 Identify the main purpose of informational texts, including what the author wants to answer, explain or describe.	Identify the main purpose of informational text.	Given choice(s), select an image or idea related to the informational text.	Given choice(s), select an image or idea related to the main purpose/ idea of informational text.

Cluster: Integration of Knowledge and Ideas

A.ELA.12.13 Identify similarities and differences between a literary text and visual elements or multimedia presentations of the literary text to demonstrate understanding of its characters, setting, or plot.	Identify ways in which a literary text is similar and different than the visual or multimedia presentations of the literary text	Identify whether both the literary text and the visual or multimedia presentations of the literary text contain certain elements.	Identify the literary text, visual element, or multimedia presentation of the text that contains specific detail(s) or element(s).
A.ELA.12.14 Use information gained from illustrations (e.g., maps or photographs) and/or the words in an informational text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).	Utilize informational illustrations or text to describe/discuss what inferences can be drawn.	Utilize informational illustrations with text to determine which one best describes the illustration.	Given choice(s), utilize informational illustrations with text to determine which one best describes the illustration.
A.ELA.12.15 Describe how evidence supports specific claims the author makes in an informational text.	Identify specific sentences within an informational text showing support of a specific claim	Given choice(s), determine which evidence supports a specific claim in an informational text.	Given choice(s), identify an item or idea from an informational text.

Cluster: Range of Reading and Text Complexity

A.ELA.12.16 Read and demonstrate understanding of literature, including stories, dramas, and poetry, while engaged in individual or group readings of appropriately challenging literary texts.	Demonstrate an understanding of assigned literary selection.	Given choice(s), identify an understanding of the theme for various stories, dramas, and poetry.	Given choice(s), identify an element of the literary text (e.g. picture, symbol, or word).
A.ELA.12.17 Read and demonstrate understanding of appropriately challenging informational texts, including social studies, science.	Demonstrate an understanding of assigned informational texts, including social studies, science, and technical texts.	Given choice(s), identify an understanding of the theme/concept/idea for various informational texts, including social studies, science, and technical texts.	Given choice(s), identify an element of the informational text (e.g. picture, symbol, or word).

Writing

Cluster: Text Types and Purposes

A.ELA.12.19 Use drawing, dictating, and/or writing to compose opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, and supplying a reason for the opinion; provide a sense of closure.	Given text on a topic, indicate opinion and reason through drawing, dictation, and/or writing.	Given text on a topic, indicate opinion through drawing, dictation, and/or writing.	Given choice(s), indicate preference.
A.ELA.12.20 Use drawing, dictating, and/or writing to narrate a well-elaborated event or short sequence of events, including details to describe actions, thoughts, or feelings and providing a sense of closure.	Create a sequence of events providing detailed description of actions, thoughts, or feelings with a clear beginning, middle, and ending.	Given choice(s) identify a sequence of events showing beginning, middle, and end.	Given choice(s) identify the beginning and the ending items of a sequence.

Cluster: Production and Distribution of Writing

A.ELA.12.21 Produce writing in which the development and organization are appropriate to task and purpose.	Produce writing with clear organization.	Use a graphic organizer to illustrate development and organization in the writing process.	Given choice(s), identify item that demonstrates proper use of the writing process.
A.ELA.12.22 Strengthen writing by planning, revising, editing, rewriting, or trying a new approach.	Illustrate the ability to find and fix mistakes in their own writing.	Illustrate the ability to find and/or fix mistakes in a pre-written document.	Given choice(s), identify the correct punctuation.
A.ELA.12.23 Use a variety of digital tools to produce and publish writing, including collaboration with peers.	With collaboration, create a digital product using information.	With collaboration, type information or input photos relating to a topic into a preset digital tool for production and publishing.	With collaboration, choose a word or picture to input using a digital tool for production and publishing.

Cluster: Research to Build and Present Knowledge

A.ELA.12.24 Conduct a short research project drawing on several sources to answer a question.	Use multiple resources to conduct research on a given topic.	Use multiple sources to fill in a graphic organizer on a given topic	Given choice(s), choose a picture or word that relates to a given topic in research material.

A.ELA.12.25 Recall information from experiences or gather information from print and digital sources; sort evidence into provide categories.	After gathering information, sort the information into provided categories.	Sort given information into specific categories.	Given choice(s), choose a photo or word that represents a provided category.
A.ELA.12.26 Draw evidence from literary or informational text to support writing. · Apply grade 12 reading standards to literature	Use evidence from given text to support writing.	Choose the appropriate information from a text to support an idea.	Given choice(s), choose a photo or word that was referenced in the text.
Cluster: Range of Writing			
A.ELA.12.27 Write routinely for a range of discipline-specific tasks, purposes, and audiences.	Complete writing assignments on a routine basis.	Convey ideas, either in written or pictorial format.	Identify an item/event/reason which to write about.
Speaking and Listening			
Cluster: Comprehension and Collaboration			
A.ELA.12.28 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on a variety of grade 12 topics and issues and appropriately challenging texts. · Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion). · Respond appropriately to the comments of others through two or more exchange.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately using proper conversational etiquette and rules.	Participate in group discussions by staying on topic, listening to peers, and responding appropriately.	Engage or listen during discussions.
A.ELA.12.29 Given information presented in diverse media or format, determine the main ideas and supporting details.	Determine the main idea(s) of diverse media presentations.	Given information presented in single media or format, determine a single main idea.	Given choice(s), choose an item which represents topic.

A.ELA.12.30 After listening to a speaker, ask questions to demonstrate level of comprehension, gather additional information, or deepen understanding of a topic or issue.	Formulate and ask questions of a speaker to gather additional information or understanding.	Given a set questions, choose an appropriate question for a speaker.	Given choice(s), choose a question for a speaker.
Cluster: Presentation of Knowledge and Ideas			
A.ELA.12.31 Speak audibly, report on a topic or text, and/ or tell a story or recount an experience with appropriate facts and relevant, descriptive details.	Present relevant information with supportive detail.	Present at least one supportive detail on a given event.	Given choice(s), choose item/topic to share with audience.
A.ELA.12.32 Include multimedia components (e.g., graphics, images, music, and/or sound) and visual displays in presentations to enhance ideas, thoughts, and feelings.	Present information using multimedia components to enhance ideas, thoughts, and feelings.	Present information using multimedia components to share information.	Present pictures or other multimedia components.
A.ELA.12.33 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	Use complete sentences to provide requested detail or clarification.	Respond to a request appropriately with words.	Uses a word or pictorial representation for communication.

Language			
Cluster: Conventions of Standard English			
A.ELA.12.34 Demonstrate understanding of the conventions of Standard English grammar and usage when writing or speaking. · Use nouns, pronouns, verbs, adjectives, and adverbs. · Form and use regular and irregular plural nouns. · Form and use regular and irregular verbs. · Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses. · Ensure subject-verb agreement. · Use coordinating and subordinating conjunctions to produce simple, and compound and/or complex sentences.	Communicate ideas and needs without grammatical errors.	Communicate ideas and needs with minor grammatical errors.	Communicate needs and wants.
A.ELA.12.35 Demonstrate understanding of conventions of Standard English capitalization, spelling, and punctuation when writing. · Use commas properly with a coordinating or subordinating conjunction when creating compound or complex sentences. · Spell most single-syllable words correctly and apply knowledge of word chunks in spelling longer words.	Communicate ideas in writing using sentence variety, proper punctuation, and correct spelling.	Communicate ideas in writing using simple sentences with proper punctuation.	Given example sentences, choose the item following rules of standard English.

Cluster: Knowledge of Language			
A.ELA.12.36 Use knowledge of language and its conventions when writing, speaking, reading, or listening. · Choose words or phrases to convey ideas precisely. · Choose punctuation for effect. · Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).	Communicate effectively in numerous situations demonstrating the knowledge that language changes with context.	Communicate effectively in numerous situations, but without changing as context changes.	Communicate using one word, symbol, or sound.
Cluster: Vocabulary Acquisition and Use			
A.ELA.12.37 Determine or clarify the meaning of unknown words choosing from a range of strategies. · Use context to determine the meaning of unknown words. · Identify and use root words and the words that result when affixes are added or removed. · Consult reference materials (dictionaries, online vocabulary supports) to clarify the meaning of unfamiliar words encountered when reading.	Demonstrate correct usage of appropriate reference materials from a variety of options, for new words in reading and writing activities.	Demonstrate correct usage of appropriate reference materials from a variety of options, for new words in reading and writing activities.	Given choice(s), identify difference reference resources (e.g. dictionary, atlas/map, book)
A.ELA.12.38 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. · Demonstrate understanding of the use of multiple meaning words. · Interpret figurative language, including similes and metaphors, in context.	Indicate a word choice to complete a sentence.	Given examples and non-examples, can identify figurative language samples.	Given choice(s), identify figurative language examples.

A.ELA.12.39 Acquire and accurately use conversational, general academic, and domain-specific words and phrases including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, and stammered).	Uses appropriate word choices in conversations.	Indicate a word choice to complete a sentence.	Given choice(s), communicate wants and needs.

Support for WV Alternate Academic Achievement Standards
Science: Earth and Space Science

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Earth and Space Science			
Space System			
A.K.9.1 Use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	Answer questions about lunar phases, eclipses of the sun and moon, and seasons.	Identify lunar phases, eclipses of the sun and moon, and seasons.	Indicate lunar phases, eclipses of the sun and moon, and seasons.
History of Earth			
A.K.9.2 Use a model to show how constructive forces (e.g., volcanoes) and destructive mechanisms (e.g., weathering, coastal erosions) change Earth's surface.	Create models which demonstrate constructive and destructive forces and relate to changes in Earth's surface.	Given models, determine if the force represented is constructive or destructive.	Identify whether an action is constructive or destructive.
Earth's System			
A.K.9.3 Use evidence to support a claim that one change to Earth's surface can cause other changes over time (e.g., clear cutting a forest will increase erosion, damming a river may stop fish migration).	Given choice(s), identify appropriate evidence which would explain how one change to Earth's surface would cause changes over time.	Given evidence, identify one change to Earth's surface that can cause other changes over time.	Given choice(s) and evidence, identify one change to Earth's surface.
A.K.9.4 Use a model to describe the effects of water on Earth's surface (e.g., weathering, erosion, deposition, sedimentation).	Given choice(s)/options, differentiate between the varying effects that water can have on the Earth's surface.	Given a model, describe the changes evident from the effects of water on Earth's surface.	Given representations and choice(s), identify an effect of water on Earth's surface.

Weather and Climate

A.K.9.5			
Using a model, demonstrate an understanding of how the effects of changes in climate can impact human lives.	Given choice(s)/options, differentiate between the changes in climate that can impact human lives.	Given a model, describe how the effects of changes in climate can impact human lives.	Given representations and choices, identify how the effects of changes in climate can impact human lives.

Human Sustainability

A.K.9.6			
Demonstrate an understanding of how natural hazards have influenced human activity.	Given representation and choice(s), describe how natural hazards influence human activity.	Given representation and choice(s), identify natural hazards and discuss influence on human activity.	Given representations and choice(s), identify natural hazards.
A.K.9.7 Construct an argument for a strategy to conserve, recycle, or reuse resources.	Identify positive reasons for conserving, recycling, and reusing resources.	Identify a strategy to conserve, recycle, or reuse resources.	Answer questions pertaining to conservation, recycling, or reusing resources.
A.K.9.8 Analyze data to determine the effects of a conservation strategy on the level of a natural resource.	Given data, determine the effects of a conservation strategy on the level of a natural resource.	Given data, determine if the effects of a conservation strategy are positive or negative.	Given data, answer questions pertaining to the effects of a conservation strategy.
A.K.9.9 Identity how Earth systems are being modified due to human activity (e.g., mountains removed for mining and building roads, rivers widened for boat transportation, animal populations decreased due to deforestation, fish populations decreased due to over fishing).	Create representations of examples showing how Earth systems are affected by human activity.	Given representations, identify possible changes in Earth systems which could result from human activity.	Given representations, identify changes in systems due to human activity.

Engineering Design

A.K.9.10			
Generate and compare multiple possible solutions to a real-world problem based on how well each is likely to meet the criteria and constraints of the problem.	Create representations which compare solutions to real-world problems.	Given representations, compare solutions to a real-world problem.	Given representations, identify a solution to a real-world problem.

Science Literacy

Reading: Key Ideas and Details

A.K.9.11 Follow procedures when taking measurements or carrying out experiments.	Follow a lab activity and collect data using the appropriate measurements.	Complete documentation of collected data.	Given steps in an experiment, put them in the proper order.

Reading: Craft and Structure

A.K.9.12 Identify the meaning of symbols, key terms, and other domain-specific words and phrases.	Give the definition for specific terms, symbols, and other domain-specific words and phrases.	Match the meaning of symbols, key terms, and other domain-specific words and phrases.	Given a symbol, key term, and other domain-specific words and phrases, choose the correct definition when given choices.

Reading: integration of Knowledge and Ideas

A.K.9.13 Express information visually (e.g., in a flowchart, diagram, model).	Create graphic representations for given information.	Complete graphic representations for given information.	Identify a flowchart, diagram, or model

Writing: Text Types and Purpose

A.K.9.14 Compare and contrast discipline-specific content using domain-specific vocabulary to explain the topic.	Create Venn-diagram or other graphic representation to compare and contrast discipline-specific content with domain-specific vocabulary.	Given a list of attributes, identify the similarities and differences between discipline-specific content and domain-specific vocabulary.	Match discipline – specific content with domain – specific vocabulary.
A.K.9.15 Provide an explanation of discipline-specific content using domain-specific vocabulary to explain the topic.	Lead discussions and/or write utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Participate in discussions and or writing activities utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Use representations to explain domain-specific vocabulary.

Support for WV Alternate Academic Achievement Standards
Science: Biology

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Life Science			
Structure and Function			
A.S.10.1 Explain how different organs of the body carry out essential functions of life.	Create presentation explaining functions of body organs.	Identify various organs of the body and their functions.	Match the appropriate organ to its corresponding function.
A.S.10.2 Use a model to illustrate the organization and interaction of major organs into systems (e.g., circulatory, respiratory, digestive, sensory) in the body to provide specific functions.	Explains how body systems are organized and what their functions are.	Match the appropriate organ to the system.	Identify various systems of the body.
A.S.10.3 Collect data from an investigation to show how different organisms react to change (e.g., heart rate increases with exercise, pupils react to light).	Design investigation, complete investigation, and collect data showing how different organisms react to change.	Participate in an investigation and given data from the investigation, show how different organisms react to change.	Participate in an investigation to show how different organisms react to change.
Matter and Energy in Organisms and Ecosystems			
A.S.10.4 Use models to describe the energy transfer from the sun to producers to consumers.	Create a model demonstrating energy transfer from sun to producers to consumers.	Given a model, answer questions about energy transfer from the sun to producers to consumers.	Order relationships between consumers and producers.

Interdependent Relationships in Ecosystems

A.S.10.5 Use graphical representations to explain changes over time in the population size of an animal species including those on the endangered list.	Using a graphical representation, answer questions pertaining to the changes over time in the population size of an animal species including those on the endangered list.	Using a graphical representation, discuss the changes over time in the population size of an animal species including those on the endangered list.	Using a graphical representation, identify the change in the population size of an animal species.
A.S.10.6 Use graphical representations to explain an animal's dependence on its ecosystem (e.g., competition with other organisms, challenges due to climate, availability of land, food, water, shelter).	Using a graphical representation, answer questions to explain an animal's dependence on its ecosystem.	Using a graphical representation, discuss an animal's dependence on its ecosystem.	Using a graphical representation, identify an animal's dependence on its ecosystem.
A.S.10.7 Evaluate a strategy to protect a species.	Compare strategies to protect a species.	Describe different strategies available to protect a species.	Determine a strategy to protect a species.

Inheritance and Variation of Traits

A.S.10.8 Use a model to illustrate how growth occurs when cells multiply.	Discuss a model of cell growth	Describe a model of cell	Identify a model of cell growth
A.S.10.9 Explain why reproduction may or may not result in offspring with different traits.	When given specific traits of parents, determine the possible traits of the offspring.	Understand that the trait of an offspring is determined by one allele from each parent.	Given a picture of an adult species, identify the correct offspring.

Natural Selection and Evolution

A.S.10.10 Explain how the traits of particular species allow them to survive in their specific environments.	Given an environment, chose the species with the most beneficial traits to survive there.	Select the possible benefits of specific traits in particular species.	Match a specific trait of a species to an environment for which it is best designed.
A.S.10.11 Interpret data sets to identify an advantageous heritable trait.	Discuss why the advantageous trait occurs more frequently.	Determine reasons why a specific trait would be advantageous.	Look at a chart or graph and determine which trait is found more frequently.

Engineering, Technology and Applications of Science

Engineering Design

A.S.10.12	Given representations, identify a solution to a real-world problem.	Given representations, identify a solution to a real-world problem.	Given representations, identify a solution to a real-world problem.
Generate and compare multiple possible solutions to a real-world problem based on how well each is likely to meet the criteria and constraints of the problem.			

Science Literacy

Reading: Key Ideas and Details

A.S.10.13	Follow a lab activity and collect data using the appropriate measurements	Complete documentation of collected data.	Given steps in an experiment, put them in the proper order.
Follow procedures when taking measurements or carrying out experiments.			

Reading: Craft and Structure

A.S.10.14	Give the definition for specific terms, symbols, and other domain-specific words and phrases.	Match the meaning of symbols, key terms, and other domain-specific words and phrases.	Given a symbol, key term, and other domain-specific words and phrases, choose the correct definition when given choices.
Identify the meaning of symbols, key terms, and other domain-specific words.			

Reading: Integration of Knowledge and Ideas

A.S.10.15	Create graphic representations for given information.	Complete graphic representations for given information.	Identify a flowchart, diagram, or model.
Express information visually (e.g., in a flowchart, diagram, model).			

Writing: Text Types and Purposes

A.S.10.16	Create Venn-diagrams or other graphic representations to compare and contrast discipline-specific content with domain-specific vocabulary.	Given a list of attributes, identify the similarities and differences between discipline-specific content and domain-specific vocabulary.	Match discipline – specific content with domain – specific vocabulary.
Compare and contrast discipline-specific content using domain-specific vocabulary to explain the topic.			
A.S.10.17	Lead discussions and/or write utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Participate in discussions and or writing activities utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Use representations to explain domain-specific vocabulary.
Provide an explanation of discipline-specific content using domain-specific vocabulary to explain the topic.			

Support for WV Alternate Academic Achievement Standards

Science: Physical Science

Standard	Step 3 *What does it look like?*	Step 2 *What does it look like?*	Step 1 *What does it look like?*
Physical Science			
Structure and Properties of Matter			
A.S.11.1 Use a model to describe that matter is made of particles too small to be seen.	Identify the parts of the atom including nucleus, protons, neutrons, and electrons.	Answer questions about a demonstration that shows matter is made of particles too small to be seen.	Participate in a demonstration that shows matter is made of particles too small to be seen (e.g. adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.)
Chemical Reactions			
A.S.11.2 Identify the changes that occurred during a chemical reaction.	Create an experiment demonstrating changes that occur during a chemical reaction.	Participate in an experiment demonstrating changes that occur during a chemical reaction.	Given graphical representations, match the changes that occur in a chemical reaction.
A.S.11.3 Recognize a release or absorption of energy from a chemical reaction.	Identify whether a chemical reaction releases or absorbs energy.	Answer questions about an activity that displays a chemical reaction.	Participate in an activity that displays a chemical reaction.
Forces and Integrations			
A.S.11.4 Evaluate the effectiveness of safety devices and design a solution that could minimize the force of a collision.	Design/record data and evaluate an experiment demonstrating the effectiveness of different damage minimizing devices.	Participate in experiment demonstrating the effectiveness of different damage minimizing devices.	Identify a real-world safety device. (e.g. helmet, seat belt, parachute)
A.S.11.5 Build electromagnets to provide evidence that an electric current can produce a magnetic field.	Create a model demonstrating how electromagnets produce electric currents produce a magnetic field.	Identify materials needed to create simple electromagnet experiment.	Explore a diagram of how an electromagnetic field is produced (e.g. battery, wire, nails)

Energy

A.S.11.6 Test and refine a device (e.g., foam, plastic, metal containers, insulated box, or thermos) to either minimize or maximize thermal energy transfer (e.g., keeping liquids hots or cold, allowing liquids to warm or cool quickly, keeping hands warm in cold temperatures).	Identify examples of devices/ materials that minimize or maximize thermal energy transfer. (e.g. sleeve on hot coffee cup)	Test devices that minimize and/or maximize thermal energy transfer.	Explore examples of materials to minimize and/or maximize thermal energy transfer.
A.S.11.7 Investigate and predict the temperatures of two liquids before and after combining to show uniform energy distribution.	Predict the temperatures of two liquids before and after combining to show uniform energy distribution. (e.g. making bathwater comfortable)	Answer questions about the temperatures of two liquids before and after combining to show uniform energy distribution.	Identify that liquids can be varying temperatures.
A.S.11.8 Identify how devices convert one kind of energy to another (e.g., flashlight – stored chemical energy to light and heat energy, toaster – electric energy to heat energy).	Explain process of energy conversion.	Investigate examples of devices that convert one kind of energy to another.	Identify examples of devices that transfer energy.

Waves and Electromagnetic Radiation

A.S.11.9 Use a model to demonstrate an understanding that waves (e.g., light, sound, radio) are reflected, absorbed, or transmitted through various materials.	Explain how waves can be reflected, absorbed, or transmitted through various materials when given a model. (e.g. slinky, item displacement through water, bending of light waves through prisms)	Answer questions about a demonstration that shows waves can be reflected, absorbed, or transmitted through various materials.	Participate in an activity that demonstrates an understanding that waves reflected, absorbed, or transmitted through various materials.
A.S.11.10 Identify how each of the types of electromagnetic radiation is used or found in our everyday lives.	Answer questions about how each of the types of electromagnetic radiation is used or found in our everyday lives.	Identify graphical representations of electromagnetic radiation.	Identify devices that use electromagnetic radiation (radio, cell phone, X-rays).
A.S.11.11 Provide evidence that shows how some devices use light and soundwaves to transmit and capture information.	Answer questions about examples that use light and soundwaves to transmit and capture information (e.g. TV, computers/internet, radios, cell phones).	Identify devices that use light and soundwaves to transmit and capture information (e.g. TV, computers, radios).	Given choice(s) and/or representations, identify which object uses light and soundwaves to transmit and capture information.

Engineering, Technology and Application Science

Engineering Design

A.S.11.12			
Compare and contrast several design solutions to identify the best characteristics of each that can be combined in new solution to better meet the criteria for success.	Given representations, identify a solution to a real-world problem.	Given representations, identify a solution to a real-world problem.	Given representations, identify a solution to a real-world problem.

Science Literacy

Reading: Key Ideas and Details

A.S.11.13			
Follow multistep procedures when taking measurements or carrying out experiments.	Follow a lab activity and collect data using the appropriate measurements	Complete documentation of collected data.	Given steps in an experiment, put them in the proper order.

Reading: Craft and Structure

A.S.11.14			
Identify the meaning of symbols, key terms, and other domain-specific words and phrases.	Give the definition for specific terms, symbols, and other domain-specific words and phrases.	Match the meaning of symbols, key terms, and other domain-specific words and phrases.	Given a symbol, key term, and other domain-specific words and phrases, choose the correct definition when given choices.

Reading: Integration of Knowledge and Ideas

A.S.11.15			
Express information visually (e.g., in a flowchart, diagram, model).	Create graphic representations for given information.	Complete graphic representations for given information.	Identify a flowchart, diagram, or model.

Writing: Text Types and Purposes

A.S.11.16			
Compare and contrast discipline-specific content using well-chosen facts and domain-specific vocabulary to explain the topic.	Create Venn-diagrams or other graphic representations to compare and contrast discipline-specific content with domain-specific vocabulary.	Given a list of attributes, identify the similarities and differences between discipline-specific content and domain- specific vocabulary.	Match discipline – specific content with domain – specific vocabulary.
A.S.11.17			
Provide an explanation of discipline-specific content using well-chosen facts and domain-specific vocabulary to explain the topic.	Lead discussions and/or write utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Participate in discussions and or writing activities utilizing discipline-specific content using domain-specific vocabulary to explain the topic.	Use representations to explain domain-specific vocabulary.

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