Task Specific Change in Materials/Approach from Instruction to Assessment: Mathematics

In order to provide more rigor as required by Texas legislation, the materials used in STAAR Alternate assessment observations must be different than those used during instruction. The materials must vary enough from instruction so that the student is not just rotely repeating an answer or response from a previous instructional session without truly demonstrating the skill. The changes in materials, therefore, should be related to the content being measured. During the assessment observation a student must provide a different answer to the predetermined criterion or respond to a different experience in the predetermined criterion than was observed during instruction. Because some tasks and predetermined criteria are written specifically for a certain skill, teachers need to plan instruction and assessments in advance to ensure a change in materials is made. For example, when specific skills are to be assessed, it may be necessary to introduce and teach similar skills during instruction so that the content of the assessment observation is not compromised.

Instruction is critical since an assessment observation only reflects the skill acquisition that occurred during the instructional process. The assessment tasks have to be presented as written and cannot be changed, thus maintaining the standardization quality of STAAR Alternate. A student's performance can only be considered valid if the assessment task has not been previously practiced in the exact way that it was designed. Therefore, teachers must review the assessment tasks prior to beginning instruction to ensure the task is not duplicated, which will compromise the authentic response required during the assessment observation. Teachers are required to approach teaching sessions differently than assessment observations. The change in approach may vary from assessment task to assessment task.

Question to ask yourself: What is the best way for the skills/concepts in the assessment task to be addressed during instruction?			
Answers:			
As the skill naturally occurs	In separate lessons	With new items only	In a different presentation

The information on the following page provides guidance on the instruction for the assessment task that should occur before the observation. The change in materials must maintain the complexity level of the task and result in a new experience or a different answer than is requested in the assessment observation.

Instructional Focus				
	Natural Occurrences	Separate Lessons	New Items*	Different Presentations
Skill/Concept	• Broadly addressed as the skill/concept naturally occurs • Exposure to numerous experiences showing how the skill/concept relates to the student	• Specifically taught in isolation of other skills due to the complexity of the skill/concept • Requires the use of new items presented in the same way as in the predetermined criteria	• Specifically taught with new items *	• Overall skill or concept taught but in a way that is different than that of the assessment task
Predetermined criteria	• Not specifically addressed during instruction since the opportunity to emphasize the skill/concept frequently occurs	• Each predetermined criterion is addressed in isolation of the other predetermined criterion since each skill/concept must be learned individually as a separate skill/concept before being demonstrated together • Each predetermined criterion becomes a single, separate lesson which can occur over numerous days	• Each predetermined criterion is addressed in the same way as in the assessment task • All predetermined criteria are addressed together during a single lesson since the skill is often a process that cannot be completed until all three criteria are performed	• Not specifically addressed during instruction since the predetermined criteria are often very specific • Repeating the predetermined criteria during instruction exactly as written in the task would compromise the assessment observation
Entire assessment task	• Not presented as written during instruction – presented for the first time as an entire task during the assessment observation	• Not presented as written during instruction – becomes a culminating activity for the first time as an entire task during the assessment observation	• Presented as written during instruction – instruction and assessment observation are exactly mirrored with the exception of the items	• Not presented as written during instruction – presented for the first time during the assessment observation

* The term "item" refers to materials as well as to specific examples or problems presented in a task. An "item" refers to, but is not limited to, the following examples: consonant letter, word, paragraph, text, topic, equation, geometric figure, graph, quantity, journal entry, map, act of a good citizen, geographic feature, investigation, characteristic of a habitat, and a basic need.

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Models and solves addition and subtraction problems						
3/Math	1/3.3	3	Addition equations	⬤	Use new quantities of objects and predetermined sums to make different addition number sentences	Given the number sentence __? __ = (a predetermined sum) and two sets of objects in which each set has the same number of objects as the predetermined sum: determine the number of objects to use from each set to create an addition equation, determine the needed operation (+), record the number sentence
3/Math	1/3.3	2	Addition equations	⬤	Use new real-life addition problems and sets of objects with different quantities	Given a real-life addition problem and two sets of objects: count the objects in each set, identify the needed operation to combine the sets (+), identify the sum of the combined sets
3/Math	1/3.3	1	Adding more	⬤	Use new objects in different quantities	Given a set of objects and an empty container: experience zero objects, participate in adding each object to the container, acknowledge all of the objects
Essence Statement B: Identifies and uses patterns to solve problems						
3/Math	2/3.6	3	Extending patterns	⬤	Use new scenarios requiring the student to purchase different priced items using identical coins totaling different values and to extend the pattern	Given a collection of ten dimes, nickels, and pennies and the scenario to purchase an item for a given price using identical coins without receiving change: determine the needed coins, determine the pattern, determine the amount when two more coins are added to the pattern
3/Math	2/3.6	2	Extending patterns	▢	Provide opportunities to construct and extend different patterns (i.e., AB, AABB, ABC) with different modalities (i.e., auditory, visual, or tactile)	Given a real-life problem to create a decorative item with an ABC pattern and items arranged in an ABC pattern: identify the pattern, reproduce the ABC pattern, supply another strand in the pattern
3/Math	2/3.6	1	Patterning	▢	Provide experiences with AB patterns presented through different modalities (i.e., auditory, visual, or tactile)	Given a real-life problem requiring participation in making a decorative item with an AB pattern: explore the A and B items separately, participate in creating the AB pattern, respond to the completed decorative item

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Natural Occurrences ★	Separate Lessons ▲	New Items ⬤	Different Presentations ▪

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement C: Uses measurement to solve problems						
3/Math	4/3.11	3	Comparing measurements	▪	Provide instruction on measuring objects with different measurement tools and comparing lengths	Given a real-life problem in which the student is determining which items will fit between two shelves: select an appropriate tool for measuring length, measure the height of the space between the shelves, measure items to determine which ones will fit on the shelf
3/Math	4/3.11	2	Ordering measurements	▪	Provide instruction on measuring objects with different measurement tools and ordering objects by length	Given a real-life problem to identify which items will fit between two shelves: assist in creating a measurement tool the exact height of the shelves, identify which items will fit on the shelf, arrange the items in order from tallest to shortest on the shelf
3/Math	4/3.11	1	Ordering lengths	★	Expose to and reinforce the concept of long and short as opportunities unrelated to shirt sleeves occur in the course of a regular school day	Given a short-sleeve shirt and a long-sleeve shirt: explore the two shirts to recognize the amount of the arm that is covered, acknowledge the short sleeves, respond to the long sleeves
Essence Statement D: Use data to solve problems						
3/Math	5/3.13	3	Organizing data on a graph	⬤	Use new data requiring different graph labels and different higher-level thinking questions	Given a set of simple data and an unlabeled graph: determine the labels for the graph, record the data on the graph, answer a question about the graph
3/Math	5/3.13	2	Organizing data on a graph	⬤	Use new objects in different amounts requiring new graph labels and different recall questions	Given objects or representations to sort into three categories, a three-column graph, and five labels for possible categories: supply the labels for the three categories on the graph, arrange the objects or representations on the graph according to category, answer a question about the data on the graph
3/Math	5/3.13	1	Organizing data on a graph	⬤	Use new objects in different horizontal and vertical graphic displays	Given three identical objects: explore the objects, participate in placing each object on a graphic display one at a time, experience the three objects placed together in the graphic display

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Uses place value to demonstrate understanding of numbers						
4/Math	1/4.1	3	Ordering numbers	⬤	Use new groups of objects with different quantities	Given a group of at least 30 objects already divided into three groups, each containing a different number of objects and no group having more than 15 objects: determine the number of objects in each group, record the number of objects in each group on a given number line containing only hash marks representing numbers one to fifteen, record the missing numbers on the number line
4/Math	1/4.1	2	Ordering numbers	⬤	Use new groups of objects with different quantities	Given three groups of objects, two groups having less than ten objects and one group having ten or more objects: count the objects in each group, identify the written number that corresponds to the quantity in each group, identify the group with the "most"
4/Math	1/4.1	1	Counting	▢	Provide instruction on groups containing different quantities of items and corresponding numbers	Given two groups of objects, one group having one object and the other group having 10 objects: explore the number of objects in each group, participate in pairing the written number that corresponds to the quantity in each group, acknowledge the group that has "more"
Essence Statement B: Recognizes relationships between sets						
4/Math	2/4.7	3	Determining patterns	▢	Provide instruction on problem solving, patterning, and determining how to extend a pattern to a specified resolution involving various scenarios	Given a real-life situation in which a given set of items is to be distributed with one item to each location; however, the number of locations will exceed the number of items: conclude that the task cannot be completed, determine the number of times the pattern will need to be extended for each location to receive an item, determine how many items will need to be provided at the beginning of the next delivery to the same locations
4/Math	2/4.7	2	Extending patterns	▢	Provide instruction on how to extend a pattern to a specified resolution involving various scenarios	Given ten containers in a row in which the first few containers have one item; identify how many objects are in each container, identify how many objects are needed to supply the remaining containers with one object, assist in placing one object in each remaining container to complete the pattern
4/Math	2/4.7	1	Patterning	☆	Expose to one-to-one correspondence patterning activities when items need to be allocated in daily tasks	Given three empty containers and three identical objects: participate in placing the first and second objects paired with a sensory experience into the first and second containers, anticipate that an object needs to be added to complete the pattern, participate in completing the pattern

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ▣

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement C: Uses attributes to identify geometric figures						
4/Math	3/4.8	3	Geometric attributes	▣	Provide instruction on three-dimensional geometric figures and their attributes	Given a wide array of real-life objects in the shape of three-dimensional geometric figures: classify the objects by geometric attributes, justify the way the classifications were made, locate one more object for each group of geometric figures from objects in the classroom environment
4/Math	3/4.8	2	Geometric attributes	▣	Provide instruction on three-dimensional geometric figures and their attributes	Given four real-life objects in the shape of three-dimensional geometric figures, one of which is a cylinder: identify the cylinder, identify the shape of the cylinder's base, identify one attribute for each of the remaining three-dimensional geometric figures
4/Math	3/4.8	1	Geometric attributes	▣	Provide experiences involving geometric figures	Given identical two-dimensional geometric figures that when joined together form a new geometric figure and a template of the new figure that is formed: explore the figures, participate in placing the two-figures on the template to form the new figure, acknowledge the entire surface of the new figure
Essence Statement D: Use temperature and time to solve problems						
4/Math	4/4.12	3	Measuring temperature	▲	Instruct on measuring different types of temperature (i.e., outside air, classroom/AC, food, body) with different types of thermometers	Given a real-life problem that requires measuring the temperature for a specific purpose: select a tool for measuring temperature from a wide array of measurement tools, measure temperature using the thermometer, generate a conclusion about the temperature
4/Math	4/4.12	2	Temperature	☆	Expose to numerous experiences with warm, cold, and room temperature items (not water)	Given three containers of water, one with chilled water, one with room-temperature water, and one with warm water, in random order: examine the water in each container, arrange the containers in order from warmest to coldest, match each container to a representation for "warm," "cold," or "room temperature"
4/Math	4/4.12	1	Ordering degrees of temperature	☆	Expose to numerous experiences with warm and cold items	Participate in gathering cold and warm objects from typical storage locations, respond to the cold objects, respond differently to the warm objects

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Models and solves addition, subtraction, multiplication, and division problems						
5/Math	1/5.3	3	Subtraction equations	⬤	Use new quantities of objects to make different subtraction problems and number sentences	Given a set of objects in a quantity equal to a two-digit number: generate a subtraction problem, generate a corresponding number sentence, generate an addition number sentence to check the answer
5/Math	1/5.3	2	Subtraction equations	⬤	Use new quantities of objects requiring different number sentences	Given a group of objects and the following number sentence __ - __ = __: identify the total amount of objects in the group, count how many objects were removed, complete the number sentence
5/Math	1/5.3	1	Subtracting	▢	Provide experiences to explore groups of objects before and after objects are removed	Given a container of objects: experience the total number of objects, participate in removing all but one object from the container, experience the one object that remains
Essence Statement B: Uses attributes to identify geometric figures						
5/Math	3/5.7	3	Geometric attributes	▢	Provide instruction on types of geometric figure, and orienting objects to meet a specific purpose	Given different-sized envelopes and business letters all written on the same size piece of paper to be folded to fit into the envelopes then opened and marked according to folds: determine the minimum number of folds needed for each business letter, determine the types and number of shapes that were formed for each folded letter, compare the number of folds needed for each letter
5/Math	3/5.7	2	Geometric attributes	▢	Provide instruction on two-dimensional geometric figures and their attributes	Given three different, large two-dimensional geometric figures: identify each figure, identify the number of sides for each figure, match three smaller figures with the same shape as the large figure to the larger figures
5/Math	3/5.7	1	Geometric attributes	☆	Expose to and reinforce the shape of two-or three dimensional objects as they occur in natural settings	Given a template of a placemat with the shape of a napkin, shape of a plate, and the base of a glass: explore each outlined shape on the template, explore the shape of each piece of tableware, participate in placing each piece of tableware on its corresponding shape
Essence Statement C: Uses measurement to solve problems						
5/Math	4/5.10	3	Capacity	▲	Instruct on measuring and comparing liquid quantities in different-sized containers and comparing various prices based on different quantities	Given a real-life problem to determine whether one large container or several small containers of the same product is a better buy and a large container and other small, identical containers all of which are empty (the total capacity of the combined small containers will equal the capacity of the large container): determine the total number of cups to fill the large container and each small container, compare the quantities, determine the better buy when given the price for the large container and the price for each of the small containers

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Natural Occurrences ☆	Separate Lessons △	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
5/Math	4/5.10	2	Capacity	△	Instruct on measuring capacity using different sized and shaped containers; focus on the concepts of "most" and "least"	Given a real-life problem to serve equal portions of a beverage to a given number of people and three containers with different shapes, different capacities, and similar sizes: count the number of servings for each container after pouring the contents of the containers into uniform cups, identify the containers with the most and least servings, identify which container best meets the need to serve the given number of people
5/Math	4/5.10	1	Capacity	☆	Experience numerous containers of different capacities; focus on "more"	Given two containers with significantly different capacities: explore the two containers, participate in filling each container, acknowledge the container that holds "more"
Essence Statement D: Displays and solves problems using data						
5/Math	5/5.13	3	Graphing	▢	Provide instruction using new problems involving data organized and displayed in different ways	Given a real-life problem to determine the most profitable time to sell a product and related unorganized data: determine the number of products sold during three times of day, generate a graph to display the data, determine the most profitable time to sell the product
5/Math	5/5.13	2	Graphing	▢	Provide instruction using different types of graphs; focus on concepts of "fewest" and "most"	Given a graph with the total number of products sold during three different times of the day: identify the total number of products sold for each time period, identify the time when the fewest products were sold, identify the most profitable time
5/Math	5/5.13	1	Graphing	▢	Provide experience with graphs and the concept of "more"	Given a real-life problem in which an item will be sold over a two-day period to find the most profitable day: participate in labeling a graph with a representation for the two days, participate in placing items on the graph representing each item sold, acknowledge the category on the graph with more items

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ■

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Uses numbers in a variety of equivalent forms						
6/Math	1/6.1	3	Place value	⬤	Use new two-digit numbers	Given a collection of at least nine dimes to be used as a bank for trading and a collection of pennies totaling more than ten but not a multiple of ten: determine how many pennies can be traded for dimes, determine how many pennies are left after trading for dimes, record the corresponding two-digit number for the combined value of the dimes and leftover pennies
6/Math	1/6.1	2	Place value	⬤	Use new two-digit numbers	Given a two-digit number and a collection of dimes and pennies: identify the number of dimes and pennies that correspond to the number in the tens places and ones place, match coins to the tens place and ones place, count the value of each coin to reach the total value
6/Math	1/6.1	1	Counting	⬤	Use new objects in different quantities	Given a one-digit number and the same number of objects: explore the objects, participate in placing the objects on top of the number, acknowledge the total number
Essence Statement B: Recognizes relationships involving geometric figures						
6/Math	3/6.6	3	Geometric attributes	■	Provide instruction on two- and three-dimensional geometric figures and their attributes	Given two-dimensional and three-dimensional geometric figures: classify the figures by attributes, justify the way the groups were classified, determine a common attribute of two teacher-selected geometric figures
6/Math	3/6.6	2	Geometric attributes	■	Provide instruction on two-and three-dimensional geometric figures and their attributes	Given a three-dimensional geometric figure with faces: identify one face on the figure, identify a two-dimensional figure the same shape as the face on the three-dimensional figure, count the faces on the three-dimensional figure
6/Math	3/6.6	1	Geometric attributes	■	Provide experiences involving geometric figures and sorting by attributes	Given an empty box with a square and a circle opening cut out of one side: explore the shape of the openings, participate in sorting cylinders from cubes, participate in placing the cylinders and cubes in the appropriate openings in the box

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Natural Occurrences ☆	Separate Lessons △	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement C: Use estimation, unit conversions, and measurement to solve problems						
6/Math	4/6.8	3	Estimating weight	△	Instruct on weighing objects using standard and non-standard units, comparing weights, and estimating weights	Given a non-standard unit that approximates one pound and a group of identical food items whose total weight is in excess of one pound: estimate the number of food items needed to equal the weight of the non-standard unit (1 lb.), determine the weight of the food items using a scale, evaluate the accuracy of the estimate
6/Math	4/6.8	2	Estimating weight	⬤	Use new items to be weighed and different choices for the non-standard unit	Given a packaged food item: examine the weight of the food item without weighing it, identify the best non-standard unit of measure for the food item, assist in using the non-standard unit to approximate the weight of the food item
6/Math	4/6.8	1	Experiencing weight	☆	Expose to heavy and light items	Given items of varying weights and a device that is activated when a heavy item is placed on it: explore the light and heavy items, participate in placing each item on the device, respond to the heavy items when the weight activates the device
Essence Statement D: Uses probability to make predictions						
6/Math	5/6.9	3	Graphing trend lines	▢	Provide instruction on plotting data points and making predictions based on trend lines	Given data that depicts a steady increase or decrease in number indicating a trend for a four-day period and a sequentially labeled graph: record the data points and the resulting trend line for the four days, predict what the data will most likely be for the fifth day, justify his or her prediction based on the amount of daily increase or decrease
6/Math	5/6.9	2	Graphing trend lines	▢	Provide instruction on connecting data points and identifying trend lines	Given a graph that has data points for a four-day period that depicts a steady increase or decrease in number; complete the graph by connecting the data points to form a trend line, identify the current trend shown by the line, identify which direction the trend will most likely go
6/Math	5/6.9	1	Graphing	⬤	Use different graphs with new activities and sensory input	Given a graph including representations of routine activities the student has done where one activity is repeated several times and paired with a sensory experience: explore the representations on the graph, respond to the sensory input provided as the graph is explored, anticipate the sensory input representing the most frequently occurring activity

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Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Represents and uses numbers in a variety of equivalent forms						
7/Math	1/7.1	3	Fractions	▢	Provide instruction on numerators and denominators of fractions	Given a whole object and eight pieces that when put together form the whole object: generate one-fourth using the pieces, generate one-half using the pieces, record each fraction in its original form and in lowest terms
7/Math	1/7.1	2	Fractions	▢	Provide instruction on modeling and identifying fractions	Given an object divided into fourths but presented individually as equal-sized pieces: identify a model of a whole, identify a model of two-fourths, identify the fraction represented by the model of two-fourths
7/Math	1/7.1	1	Fractions	☆	Expose to numerous whole items with opportunities to divide and share equal parts with others	Given a whole item to be divided in half to be shared: explore the whole item, participate in dividing the item in half, participate in sharing the item equally
Essence Statement B: Use equations to solve problems						
7/Math	2/7.5	3	Multiplication equations	⬤	Use new problems for different number of people with packages containing new quantities of a different item	Given a real-life problem in which he or she needs to determine how many packages of an item sold in quantities of 100 are needed for a number of people, in excess of 300 but not a multiple of 100: generate a multiplication equation representing the total number of items found in one package, generate multiplication equations to represent each time an additional package is needed until the problem is solved, determine how many packages will be needed
7/Math	2/7.5	2	Multiplication equations	⬤	Use a new problem for a different number of people with packages containing new items	Given a real-life problem in which he or she needs to identify how many packages of an item sold in multiples of 10 are needed for at least 50 people in multiples of ten and a list of multiplication equations that have the first two equations completed and represent the number of packages multiplied by 10 that equal the total number of items: complete the remaining equations, identify how many packages are needed for the given number of people, identify how many packages are needed for a greater number of people
7/Math	2/7.5	1	Addition equations	▢	Provide experiences for the student to match objects to numbers and combine sets	Given an equation (1+1=2) with objects representing each number in the equation: explore the equation with its corresponding objects, participate in increasing the first addend by one and changing the corresponding addend for two new equations as the teacher adds objects and numbers to represent the new sums, respond to the new equations

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Essence Statement C: Uses coordinate geometry to locate and name points and graph reflections and translations						
Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
7/Math	3/7.7	3	Points on a number line	△	Instruct on mixed numbers and using different measuring tools or number lines; measure items to the inch or half-inch intervals	Given a unnumbered ruler with hash marks for inches and half-inches and an object that measures exactly to a half-inch interval: generate the number labels for the whole numbers on the ruler, generate the number labels for the mixed numbers on the ruler, measure an item to the half-inch
7/Math	3/7.7	2	Points on a number line	⬤	Use new tickets with different row and seat numbers	Given a ticket indicating a row and seat number: identify his or her seat in the row, identify a seat with a lower seat number, identify a seat with a higher seat number
7/Math	3/7.7	1	One-to-one correspondence and math language	⬤	Use new objects in quantities of more than three; count objects one to one in a line using informal vocabulary	Given three objects: explore the objects, participate in placing the objects horizontally in adjacent containers, acknowledge the objects that were placed in a line as the teacher uses informal language describing the placement
Essence Statement D: Uses estimation and measurement to solve problems						
7/Math	4/7.9	3	Measuring perimeter	△	Instruct on determining perimeter with new shapes or physical spaces with different perimeters; use different measurement tools	Given a real-life problem comparing the perimeter of two rectangles (one having longer side lengths than the other): select a tool for measuring perimeter from a wide array of tools, determine the perimeter of each rectangle, compare the perimeters of the two rectangles
7/Math	4/7.9	2	Measuring with non-standard units	⬤	Use new items varying in lengths and measure using different non-standard measurement tools resulting in different non-standard units	Given a 12-inch ruler: choose a non-standard measurement tool that approximates the length of the ruler, assist in measuring an item greater than one foot with the non-standard tool, identify the length in non-standard units
7/Math	4/7.9	1	Measuring length	★	Expose to experiences with objects of different lengths; use language of "long," "short," and "same"	Given two objects of the same length and one object of a different length arranged so that the lengths can be easily compared: explore the length of each object, acknowledge the two objects that are the same length, respond to the object of a different length

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ⬛

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Solves problems using operations						
8/Math	1/8.2	3	Division and multiplication equations	⬤	Use new real-life problems with new quantities of objects to make different division problems and equations	Given a real-life problem in which a given number of objects needs to be shared equally and a group of objects equal to a two-digit number that can be divided without a remainder: generate a division problem using the objects, generate a corresponding equation, generate a multiplication equation to check the answer to the division problem
8/Math	1/8.2	2	Division equations	⬤	Use new quantities of objects to be divided into different numbers of equal groups	Given a real-life problem in which a given number of objects needs to be divided into equal groups: arrange the objects into a specified number of equal groups, identify the number of objects in each group, identify an equation that represents the problem
8/Math	1/8.2	1	Division	☆	Expose to numerous opportunities to divide objects into groups and share	Given objects to be divided equally into two groups for sharing: participate in dividing the objects equally into two groups after exploring them, respond to each equal group of objects, participate in sharing the objects
Essence Statement B: Estimates and solves problems involving proportional and non-proportional relationships						
8/Math	2/8.3	3	Patterns in multiplication	⬤	Use new real-life problems and new numbers of items and different numbers of people to make new multiplication problems	Given a real-life problem in which three items are needed per person for a specified number of people: record a corresponding multiplication equation, determine the total number of items needed for the number of people, generate another equation when the number of people is increased
8/Math	2/8.3	2	Patterns in tables	⬤	Use new prices and different coins in tables	Given a partially completed table that when completed will show the total number of the same kind of coins needed to purchase an item for a specified amount: identify the pattern, complete the table, identify the total number of coins needed to purchase the item
8/Math	2/8.3	1	Large and small quantities	☆	Expose to numerous opportunities to experience differences in quantities focusing on "more" or "most"	Given a real-life problem in which a large quantity of the same item is needed: explore one item paired with the number "1", experience 100 items that are identical to the original item and paired with the number "100", respond to the larger amount

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ▣

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement C: Uses transformational geometry						
8/Math	3/8.6	3	Translations and rotations	▣	Provide instruction on the definition of a rotation and translation and opportunities to orient a variety of different items to model transformations	Given one real-life object positioned by the teacher and other objects requiring a translation or rotation in order to be oriented like the first object: generate a rotation for each object that requires a rotation, generate a translation for each object that requires a translation, determine if a rotation or translation was performed
8/Math	3/8.6	2	Symmetry and reflections	▣	Provide instruction on the definition of symmetrical and nonsymmetrical figures, practice reflections, and identify lines of symmetry	Given three two-dimensional figures, one that is symmetrical and two that are not symmetrical: assist in folding each figure to try to find a line of symmetry, identify the figure that is symmetrical, identify a part that can be added to one of the nonsymmetrical figures to make a reflection
8/Math	3/8.6	1	Positioning objects	☆	Expose to opportunities to participate in orienting objects for correct placement	Given an object to be placed with other like objects already positioned on a shelf: explore the part of the object that should be placed outward, participate in turning and placing the object properly on the shelf, participate in sliding the object next to the like objects
Essence Statement D: Displays and interprets relationships among data						
8/Math	5/8.12	3	Range and mode of data	▲	Instruct on organizing data and determining range and mode	Given a list of numbers in random order with at least two of the numbers being the same: organize the data in a list, determine the range of the data, determine the mode of the data
8/Math	5/8.12	2	Interpreting data in graphs	▣	Provide instruction on reading and creating different types of graphs	Given a pictograph with four categories of data displayed and a bar graph with the same data for three of the corresponding categories: match the displayed data from the pictograph to the displayed data on the bar graph, identify which category of data is missing, supply the missing data on the bar graph
8/Math	5/8.12	1	Sorting and graphing data	⬤	Use different surveys and graphs	Participate in collecting responses/objects to represent the results of a survey about a preference, participate in grouping the data by preference, acknowledge the data as it is placed on a real-object graph

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ◼

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Shows a basic understanding of functions						
Algebra 1	1/1	3	Patterns in tables of data	◼	Provide instruction on displaying data in different tables and comparing the data	Given a completed table showing the relationship between number of items sold and the total amount of money made for a specified amount (one column displays the number of items sold in increments of one and the second column displays the total amount of money made): generate a table to display the number of products sold at a new price and the total amount of money that would be made, compare the data in each table, generate a conclusion about how a change in price affects the amount of money made
Algebra 1	1/1	2	Patterns in tables of data	◼	Provide instruction on identifying information in three column tables and extending the tables	Given a real-life problem in which products are sold for $3.00 each along with a three column table labeled "Number of Products," "Cost of One Product," and "Total Earned": identify the pattern in the first three rows of the table, choose the operation that was used between the first and second column to arrive at the totals, complete another row to extend the table
Algebra 1	1/1	1	Patterns in addition problems	◼	Provide experiences with number sentences and corresponding objects	Given objects each of which can be separated into two parts and a number sentence (1+1=2) with objects representing each number: experience the objects for each number in the presented equation, participate in separating the objects into two parts, participate in placing the separated objects into a new number sentence (2+2=4), experience the objects representing the new equation as the teacher counts by twos
Essence Statement B: Uses mathematical skills to simplify expressions and solve problems						
Algebra I	2/4	3	Multiplication and division	◼	Provide instruction on multiplication and division problems and corresponding equations	Given a simple recipe without fractions that makes six servings: generate an equation for adjusting one ingredient for 12 servings, generate a second equation for adjusting one ingredient for three servings, solve both equations
Algebra I	2/4	2	Multiplication	⬤	Use new two-digit numbers requiring different arrangements	Given a specified number of servings that total a two-digit number: identify a multiplication equation that represents the student arrangement of servings in equal rows, construct a new arrangement of servings into equal rows, identify a multiplication equation that represents the new arrangement

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Natural Occurrences ☆	Separate Lessons △	New Items ⬤	Different Presentations ▢

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Algebra I	2/4	1	Combining sets	▢	Provide instruction in counting sets of objects into one total for various objects in different amounts	Given three objects in a row: participate in counting the objects, participate in creating another identical row when given three more objects, respond to the set of objects when combined and counted as a total
Essence Statement C: Understands different representations of linear functions						
Algebra I	3/5	3	Solving problems using tables	△	Instruct on determining wages, creating graphs and tables, and creating equations to correspond with problems	Given a real-life problem in which the student works at a job, earns a specific amount an hour, and works a specific number of hours each day: determine how much is earned each day, generate a graph or table to show the total earned each day for five days, generate an equation to show the total earned for the five days
Algebra I	3/5	2	Using data in tables	⬤	Provide instruction on identifying information in tables and extending the table for a new row	Given a real-life problem requiring the student to find the cost of riding the bus for five days and a two-column table with four completed rows (one column displays the number of days and the other column displays the cost): identify the cost of riding the bus for one day, identify the cost of riding the bus for three days, complete the table supplying the cost of riding the bus for five days
Algebra I	3/5	1	Fact families	☆	Expose to a token economy system where privileges are earned and cashed in	Participate in a task that earns the student a dollar which can be exchanged for a preferred activity, participate in pairing the dollar with the equation 0 + 1 = 1, acknowledge the equation 1 − 1 = 0 that represents the exchange
Essence Statement D: Solves quadratic equations in a variety of ways						
Algebra I	5/10	3	Graphing trends in data	△	Instruct on creating graphs, plotting trend lines, and evaluating information on graphs	Given a table that contains data for product sales for a 5 day period where the data for the first three days shows a gradual increase in sales and the fourth and fifth days show a gradual decrease: generate a graph and plot the data points, generate the line connecting the data points, evaluate the sales data

MATHEMATICS

Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ◼

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Algebra I	5/10	2	Graphing trends in data	◼	Provide instruction on counting by 100's and plotting and reading graphs	Given a table that contains product sales that change in increments of 100 over a five day period (data for the first day and second day will show a gradual increase, the third day sales will peak, and the fourth and fifth day will show a gradual decrease) and a partially completed graph representing a portion of the data from the table: complete plotting the remaining data from the table on the graph, construct a curve connecting the data points, identify a true statement about the sales results represented in the graph
Algebra I	5/10	1	Creating graphs	◼	Provide instruction on pairing numbers on a graph with the corresponding number of objects	Given nine identical squares to be placed in a series of columns; participate in placing one square in the first column, two squares in the second column, and three squares in the third column to represent a gradual increase; participate in placing two squares in the fourth column and one square in the fifth column to represent a gradual decrease, experience the curve as the teacher emphasizes the curve created by the data

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Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ◼

Grade/ Subject	Rep Cat/ K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Essence Statement A: Recognizes the foundations of geometric concepts						
Geometry	1/1	3	Measuring and determining area	▲	Instruct on measuring lengths, determining area, and comparing amounts	Given two rectangles (the second rectangle should have two of the sides the same length as the first rectangle but an increased length of the other two sides) and a wide array of measurement tools: select a tool for measuring length, determine the area for both rectangles, conclude how increasing the lengths of any of the sides of the rectangles affect the area
Geometry	1/1	2	Measuring perimeter	▲	Instruct on measuring lengths and finding perimeter using a formula	Given a tool for measuring length and a rectangular object in which the side lengths are whole numbers: identify the formula used for finding perimeter, assist in measuring the sides of the rectangular object, identify the perimeter of the rectangular object
Geometry	1/1	1	Measuring length	◼	Provide experiences with measurement tools and the process of measuring	Given a yardstick and three 12-inch rulers with unique physical characteristics: explore the length of the yardstick, participate in placing the rulers end-to-end next to the yardstick, experience the length of the three combined rulers in relation to the length of the yardstick
Essence Statement B: Uses different representations for geometric relationships and solves problems						
Geometry	2/4	3	Using right angles and lines of symmetry	◼	Provide instruction on types of angles and line of symmetry in real-life objects	Given a collating task and a collection of papers of different sizes and shapes presented in disarray: determine which papers have at least one right angle, organize the papers so that one right-angled corner per sheet is aligned, determine where to place the papers along the line of symmetry in an open folder
Geometry	2/4	2	Using right angles and congruent figures	◼	Provide instruction on identifying base shapes, congruent objects, and orienting shapes to fit a specified purpose	Given an object with a base that is a right triangle to place in a storage container with a square base: match the right angle of the object's base to one of the right angles of the container's base to place the object in the container, choose an object that has a base that is congruent to the base of the object already placed in the container from objects that have varying bases, arrange the object to fit in the container

MATHEMATICS

Natural Occurrences ☆	Separate Lessons ▲	New Items ⬤	Different Presentations ◼

Grade/ Subject	Rep Cat/K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Geometry	2/4	1	Symmetry	☆	Expose student to real life experiences involving folding objects for specific purposes	Given square shaped napkins: explore the four right-angled corners of the napkins, participate in folding the napkins diagonally along the line of symmetry, respond to the triangular-shaped napkins
Essence Statement C: Uses geometric representations to solve problems						
Geometry	3/6	3	Parallel and perpendicular lines	◼	Provide instruction on the attributes of parallel and perpendicular lines	Given a city map and a real-life problem in which the student needs to locate the streets surrounding a designated area: locate a designated area on the map, locate two parallel streets adjacent to the designated area, locate two parallel streets that are perpendicular to the original two streets
Geometry	3/6	2	Parallel and perpendicular lines	◼	Provide instruction on the attributes of parallel and perpendicular lines	Given a portion of a map and one street clearly emphasized: construct a model of parallel and perpendicular lines using manipulatives, identify a street that is parallel to the emphasized street using the model, identify a street that is perpendicular to the emphasized street forming an intersection
Geometry	3/6	1	Attributes that enhance movement	◼	Provide new experiences with attributes of geometric figures	Given spheres and cubes placed one at a time on a inclined plane: explore the geometric figures, respond to the figures that roll down an inclined plane, participate in grouping the figures by attributes
Essence Statement D: Uses the concept of congruence in geometric figures						
Geometry	4/10	3	Transformations	⬤	Use new geometric figures and different orientations	Given a wide array of two-dimensional geometric figures some of which are the same size and shape but others are not: select two geometric figures that are reflections of each other, determine how to orient the two figures so that they are reflections of each other, generate a reflection of the figures after the teacher has changed the orientation of one figure by using the other figure
Geometry	4/10	2	Symmetry	◼	Provide instruction on the concept of congruency	Given different lids that vary in both size and shape that are grouped by the student by shape: identify the definition of the word "congruent", identify which group of lids is the appropriate shape for the opening of each container identify which lid is the right size for the opening of each container

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Natural Occurrences ☆	Separate Lessons ▲	New Items ◯	Different Presentations ▨

Grade/ Subject	Rep Cat/K&S	Level	Skill Focus	Code	Description of Instruction	Assessment Task Summary
Geometry	4/10	1	Positioning objects	☆	Expose to changing positions of items for a purpose	Given a large envelope that can fit in a mail slot only one way: participate in attempting to place the envelope into the mail slot when the envelope is not positioned correctly to do so, participate in rotating the envelope so that it will fit in the mail slot, respond as the envelope as it is successfully placed in the mail slot