



Standardized Assessment Tasks for
STAAR Alternate

Grade 4 Mathematics

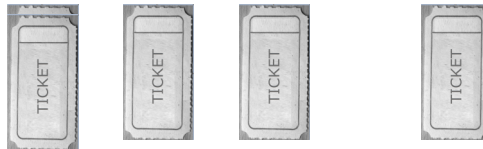
Definitions/Examples for STAAR Reporting Category 1 (4.3) Essence Statement A

The following definitions clarify terms used in the grade 4 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

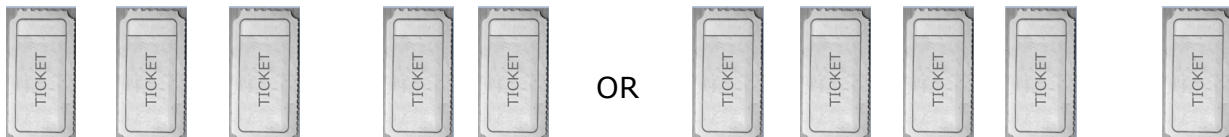
Level 3: page 4

For this Level 3 task, a student is expected to represent a real-life situation with a number sentence, make a change to the situation, and represent that change with another number sentence. See example below:

- The teacher presents the student with **several** tokens and models a real-life situation such as, "A student earns one token for each completed task. He had previously earned 3 tokens. The student completed another task and earned 1 more token. Show me a number sentence for the situation."



- The number sentence $3+1=4$ represents this real-life problem. The student must generate this number sentence on his or her own. The teacher must be careful to maintain the complexity level 3 requirements and not indicate to the student that an addition number sentence is needed.
- The teacher then presents information requiring the student to modify the situation such as, "How could you change the situation to show that more tasks were completed?" or "How could you change the situation to show that more tokens were earned?" The teacher must be careful to maintain the complexity level 3 requirements that the student be the one to determine the change that is made.
- The student could arrange the tokens in an acceptable manner as shown in two examples below. The student must do so on his or her own.



- The teacher then states: "Show me a number sentence for the new situation."
- The number sentence $3+2=5$ or $4+1=5$ represents this real-life situation. The student must generate the number sentence to match the new situation on his or her own.

Level 2: page 5

In this Level 2 task, a student is presented a real-life problem involving addition and sets of objects modeling the problem. See example below:

- The teacher presents the student with several tokens and models a real-life situation such as, "A student earns one token for each completed task. He had previously earned 3 tokens. The student completed another task and earned 1 more token." The problem could be modeled like this:



- The student will count the number in each set.
- The number sentence $3+1=4$ represents this real-life problem. The student should identify this number sentence from at least three choices.
- The teacher or student then modifies the real-life problem. The teacher could use the phrase, "Instead of just one token, what if the student earned two tokens?"
- The teacher then states: "Show me a number sentence for the new situation."
- The number sentence $3+2=5$ represents this modified problem. The student should identify this number sentence from at least three choices.

STAAR Reporting Category 1 – Numbers, Operations, and Quantitative Reasoning: The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(4.3) Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers and decimals. The student is expected to</p> <p>(A) use addition and subtraction to solve problems involving whole numbers; Supporting Standard</p> <p>(B) add and subtract decimals to the hundredths place using [concrete objects and] pictorial models. Supporting Standard</p>	<p>Essence Statement A: Models and solves addition and subtraction problems.</p>

Level 3

Prerequisite skill: model and create addition and subtraction problem situations with concrete objects and write corresponding number sentences

The student will be presented a real-life problem involving addition of whole numbers using concrete objects. The student will generate a number sentence to represent the problem. The student will be directed to modify the original real-life problem resulting in a change to one of the addends. The student will generate a change to the problem affecting the addends. The student will generate a new number sentence to represent the change.

Predetermined Criteria

1. The student will generate a number sentence to represent the problem.
2. The student will generate a change to the problem affecting the addends.
3. The student will generate a new number sentence to represent the change.

Process skill: identify mathematics in everyday situations

Level 2

Prerequisite skill: model and create addition and subtraction problems in real situations with concrete objects

The student will be presented a real-life problem involving addition and sets of objects modeling the problem. The student will count the objects in each set. The student will identify a number sentence to represent the problem. A change to the problem will be made. The student will identify a new number sentence to represent the change.

Predetermined Criteria

1. The student will count the objects in each set.
2. The student will identify a number sentence to represent the problem.
3. The student will identify a new number sentence to represent the change.

Process skill: identify mathematics in everyday situations

Level 1

Prerequisite skill: use concrete models or make a verbal word problem for adding up to 5 objects

The student will be presented a set of objects and a container to hold the objects. The student will experience "zero" objects in the container as the teacher records "0" for the addend of a number sentence. The student will participate in adding each object to the container as the teacher records "+1" on the number sentence. As the teacher records "= __," to reflect the sum, the student will acknowledge all of the objects in the container.

Predetermined Criteria

1. The student will experience "zero" objects in the container as the teacher records "0" for the addend of a number sentence.
2. The student will participate in adding each object to the container as the teacher records "+1" on the number sentence.
3. The student will acknowledge all of the objects in the container.

Definitions/Examples for STAAR Reporting Category 2 (4.7) Essence Statement B

The following definitions clarify terms used in the grade 4 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

Levels 3, 2, and 1: pages 7 and 8

pattern – an arrangement that repeats according to a rule. There should be at least three repeating iterations/strands to establish a pattern.

- For the Level 3 task, a pattern of one item per one delivery location is appropriate. There should be numerous delivery locations with at least three items available for delivery to the first three locations.
- For the Level 2 task, a pattern of one item per one container is appropriate. There should be 10 containers for this task with at least the first three containers in the row filled with one object each.
- For the Level 1 task, a pattern of one item per one container is appropriate. There should be exactly three containers for the task.

STAAR Reporting Category 2 – Patterns, Relationships, and Algebraic Reasoning: The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectation	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectation
<p>(4.7) Patterns, relationships, and algebraic thinking. The student uses organizational structures to analyze and describe patterns and relationships. The student is expected to</p> <p>(A) describe the relationship between two sets of related data such as ordered pairs in a table. Readiness Standard</p>	<p>Essence Statement B: Recognizes relationships between sets.</p>

Level 3

Prerequisite skill: identify, describe, and extend repeating and additive patterns to make predictions and solve problems

The student will be presented a real-life situation in which he or she is given a set of items to distribute to multiple locations. A one-to-one pattern of one item to one location should be established, but the number of locations will be greater than the number of items given to the student. After the items have been distributed, the student will conclude why the task cannot be completed. The student will determine the number of times the pattern will need to be extended for each location to receive an item to complete this delivery. The student will determine how many items he or she will need for the next delivery to provide equal distribution to the same locations.

Predetermined Criteria

1. The student will conclude why the task cannot be completed.
2. The student will determine the number of times the pattern will need to be extended for each location to receive an item to complete this delivery.
3. The student will determine how many items he or she will need for the next delivery to provide equal distribution to the same locations.

Process skill: identify mathematics in everyday situations

Transition

Level 2

Prerequisite skill: identify, describe, and extend concrete and pictorial patterns in order to make predictions and solve problems

The student will be presented 10 containers in a row. The first few containers in the row will contain one object each. The student will identify how many objects are in each container. The student will identify how many objects are needed so that each remaining container receives one object. The student will be provided the number of objects he or she indicated. The student will assist in placing one object in each of the remaining containers to complete the pattern.

Predetermined Criteria

1. The student will identify how many objects are in each container.
2. The student will identify how many objects are needed so that each remaining container receives one object.
3. The student will assist in placing one object in each of the remaining containers to complete the pattern.

Process skill: identify mathematics in everyday situations

Transition

Level 1

Prerequisite skill: use patterns to predict what comes next, including cause-and-effect relationships

The student will be presented three empty containers and three identical objects. The student will participate in placing the first object, paired with a sensory experience, into the first container and the second object, paired with a sensory experience, into the second container. When a third container is approached, the student will anticipate that an object needs to be added to complete the pattern. The student will participate in completing the pattern by adding the third object, paired with the sensory experience, to the third container.

Predetermined Criteria

1. The student will participate in placing the first object, paired with a sensory experience, into the first container and the second object, paired with a sensory experience, into the second container.
2. The student will anticipate that an object needs to be added to complete the pattern.
3. The student will participate in completing the pattern by adding the third object, paired with the sensory experience, to the third container.

Definitions/Examples for STAAR Reporting Category 4 (4.11)
Essence Statement C

The following definitions clarify terms used in the grade 4 mathematics assessment tasks to ensure that the content of the tasks is understood. When appropriate, examples and nonexamples have been provided for further clarification. These are just examples and do not represent all the appropriate ways to test the skills in the STAAR Alternate assessment tasks.

Level 3: page 11

In this Level 3 task, the student is expected to organize weights listed on cards from heaviest to lightest.

- The cards must contain the weight and the unit (spelled out or abbreviated); a number listed on the card without a unit listed would NOT be appropriate. Examples could include:

7 pounds	or	7 lbs	NOT	7
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Level 1: page 12

In this Level 1 task, identical stackable objects are placed on a part of a student's body.

- Copies of the same textbook could be placed on the student's lap or identical beanbags could be placed in the student's hand. Based on each student's individual needs, the teacher must decide what objects and what parts of the body are appropriate for this task.

STAAR Reporting Category 4 – Measurement: The student will demonstrate an understanding of the concepts and uses of measurement.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(4.11) Measurement. The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass. The student is expected to</p> <ul style="list-style-type: none"> (A) estimate and use measurement tools to determine length (including perimeter), area, capacity, and weight/mass using standard units SI (metric) and customary; Readiness Standard (B) perform simple conversions between different units of length, between different units of capacity, and between different units of weight within the customary measurement system; Supporting Standard (C) use [concrete] models of standard cubic units to measure volume; Supporting Standard (D) estimate volume in cubic units; Supporting Standard (E) explain the difference between weight and mass. Supporting Standard 	<p>Essence Statement C: Uses measurement to solve problems.</p>

Level 3

Prerequisite skill: compare and order two or more objects according to weight/mass (from heaviest to lightest)

The student will be presented a scale for measuring weight and at least five items each weighing a different whole-number amount. The student will measure the weight of each item using the scale. The weights will be recorded on individual cards. The student will organize the weights listed on the cards from heaviest to lightest. The student will determine which items have weights that fall between two whole-number amounts that have been predetermined by the teacher.

Predetermined Criteria

1. The student will measure the weight of each item using the scale.
2. The student will organize the weights listed on the cards from heaviest to lightest.
3. The student will determine which items have weights that fall between two whole-number amounts that have been predetermined by the teacher.

Process Skill: use tools such as real objects, manipulatives, and technology to solve problems

Transition

Level 2

Prerequisite skill: compare two objects according to weight/mass (heavier than, lighter than or equal to)

Three cards will be displayed labeled with "heavier than ___ pounds," "same as ___ pounds," and "lighter than ___ pounds." The student will be presented a problem that requires identifying items that are heavier than, the same as, or lighter than a given whole-number amount. The student will be presented a scale for measuring weight and items that each weigh a different whole number amount. The student will assist in weighing each item. After each item is weighed, the weight will be recorded on the item. The student will match the items with the recorded weights to the "heavier than," "same as," and "lighter than" cards. The student will identify the items that are the heaviest and the lightest.

Predetermined Criteria

1. The student will assist in weighing each item.
2. The student will match the items with the recorded weights to the "heavier than," "same as," and "lighter than" cards.
3. The student will identify the items that are the heaviest and the lightest.

Process Skill: use tools such as real objects, manipulatives, and technology to solve problems

Transition

Level 1

Prerequisite skill: informally recognize and compare weights of objects or people

The student will be presented several identical items of the same weight that can be easily stacked. One item will be placed on a part of the student's body. The student will experience the weight of one item. The student will participate in stacking additional items on top of the first item. The student will respond to the accumulated weight of all items.

Predetermined Criteria

1. The student will experience the weight of one item.
2. The student will participate in stacking additional items on top of the first item.
3. The student will respond to the accumulated weight of all items.

**Definitions/Examples for STAAR Reporting Category 5 (4.13)
Essence Statement D**

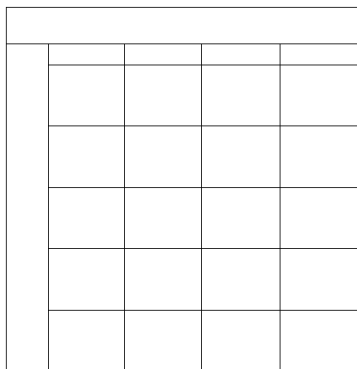
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Level 3: page 14

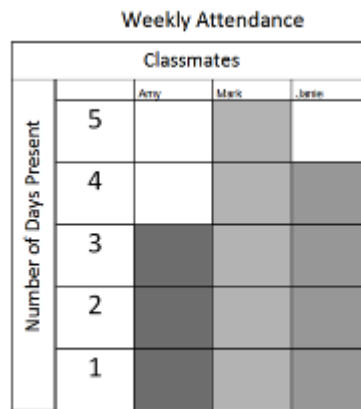
In this Level 3 task, the student must be presented an unlabeled bar-type or picture graph. The student should label and record the data on the graph and generate a title for the graph on his or her own. A real-object graph is NOT appropriate for this Level 3 task.

bar-type graph – a graph that displays bars to represent data.

Unlabeled Bar-Type Graph

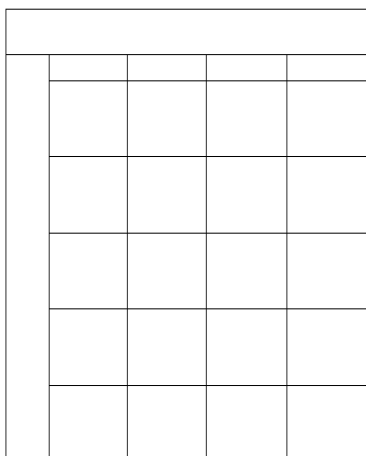


Completed Bar-Type Graph

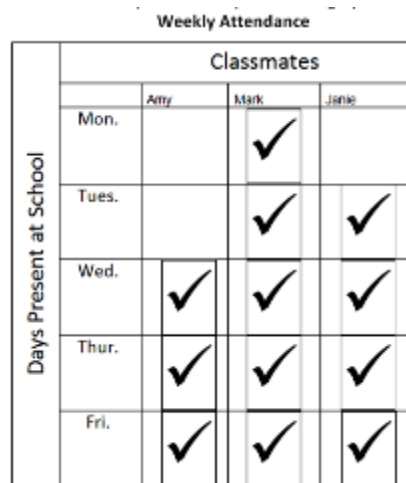


picture graph – a graph that displays pictures to represent data; also called a pictograph.

Unlabeled Pictograph



Completed Pictograph



STAAR Reporting Category 5 – Probability and Statistics: The student will demonstrate an understanding of probability and statistics.	
TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations	Essence of TEKS Knowledge & Skills Statement / STAAR-Tested Student Expectations
<p>(4.13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to</p> <p>(A) use [concrete objects or] pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation; Supporting Standard</p> <p>(B) interpret bar graphs. Readiness Standard</p>	<p>Essence Statement D: Uses data to solve problems.</p>

Level 3

Prerequisite skill: construct picture graphs and bar-type graphs

The student will be asked to determine who should receive the weekly attendance award. The student will be presented the total number of days each of three students were present for one week. The student will be presented an unlabeled picture or bar-type graph. The student will record the data on the graph. The student will generate a title for the graph. The student will determine who will receive the attendance award.

Predetermined Criteria

1. The student will record the data on the graph.
2. The student will generate a title for the graph.
3. The student will determine who will receive the attendance award.

Process skill: explain and record observations using objects, words, pictures, numbers, and technology

Level 2

Prerequisite skill: collect and sort data

An event will be planned. The student will assist in conducting a survey to decide which of three food choices is the most preferred to serve at the event. The student will identify the total for each food choice. The student will identify the food to be served at the event.

Predetermined Criteria

1. The student will assist in conducting a survey.
2. The student will identify the total for each food choice.
3. The student will identify the food to be served at the event.

Process skill: explain and record observations using objects, words, pictures, numbers, and technology

Transition

Level 1

Prerequisite skill: sort objects that are the same and different into groups and use language to describe how the groups are similar and different

During clean-up time, the class organizes objects into containers. The student will be presented an empty container and three identical objects. The student will explore the three identical objects. The student will participate in placing each identical object into the container. The student will be presented a significantly different object. The student will participate in discarding the different object.

Predetermined Criteria

1. The student will explore the three identical objects.
2. The student will participate in placing each identical object into the container.
3. The student will participate in discarding the different object.

Transition