Washington Office of Superintendent of
PUBLIC INSTRUCTION

Washington Access to Instruction and Measurement (WA-AIM): Grade 8 ELA, Math, and Science Performance Tasks

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WASHINGTON ACCESS TO INSTRUCTION AND MEASUREMENT (WA-AIM)

Grade 8 ELA, Math, and Science Performance Tasks

2022–2023

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HOW TO USE THIS DOCUMENT

This document outlines the required standards to be assessed at this grade level. Each standard contains 3 access points.

Educators should review the access points associated with each standard. For each student taking the WA-AIM, the educator will choose the access point that best reflects the student's knowledge, skills, and abilities in relationship to each individual standard.

Once one access point for each standard has been selected for administration, the educator will administer a Performance Task form associated with that access point level.

Each Performance Task will require the use of 1 form. Forms can be selected or created within the INSIGHT system. Each form must contain five items that meet all requirements found under the relevant access point. For each access point educators will select a pre-built form containing five items that fully meet the requirements of the access points OR create a form by selecting five unique items from the item library housed in the test delivery platform, INSIGHT.

Each student in grade 8 will need to be administered 15 total forms (5 ELA, 5 Math, and 5 Science), each containing five items.

All form selection, creation, registration to student, and student performance data will occur in INSIGHT. While educators are no longer allowed to create item content, allowable adaptations/accommodations will be listed for each standard and/or access point within this document.

RI.8.6 READING INFORMATIONAL TEXT: CRAFT AND STRUCTURE

Washington K–12 Learning Standard

RI.8.6 Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

Essential Element

EE.RI.8.6 Determine an author's purpose or point of view and identify examples from text to that [sic] describe or support it.

Figure 1: Access Points RI.8.6 (M, I, L)

More	Intermediate	Less
Student will determine an author's purpose or point of view and identify examples from a text that describe or support that purpose/point of view.	**When provided with an author's purpose or point of view, student will identify specifics from a text that describe or support it.**	**Given an informational text on a familiar topic, student will identify what action the author wants the reader to take.**
Requirements: • Every performance task must have at least five unique items/questions. • The five items must relate to multiple texts. • Source material must be an informational text with a clear purpose/point of view. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Each of the five items must relate to a different text. • Source material must be an informational text with a clear purpose/point of view. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items must relate to five different topics. • Source material must be an informational text with a clear purpose/point of view. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form

2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Pages of literary text(s) may be enlarged and/or cut apart
- Scribe and/or Speech to Text
- Sign story
- Masking
- Highlighting by student as response

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

RI.8.9 READING INFORMATIONAL TEXT: INTEGRATION OF KNOWLEDGE AND IDEAS

Washington K–12 Learning Standard

RI.8.9 Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

Essential Element

EE.RI.8.9 Identify where two different texts on the same topic differ in their interpretation of the details.

Figure 2: Access Points RI.8.9 (M, I, L)

More	Intermediate	Less
Student will explain how two texts on the same topic agree or disagree.	**Student will identify how two texts on the same topic disagree.**	**Student will identify a detail that supports an author's argument in a text.**

Requirements:
• Every performance task must have at least five unique items/questions.
• Task can include five items that require the student to explain how two texts on the same topic:
  ○ agree
  ○ disagree
  ○ or a combination of both
• The five items can relate to one topic or to multiple topics.
• Source material must be two informational texts on the same topic that clearly agree or disagree.
• In a multiple-choice item, teacher must use the answer choices provided.
	Requirements:
	• Every performance task must have at least five unique items/questions.
	• The five items must relate to pairs of texts on the same topics.
	• The pairs of texts must include points of difference.
	• Source material must be two informational texts that provide conflicting information on the same topic.
	• In a multiple-choice item, teacher must use the answer choices provided.
		Requirements:
		• Every performance task must have at least five unique items/questions.
		• The five items can relate to one text or to multiple texts.
		• Source material must be an informational text that supports an author's argument.
		• In a multiple-choice item, teacher must use the answer choices provided.

More	Intermediate	Less
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Pages of literary text(s) may be enlarged and/or cut apart
- Scribe and/or Speech to Text
- Sign story
- Masking
- Highlighting by student as response

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

W.8.8 WRITING: RESEARCH TO BUILD PRESENT KNOWLEDGE

Washington K–12 Learning Standard

W.8.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Essential Element

EE.W.8.8 Select quotes providing relevant information about a topic from multiple print or digital sources.

Figure 3: Access Points W.8.8 (M, I, L)

More	Intermediate	Less
Student will paraphrase quotations gathered from multiple print or digital sources.	**Student will identify quotes or information that is relevant to a topic from a print or digital source.**	**Student will identify a source that is relevant for a given familiar topic.**
Requirements: • Every performance task must have at least five unique items/questions. • The five items can relate to one topic or to multiple topics. • Source material must be an informational text. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Task may include five items that require the student to identify: o quotes relevant to a topic o information relevant to a topic o or a combination of both • Students must be given access to several different information sources. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items must relate to five different topics. • Students must be given access to several different information sources. • In a multiple-choice item, teacher must use the answer choices provided.

More	Intermediate	Less
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Pages of literary text(s) may be enlarged and/or cut apart
- Scribe and/or Speech to Text
- Sign story
- Masking
- Highlighting by student as response
- Sentence frames/starters

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

SL.8.4 SPEAKING AND LISTENING: PRESENTATION OF KNOWLEDGE AND IDEAS

Washington K–12 Learning Standard

SL.8.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well- chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

Essential Element

SL.8.4 Present descriptions, facts, or details supporting specific points made on a topic.

Figure 4: Access Points SL.8.4 (M, I, L)

More	Intermediate	Less
Student will prepare and present a speech on a familiar topic and will include in that presentation supporting points.	**Student will present details to support a point that can be used in a presentation.**	**Student will identify a fact and/or a descriptor from a presentation on a familiar topic.**
Requirements: • Every performance task must have at least five unique items/questions. • The five items can relate to one topic or to multiple topics. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items must relate to five different topics. • The details must support a specific point. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items must relate to five different topics. • Items can require students to include: ○ facts from a presentation ○ descriptions from a presentation ○ or a combination of both • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** Student must inform the teacher, not just identify details	**Restrictions:** Do not show the text to the student

Test Administration Consideration

At the More Complex and Intermediate Complex levels the goal is for the student to give a presentation. This can be a live presentation or a recorded presentation. The teacher is allowed to change the topics in the items if the item topics are not engaging to the student. If changing the topic in the items, the teacher should adhere to the format of the items to ensure all Requirements are met.

Organizers provided in the item materials may be replaced with organizers traditionally used by the student and/or teacher.

The teacher may want to consider connecting these Performance Tasks to the W.8.8- Research to Build and Present Knowledge as the knowledge, skills, and abilities in both contain points of overlap.

The final product for use in the presentation could take many forms including, but not limited to: Powerpoint, poster, speech, etc.

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Pages of literary text(s) may be enlarged and/or cut apart
- Scribe and/or Speech to Text
- Sign story
- Masking
- Highlighting by student as response
- Presentation can be recorded or live (More Complex and Intermediate Complex)

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions

- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

L.8.3 LANGUAGE: KNOWLEDGE OF LANGUAGE

Washington K–12 Learning Standard

L.8.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.

a) Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

Essential Element

EE.L.8.3 Use language to achieve desired outcomes when communicating.

a) Use to-be verbs (am, are, is, was, were, be, become, became) accurately when writing and communicating

Figure 5: Access Points L.8.3 (M, I, L)

More	Intermediate	Less
Student will use the correct forms of verbs in sentences to communicate desired outcomes.	**Student will identify a verb to complete simple sentences.**	**Student will make appropriate requests.**
Requirements: • Every performance task must have at least five unique items/questions. • The five items can relate to one topic or multiple topics. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items may relate to one topic or to multiple topics. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The five items must relate to five different topics. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: None	**Restrictions:** None	**Restrictions:** None

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models

- Enlarge text/graphics/answer options;
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Sign language
- Masking

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
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- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

8.G.4 GEOMETRY: UNDERSTAND CONGRUENCE AND SIMILARITY USING PHYSICAL MODELS, TRANSPARENCIES, OR GEOMETRY

Washington K–12 Learning Standard

8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

Essential Element

EE.8.G.4 Identify similar shapes with and without rotation.

Figure 6: Access Points 8.G.4 (M, I, L)

More	Intermediate	Less
Student will demonstrate understanding of similar figures drawn on a grid (with rotation).	**Student will identify similar figures on a grid without rotation.**	**Student will identify a similar and congruent circles and squares.**
Requirements: • Every performance task must have at least five unique items/questions. • Distractors must be the same shape. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • The set of five items must include at least: ○ one item identifying similar circles ○ one item identifying similar squares ○ one item identifying congruent circles ○ one item identifying congruent squares • In a multiple-choice item, teacher must use the answer choices provided.

More	Intermediate	Less
Restrictions: None	**Restrictions:** None	**Restrictions:** None

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options
- Hand-over-hand assistance for shape orientation
- Manipulatives
- Highlight outline of shape
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

8.EE.5 EXPRESSIONS AND EQUATIONS: UNDERSTAND THE CONNECTIONS BETWEEN PROPORTIONAL RELATIONSHIPS, LINES, AND LINEAR EQUATIONS

Washington K–12 Learning Standard

8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.

Essential Element

EE.8.EE.5-6 Graph a simple ratio by connecting the origin to a point representing the ratio in the form of *y/x*. *For example, when given a ratio in standard form (2:1), convert to 2/1, and plot the point (1,2).*

Figure 7: Access Points 8.EE.5 (M, I, L)

More	Intermediate	Less
Student will identify a graph given a ratio relationship displayed in a table.	**Student will locate or identify a point in the first quadrant of a coordinate grid.**	**Student will locate or identify a point on a number line.**
Requirements: • Every performance task must have at least five unique items/questions. • Line graphs must be used to represent the relationship displayed in the table. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Task must include five items that: o locate a point in the first quadrant of a coordinate grid o identify a point in the first quadrant of a coordinate grid o or a combination of both • At most one item,	**Requirements:** • Every performance task must have at least five unique items/questions. • Tasks must include five items where a student: o locates a point on a number line o identifies a point on a number line o or a combination of both • Number line must include positive and negative integers.

More	Intermediate	Less
	within the set of five, may have the x value equal to the y value. • In a multiple-choice item, teacher must use the answer choices provided.	• In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** Multiple-choice items must not be used

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options
- Hand-over-hand assistance for shape orientation
- Manipulatives
- Raised line or dark lined graph paper
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Hand-over-hand orientation to graph

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary

- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

8.F.5 FUNCTIONS: USE FUNCTIONS TO MODEL RELATIONSHIPS BETWEEN QUANTITIES

Washington K–12 Learning Standard

8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Essential Element

EE.8.F.5 Describe how a graph represents a relationship between two quantities.

Figure 8: Access Points 8.F.5 (M, I, L)

More	Intermediate	Less
Student will describe a relationship between two quantities shown in a scatter plot or line graph.	**Student will identify a correct statement about a scatter plot or a line graph that shows a relationship between two quantities.**	**Student will identify the topic of information represented in a scatter plot or line graph.**
Requirements: • Every performance task must have at least five unique items/questions. • Task must include five: ○ scatter plots ○ line graphs ○ or a combination of both • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Task must include five: ○ scatter plots ○ line graphs ○ or a combination of both • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Task must include five: ○ scatter plots ○ line graphs ○ or a combination of both • All graphs must have a title. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options
- Manipulatives
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Raised line or dark lined graphs
- Hand-over-hand orientation to graphs

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

8.NS.2 THE NUMBER SYSTEM: KNOW THAT THERE ARE NUMBERS THAT ARE NOT RATIONAL AND APPROXIMATE THEM BY RATIONAL NUMBERS

Washington K–12 Learning Standard

8.NS.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

Essential Element

EE.8.NS.2 Compare quantities represented as decimals in real-world examples to hundredths.

Figure 9: Access Points 8.NS.2 (M, I, L)

More	Intermediate	Less
Student will use models to compare decimals to the hundredths place.	**Student will use models to compare decimals to the tenths place.**	**Student will identify the greater decimal using models.**
Requirements: • Every performance task must have at least five unique items/questions. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics
- Manipulatives
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Scribe and/or Speech to Text
- Raised line or dark lined graphs
- Hand-over-hand orientation to graphs

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

8.SP.4 STATISTICS AND PROBABILITY: INVESTIGATE PATTERNS OF ASSOCIATION IN BIVARIATE DATA

Washington K–12 Learning Standard

8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

Essential Element

EE.8.SP.4 Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

Figure 10: Access Points 8.SP.4 (M, I, L)

More	Intermediate	Less
Student will represent given unorganized data by completing a bar graph or picture graph using a template.	**Student will identify a bar graph or picture graph that represents given unorganized data.**	**Student will sort given unorganized data into two groups.**

Requirements:
• Every performance task must have at least five unique items/questions.
• The set of five items must include at least:
  ○ one bar graph item
  ○ one picture graph item
• Each item must include at least five pieces of data.
	Requirements:
	• Every performance task must have at least five unique items/questions.
	• Task must include five:
	  ○ bar graphs
	  ○ picture graphs
	  ○ or a combination of both
	• Each item must include at least five unorganized pieces of data.
	• In a multiple-choice item,
		Requirements:
		• Every performance task must have at least five unique items/questions.
		• Each item must use different objects.
		• Each item must sort at least five objects into at least 2 groups.

More	Intermediate	Less
	teacher must use the answer choices provided.	
Restrictions: Multiple-choice items are not allowed.	**Restrictions:** NONE	**Restrictions:** Multiple-choice items are not allowed

Final Form Options

1) Use pre-built form
2) Create forms ensuring requirements for access point assessed are met using items available within INSIGHT Item and Form Management

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics
- Hand-over-hand assistance for shape orientation
- Manipulatives
- Simplify text/directions;
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Scribe and/or Speech to Text
- Number lines
- Hundreds chart
- Multiplication chart
- Touch point numbers
- Calculator

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language

- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

NONE

MS-ETS1-3 SCIENCE ENGINEERING & TECHNOLOGY: ENGINEERING DESIGN

Next Generation Science Standard Performance Expectation

MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

SEP: Analyzing and Interpreting Data Analyze and interpret data to determine similarities and differences in findings.

DCI: ETS1.B; Developing Possible Solutions:

- There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.
- Sometimes parts of different solutions can be combined to create a solution that is better than any of its predecessors.

ETS1.C: Optimizing the Design Solution

- Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process-that is, some of those characterizes may be incorporated into the new design.

CCC: None

Essential Concept

EC-MS-ETS1-3 Organize and interpret data from tests of several design solutions in order to develop a solution that better meets the criteria for success.

SEP: Compare data to determine similarities and differences.

DCI: ETS1.B and ETS1.C: Evaluate different solutions to determine the best parts of each solution (best meet design criteria and constraints).

CCC: None

Figure 11: Access Points MS-ETS1-3 (M, I, L)

More	Intermediate	Less
Student will organize and use data from tests to determine similarities and differences among several design solutions AND select features of each solution that can be combined into a new solution that better meets the criteria for success AND develop a design that better meets the criteria and evaluate its effectiveness	**Student will organize and interpret data from several design solutions, to select features of each solution that can be combined into a new solution that better meets the criteria for success.**	**Given organized data from tests of several design solutions, student will identify solutions that better meet the criteria for success.**

More	Intermediate	Less
Requirements: • Every performance task must have at least five unique items/questions. • Teacher will provide three criteria for a successful design. • Teacher will provide designs and data for at least three design solutions • The set of five items must include: o One item that requires the student to organize data from tests of several design solutions, AND o One item that requires the student to interpret quantitative data, AND o One item that requires the student to determine similarities and/or differences of the design solutions based on interpreted data, AND o Two items that require the student to develop a design that better meets the criteria for success. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Teacher will provide two criteria for a successful design. • Teacher will provide designs and data for at least three design solutions for the student to organize. • The set of five items must include: o One item where students organize data, AND o Two items that require the student to interpret quantitative data, AND o Two items that require the student to select features of the design solutions that can be combined into a new solution that better meets the criteria for success. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Teacher will provide at least one criterion for a successful design. • Teacher will provide designs and organized data for at least two design solutions. • Student must select design solutions that better meet the criteria for success. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** Data can be organized using the following formats: • Graphs • Charts • Tables	**Restrictions:** Data can be organized using the following formats: • Graphs • Charts • Tables

Final Form Options

1) Use pre-built form

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Re-enactment or Computer simulations
- Simplify text/directions
- Simplified models
- Data displays may be simplified, modified, adjusted for student understanding
- 2-Dimensional or 3-dimensional models
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Speech recognition internet searches
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Sign text

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

See specific forms in INSIGHT Item and Form Management for materials needed.

Form Names:
WA A1 Science_8_MS.ETS1.3.M
WA A1 Science_8_MS.ETS1.3.I

The More and Intermediate Access Point levels ask the student to work with data. Data has been provided and can be cut-out and provided to students to manipulate.

Materials Directions:

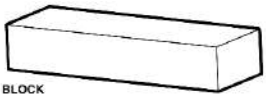
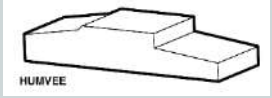
The teacher should prepare the following materials prior to assessing the student.

1) Label 5 envelopes:
    a. Car A
    b. Car B
    c. Car C
    d. Car D
    e. Car E

2) Cut out Car Features (from provided Car Features table) and place in envelopes that correspond to the correct car.

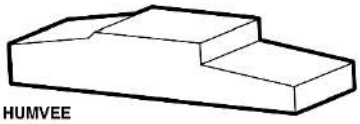
Access Point More

Car Features Cut-outs

CAR	# of TIRES	# of WEIGHTS	BODY SHAPE	FINISHING TIME	# TIMES FELL OFF TRACK
Car A Features	3 Tires	5 Weights		Finishing Time: 2.96s	Fell Off Track 3 Times
Car B Features	6 Tires	2 Weights		Finishing Time: 3.10s	Fell Off Track 4 Times
Car C Features	4 Tires	4 Weights		Finishing Time: 2.90s	Fell Off Track 2 Times
Car D Features	4 Tires	2 Weights		Finishing Time: 2.80s	Fell Off Track 1 Time
Car E Features	3 Tires	2 Weights		Finishing Time: 3.00s	Fell Off Track 3Times

Access Point Intermediate

Car Features Cut-Outs

CAR	# of TIRES	# of WEIGHTS	BODY SHAPE	FINISHING TIME (sec)	# TIMES FELL OFF TRACK
Car A Features	3 Tires	3 Weights		Finishing Time: 2.96s	Fell Off Track 3 Times
Car B Features	8 Tires	2 Weights		Finishing Time: 3.10s	Fell Off Track 4 Times
Car C Features	4 Tires	4 Weights		Finishing Time: 2.90s	Fell Off Track 2 Times
Car D Features	4 Tires	5 Weights		Finishing Time: 2.80s	Fell Off Track 1 Time
Car E Features	6 Tires	2 Weights		Finishing Time: 3.00s	Fell Off Track 3 Times

MS-LS2-1 LIFE SCIENCE: ECOSYSTEMS-INTERACTIONS, ENERGY, AND DYNAMICS

Next Generation Science Standard Performance Expectation

MS-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

SEP: Analyzing and Interpreting Data: Analyze and interpret data to provide evidence for phenomena.

DCI:LS2.A: Interdependent Relationships in Ecosystems

- Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors.
- In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction.
- Growth of organisms and population increases are limited by access to resources.

CCC: Cause and Effect:

- Cause and effect relationships may be used to predict phenomena in natural or designed systems.

Essential Concept

EC.MS-LS2-1: Organize and interpret data to describe a cause and effect relationship of resource availability on organisms and/or populations in an ecosystem.

SEP: Compare and interpret data to provide evidence for phenomena.

DCI: LS2.A: Organisms and population growth are limited by access to resources in an ecosystem.

CCC: Cause and effect relationships can predict phenomena in systems.

Figure 12: Access Points MS-LS2-1 (M, I, L)

More	Intermediate	Less
Student will organize and interpret data to provide evidence for the effects of access to resources on organisms and/or populations, in an ecosystem.	**Student will organize and interpret data to describe a cause and effect relationship of resource availability on organisms and/or populations in an ecosystem.**	**Given organized data, student will identify effects of resource availability on organisms and/or populations in an ecosystem.**
Requirements: • Every performance task must have at least five unique items/questions.	**Requirements:** • Every performance task must have at least five unique items/questions.	**Requirements:** • Every performance task must have at least five unique items/questions.

More	Intermediate	Less
• Task must include at least two of the following: o Graph o Chart o Table • The set of five items must include at least: o One item organizing data (e.g., from table to graph) that can be used to establish a cause and effect relationship, AND o One item evaluating student-organized data; AND o One item making a claim about a cause and effect relationship, AND o One item specifying evidence from a graph, chart or table to support the student's claim about a cause and effect relationship • In a multiple-choice item, teacher must use the answer choices provided.	• Task must include at least two of the following: o Graph o Chart o Table • The set of five items must include at least: o One item having students organize data; AND o One item making a claim about a cause and effect relationship in the data, AND o One item using data to support the student's claim about a cause and effect relationship; AND • In a multiple-choice item, teacher must use the answer choices provided.	• Given data must focus specifically on resource availability and impact on organisms or populations. • Data must be organized using at least two of the following: o Graph o Chart o Table • The set of five items must include at least: o One item that identifies data points on a graph. o One item that require the determination of the effect of an action or the cause of the action, AND o One item must include data to support the student's claim or conclusion. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Final Form Options

1) Use pre-built form

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Re-enactment or Computer simulations

- Simplify text/directions
- Simplified models
- Data displays may be simplified, modified, adjusted for student understanding
- 2-Dimensional or 3-dimensional models
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Speech recognition internet searches
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Sign text

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

See specific forms in INSIGHT Item and Form Management for materials needed

MS-PS3-3 PHYSICAL SCIENCE: ENERGY

Next Generation Science Standard Performance Expectation

MS-PS3-3: Apply scientific principle to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

SEP: Constructing Explanations and Designing Solution Apply scientific ideas or principles to design, construct, and test a design of an object, tool, process or system.

DCI: PS3.A: Definitions of Energy Temperature is a measure of the average kinetic energy of particles of matter. The relationship between the temperature and the total energy of a system depends on the types, states and amounts of energy present.

PS3.B: Conservation of Energy and Energy Transfer Energy is spontaneously transferred out of hotter regions or objects and into colder ones.

ETS1.A: Defining and Delimiting an Engineering Problem The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that likely to limit possible solutions (secondary)

ETS1.B: Developing Possible Solutions A solution needs to be tested, and then modified on the basis of the test results in order to improve it. There are systematic processes for evaluation solutions with respect to how well they meet criteria and constraints of a problem. (secondary)

CCC: Energy and Matter The transfer of energy can be tracked as energy flows through a designed or natural system.

Essential Concept

EC.MS-PS3-3: Given materials and directions, design, build and test a device that either increases or decreases the transfer of thermal energy.

SEP: Apply scientific ideas or principles to construct, and test a device.

DCI: PS3.A: Temperature is a measure of the energy of particles of matter.

PS3.B: Energy moves from hotter areas or objects to colder areas or objects.

ETS1.A: The more precisely a device's criteria and constraints can be met, the more likely it is that the solution will be successful. Constraints are descriptions that limit possible solutions.

CCC: Cause and effect relationships can predict phenomena in systems.

ETS1.B: A solution needs to be tested, and then modified based on the test results in order to improve it.

CCC: The transfer of energy can be tracked as energy flows through a system.

Figure 13: Access Points MS-PS3-3 (M, I, L)

More	Intermediate	Less
Student will design, build and test a device that either increases or decreases the transfer of thermal energy from hotter areas or objects to cooler areas or objects.	**Given materials and directions, student will build and test a device that either increases or decreases the transfer of thermal energy from hotter areas or objects to cooler areas or objects.**	**Using a given device, student will identify whether the device was intended to increase or decrease thermal energy transfer from hotter areas or objects to colder areas or objects and test how well the device meets the criteria.**
Requirements: • Every performance task must have at least five unique items/questions. • The student must design device, however; the design can be based on materials provided by the teacher. • Student must build one version of the device. • Student must measure the temperature in two areas at least three times. • The set of five items must include: o One item that requires students to design, build, and test a device, AND o One item that requires the student to identify changes over time using their temperature data, AND o One item that identifies where energy is being transferred in, transferred out or transferred through the device, AND o One item that requires the student to identify constraints (e.g., cost, time, material) for the device, AND o One item that requires the	**Requirements:** • Every performance task must have at least five unique items/questions. • Teacher must provide the design (instructions) and materials to build the device. • Student must build device using given materials. • Student must measure the temperature in two areas at least three times. • The set of five items must include: o One item that requires students to build and test a device, AND o One item that requires the student to identify changes over time using their temperature data, AND o One item that identifies where energy is being transferred in, transferred out, or transferred through the device, AND o One item that requires the student to identify constraints (e.g., cost, time, material) for the device, AND o One item that requires the	**Requirements:** • Every performance task must have at least five unique items/questions. • Teacher must supply a device, or a representation of a device for the student to use. • Student must measure the temperature in two areas at least two times. • The set of five items must include: o One item that requires the student to identify changes over time using their data, AND o One item that requires the student to identify the energy flow in the device, AND o One item that requires the student to identify whether the device was intended to increase or decrease thermal (heat) energy transfer, AND • In a multiple-choice item, teacher must use the answer choices provided.

More	Intermediate	Less
student to describe how a constraint impacts the device. • In a multiple-choice item, teacher must use the answer choices provided.	student to describe how a constraint impacts the device. • In a multiple-choice item, teacher must use the answer choices provided.	
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Test Administration Considerations

For students with physical limitations, building and testing the device can be done by the teacher with directive from the student.

Final Form Options

1) Use pre-built form

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Re-enactment or Computer simulations
- Simplify text/directions
- Simplified models
- Data displays may be simplified, modified, adjusted for student understanding
- 2-Dimensional or 3-dimensional models
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Speech recognition internet searches
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Sign text
- Hand-over-hand descriptions or orientation to graphics
- Tactile charts
- Accessible thermometers

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

See specific forms in INSIGHT Item and Form Management for materials needed

All three levels require a device to be built and tested. The test administrator must ensure the materials and/or built device are ready prior to item administration.

Form Name:
WA A1 Science_8_MS.PS3.3_M
At **More Complex** the student designs and builds their own device using teacher provided materials. See Materials list.

Form Name:
WA A2 Science_8_MS.PS3.3_I
At **Intermediate Complex** the student builds the device following teacher provided directions. See Materials list and Options for Device Design Directions.

Form Name:
WA A1 Science_8_MS.PS3.3.L
At **Less Complex** the teacher builds the device and the student engages with the Device Test. See Materials list and Device Build directions.

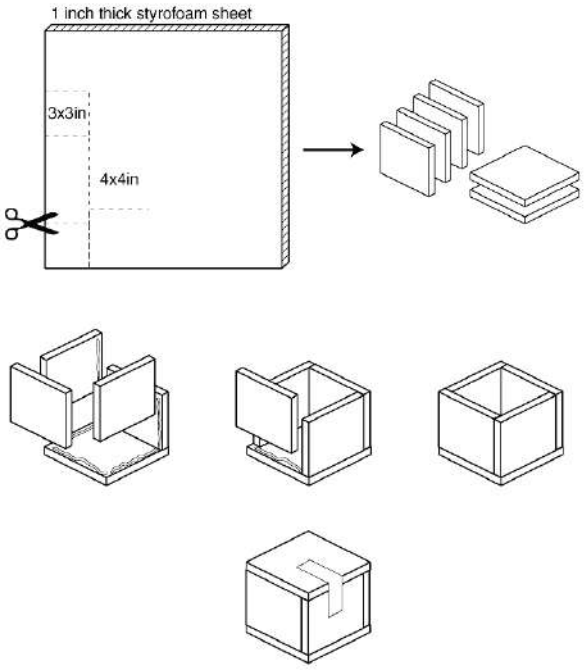
Materials:

- At least 2 Styrofoam boards (16x16x1inch)
- A cutting device such as a pair of scissors
- A measuring device such as ruler
- Glue
- Tape
- Thermometer
- Timer

Option A: Device Design Directions- Text-Based

1) Cut four 3x3 inch squares out of Styrofoam. These will be the sides of your box.
2) Cut two 4x4 inch squares out of Styrofoam. These will be the top and bottom of your box.
3) Glue four of the 3x3 inch squares to the one of the 4x4 inch squares in order to make a box without a top.
4) Tape the last Styrofoam square to the top of your box so that you can open and close the box.

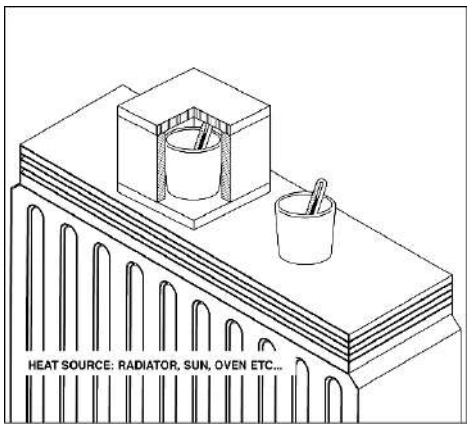
Option B: Device Design Instructions- Visual



Directions for Device Test:

1) Place a drink (i.e., cup of water) inside your built cooler (device).
2) Place cooler (device) with drink near a thermal (heat) source.
3) Place a drink not in a cooler (device) near the same thermal (heat) source.
4) Measure the temperature for both liquids and record on your table.
5) Wait 1 hour and then measure and record the temperatures again. Record in table.
6) Wait 1 more hour and then measure and record the temperature again. Record in table.

Example Device Test Set-Up


HEAT SOURCE: RADIATOR, SUN, OVEN ETC...

MS-ESS1-1 EARTH AND SPACE SCIENCE: EARTH'S PLACE IN THE UNIVERSE

Next Generation Science Standard Performance Expectation

MS-ESS1-1 Develop and 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.

SEP: Developing and Using Models Develop and use a model to describe phenomena

DCI: ESS1.A: The Universe and Its Stars Patterns of the apparent motion of the sun, moon and stars in the sky can be observed, described, predicted, and explained with models.

ESS1.B: Earth and the Solar System This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilts and are caused by the differential intensity of sunlight on different areas of Earth across the year.

CCC: Patterns: Patterns can used to identify cause- and-effect relationships.

Scientific Knowledge Assumes an Order and Consistency in Natural Systems Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation.

Essential Concept

EC.MS-ESS1-1 Use a model to show how the patterns of the motions of the Earth-moon-sun system cause the phases of the moon, eclipses of the sun or moon, and/or seasons.

SEP: Develop and/or use a model to describe phenomena.

DCI: ESS1.A: Patterns of the apparent motion of the Earth-moon-sun system can be described with models.

ESS1.B: Models can be used to describe patterns of lunar phases, eclipses of the sun or the moon, and/or seasons.

CCC: Patterns can be used to identify cause- and-effect relationships

Figure 14: Access Points MS-ESS1-1 (M, I, L)

More	Intermediate	Less
Student will develop and use a model to describe and predict patterns of the phases of the moon, eclipses of the sun or moon, and/or seasons.	**Student will use a given model to show how the motions of sun, moon, and Earth cause the phases of the moon, eclipses of the sun or moon, and/or seasons.**	**Student will identify parts and/or patterns of a given model of the phases of the moon, eclipses of the sun or moon, and/or seasons.**
Requirements: • Every performance task must have at least five unique items/questions.	**Requirements:** • Every performance task must have at least five unique items/questions.	**Requirements:** • Every performance task must have at least five unique items/questions.

More	Intermediate	Less
• The set of five items must include: o One item that requires the student to develop a model that includes relative sizes and distances AND o One item that requires the student to identify components of a model, AND o One item that requires the student to indicate the accuracy of the scale of a model, AND o One item that requires students to use information from a model to predict an event, AND o One item that requires the student to describe the patterns that are shown by a model • Task may use one or multiple models. • Models must demonstrate at least one of the following: o Lunar phases o Eclipses (of the sun or moon) o Seasons • In a multiple-choice item, teacher must use the answer choices provided.	• The set of five items must include: o One item that requires the student to identify one component of a model, AND o One item that requires the student to use information from a model to demonstrate OR describe a pattern, AND o One item that requires the student to use information from a model to make a prediction. • Models must include information about the accuracy or limits of accuracy of size and distance (scale). • Task may use one or multiple models. • Models must demonstrate at least one of the following: o Lunar phases o Eclipses (of the sun or moon) o Seasons • In a multiple-choice item, teacher must use the answer choices provided.	• The set of five items must include: o One item that requires the student to develop a model that includes relative sizes and distances AND o One item that requires the student to identify components of a model, AND o One item that requires the student to indicate the accuracy of the scale of a model, AND o One item that requires students to use information from a model to predict an event, AND o One item that requires the student to describe the patterns that are shown by a model • Task may use one or multiple models. • Models must demonstrate at least one of the following: o Lunar phases o Eclipses (of the sun or moon) o Seasons • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: NONE	**Restrictions:** NONE	**Restrictions:** NONE

Test Administration Considerations

For students with physical limitations, development and use of model can be done by the teacher with directive from the student.

Final Form Options

1) Use pre-built form

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Re-enactment or Computer simulations
- Simplify text/directions
- Simplified models
- Data displays may be simplified, modified, adjusted for student understanding
- 2-Dimensional or 3-dimensional models
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Tactile models
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
- Place answer choices on word cards, choice board, AAC device
- Braille
- Re-read text and/or answer options
- Read aloud and/or Text to Speech
- Speech recognition internet searches
- Responses may be cut out and/or laminated to present to student
- Scribe and/or Speech to Text
- Sign text
- Hand-over-hand descriptions or orientation to graphics

Additional Tools, Supports, and Accommodations for Multilingual Learners

- Written or oral translation of test directions
- Side-by-side dual language versions of the test
- Translated versions of entire tests
- Written or oral response in native language
- Customized dual language glossary
- Customized dual language pop-up electronic glossary
- Commercial word-to-word dual language dictionary
- Sight translation is the oral, on-the-fly rendering of test directions, items, or both from English into a student's native language
- Clarify, explain test directions in student's native language
- Provide images or graphics for unknown vocabulary or words where the vocabulary where the support vocabulary or word is not what the item is intended to measure

Additional Materials for Test Administration

See specific forms in INSIGHT Item and Form Management for materials needed

MS-ESS2-6 EARTH AND SPACE SCIENCES: EARTH'S SYSTEMS

Next Generation Science Standard Performance Expectation

MS-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.

SEP: ***Developing and Using Models*** Develop and use a model to describe phenomena.

DCI: ***ESS2.C: The Roles of Water in Earth's Surface Processes*** Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents.

ESS2.D: Weather and Climate

- Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns.
- The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents.

CCC: System and System Models: Models can be used to represent systems and their interactions-such as inputs, processes, and outputs- and energy, matter, and information flows within systems.

Essential Concept

EC.MS-ESS1- EC.MS-ESS2-6: Use a model to describe how unequal heating of Earth by the sun causes different weather and/or climates in different areas on Earth.

SEP: Develop and/or use a model to describe phenomena.

DCI: ESS2.C: Uneven heating of water causes ocean currents.

ESS2.D: Weather and climate are affected by interactions among sunlight, the ocean, location on Earth, and geography. Ocean currents distribute energy absorbed by the sun to different areas on Earth.

CCC: Models can be used to represent systems and their interactions (inputs and outcomes), as well as energy and matter flow within the systems.

Figure 15: Access Points MS-ESS2-6 (M, I, L)

More	Intermediate	Less
Student will develop and use a model to demonstrate and/or describe how unequal heating and the rotation of the Earth effect weather and climate systems.	**Student will use a given model to demonstrate and/or describe how unequal heating causes different weather and/or climates in different areas on Earth.**	**Student will identify the parts of a given model (factors) that interact and cause different weather and/or climates in different areas on Earth.**

More	Intermediate	Less
Requirements: • Every performance task must have at least five unique items/questions. • Models can be one or more of the following: o Diagrams o Maps o Globes o Digital representations • Models must include at least one of the following: o Air currents o Surface currents • The set of five items must include at least: o One item that involves developing a model, AND o One item that requires the student to identify components of the model, AND o One item that requires the student to identify processes shown by the model, AND o One item that requires the student to use the model to explain an effect of uneven heating on weather OR climate systems. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Models can be one or more of the following: o Diagrams o Maps o Globes o Digital representations • Models must include at least one of the following: o currents of air or water o latitude or position compared to incoming sunlight • The set of five items must include at least: o One item that requires the student to identify a part of the model, AND o Two items that require the student to use a model to describe an effect of uneven heating on weather AND/OR climate systems, AND o One item that requires the student to use information from the model to answer a question. • In a multiple-choice item, teacher must use the answer choices provided.	**Requirements:** • Every performance task must have at least five unique items/questions. • Models can be one or more of the following: o Diagrams o Maps o Globes o Digital representations • Models must include one or more of the following: o Air currents o Surface currents • The set of five items must include at least: o One item that requires the student to identify a part of the model, AND o One item that requires the student to identify a process represented in the model, AND o One item that requires the student to use information to identify causes of different weather OR climate. • In a multiple-choice item, teacher must use the answer choices provided.
Restrictions: Does not include dynamics of Coriolis Effect	**Restrictions:** NONE	**Restrictions:** NONE

Test Administration Considerations

For students with physical limitations, development and use of a model can be done by the teacher

with directive from the student.

Final Form Options

1) Use pre-built form

Allowable Adaptations/Accommodations

- Use graphics and/or physical models
- Enlarge text/graphics/answer options;
- Re-enactment or Computer simulations
- Simplify text/directions
- Simplified models
- Data displays may be simplified, modified, adjusted for student understanding
- 2-Dimensional or 3-dimensional models
- Use tactile graphics; replace provided graphics with graphics commonly used by the student
- Text and vocabulary can be tailored to the student's vocabulary in cases where the vocabulary is not a key element of the concept;
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Additional Materials for Test Administration

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Glossary of Terms

Composite figure: A figure created using two or more figures.

Congruent figures: Figures with the same size and shape.

Connotative meaning: A meaning that is implied by a word apart from the thing which it describes explicitly.

Example: The man in front of me at the coffee store was very pushy. (Pushy refers to someone loud-mouthed and irritating.)

Criteria: A standard of judgement; a reference point against which other designs or solutions can be compared.

Distractor: An incorrect answer in a multiple-choice question.

Ecosystem: All the living populations in an area along with the nonliving parts of the environment.

Figure of Speech: A form of expression (as a simile or metaphor) used to convey meaning or heighten effect often by comparing or identifying one thing with another that has a meaning or connotation familiar to the reader or listener.

Informational Text: Informational text is non-fiction and is organized by topic with supporting details and is often further organized with headings, graphics and captions.

Examples: exposition, argument and functional text in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, technical or economic accounts (including digital sources)

Literary Text: Literary Text includes stories, dramas and poetry.

Examples: adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, graphic novels, one-act and multi-act plays, narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads and epics.

Organism: A living thing.

Population: Ecology: all the members of a species living in a particular area at a particular time.

Similar figures: Figures that have the same shape, equal angles, and proportionate corresponding sides.

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