



Accompanying Guide to
New Question Type
Samplers: Science

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This document provides a guide to navigating the new question type samplers, including scoring and reporting information

All example questions in this guide are from the new question type samplers, which are available here: [new question type samplers](#)

Information provided in this document is subject to change following results from the Spring 2022 field test.

Please note the following about the new question type samplers:

- Sampler results are not predictive of student performance on the STAAR assessment, and instructional interpretations should not be made from the question type sampler results.
- Constructed response questions in the samplers will not be scored because they are handscored.
- Not all new question types in the samplers will appear on every STAAR test every year.

Additional information and resources about the STAAR assessment are available here: [STAAR Test](#)

State and federal laws require a redesign of Texas's state summative assessment (STAAR), effective 2022–2023

Assessments provide educators and parents with helpful information to support strong teaching and guide students to their full potential.

STAAR is a summative assessment that serves several primary purposes, including determining student mastery of TEKS, determining effectiveness of curriculum and instruction programs, helping determine which individual students should receive additional holistic supports, and serving as a bar for rigor and standards alignment in planning.

State and federal laws require a redesign of Texas's state summative assessment (STAAR), effective 2022–2023, that will ensure STAAR is more aligned with how students are learning in the classroom.

One component of the redesign is the addition of new, non-multiple-choice questions to meet a 75% cap on multiple-choice questions.

Any new question type will need to be able to meet our existing rigorous requirements for STAAR questions AND provide additional benefits

New questions will need to meet our existing rigorous requirements for STAAR, including:

- Valid statistics from field tests
- Alignment with TEKS
- Grade-level appropriateness
- Lack of bias
- Accessibility for all students
- Review and approval from a group of Texas educators who teach the grade level and agree students should be able to answer these questions at the end of the year

TEA has worked closely with educators to determine which new question types best support students:


- **600** educators participated in focus groups on new question types
- **92%** of educators agree that the new question types allow students to better demonstrate their knowledge
- **89%** of educators believe that the new question types are more engaging for students
- **80%+** of educators agree that new question types will impact instructional planning


The following new question types may be included in the specified Science tests starting in Spring 2023

*Question Type	Question Type Description	STAAR Science Test Titles
Text entry	Student responds by typing a brief string of text such as a number, word, or phrase.	Grade 8 EOC
Hot spot	Student responds by selecting one or more specific areas of a graphic.	Grades 5, 8 EOC
Drag and drop	Student evaluates a given number of options (words, numbers, symbols, etc.) and chooses which response(s) to drag to a given area (a diagram, map, chart, etc.).	Grades 5, 8 EOC
Multipart	Student responds to a two-part question where Parts A and B are scored separately. In many cases, Part B asks students to give evidence or explain their thinking for their answer to Part A.	Grades 5, 8 EOC
Multiselect	Student can select more than one correct answer from a set of possible answers.	Grades 5, 8 EOC
Short constructed response	Student gives a brief explanation in their own words to demonstrate their understanding of content.	Grades 5, 8 EOC

Maximum possible points per question

 2 points

 1 or 2 points dependent upon question

 Constructed responses are graded on a rubric equal to 2 points

*Not all new question types will appear on every test every year

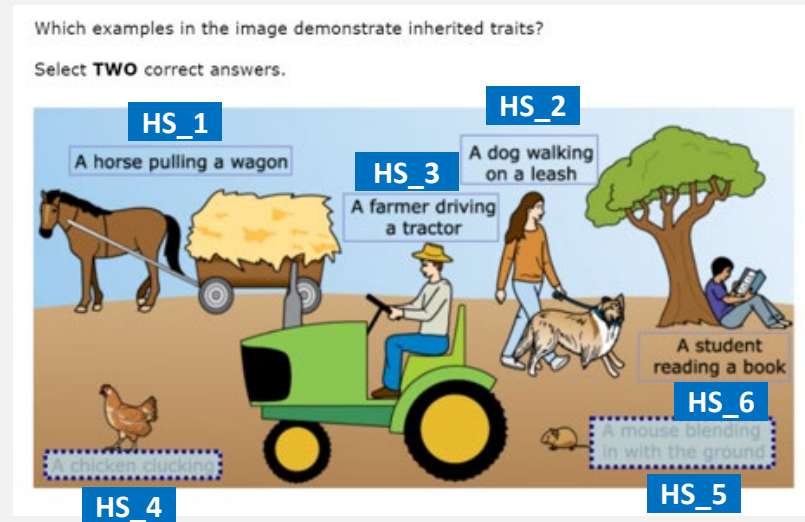
How new question types are reported in the data file

Districts are provided a data file that details student's answers at an aggregate level:

- Actual value or texts will appear in the data file for items such as inline choice or multiple select items.
- For new question types such as match table grid or hot spot items, answer choices will be given identifiers.
- Student responses will not be transformed into a data file for some items such as graphing or number line.
- Data files will be delivered to district users' TIDE secure inbox.

Sample data file output: Identifiers

- For this hot spot item, each answer choice is given a corresponding identifier. In a data file, it will appear that the student selected HS_4, HS_5 (hot spot answer choice 4 and hot spot answer choice 5) for this item.





Scoring and Reporting Information for Each New Question Type

Overview of the scoring and reporting guide

The remainder of this resource includes information about scoring and reporting for each new question type on science tests.

The first slide for each new question type is an overview that includes a definition, the possible points for the question type, and the grades which may include the question type.

Then, one example of the new question type is given. The example includes a set of slides:

- Student view slides: Student view that includes the question prompt and what the student will see when they select their answer. Example student responses for each possible credit will also be given.
- Teacher view slide: Teacher view in the reporting system that includes the scoring model for the question type, the correct answer to the example question, and the score of the student answering the example question.

Question Type: Text Entry

Question Type Overview

Description: Student responds by typing a brief string of text such as a number, word, or phrase.

Point value: These questions can be worth a maximum of 2 points with the possibility of receiving 1 point for a partially correct response.

Science tests that may include these questions: Grade 8 and EOC

Question Type: Text Entry

Example #1: Student view

This example is question #1 in the Biology EOC sampler.

1

GUEST, GUEST

Giant sequoias can grow to be nearly 100 meters (328 feet) tall. They rely on a complex transport system to allow water to travel from the roots to the leaves at the top of the tree.

Which transport tissue allows water to travel upward from the roots to the leaves?

Enter your answer in the box.

Question Type: Text Entry

Example #1: Student view

This is what the student will see when they enter the correct answer (1 point).

Which transport tissue allows water to travel upward from the roots to the leaves?

Enter your answer in the box.

This student entered the incorrect answer in the space (0 points).

Which transport tissue allows water to travel upward from the roots to the leaves?

Enter your answer in the box.

Question Type: Text Entry

Example #1: Teacher view

The screenshot displays the 'Fall 2022 STAAR Interim' interface. At the top, it shows 'Student: Demo, Student' and 'Item 2'. Below this, a table with two columns, 'Scoring Assertion' and 'Outcome', shows a scoring assertion: '1. The student chose the correct answer.' with a corresponding 'Outcome' of a checkmark. A 'student setting(s)' toggle is set to 'ON'. The main content area shows a question number '1' by Jennifer Strittmatter. The question text reads: 'Giant sequoias can grow to be nearly 100 meters (328 feet) tall. They rely on a complex transport system to allow water to travel from the roots to the leaves at the top of the tree. Which transport tissue allows water to travel upward from the roots to the leaves? Enter your answer in the box.' Below the text is a text entry box containing the word 'xylem'. At the bottom of the screenshot, the copyright notice 'Copyright © 2022 Cambium Assessment, Inc. All rights reserved.' is visible.

The scoring model for this text entry question is:

- To obtain full credit (1 point), the student will enter the correct answer in the box.
- Students will receive 0 points if the answer is missing or incorrect.

In this example, the student chose the correct answer, so they received full credit (1 point).

Question Type: Hot Spot

Question Type Overview

Description: Student responds by selecting one or more specific areas of a graphic.

Point value: These questions can be worth a maximum of 2 points with the possibility of receiving 1 point for a partially correct response.

Science tests that may include these questions: Grade 5, Spanish Grade 5, Grade 8, and EOC

Question Type: Hot Spot

Example #1: Student view

This example is question #4 in the Grade 5 sampler.

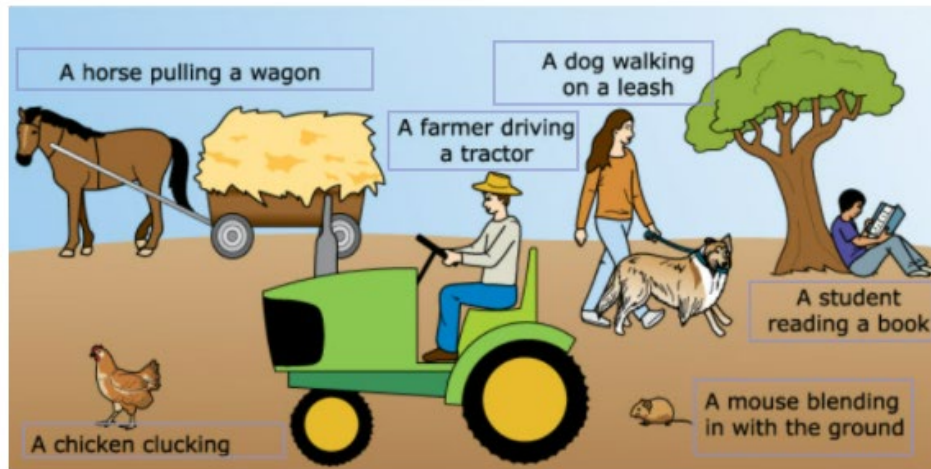
4

GUEST, GUEST



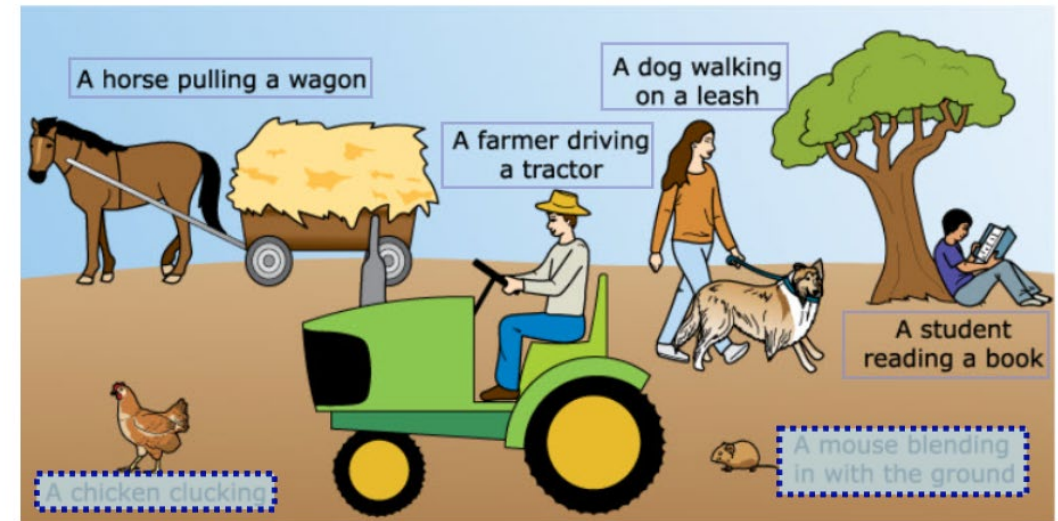
Which examples in the image demonstrate inherited traits?

Select **TWO** correct answers.



This is what the student will see when they select the correct answers (2 points).

Select **TWO** correct answers.

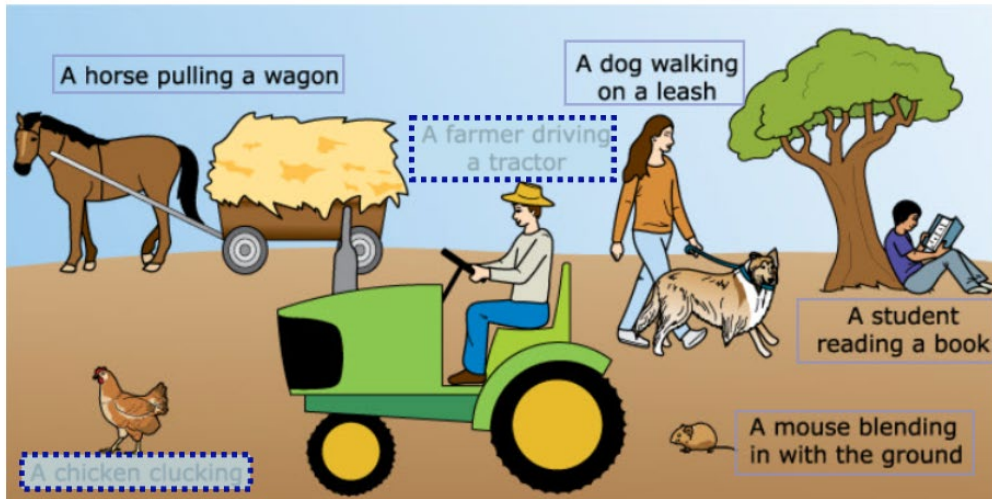


Question Type: Hot Spot

Example #1: Student view

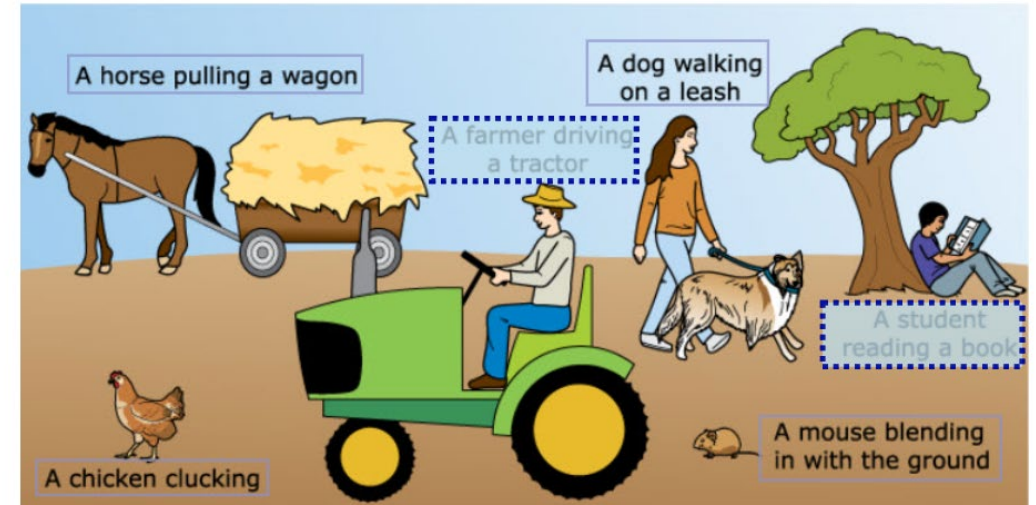
This student chose one correct answer and one incorrect answer (1 point).

Select **TWO** correct answers.



This student did not choose the correct answers (0 points).

Select **TWO** correct answers.



Question Type: Hot Spot

Example #1: Teacher view

CRS - Centralized Reporting System

Fall 2022 STAAR Interim

Item 3 Student: Demo, Student Item 5

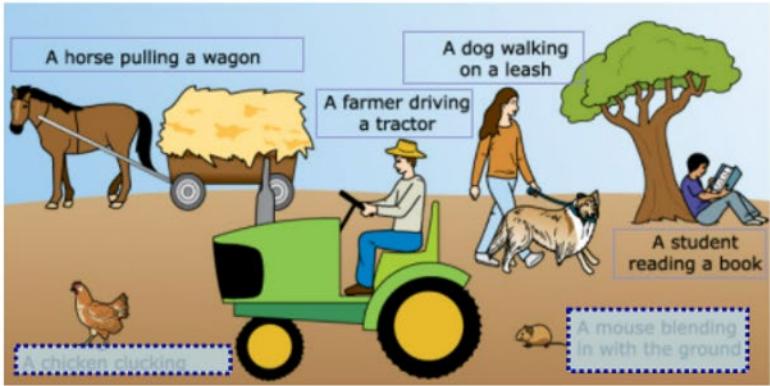
Current Item: 4 Score: 2/2

Scoring Assertion	Outcome
1. The student chose the correct answer.	✓

student setting(s)
ON

4
Jennifer Strittmatter

Which examples in the image demonstrate inherited traits?
Select **TWO** correct answers.



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The scoring model for this hot spot question is:

- To obtain full credit (2 points), the student will correctly select two examples in the image that demonstrate inherited traits.
- To obtain partial credit (1 point), the student will correctly select one example.
- Students will receive 0 points if both selections are missing or incorrect.

In this example, the student chose the correct answer, so they received full credit (2 points).

Question Type: Drag and Drop

Question Type Overview

Description: Student evaluates a given number of options (words, numbers, symbols, etc.) and chooses which response(s) to drag to a given area (a diagram, map, chart, etc.).

Point value: These questions can be worth a maximum of 2 points with the possibility of receiving 1 point for a partially correct response.

Science tests that may include these questions: Grade 5, Spanish Grade 5, Grade 8, and EOC

Question Type: Drag and Drop

Example #1: Student view

This example is question #6 in the Grade 5 sampler.

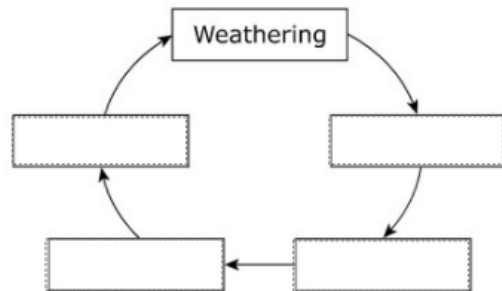
6

GUEST, GUEST

What is the correct order of the steps that form sedimentary rock?

Move **ONE** correct answer to each box.

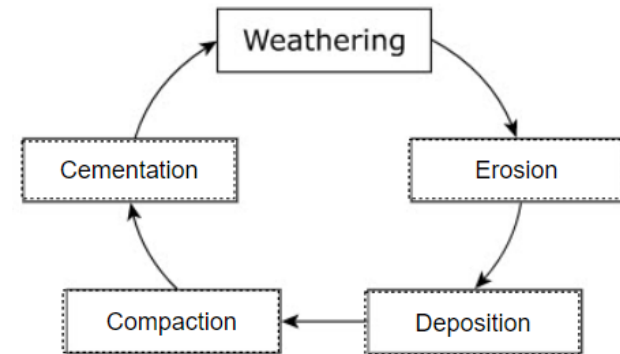
Deposition Cementation Erosion Compaction



This is what the student will see when they select the correct answers (2 points).

Move **ONE** correct answer to each box.

Deposition Cementation Erosion Compaction

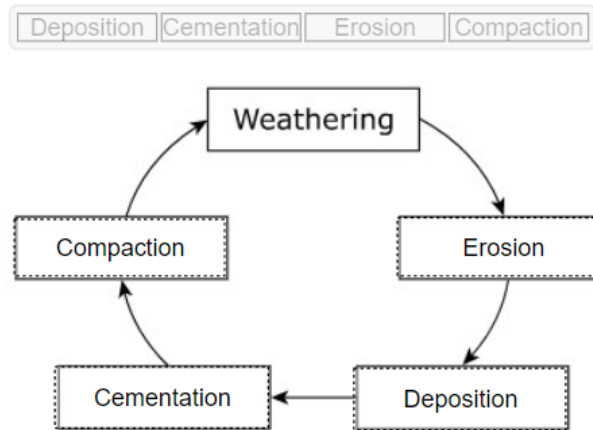


Question Type: Drag and Drop

Example #1: Student view

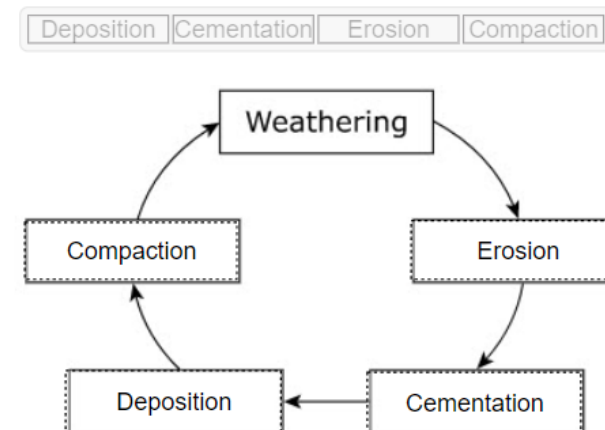
This student answered two boxes correctly and two boxes incorrectly (1 point).

Move **ONE** correct answer to each box.



This student answered one box correctly and three boxes incorrectly (0 points).

Move **ONE** correct answer to each box.



Question Type: Drag and Drop

Example #1: Teacher view

The screenshot displays the teacher interface for a drag and drop question. At the top, it shows 'Fall 2022 STAAR Interim' and 'Student: Demo, Student'. The current item is 6, with a score of 2/2. The question asks for the correct order of steps that form sedimentary rock, with a note to move one correct answer to each box. A diagram shows the rock cycle: Weathering leads to Deposition, which leads to Compaction, then Cementation, and finally back to Weathering. The student has correctly placed 'Deposition' in the first box, 'Cementation' in the second, 'Erosion' in the third, and 'Compaction' in the fourth.

Scoring Assertion	Outcome
1. The student chose the correct answer.	✓

student setting(s)
 ON

6
Jennifer Strittmatter

What is the correct order of the steps that form sedimentary rock?
Move **ONE** correct answer to each box.

Deposition | Cementation | Erosion | Compaction

```
graph TD; Weathering --> Deposition; Deposition --> Compaction; Compaction --> Cementation; Cementation --> Weathering; Erosion --> Deposition;
```

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The scoring model for this drag and drop question is:

- To obtain full credit (2 points), the student will move all four answers to the correct boxes.
- To obtain partial credit (1 point), the student will move two or three answers to the correct boxes.
- Students will receive 0 points if three or more answers are missing or incorrect.

In this example, the student chose the correct answer, so they received full credit (2 points).

Question Type: Multipart

Question Type Overview

Description: Student responds to a two-part question where Parts A and B are scored separately. In many cases, Part B asks students to give evidence or explain their thinking for their answer to Part A.

Point value: These questions can be worth a maximum of 2 points with the possibility of receiving 1 point for a partially correct response.

Science tests that may include these questions: Grade 5, Spanish Grade 5, Grade 8, and EOC

Question Type: Multipart

Example #1: Student view

This example is question #8 in the Grade 8 sampler.



This question has two parts.

Scientists used two sets of mustard seeds to study changes due to environmental conditions. One set of seeds was produced during a severe drought. The other set was produced during normal rainfall conditions.

Part A

When the two sets of seeds were grown together, the plants grown from the set of seeds produced during drought conditions formed flowers much earlier than the plants grown from the other set. Which conclusion is supported by these results?

Ⓐ Drought can affect future generations of some plant populations.

Ⓑ Drought can benefit plants that produce flowers.

Ⓒ Normal rainfall damages the roots of flowering plants.

Ⓓ Normal rainfall reduces reproduction of plant populations.

Part B

Which statement supports the answer to Part A?

Ⓐ Plants can regulate their flowering times based on the environment.

Ⓑ Plants produce flowers only when environmental conditions are favorable.

Ⓒ Plants with genes for producing flowers early were favored by the environment.

Ⓓ Plants maintain reproductive cycles regardless of environmental conditions.

This is what the student will see when they select the correct answers (2 points).

Part A

When the two sets of seeds were grown together, the plants grown from the set of seeds produced during drought conditions formed flowers much earlier than the plants grown from the other set. Which conclusion is supported by these results?

Ⓐ Drought can affect future generations of some plant populations.

Ⓑ Drought can benefit plants that produce flowers.

Ⓒ Normal rainfall damages the roots of flowering plants.

Ⓓ Normal rainfall reduces reproduction of plant populations.

Part B

Which statement supports the answer to Part A?

Ⓐ Plants can regulate their flowering times based on the environment.

Ⓑ Plants produce flowers only when environmental conditions are favorable.

Ⓒ Plants with genes for producing flowers early were favored by the environment.

Ⓓ Plants maintain reproductive cycles regardless of environmental conditions.

Question Type: Multipart

Example #1: Student view

This student selected the correct answer in Part A and an incorrect answer in Part B (1 point).

Part A

When the two sets of seeds were grown together, the plants grown from the set of seeds produced during drought conditions formed flowers much earlier than the plants grown from the other set. Which conclusion is supported by these results?

- A Drought can affect future generations of some plant populations.
- B Drought can benefit plants that produce flowers.
- C Normal rainfall damages the roots of flowering plants.
- D Normal rainfall reduces reproduction of plant populations.

Part B

Which statement supports the answer to Part A?

- A Plants can regulate their flowering times based on the environment.
- B Plants produce flowers only when environmental conditions are favorable.
- C Plants with genes for producing flowers early were favored by the environment.
- D Plants maintain reproductive cycles regardless of environmental conditions.

This student selected an incorrect answer for Part A (0 points).

Part A

When the two sets of seeds were grown together, the plants grown from the set of seeds produced during drought conditions formed flowers much earlier than the plants grown from the other set. Which conclusion is supported by these results?

- A Drought can affect future generations of some plant populations.
- B Drought can benefit plants that produce flowers.
- C Normal rainfall damages the roots of flowering plants.
- D Normal rainfall reduces reproduction of plant populations.

Part B

Which statement supports the answer to Part A?

- A Plants can regulate their flowering times based on the environment.
- B Plants produce flowers only when environmental conditions are favorable.
- C Plants with genes for producing flowers early were favored by the environment.
- D Plants maintain reproductive cycles regardless of environmental conditions.

Question Type: Multipart

Example #1: Teacher view

The screenshot shows the 'Fall STAAR Interim' interface. At the top, it displays 'Current Item: 8' and 'Score: 2/2'. A table below shows the 'Scoring Assertion' and 'Outcome' for the item. The 'Scoring Assertion' is '1. The student chose the correct answer.' and the 'Outcome' is a checkmark. Below the table, there is a 'student setting(s)' section with a green 'ON' button. The question text reads: 'This question has two parts. Scientists used two sets of mustard seeds to study changes due to environmental conditions. One set of seeds was produced during a severe drought. The other set was produced during normal rainfall conditions. Part A: When the two sets of seeds were grown together, the plants grown from the set of seeds produced during drought conditions formed flowers much earlier than the plants grown from the other set. Which conclusion is supported by these results? Part B: Which statement supports the answer to Part A?'. The answer options for Part A are: (A) Drought can affect future generations of some plant populations. (B) Drought can benefit plants that produce flowers. (C) Normal rainfall damages the roots of flowering plants. (D) Normal rainfall reduces reproduction of plant populations. The answer options for Part B are: (A) Plants can regulate their flowering times based on the environment. (B) Plants produce flowers only when environmental conditions are favorable. (C) Plants with genes for producing flowers early were favored by the environment. (D) Plants maintain reproductive cycles regardless of environmental conditions.

The scoring model for this multipart question is:

- To obtain full credit (2 points), the student will correctly answer Parts A and B.
- To obtain partial credit (1 point), the student will correctly answer Part A.
- Students will receive 0 points if the answer to Part A is missing or incorrect.

In this example, the student chose the correct answer, so they received full credit (2 points).

Question Type: Multiselect

Question Type Overview

Description: Student can select more than one correct answer from a set of possible answers. Student will not be allowed to select more than the specified number of correct answers asked for within an individual question.

Point value: These questions can be worth a maximum of 2 points with the possibility of receiving 1 point for a partially correct response.

Science tests that may include these questions: Grade 5, Spanish Grade 5, Grade 8, and EOC

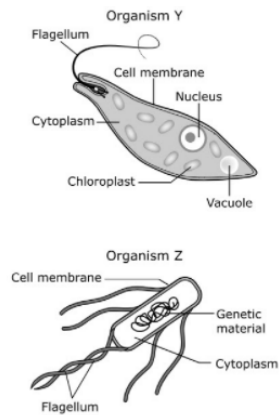
Question Type: Multiselect

Example #1: Student view

This example is question #9 in the Biology EOC sampler.

9

Two single-celled organisms are shown.



Which statements accurately compare the two organisms?

Select **TWO** correct answers.

- Organism Y is a eukaryotic cell, while Organism Z is a prokaryotic cell.
- Organism Z has a complex structure, while Organism Y has a simple structure.
- Organism Y requires a host cell to reproduce, while Organism Z does not.
- Organism Z contains genetic material, while Organism Y does not.
- Organism Y contains membrane-bound organelles, while Organism Z does not.

This is what the student will see when they select the correct answers (2 points).

Which statements accurately compare the two organisms?

Select **TWO** correct answers.

- Organism Y is a eukaryotic cell, while Organism Z is a prokaryotic cell.
- Organism Z has a complex structure, while Organism Y has a simple structure.
- Organism Y requires a host cell to reproduce, while Organism Z does not.
- Organism Z contains genetic material, while Organism Y does not.
- Organism Y contains membrane-bound organelles, while Organism Z does not.

Question Type: Multiselect

Example #1: Student view

The student selected one correct answer and one incorrect answer (1 point).

Which statements accurately compare the two organisms?

Select **TWO** correct answers.

- Organism Y is a eukaryotic cell, while Organism Z is a prokaryotic cell.
- Organism Z has a complex structure, while Organism Y has a simple structure.
- Organism Y requires a host cell to reproduce, while Organism Z does not.
- Organism Z contains genetic material, while Organism Y does not.
- Organism Y contains membrane-bound organelles, while Organism Z does not.

The student did not select the correct answers (0 points).

Which statements accurately compare the two organisms?

Select **TWO** correct answers.

- Organism Y is a eukaryotic cell, while Organism Z is a prokaryotic cell.
- Organism Z has a complex structure, while Organism Y has a simple structure.
- Organism Y requires a host cell to reproduce, while Organism Z does not.
- Organism Z contains genetic material, while Organism Y does not.
- Organism Y contains membrane-bound organelles, while Organism Z does not.

Question Type: Multiselect

Example #1: Teacher view

The screenshot shows the teacher view of a multiselect question in the Fall STAAR Interim system. The interface includes a header with the student's name (John106, Doe036) and a score of 2/2. Below the header is a table with two columns: "Scoring Assertion" and "Outcome". The "Scoring Assertion" column contains the text "1. The student chose the correct answer." and the "Outcome" column contains a checkmark. The question itself is titled "Two single-celled organisms are shown." and includes two diagrams. Organism Y is a eukaryotic cell with a nucleus, vacuole, chloroplast, cytoplasm, and cell membrane. Organism Z is a prokaryotic cell with genetic material, cytoplasm, and flagella. The question asks the student to select two correct statements comparing the two organisms. The selected statements are: "Organism Y is a eukaryotic cell, while Organism Z is a prokaryotic cell." and "Organism Y contains membrane-bound organelles, while Organism Z does not."

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The scoring model for this multiselect question is:

- To obtain full credit (2 points), the student will correctly select two statements that accurately compare the two organisms.
- To obtain partial credit (1 point), the student will correctly select one statement.
- Students will receive 0 points if both selections are missing or incorrect.

In this example, the student chose the correct answer, so they received full credit (2 points).

Question Type: Short Constructed Response

Question Type Overview

Description: Student gives a brief explanation in their own words to demonstrate their understanding of content.

Point value: Short constructed responses are graded on a rubric equal to 2 points.

Science tests that may include these questions: Grade 5, Grade 8, and EOC

Question Type: Short Constructed Response

Example #1: Student view


This example is question #12 in the Biology EOC sampler.

12

GUEST, GUEST

The image shows a region before and after deforestation.

Before Deforestation After Deforestation



How does the environmental change depicted in the image affect the ecosystem's stability **AND** its ability to recover from change?

Look at the image carefully. Then enter your answer and explanation in the box provided.

B I U [List Bullets] [List Numbers] [Link] [Image] [Undo] [Redo] [Omega]

Note: More information about constructed response questions, including rubrics and sample student responses, will be available in Fall 2022.

Question Type: Short Constructed Response

Example #1: Teacher view

The screenshot displays a teacher view of a question. At the top, it shows 'Item 11', 'Student: John166, Doe036', and 'Item 13'. Below this, there are tabs for 'Current Item: 12', 'Score: 2/2', 'Item & Score', and 'Rubric & Resources'. A table with two columns, 'Scoring Assertion' and 'Outcome', is visible. The 'Scoring Assertion' column contains the text '1. The student chose the correct answer.' and the 'Outcome' column contains a checkmark. Below the table, there is a 'student setting(s)' section with a green 'ON' button. The question prompt is 'The image shows a region before and after deforestation.' Below the prompt is an image with two side-by-side panels labeled 'Before Deforestation' and 'After Deforestation'. The 'Before Deforestation' panel shows a dense forest, and the 'After Deforestation' panel shows a cleared area with sparse vegetation. Below the image, the question text reads: 'How does the environmental change depicted in the image affect the ecosystem's stability **AND** its ability to recover from change?' and 'Look at the image carefully. Then enter your answer and explanation in the box provided.' At the bottom, there is a text input area with a rich text editor toolbar.

The scoring model for this short constructed response question is:

- To obtain full credit (2 points), the student will correctly answer how the environmental change depicted in the image affects the ecosystem's stability and its ability to recover from the change.
- To obtain partial credit (1 point), the student will correctly answer how the environmental change depicted in the image affects the ecosystem's stability or its ability to recover from the change.
- Students will receive 0 points if the answer is missing, incorrect, or irrelevant.

A rubric is used to determine the score for a short constructed response question. A correct answer to this example will receive 2 points.

Note: More information about constructed response questions, including rubrics and sample student responses, will be available in Fall 2022.

Additional Resources

Additional information about STAAR and STAAR Redesign is available via the following links:

- [STAAR Redesign Resources](#)
- [STAAR Science Resources](#)
- [STAAR Resources for all Assessments](#)