



ISTEP+ Experience Online

Science

Grades 4, 6 & 10

Purpose

Several Different
Technology-Enhanced Item
Types

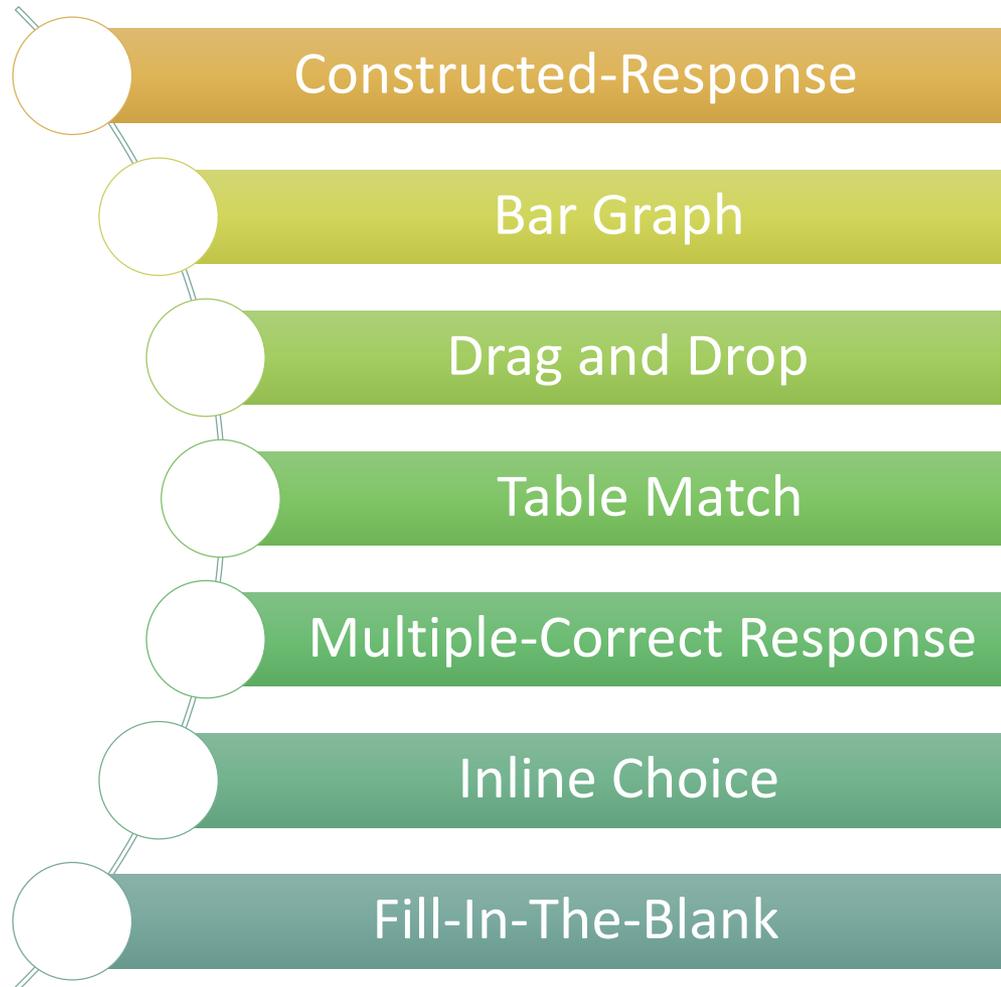
How to Respond to An
Online Version of A
Constructed-Response
Item

To prepare students
for success by letting
them ***Experience...***

The Online Testing
Platform

Using Online Tools That
Are Available During the
Science Assessment

Constructed-Response and Technology-Enhanced Science Item Types Found on ISTEP+ Experience Online



Constructed-Response

← → Review Bookmark

J. Doe

ISTEP+ GRADES 3-4 ONLINE EXPERIENCE / SECTION 3: SCIENCE / 1 OF 11

Landslides can occur in the mountains after heavy rain from a storm.

What happens during a landslide?

10000

Why are landslides a concern for farmers living at the bottom of a mountain?

10000

Bar Graph



Review ▾

Bookmark

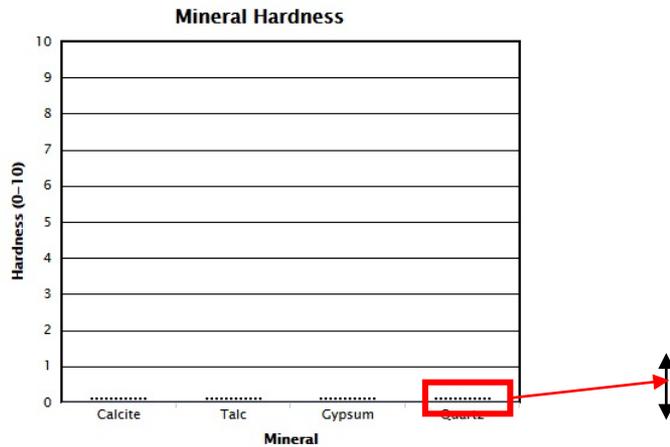


J. Doe ▾

Students measured the hardness of four minerals on a scale from 0 to 10. The table shows the measurements.

Mineral	Hardness (0–10)
Calcite	3
Talc	1
Gypsum	2
Quartz	7

Create a bar graph of the measurements. Drag the top of each bar to the correct height.



Bar Graph

← → Review Bookmark J. Doe

ISTEP+ GRADES 3-4 ONLINE EXPERIENCE / SECTION 3: SCIENCE / 3 OF 11

Students measured the hardness of four minerals on a scale from 0 to 10. The table shows the measurements.

Mineral	Hardness (0–10)
Calcite	3
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Create a bar graph of the measurements. Drag the top of each bar to the correct height.

Mineral Hardness

Mineral	Hardness (0–10)
Calcite	3
Talc	1
Gypsum	2
Quartz	7

Drag-and-Drop



Review ▾

Bookmark



J. Doe



The table lists some of the planets in the solar system. Classify each planet as a gaseous planet or a rocky planet and select the correct fact about the atmosphere of each planet. Drag and drop your answers into the table.

Gaseous **Rocky** **Highest atmospheric temperatures** **Deepest atmosphere**
Thinnest atmosphere **Most atmospheric oxygen**

Planet	Classification	Fact About Atmosphere
Mercury	<input type="text"/>	<input type="text"/>
Venus	<input type="text"/>	<input type="text"/>
Earth	<input type="text"/>	<input type="text"/>
Jupiter	<input type="text"/>	<input type="text"/>

Drag-and-Drop



Review ▾

Bookmark



J. Doe



ISTEP+ GRADES 5-6 ONLINE EXPERIENCE / SECTION 3: SCIENCE / 5 OF 11

The table lists some of the planets in the solar system. Classify each planet as a gaseous planet or a rocky planet and select the correct fact about the atmosphere of each planet. Drag and drop your answers into the table.

Gaseous

Rocky

Planet	Classification	Fact About Atmosphere
Mercury	Rocky	Thinnest atmosphere
Venus	Rocky	Highest atmospheric temperatures
Earth	Rocky	Most atmospheric oxygen
Jupiter	Gaseous	Deepest atmosphere

Inline Choice



Review ▾

Bookmark

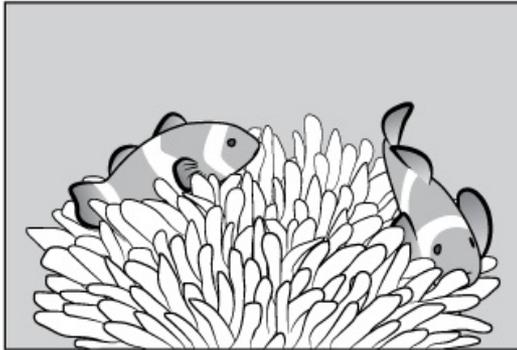


J. Doe



ISTEP+ GRADES 5-6 ONLINE EXPERIENCE / SECTION 3: SCIENCE / 3 OF 11

Sea anemones have stinging tentacles that harm most fish, but clownfish can safely swim among the tentacles. Clownfish attract other fish that sea anemones sting and then eat. Clownfish eat fish parts that the sea anemones leave behind. They also help keep the sea anemones clean by eating other organisms off of the anemones' tentacles.



Select a term from EACH drop-down menu to correctly complete the sentence.

The relationship between clownfish and sea anemones is an example of

Choose... ▾

because

Choose...

Choose...

clownfish prey on sea anemones

clownfish and sea anemones both benefit

clownfish are harmed but sea anemones benefit

Choose...

mutualism

predatory behavior

a parasite and host

Fill-in-the-Blank



Review ▾

Bookmark

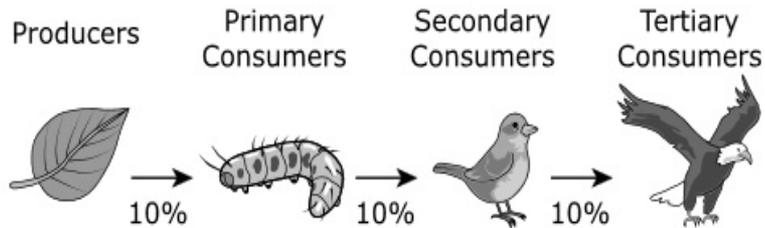


J. Doe



ISTEP+ GRADE 10 ONLINE EXPERIENCE / SECTION 3: SCIENCE / 4 OF 11

The diagram shows the flow of energy between trophic levels.

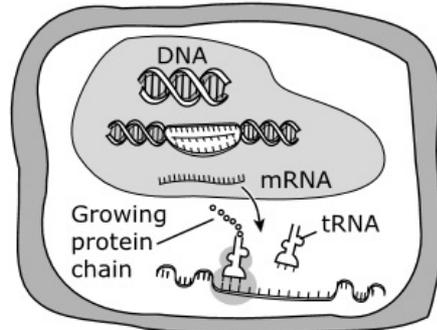


What percentage of the energy produced by the leaf is transferred to the eagle in this food chain? Type your answer in the blank.

 %

Multiple-Select Response

The diagram shows the process of protein synthesis in a plant cell.



Select ALL organelles that are involved in protein synthesis.

- A. chloroplasts
- B. rough endoplasmic reticulum
- C. mitochondria
- D. nucleus
- E. ribosomes

Tools – Review

The screenshot displays a 'Review' interface with a list of 10 questions. The 'Review' button in the top navigation bar is highlighted with a red box. The list of questions is as follows:

- Question 1: Not answered (indicated by a red callout box labeled 'Question Not Answered')
- Question 2: Answered (indicated by a red callout box labeled 'Question Answered')
- Question 3: Bookmarked (indicated by a blue callout box labeled 'Item Bookmarked')
- Question 4: Not answered
- Question 5: Not answered
- Question 6: Not answered
- Question 7: Not answered
- Question 8: Not answered
- Question 9: Not answered
- Question 10: Not answered

At the bottom of the interface, a summary bar shows the following counts:

- All Questions: 11
- Not Answered: 10
- Bookmarks: 1

Tools – Bookmark

← → Review **Bookmark** ⌵

J. Doe ⌵

End of Section 3: Science

Use the **Review** button above to go back and review your answers. When you are done, use the **Submit Section** button below to submit your answers.

11
Not Answered

1
Bookmarks

Submit Section >>

← → Review **Bookmark** ⌵

J. Doe ⌵

Item not Bookmarked

Item Bookmarked

Tools – Answer Eliminator

← → Review ▾ Bookmark   J. Doe 

Which of these is the MOST LIKELY number of gray wolves in the northern Rocky Mountains in 2001?

~~A. 575~~

B. 463

C. 550

~~D. 538~~

Tools – Line Reader

The screenshot shows the Line Reader tool interface. At the top, there is a navigation bar with a back button, a forward button, a 'Review' dropdown, a 'Bookmark' button, and a close button. On the right side of the navigation bar, the user's name 'J. Doe' and a profile icon are displayed. The main content area is a dark gray rectangle containing a text snippet: 'Sea anemones have stinging tentacles that harm most fish, but clownfish can safely swim among the'. Below the text is a horizontal line with a crosshair icon in the center, indicating the current reading position. To the right of the text area, there is a vertical toolbar with several icons: a red-bordered box around the 'Show Line Reader Mask' option, a blue-bordered box around a diagonal line icon, and a green-bordered box around another diagonal line icon. Below the text area, there is a question: 'Select a term from EACH drop-down menu to correctly complete the sentence. The relationship between clownfish and sea anemones is an example of [Choose...] because [Choose...]'.

← → Review ▾ Bookmark

J. Doe

Sea anemones have stinging tentacles that harm most fish, but clownfish can safely swim among the

Change the background and foreground color
Show Line Reader Mask
Sign out of TestNav

Change reading pane size

Move the reading pane

Change box size

Select a term from EACH drop-down menu to correctly complete the sentence.
The relationship between clownfish and sea anemones is an example of [Choose...]
because [Choose...]

Features – Background/ Foreground Color

The screenshot displays a web application interface with a navigation bar at the top containing a back button, a forward button, a 'Review' dropdown, a 'Bookmark' button, and a user profile icon labeled 'J. Doe'. A 'Contrast Settings' dialog box is open in the center, listing seven color schemes with radio buttons: 'Black on White (Default)', 'Black on Cream', 'Black on Light Blue', 'Black on Light Magenta', 'White on Black', 'Yellow on Blue', and 'Gray on Green'. A 'Continue' button is at the bottom of the dialog. To the left of the dialog, a list of six items, each labeled 'A. 375', is shown with different background colors: yellow, light blue, magenta, black, dark blue, and gray. Red arrows point from the selected color scheme in the dialog to the corresponding background color of the items. On the right side, a red-bordered box highlights the text 'Change the background and foreground color' and 'Show Line Reader Mask'. Below this box is a 'Sign out of TestNav' button.

Review

Bookmark

J. Doe

Contrast Settings

- abc Black on White (Default)
- abc Black on Cream
- abc Black on Light Blue
- abc Black on Light Magenta
- abc White on Black
- abc Yellow on Blue
- abc Gray on Green

Continue →

Change the background and foreground color

Show Line Reader Mask

Sign out of TestNav

A. 375

A. 375

A. 375

A. 375

A. 375

A. 375

Questions

- For science assessment questions please contact Ben Kemp at bkemp@doe.in.gov
- For other questions, please contact the Office of Student Assessment by calling (317) 232-9050 or via email at INassessments@doe.in.gov.



**Indiana
Department of Education**

The graphic shows a green, curved line representing a hill. Five dark blue silhouettes of people are walking up the hill from left to right. The first silhouette is sitting on the ground, the second is walking, the third is walking, the fourth is walking, and the fifth is a graduate in a cap and gown.

Glenda Ritz, NBCT

Indiana Superintendent of Public Instruction