

**Practice Item Guide**  
**Virginia Standards of Learning**  
**Earth Science**

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Pearson

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## OVERVIEW

The practice items available in the Virginia Standards of Learning (SOL) Earth Science practice set provide examples of the new content and increased rigor represented by the 2010 *Science Standards of Learning*. Additionally, these items illustrate the technology-enhanced item (TEI) types. These practice items do not cover all Earth Science SOL and should not be used in place of review of the SOL test content.

This practice guide may be used by teachers or other adults to guide students through the practice items for Earth Science. While the use of this guide with the practice items is not required, it is strongly encouraged, as it will help ensure that students are familiar with the types of items that they may encounter while taking the Earth Science test. The directions in the guide will also lead students through practice with the online tools, familiarize students with how to navigate through the test, and help students understand how to use the Section Review screen within TestNav™. Appendix B summarizes how student responses for TEI are indicated on the Section Review screen.

Prior to guiding students through the practice items, carefully read this practice item guide and review the practice items to become familiar with them. All directions that must be read aloud to the students are in **bold Arial font** so that they stand out from the rest of the text. All other text is for your information and should not be read to students.

The following Change Log indicates any updates to this document.

Change Log		
Version	Date	Description
V.1	03/01/2012	Original document posted.
V.2	03/20/2012	Item #1: Edit to actual item, as well as to correct answer. Correct answer in appendix also updated.
V.3	10/31/2012	Additional practice items added to existing set. Various changes throughout guide regarding how TEI appear on the Section Review screen. Removed one practice item. Updated directions and screen shots for exiting TestNav. Added Appendix B.
V.4	11/08/12	Removed one practice item.
V.5	12/06/13	Added 9 new practice items.

## **SYSTEM REQUIREMENTS FOR TESTNAV**

The minimum hardware requirements for all workstations used to access TestNav are available at <http://www.pearsononlinetesting.com/TestNav/7/index.html>

## **TECHNOLOGY-ENHANCED ITEM (TEI) TYPES**

There are four types of technology-enhanced items:

- drag and drop,
- hot spot (which includes number line and coordinate plane items),
- bar graph or histogram, and
- fill-in-the-blank.

A brief description of each technology-enhanced item (TEI) type is provided below. The SOL practice items for Earth Science will introduce each of the TEI types: drag and drop, hot spot, bar graph, and fill-in-the-blank.

### **Drag and Drop**

Drag and drop items contain draggers and bays.

- Draggers are the answer options that are moved to bays in response to the question.
- Bays are areas of an item where draggers will remain once moved there.

Drag and drop items require a student to respond by moving one or more draggers from one place on the screen into a bay(s) elsewhere on the screen.

The student will click on the dragger and keep the button down while moving the dragger to the desired location. Once the button is released, the dragger will be in the new location. Students can still move the dragger once it has been dropped into a bay.

Drag and drop items may be used in reading, writing, mathematics, and science assessments.

### **Hot Spot**

Hot spot items contain hot spot zones which represent student answer options.

- Hot spot zones are answer options which may be part of a graphic, art, numbers, or text, that are selected in response to a question.
- Unlike a traditional multiple-choice item where only one answer option is correct, hot spot items may require the student to select one or more hot spot zones (answer options) in order to correctly answer the item.
- Number line and coordinate plane items require students to respond by clicking on a number line or coordinate plane to plot one or more points. In these items, the points themselves are the hot spot zones. Only points plotted with the pointer tool are scorable responses. Points plotted with the dot tool are not scorable responses.

The student selects a hot spot by clicking on it. In some hot spot items, there will be an indication on the screen, such as the zone being outlined in blue, which confirms that the pointer is over a hot spot. After the hot spot is clicked, there will always be an indication that the zone has been selected as an answer, such as the hot spot being outlined in burnt orange, the hot spot being shaded, an asterisk being placed on the hot spot, the phrase or statement on the hot spot being marked with a strikethrough line, or a red point being plotted on the number line or coordinate plane.

Hot spot items may be used in reading, writing, mathematics, and science assessments.

## **Bar Graph or Histogram**

Bar graph or histogram items require students to graph data by indicating the height (if the bars are vertical) or length (if the bars are horizontal) of one or more bars or intervals. The bar height or length is graphed by clicking on a location within the graph or by dragging the bar to the desired location.

Bar graph and histogram items may be used in mathematics and science assessments.

## **Fill-in-the-Blank**

Fill-in-the-blank items require students to input characters from the keyboard (numbers, letters, or symbols) to answer the question. For this item type, the student responds to a question by typing into a blank box provided in the item.

- Some response boxes may limit the characters that can be entered. For instance, if the response is expected to be numeric, the student will not be able to enter letters.
- Students should carefully follow directions in fill-in-the-blank items, such as providing an answer in simplest form, rounding a number as indicated, or using significant digits.
- Currently, no fill-in-the-blank item requires students to spell a word correctly; however, alphabetic characters or symbols may be used in an answer.

Fill-in-the-blank items are currently used in mathematics and science assessments.

## **OPENING THE VIRGINIA SOL SCIENCE PRACTICE ITEMS**

1. Go to the Virginia Department of Education Web site:  
[http://www.doe.virginia.gov/testing/sol/practice\\_items/index.shtml](http://www.doe.virginia.gov/testing/sol/practice_items/index.shtml)
2. Under the heading “Science Practice Items” click on the Earth Science link. Since this is a web based application, the link will take you directly to the Earth Science practice items.

**MATERIALS NEEDED FOR COMPLETING VIRGINIA SOL PRACTICE ITEMS**

Scratch paper and pencil

**ONLINE TOOLS AVAILABLE ON THE VIRGINIA SOL SCIENCE PRACTICE ITEMS**

The following tools can be accessed by clicking the appropriate icon on the toolbar at the top of the screen. These tools can be used to assist the test taker in finding the answer, but only the pointer can be used to respond to the question.

Tool Icon	Description
	<b>Pointer</b> – Use the pointer to answer questions.
	<b>Eraser</b> – Use the eraser to remove lines or highlights.
	<b>Highlighter</b> – Use the highlighter tool to highlight text or graphics.
	<b>Eliminator</b> – Use the eliminator tool on multiple-choice questions to mark choices you do not wish to consider.
	<b>Pencil</b> – Use the pencil tool to make marks on the test questions.
	<b>Ruler</b> – Use the ruler tool to measure something on screen.
	<b>Straightedge</b> – Use the straightedge tool to draw straight lines and underline text.
	<b>Calculator</b> – Use the calculator tool to perform calculations.
	<b>Exhibit</b> – Use the exhibit icon to view information about the Commonwealth of Virginia copyright. The exhibit icon only appears on the first screen of the practice items.
	<b>Help</b> – Use the help tool to display information about a specific tool on the top toolbar.

## SPECIFIC DIRECTIONS FOR THE SOL EARTH SCIENCE PRACTICE ITEMS

### Introduction

After the practice items are launched, the first practice item will be displayed. Read the following instructions to the students.

**SAY** Today you will be working on some Earth Science practice items for the SOL test. There are 27 questions that will show you some of the types of test items that will be administered as part of the End-of-Course Earth Science assessment. Some questions are multiple-choice and others are technology-enhanced items. Technology-enhanced items require you to show your answer in another way, such as typing the answer in a box, completing a graph, clicking and dragging the answer to a specific location, or clicking on an answer to choose it.

Listen carefully as I read the directions. I will guide you through each item one at a time. Please remember that the questions are for practice. They will not be scored, and I will tell you the answer for each question.

Are there any questions before we start?

Pause to answer questions.

**SAY** *Next* and *Previous* buttons appear at the bottom of the screen for each question. Clicking *Next* takes you to the next question. Clicking *Previous* takes you back to the previous question. Notice that the *Previous* button is not available when viewing the first question but will become available after you have moved to the second question. Question numbers are also located at the bottom of the screen. For example, the screen with the first question reads “Question 1 of 27.”



**SAY** At any time, you may click on the *Flag for Review* button (  ) located at the bottom left of the screen. This should be used for any question that you want to review at a later time. We will practice using this button when we are working on the practice items.

Now let's look at the top of your screen.

Pause. The picture below is the toolbar students will see at the top of the screen.



**SAY** The tools you may use are in the toolbar at the top of the screen. We will practice with each of the tools as we work through the practice questions. If you forget what a tool does, you can click on the Help symbol (  ) to read about the tool.

The Help tool has information about the tools. If you would like your students to explore the Help tool, you can have them do this at the end of the practice items, after they have been exposed to the tools while working these items.

Note that the exhibit window contains information only about the Commonwealth of Virginia copyright. The exhibit icon only appears on the first screen of the practice items.

**SAY Remember that the tools at the top of the screen are there to help you answer a question. The only tool that can be used to mark an answer to a question is the pointer**

**tool (  ).**

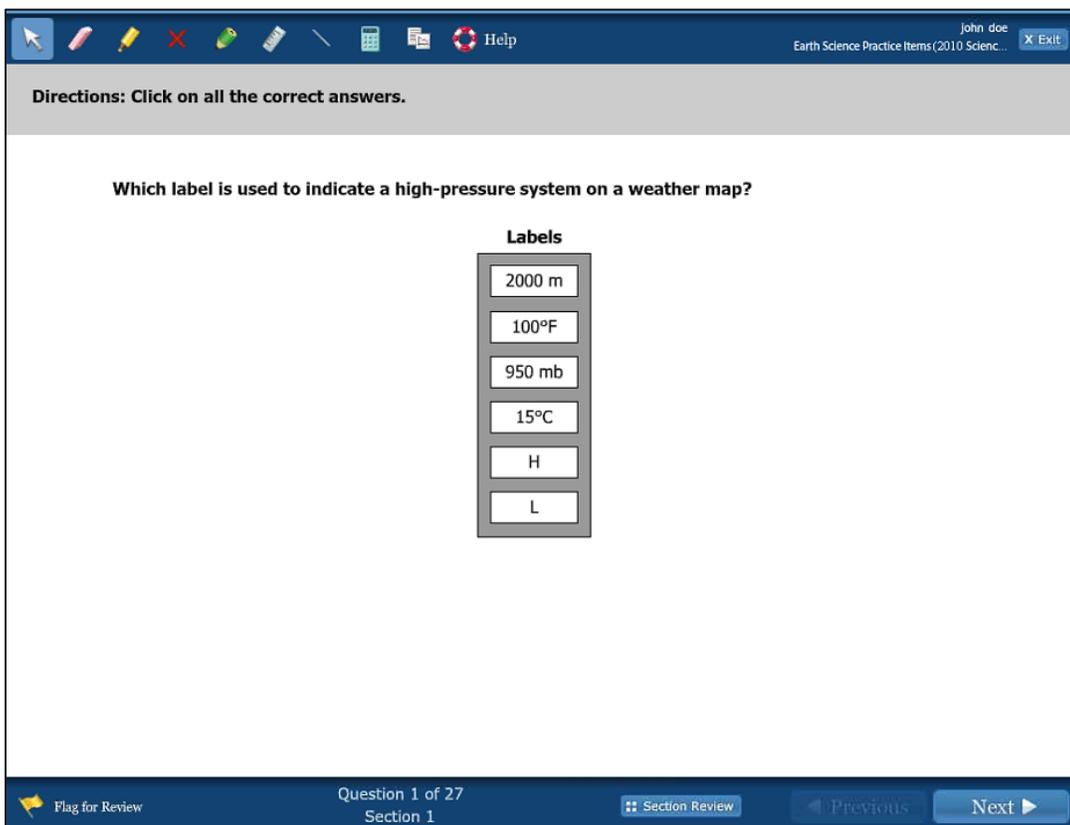
**Underneath the toolbar is a gray directions box. The directions banner is included in every technology-enhanced item, and it tells you how to answer the question. Always read the directions banner before selecting the answer.**

Make sure students see the directions banner at the top of the screen.

**SAY The directions banner says, “Click on all the correct answers.”**

**Now I will read the question to you. It says, “Which label is used to indicate a high-pressure system on a weather map?”**

**In order to get the item correct, you must click on each of the correct labels found in the dark gray box.**



**SAY Notice that when you hover over an answer choice in this type of question, it will be outlined in blue. When you click to select the box as your answer, it will be outlined in orange. If you change your mind, click on the orange box to remove the orange outline and select another box.**

**SAY** Now, select your answer. If you change your mind after clicking on an answer, you can remove the selection by clicking it again.

Pause while students work to answer the question.

**SAY** Which label did you select?

Pause for replies.

**SAY** You should have selected the label *H*.

When we have finished looking at the practice items, we will look at a Section Review screen. The Section Review screen shows which questions you have answered and which questions you have not answered. Since the number of correct answers was not indicated and the directions tell you to click on all of the answers that are correct, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are.  
Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 2.

Pause while students navigate to the next question.

John doe  
Earth Science Practice Items (2010 Scienc... X Exit

**Directions: Click on three characteristics below inner planets and three characteristics below outer planets.**

**Distinguish between the characteristics of inner and outer planets.**

Inner Planets	Outer Planets
Mainly gases	Mainly gases
Mainly solid material	Mainly solid material
Few or no moons	Few or no moons
Many moons	Many moons
Shorter orbital year	Shorter orbital year
Longer orbital year	Longer orbital year

Flag for Review Question 2 of 27 Section 1 Section Review Previous Next

**SAY** With this item, you will select your answers by clicking on the labels from the dark gray boxes on the screen. The directions box at the top of your screen says, “Click on three characteristics below inner planets and three characteristics below outer planets.”

The problem says, “Distinguish between the characteristics of inner and outer planets.”

In order to completely answer this question, you must select three characteristics from each column. If you do not select three answers from each column, the question will show as unanswered on the Section Review screen.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Before answering this question, let’s practice using the pencil tool and eraser tool with this item. Click on the pencil icon () located on the top toolbar. You may use this tool to make marks on the test questions. One of the ways you can use the pencil tool is to narrow down your answer choices. You may want to use the pencil tool to eliminate choices on technology-enhanced items like this one. The eliminator tool () , the tool on the upper left side of the screen that is shown as a red “X”, can only be used to eliminate answer choices on multiple-choice questions.

Make sure students see the eliminator tool on the toolbar and understand that it can be used on multiple-choice items but not technology-enhanced items.

**SAY** Let's practice making marks on this item to eliminate some choices. Use your pencil tool to put an "X" over the words you do NOT wish to select. Then click on the pencil tool icon again to put the tool away.

Pause while students mark an "X" on the words and put away the tool.

**SAY** Now, let's practice using the eraser tool to erase the highlighter mark we just made. Click the icon with the pink eraser (). Then click on the pencil mark to make it disappear. To put the eraser tool away, click on the icon again on the toolbar.

Pause while students practice with the eraser tool and put it away.

**SAY** Are there any questions on how to use the highlighter and eraser tools?

Answer all questions

**SAY** Now use the pointer tool to answer the question. If you change your mind after clicking on an answer choice, you can remove the selection by clicking it again.

Pause while students select their answers. Assist students as necessary.

**SAY** Let's go over the answer. In the *Inner Planets* column, you should have selected *Mainly solid material, Few or no moons, and Shorter orbital year*. In the *Outer Planets* column, you should have selected *Mainly gases, Many moons, and Longer orbital year*.

**Do you have any questions on how to answer this item or how to use the pencil tool?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 3.

Pause while students navigate to the next question.

**Directions:** Click on a box to choose each mineral you want to select. You must select all correct options.

According to the Mohs scale, which of the minerals would be scratched by a steel file with a hardness of 6.5?

Mohs Scale	Hardness
Talc	1
Gypsum	2
Calcite	3
Fluorite	4
Apatite	5
Feldspar	6
Quartz	7
Topaz	8
Corundum	9
Diamond	10

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Section 1

**SAY** The directions banner says, “Click on a box to choose each mineral you want to select. You must select all correct options.”

Now read the question and answer it. If you change your mind after clicking on an answer choice, you can remove the selection by clicking it again.

Pause while students read and answer the question.

**SAY** Which minerals did you select?

Pause for replies.

**SAY** You should have selected *Talc*, *Gypsum*, *Calcite*, *Fluorite*, *Apatite*, and *Feldspar*, and only those minerals, to get the question correct.

Since the number of correct answers was not indicated in the question, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are, since it was not indicated in the question.

**Do you have any questions?**

Answer any questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Before we go to the next question, let’s take a moment to practice using the highlighter tool. You can use the highlighter tool on the toolbar to highlight words. To use this tool, click the icon that looks like a picture of a yellow highlighter (  ). Clicking the highlighter tool will change your pointer to an arrow with a highlighter next to it.

Practice using the highlighter by highlighting the question below the gray directions banner. Then click again on the highlighter tool on the toolbar to put the tool away.

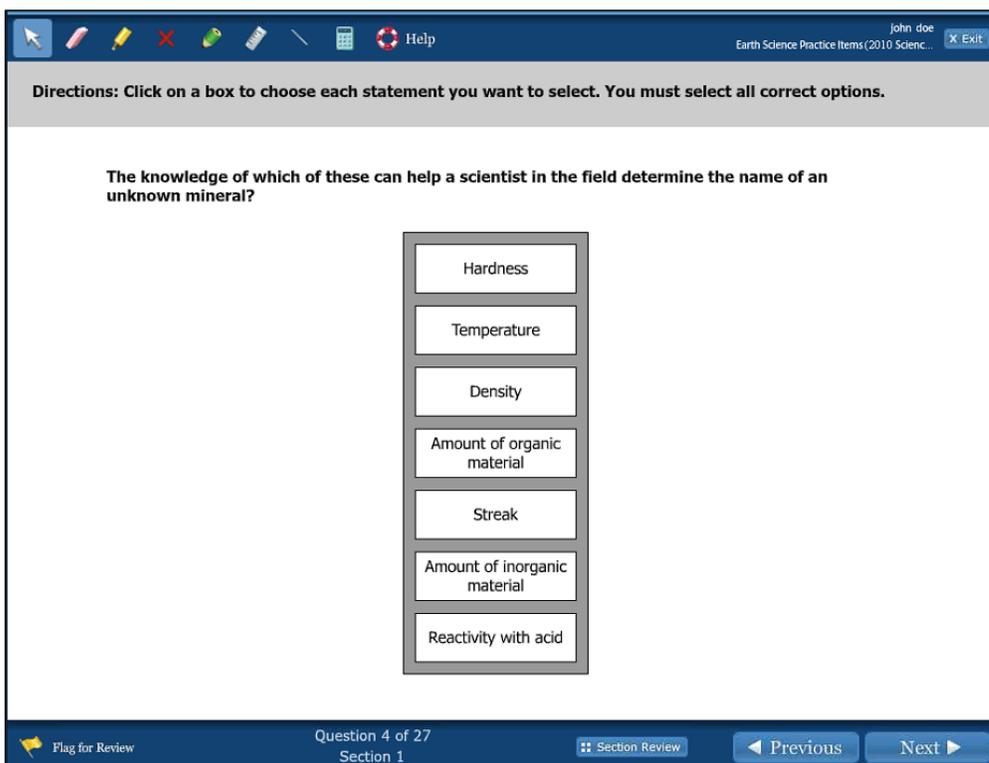
Pause while students highlight the text and put the tool away. Assist students as necessary.

**SAY** Are there any questions on how to use the highlighter tool?

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to the next question.

Pause while students navigate to the next question.



**SAY** Question 4 requires you to select your answers by clicking on the correct boxes found in the dark gray box. You can select more than one box.

Now read the directions and question to yourself and then answer it. If you change your mind after clicking on an answer choice, you can remove the selection it by clicking it again.

Pause while students read and answer the question.

**SAY** Which answers did you choose?

Pause for replies.

**SAY** You should have selected *Hardness, Density, Streak, and Reactivity with acid*, and only those answers, for your answer to be correct.

Since the number of correct answers was not indicated in the question, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are.

**Do you have any questions?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Before we go on to the next question, click on the *Flag for Review* button on the bottom left of the screen. If this were an actual SOL test, you would click this button if you wanted to come back and review the question again.

Pause while students click on this icon.

**SAY** When we reach the end of the practice questions, I will show you how the questions that you flagged for review will look on the Section Review screen. They will have a picture of a flag next to them.

Pause.

**SAY** Click *Next* at the bottom of the screen to go to question 5.

Pause while students navigate to the next question.

**SAY** Read the directions and problem to yourself.

Pause while students read the directions and question.

**SAY** This item requires you to drag the terms from the dark gray box into the empty boxes in the concept map. If you do not click and drag a term into each empty box within the diagram, the question will not be completely answered and will show as unanswered on the Section Review screen.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Now, drag the terms to the correct boxes on the screen. If you change your mind after clicking and dragging a term into the diagram, you can drag that term back to the dark gray box and select another.

Pause while students work to answer the question.

**SAY** In which boxes did you place the terms?

Pause for replies.

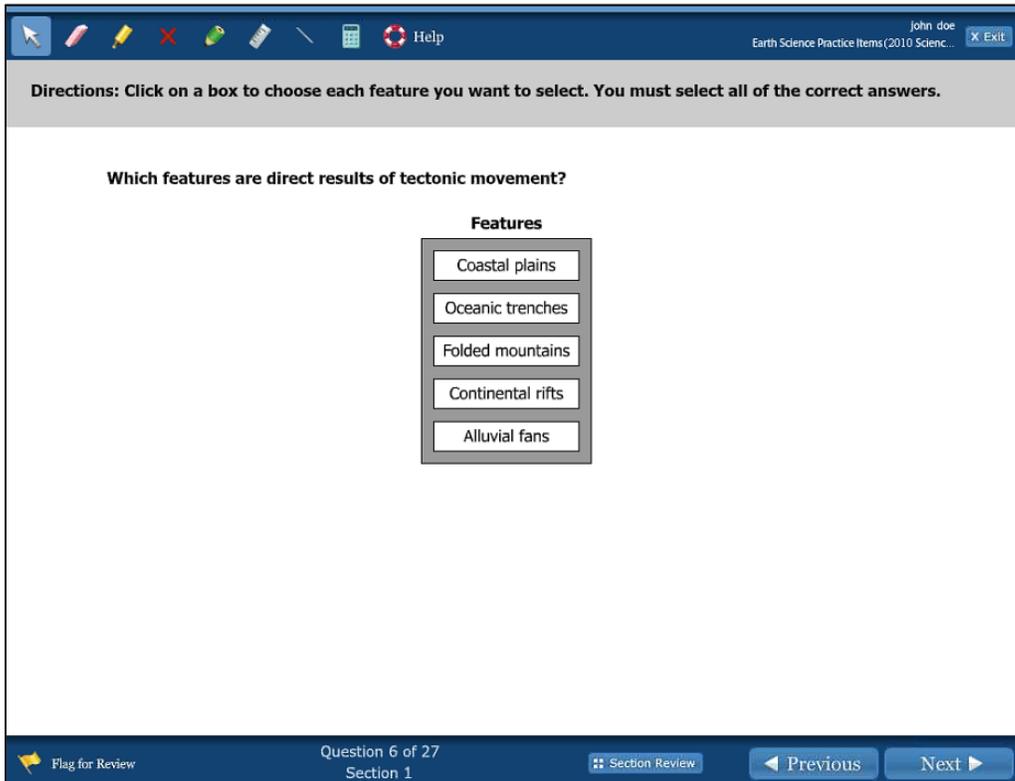
**SAY** The correct answers are in these locations within the concept map:  
 In the top box on the left, *runoff*;  
 In the top box on the right, *habitats*;  
 In the bottom box on the left, *flooding*; and  
 In the bottom box on the right, *extinction*.

**SAY Do you have any questions?**

Answer all questions.

**SAY Click *Next* at the bottom of the screen to go to question 6.**

Pause while students navigate to the next question.



**SAY This item requires you to select your answers from the dark gray box on the screen. Read the directions and question to yourself and then select your answers. If you change your mind after clicking on an answer choice, you can remove the selection it by clicking it again.**

Pause while students read and answer the question.

**SAY How did you answer this question?**

Pause for replies.

**SAY You should have selected *Oceanic trenches*, *Folded mountains*, and *Continental rifts*, and only those features, to be correct.**

Since the number of correct answers was not indicated in the question, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are, since it was not indicated in the question.

Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Before we go to the next question, let’s take a moment to practice using the straightedge tool. You can use the straightedge tool on the toolbar to make a straight line or underline text. To

use this tool, click the icon that looks like a slanted line (  ). Clicking the straightedge tool will change your pointer to an arrow with a blue slanted line next to it. Click and drag to create a line.

Practice using the straightedge by underlining the question, “Which features are direct results of tectonic movement?” Then click again on the straightedge tool on the toolbar to put the tool away.

Pause while students underline the text and put the tool away. Assist students as necessary.

**SAY** Click *Next* at the bottom of the screen to go to question 7.

Pause while students navigate to the next question.

**SAY** To answer this question, you will complete the bar graph on the screen. Read the directions and problem to yourself.

Pause while students read the directions and the question.

**SAY** You will click on a location above each bar to graph the correct height. If you change your mind about a bar height, you can click on another location, and the bar height will change. Now graph the data.

Pause while students complete the bar graph. Assist students as necessary.

**SAY** What should be the heights of the bars on the graph?

Pause for replies.

**SAY** Moving from left to right:  
The height of the *Bottom of Zone of Aeration* bar should be at *200m*;  
The height of the *Top of the Water Table* bar should be at *200m*; and  
The height of the *Top of the Confining Layer* should be at *300m*.

For bar graph or histogram questions, once you raise one bar above the original height, it will show as “Answered” on the Section Review screen. This is so no hint or clue is given as to how to graph the data in the table. If you return all of the bars to their original heights, the question will be “Unanswered.”

**Do you have any questions on how to graph the data?**

Pause to answer questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 8.

Pause while students navigate to the next question.

The screenshot shows a digital assessment interface. At the top, there is a toolbar with various icons and a 'Help' button. The user's name 'John doe' and the page title 'Earth Science Practice Items (2010 Scienc...)' are visible. The main content area contains the following text: 'Directions: Click on a box to choose each option you want to select. You must select the two correct options.' Below this is the question: 'Based on the circulation pattern, identify the type of breeze and the time that the breeze occurs.' A diagram shows a cross-section of land and ocean. Arrows indicate air rising from the land and sinking over the ocean, with surface air moving from the ocean to the land. To the right of the diagram is a list of options: 'Sea Breeze', 'Land Breeze', 'Daytime', and 'Nighttime'. At the bottom, there is a navigation bar with buttons for 'Flag for Review', 'Section Review', 'Previous', and 'Next'.

**SAY** This question requires you to select the two correct answer options by clicking the boxes in the dark gray box. Read the directions and question to yourself. Then answer the question. If you change your mind after selecting an answer choice, you can remove the selection by clicking it again.

Pause while students answer the question.

**SAY** Which options did you select for your answer?

Pause for replies.

**SAY** The correct answers are *Sea Breeze* and *Daytime*. Since the directions indicated that there were two correct answers, this question will only show as “Answered” on the Section Review screen when two answers have been selected.

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 9.

Pause while students navigate to the next question.

**SAY** Read the directions and question, and then select your answers. If you change your mind after clicking on an answer choice, you can remove the selection it by clicking it again. You must select all correct answers.

Pause while students answer the question.

Directions: Click on a box to choose each statement you want to select. You must select all correct statements.

If seafloor spreading were to occur at the line marked X to X', what else would be occurring at this location at the same time?

Crust being subducted  
 Trench is being formed  
 Ridge is developing  
 Magma is released  
 Crust is separating  
 Rift zone

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 Section 1

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**SAY** How did you answer the question?

Pause for replies.

**SAY** You should have selected *Ridge is developing*, *Magma is released*, *Crust is separating*, and *Rift zone*, and only those answers, to be correct.

Since the number of correct answers was not indicated in the question, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are.

**Do you have any questions about how to answer this question correctly?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 10.

Pause while students navigate to the next question.

**SAY** This question requires you to drag the pressure symbols from the dark gray box to the correct boxes on the map. Read the directions and question to yourself and then answer it. In order to completely answer this question, each of the boxes on the map must contain a pressure symbol. Notice that you can use the symbols more than one time. In some items like this one, answer choices can be used more than one time.

Pause while students read the directions and answer the item.

**SAY How did you respond?**

Pause for replies.

**SAY The correct answers are:**  
**In the upper box below the map title – L;**  
**In the lower box on the right, near the Atlantic Ocean – H; and**  
**In the lower box on the left – H.**

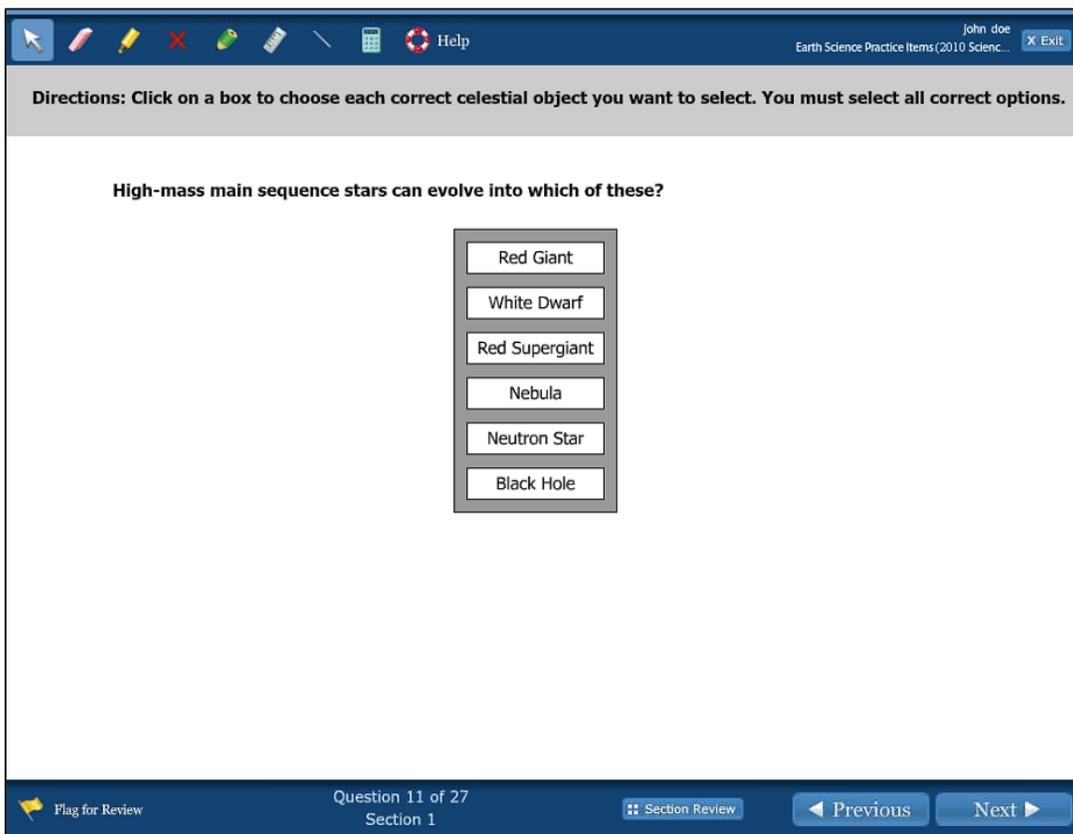
**Since there were three empty boxes on the map that required an answer, this question will show as “Answered” on the Section Review screen only when each box is filled. Do you have any questions?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY Click *Next* at the bottom of the screen to go to question 11.**

Pause while students move to the next question.



**SAY** Read the directions and question to yourself, and then answer the question by selecting the correct boxes. If you change your mind after selecting an answer choice, you can remove the selection it by clicking it again.

Pause while students read the directions and question and select their answers.

**SAY** Which answers did you choose?

Pause for replies.

**SAY** You should have selected *Red Supergiant*, *Neutron Star*, and *Black Hole*, and only those answers, to get this question correct.

Since the number of correct answers was not indicated in the question or in the directions, this item will show as “Answered” on the Section Review screen once one answer is selected. This is so no hint or clue is given as to how many correct answers there are, since it was not indicated in the question.

**Do you have any questions?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 12.

Energy Source	
Pros	Cons
<ul style="list-style-type: none"> <li>• No pollution</li> <li>• Quiet production</li> <li>• Works in remote locations</li> </ul>	<ul style="list-style-type: none"> <li>• Affected by weather</li> <li>• Initial cost of installation is high</li> <li>• Efficiency affected by air pollution</li> </ul>

Which source of energy does the table describe?

A Geothermal  
 B Natural gas  
 C Nuclear  
 D Solar

**SAY** Notice that this is not a technology-enhanced item but is in multiple-choice format. You will select your answer by using your pointer tool to click on the radio button that corresponds to your answer choice.

You may use the eliminator tool (  ), the tool on the upper left side of the screen that is shown as a red “X,” to narrow down the answer choices on multiple-choice questions. Click on this tool and practice eliminating the answer choices you do not wish to select. Then click on the pointer tool to put the eliminator away, and use the pointer tool to select your answer.

Pause while students practice using the eliminator tool and select their answer. There is a pop-up window that will alert a student who is attempting to select an answer that was eliminated or attempting to eliminate an answer that was selected.

**SAY** Now read the question to yourself and then answer it.

Pause.

**SAY** Which answer did you select?

Pause for replies.

**SAY** You should have selected D, *Solar*.

Do you have any questions?

Answer all questions.

**SAY** Click Next at the bottom of the screen to go to question 13.

Pause while students navigate to the next question.

The screenshot shows a digital assessment interface. At the top, there is a toolbar with icons for navigation and a 'Help' button. The user's name 'John doe' and the text 'Earth Science Practice Items (2010 Scienc...' are visible in the top right corner. The main content area is titled 'Topographic Map' and contains a contour map with two peaks. The inner peak is labeled '3000' and has a point 'X' marked on it. The outer peak is labeled '2800'. Below the map, the question asks: 'Which is the highest possible elevation of point X ?'. There are four multiple-choice options: A 3239 m, B 3199 m, C 3200 m, and D 3100 m. At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 13 of 27 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

**SAY** Read the directions and question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

**SAY** You should have selected A, 3239 m.

Do you have any questions?

Answer all questions.

**SAY** Click Next at the bottom of the screen to go to question 14.

Pause while students navigate to the next question.

The screenshot displays a digital practice item interface. At the top, a dark blue toolbar contains icons for a mouse cursor, eraser, highlighter, red X, green checkmark, pencil, calculator, and a 'Help' button. The user's name 'John doe' and the title 'Earth Science Practice Items (2010 Scienc...)' are visible in the top right corner, along with an 'Exit' button. The main content area features the word 'Mineral' centered above a photograph of a mineral specimen. The specimen is a dark, lustrous mineral with several flat, intersecting planes of cleavage, characteristic of mica. Below the image, the question asks, 'Which mineral has the cleavage property shown?' and provides four multiple-choice options: A Halite, B Mica, C Pyrite, and D Quartz. At the bottom of the interface, a dark blue bar contains a 'Flag for Review' button, the text 'Question 14 of 27 Section 1', a 'Section Review' button, and 'Previous' and 'Next' navigation buttons.

**SAY** Read the question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

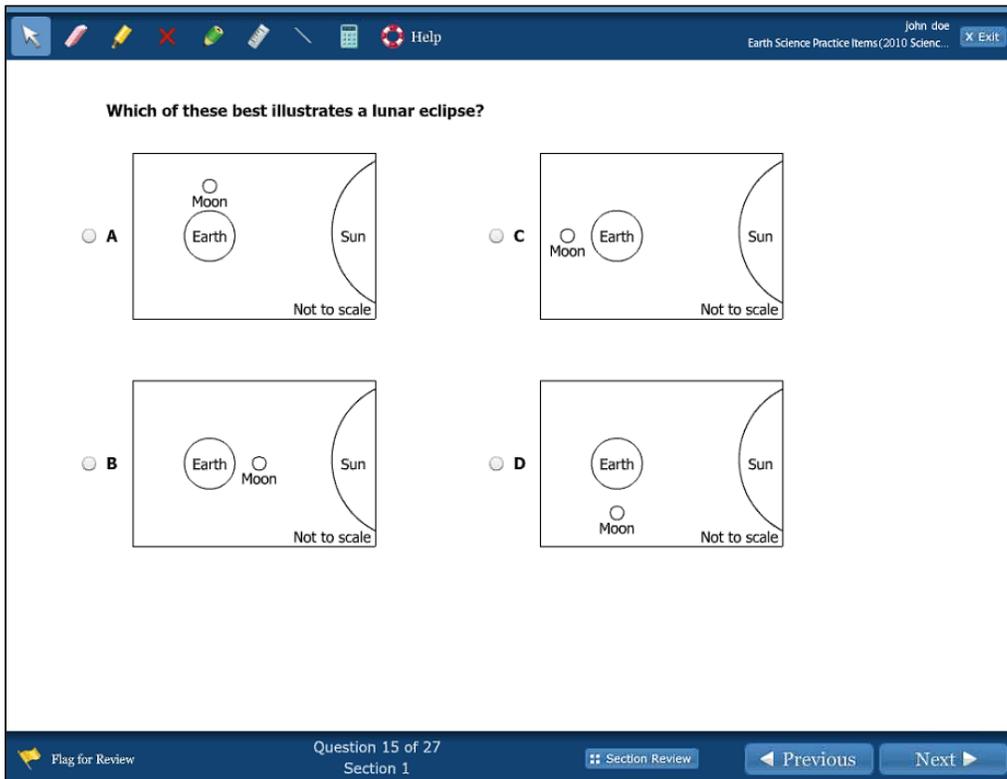
**SAY** You should have selected B, *Mica*.

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 15.

Pause while students navigate to the next question.



**SAY** Read the question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

**SAY** You should have selected C.

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 16.

Pause while students navigate to the next question.

The screenshot shows a digital practice interface for a weather station model question. At the top, there is a toolbar with icons for navigation and a 'Help' button. The user's name 'John doe' and the page title 'Earth Science Practice Items (2010 Scienc...' are visible in the top right. The main content area is titled 'Weather Station Model' and contains a diagram of a weather station model. The diagram shows a large black circle (pressure), a plus sign (temperature), a line with a flag (wind direction and speed), and two small black circles (cloud cover). Below the diagram is the question: 'Which part of the weather station model shown is indicating cloud cover?'. There are four multiple-choice options, each in a square box: A (two small black circles), B (a plus sign), C (a line with a flag), and D (a large black circle). At the bottom of the interface, there is a navigation bar with buttons for 'Flag for Review', 'Section Review', 'Previous', and 'Next'. The question number 'Question 16 of 27' and 'Section 1' are also displayed.

**SAY** Read the question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

**SAY** You should have selected D.

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 17.

Pause while students navigate to the next question.

The screenshot shows a software interface for a practice item. At the top, there is a toolbar with icons for navigation and a 'Help' button. The user's name 'John doe' and the title 'Earth Science Practice Items (2010 Scienc...)' are visible in the top right. The main content area is titled 'Types of Sedimentary Rocks' and contains a hierarchical diagram:

```

    graph TD
      Sedimentary --> Clastic
      Sedimentary --> Nonclastic
      Clastic --> Box1[ ]
      Clastic --> Box2[ ]
      Nonclastic --> BoxX[X]
      Nonclastic --> Box3[ ]
    
```

Below the diagram, the question asks: 'Which of these rocks best fits in box X ?' with four radio button options:

- A Conglomerate
- B Breccia
- C Limestone
- D Sandstone

At the bottom of the interface, there is a navigation bar with a 'Flag for Review' button, 'Question 17 of 27 Section 1', a 'Section Review' button, and 'Previous' and 'Next' buttons.

**SAY** Read the question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

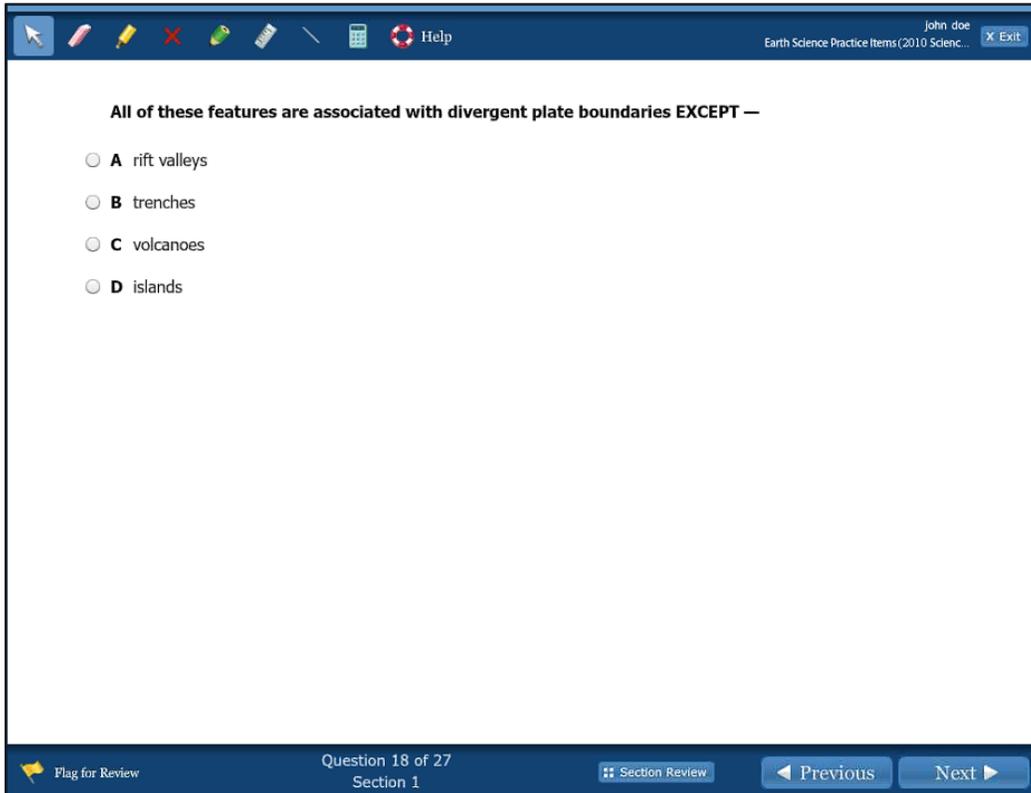
**SAY** You should have selected **C, Limestone.**

**Do you have any questions?**

Answer all questions.

**SAY** Click **Next** at the bottom of the screen to go to question 18.

Pause while students navigate to the next question.



**SAY** Read the question to yourself. Then answer the question.

Pause.

**SAY** Which answer did you select?

Pause for replies.

**SAY** You should have selected B, *trenches*.

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 19.

Pause while students navigate to the next question.

**Pangaea**

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**Which of these is evidence that North America and Africa collided as Pangaea formed about 270 million years ago?**

- A Chesapeake Bay
- B Florida Peninsula
- C Appalachian Mountains
- D Great Dismal Swamp

Question 19 of 27  
Section 1

Section Review Previous Next

**SAY** Read and answer the question.

Pause while students read and answer the question.

**SAY** How did you answer the question?

Pause for replies.

**SAY** The correct answer option is *C, Appalachian Mountains*. Do you have any questions?

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 20.

Pause while students navigate to the next question.

**Our Solar System**

(not to scale)

**If Earth was in Jupiter's position, at which position would it be?**

- A Position 4
- B Position 5
- C Position 6
- D Position 7

Flag for Review      Question 20 of 27 Section 1      Section Review      Previous      Next

**SAY Read and answer the question.**

Pause while students read and answer the question.

**SAY How did you answer the question?**

Pause for replies.

**SAY The correct answer is option B, *Position 5*.**

**Do you have any questions?**

Answer all questions.

**SAY Click *Next* at the bottom of the screen to go to question 21.**

Pause while students navigate to the next question.

**Aquifer Diagram**

Which of the numbered areas represents the zone of saturation?

A 1  
 B 2  
 C 3  
 D 4

Question 21 of 27  
Section 1

Flag for Review Section Review Previous Next

**SAY Read and answer the question.**

Pause while students read and answer the question.

**SAY How did you answer the question?**

Pause for replies.

**SAY The correct answer is option D, 4.**

**Do you have any questions?**

Answer all questions.

**SAY Click *Next* at the bottom of the screen to go to question 22.**

Pause while students navigate to the next question.

**Geologic Cross-Section**

Layer 1  
Layer 2  
Layer 3  
Layer 4  
Layer 5  
Layer 6  
Layer 7

In the cross-section shown, if layer 2 is 299–318 million years old and layer 7 is 488–542 million years old, which of these is most likely correct?

A Layer 2 is younger than layer 1.

B Layer 3 is 317 million years old.

C Layer 5 is younger than layer 6.

D Layer 4 is less than 318 million years old.

Flag for Review      Question 22 of 27      Section Review      Previous      Next

**SAY** Read and answer the question.

Pause while the student answers the question.

**SAY** Which answer did you choose?

Pause for replies.

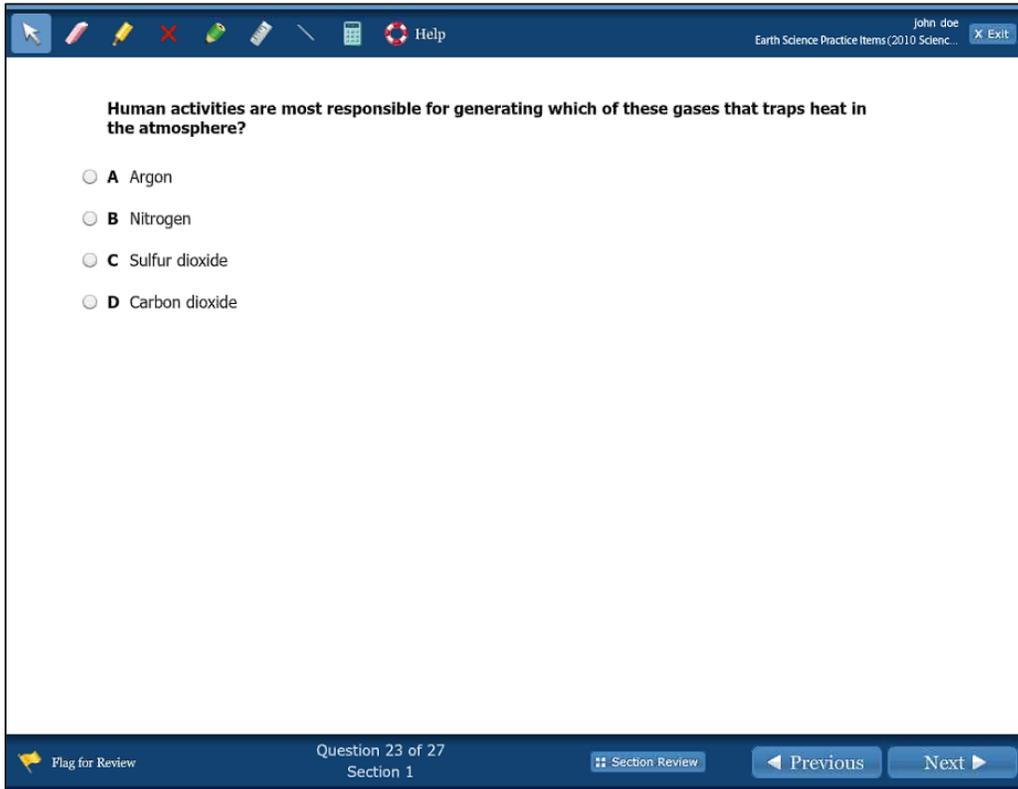
**SAY** The correct answer is option C, *Layer 5 is younger than layer 6.*

**Do you have any questions?**

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 23.

Pause while students navigate to the next question.



**SAY Read and answer the question.**

Pause while students answer the question.

**SAY Which answer did you choose?**

Pause for replies.

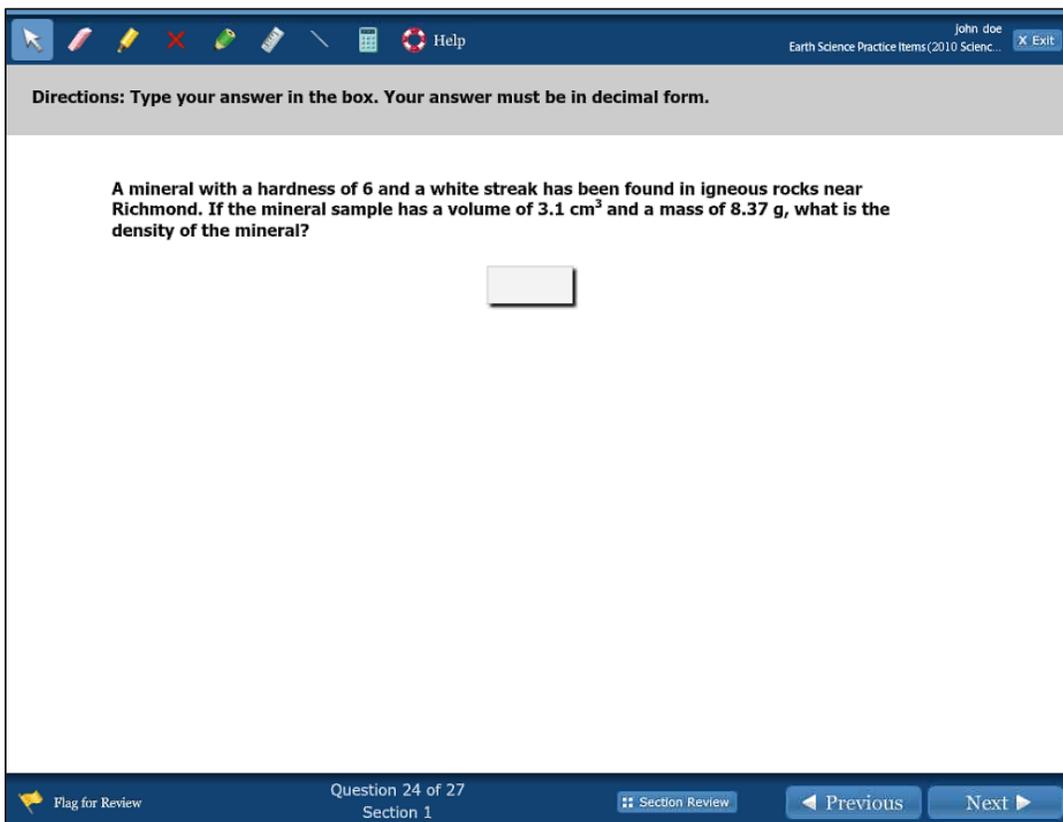
**SAY The correct answer is option D, *Carbon dioxide*.**

**Do you have any questions?**

Answer all questions.

**SAY Click *Next* at the bottom of the screen to go to question 24.**

Pause while students navigate to the next question.



**SAY** Notice the gray directions banner. The directions say, “Type your answer in the box. Your answer must be in decimal form.”

Underneath the directions banner the question says “A mineral with a hardness of 6 and a white streak has been found in igneous rocks near Richmond. If the mineral sample has a volume of 3.1 cm<sup>3</sup> and a mass of 8.37 g, what is the density of the mineral?”

Some questions, like this one, may require you to do some calculation in order to answer the question. Before you answer this question, let’s practice with the calculator that is available in the toolbar at the top of your screen. To use the online calculator to help solve this problem,

click the icon in the toolbar that looks like a calculator (  ).

Pause while students click on the calculator.

**SAY** A calculator will appear on the screen. You will use the pointer to click on the numbers and operations you want to enter in the calculator. Let’s use the calculator to find the density of the mineral by dividing the mineral’s mass by its volume. On your calculator, enter 8.37, the division sign, and 3.1, then press the equal sign.

Pause.

**SAY** The calculator should display 2.7, which is the density of the mineral in grams per cubic cm. Now find the red button that says “ON/C” that is located at the bottom left of the calculator and press that button to clear the display. (Pause.) The calculator display should now show zero.

Pause.

**SAY Are there any questions about how to use the online calculator?**

Answer all questions. The online calculator available for use in the toolbar is a four-function calculator. While completing the actual Earth Science assessment, students will have the option of using a hand-held state approved four-function, scientific, or graphing calculator in addition to the online calculator. Students should be familiar with the calculator they will use prior to testing. Please refer to information regarding approved calculators on the Virginia Department of Education Web site at [http://www.doe.virginia.gov/testing/test\\_administration/index.shtml#ancillary](http://www.doe.virginia.gov/testing/test_administration/index.shtml#ancillary).

**SAY To put the calculator tool away, click on the calculator icon or pointer tool icon in the toolbar, or click on the “x” located on the upper right corner of the calculator.**

Pause while students put the calculator tool away.

**SAY To answer this question, you will type the answer into the box. In order to type into the box, you must first make sure that you are using the pointer tool and that you click inside the box before you begin typing. Remember, your answer must be in decimal form. Use the period as the decimal point. Now enter the correct answer to the question, 2.7.**

Pause while students answer the question.

**SAY Notice that your answer does not always need to be the same length as the box.**

**For questions that are fill-in-the-blank, once any character is entered into the response box and remains in the response box, the question will show as “Answered” on the Section Review screen. Do you have any questions about how to type your answer in the box?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY Try entering other characters into the box, such as letters or symbols.**

Pause while students try to enter other characters. In this item, they will not be able to enter any character other than a number and decimal point.

If a fractional answer is required in a technology-enhanced item, the forward slash (/) symbol is to be used for the fraction bar. If a decimal answer is required, a period (.) is to be used.

**SAY For fill-in-the-blank items, if you try to enter a character that you believe is part of the answer and it does not appear in the response box, make certain the CAPS LOCK key is not engaged on the keyboard. Having the CAPS LOCK key on will sometimes prevent a character from being entered. If the CAPS LOCK key is not on, and you still cannot enter a character, then that character is not part of the answer. Do you have any questions?**

Answer all questions.

**SAY To clear your answer, you can use the backspace key on the keyboard or the delete key. To use the delete key, place the pointer in front of the character you wish to delete and then press the delete key. Or, highlight the character you wish to delete and press the delete key. Try clearing your answer and retyping it in the box.**

Pause while students clear their answer and reenter it into the box.

**SAY** Do you have any questions about how to type your answer in the box or how to change your answer?

Answer all questions.

**SAY** Click *Next* at the bottom of the screen to go to question 25.

Pause while students navigate to the next question.

**SAY** Read the directions banner, located in gray at the top of the screen.

Pause while students read the directions.

**SAY** Underneath the directions banner the problem says, “The diagram represents the sun-Earth-moon system as seen from space. Label the types of tides formed on Earth based on the positions of the sun and the moon.”

To answer this question, click and drag the correct answers to the empty boxes. The answers can be used more than one time.

Pause while students answer the question.

**SAY** How did you answer the question?

Pause for replies.

**SAY** To answer this question correctly, you should have placed these answers, beginning at the top empty box and moving clockwise; *NT,ST, NT* and *ST*.

**SAY** For this question to show as “Answered” on the section review screen, all four boxes within the diagram must contain an answer. Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 26.

Directions: Click and drag the answers to the correct boxes.

Classify the rocks that are either intrusive or extrusive.

Intrusive	Extrusive	Rocks
		Limestone
		Granite
		Pumice
		Basalt
		Schist
		Obsidian

Question 26 of 27  
Section 1

Flag for Review Section Review Previous Next

**SAY** Read the directions and question.

Pause while students read the directions and question.

**SAY** For this question you are being asked to classify the igneous rocks as either intrusive or extrusive. To answer, click and drag the answers to the correct boxes. If you change your mind after dragging in an answer choice, you may drag it back to the dark gray box and select another answer.

Pause while students answer the question.

**SAY** What rocks do you have listed under *Intrusive*?

Pause for student responses.

**SAY** You should have listed *Granite* under *Intrusive*. Do you have any questions?

Answer all questions.

**SAY** Under *Extrusive*, you should have placed *Pumice*, *Basalt*, and *Obsidian*, in any order. The rocks *Limestone* and *Schist* should remain in the dark gray box because they are not igneous rocks.

This question will show as “Answered” on the Section Review screen after one rock has been placed in the table. This is so no clue or hint is given as to how many rocks are igneous.

Do you have any questions?

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY** Click *Next* at the bottom of the screen to go to question 27.

Pause while students navigate to the last item.

**Directions: Click on the correct answer.**

A bone that contains carbon-14 is found. Carbon-14 has a half-life of 5,730 years. If the bone has 25% of its carbon-14 remaining, how many half-lives have gone by?

**Age of a Fossil Based on Carbon-14**

Half-Lives	Percent of Carbon-14 Remaining
0	100
1	50
2	25
3	12.5
4	6.25
5	3.125

Question 27 of 27  
Section 1

Flag for Review   Section Review   Previous   Next

**SAY** Read the directions and question to yourself and then answer it.

Pause while students read the directions and question and answer it.

**SAY** How did you answer the question?

Pause for replies.

**SAY To answer this question correctly, you should have selected the box above 2 Half-Lives.**

**Since this question asks for one answer, it will show as “Answered” on the Section Review screen once one answer is selected. Do you have any questions?**

Answer all questions.

Please note that additional information regarding the requirements for an item to appear as “Answered” on the Section Review screen within TestNav is located in Appendix B for reference.

**SAY Before we finish with the practice items, let’s practice with the ruler tool. Click on the tool at the top of the screen that looks like a ruler (  ). Notice a drop down box appears. You must select the type of ruler you want to use. For our practice, please click on *Centimeters Ruler*.**

Pause while students select the type of ruler they will use.

**SAY When the unit of measure is clicked in the drop down box, a ruler will appear on the screen. To move the ruler, click and drag the ruler over to the object to be measured. To rotate the ruler, click and drag the end with the arrows.**

Pause while the students practice with the ruler tool.

**SAY Now use the ruler to measure the height of the vertical scale of the graph in centimeters.**

Pause while students position the ruler to measure from the top to the bottom of the rectangle in which the transpiration diagram appears on the screen. Assist students as necessary.

**SAY What is the height of the vertical scale of this graph in centimeters?**

Pause for replies.

**SAY The height of the vertical scale of the graph, to the nearest tenth of a centimeter, is 7.3 cm. Do you have any questions about how to use the ruler?**

Pause for questions.

If you want your students to practice using the Help tool (as mentioned on page 9), they can do so now. They can also practice using the calculator and the ruler tool at this time.

**SAY Click *Next* at the bottom of the screen to go to the Section Review screen.**

Return to Test 

### Section 1 Review

Choose an item below or click *CONTINUE* to go to the Test Overview.

All Items	1 Flagged for Review	18 Answered	0 Unanswered
Question 1		✓ Answered	
Question 2		✓ Answered	
Question 3		✓ Answered	
Question 4	🚩 Flagged for Review	✓ Answered	
Question 5		✓ Answered	
Question 6		✓ Answered	
Question 7		✓ Answered	
Question 8		✓ Answered	
Question 9		✓ Answered	
Question 10		✓ Answered	
Question 11		✓ Answered	
Question 12		✓ Answered	

**CONTINUE** TO TEST OVERVIEW 

john doe | Earth Science Practice Items (2010 Science SOL)

**SAY** The Section Review screen shows which questions have been answered, which questions have not been answered, and which questions you have flagged for review. To return to a question, click on the question number.

Practice returning to a question by clicking on question 4, the question we flagged for review. You should see a picture of a flag in the “Flagged for Review” column next to the question. (Pause.) You can then return to this screen by clicking on the “Section Review” button at the bottom of the screen on question 4.

Pause while students practice navigating between question 4 and this screen.

**SAY** You can also use the Section Review screen to sort the questions. The top row of the Section Review screen tells you how many questions you have flagged for review, answered, or left unanswered. If you want to view only the questions you flagged for review, simply click on the column header that says “Flagged for Review.” If you want to view only questions you have answered, click the “Answered” header. If you want to view only questions you left unanswered, click on the header that says “Unanswered.” Move your pointer over each column heading and notice how that section of the heading changes.

Pause while students practice sorting the columns.

**SAY** If the Section Review screen indicates that a question is unanswered, you have not answered that question completely. If this happens, it is a good idea to return to the question, and read the directions and the question again before making any changes to your answer.

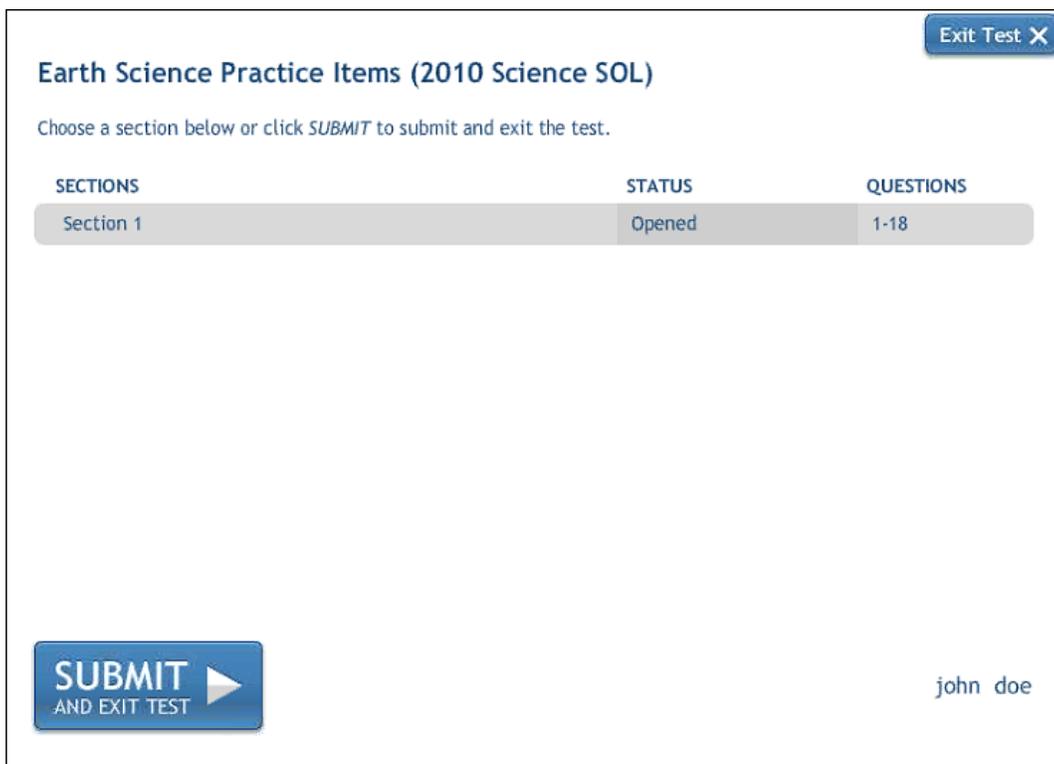
Are there any questions?

Students should check any questions that show as “*Unanswered*” on the Section Review screen. When the student returns to the question he or she may see that there is an answer, but it may be incomplete. It is important to note, however, that some questions will show as answered once a student responds with a single answer. This is necessary at times to avoid hinting or cluing an answer. For example, hot spot items that require students to “Select All” fall into this category. Please see Appendix B for detailed information.

**SAY** To get back to the Section Review screen that lists all questions and the status of each, click the top left-hand column header, titled “\_ of 27 All Items”. (Pause.)

The number in the blank will vary, depending on the column the student filters on last.

**SAY** We are going to review two more screens. Click on the “Continue to Test Overview” button on the lower left corner of the screen. (Pause.)

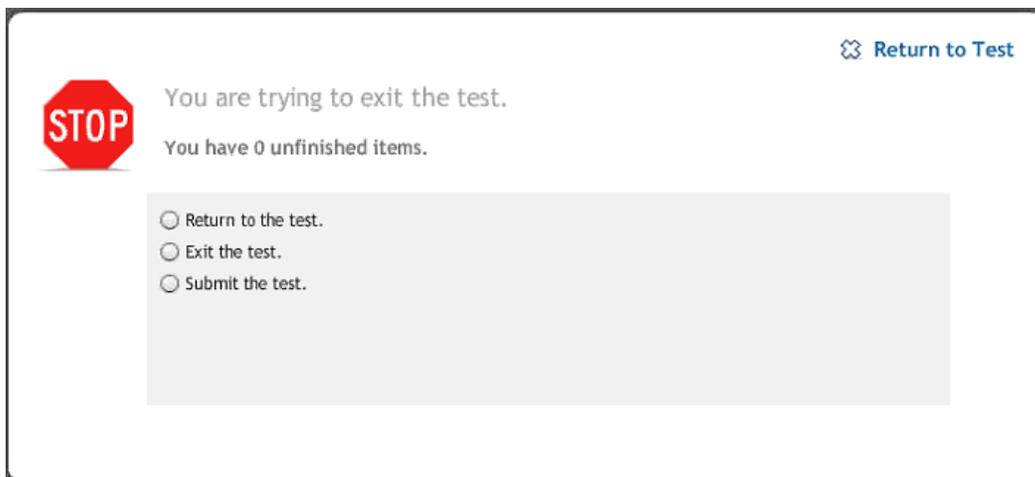


**SAY** From the Test Overview screen, you can return to the test or move to the final screen. Clicking on *Section 1* will take you to the last practice item you were working on or went back to review. Since we have finished with the practice items, we will not return to any question within the section. Clicking on the “Submit and Exit Test” button at the bottom of the screen will move you to the final screen. Are there any questions?

Pause to answer all questions.

**SAY** Now click on “Submit and Exit Test.” (Pause.)

You will see a stop sign with three choices. It is important to review these three choices. (Pause.)



**SAY** Notice this screen indicates the number of unfinished items you have on the test.

The first choice states, *“Return to the test.”* This option allows you to go back to the practice questions. You would click this option if you wanted to return to any of the questions. Selecting this would first take you to the screen we just reviewed, and then you would click on Section 1 to return to the practice items.

The second choice states, *“Exit the test.”* This option should NOT be chosen. This option may be used during actual SOL testing, but should NOT be used for this practice set. **If you click on this option, you will lose all of your work. It will not be saved.**

Pause and make sure students understand not to choose option 2. During actual SOL testing, students may be directed to choose this option if they are being moved to a different location to complete their tests or if they need to leave the testing environment (while monitored) for a short time.

**SAY** The third choice states, *“Submit the test.”* This option allows you to submit your answers.

Once you have finished using these practice items, proceed with exiting the application.

**SAY** Since we have finished with the practice items, please click on the third option, *“Submit the test.”* Next, click on the green button that says *“Final submit.”* When you click this button during actual SOL testing, your test will be submitted for scoring and you will not be able to return to the test.

This completes our review of the Earth Science SOL Practice Items.

Thank you for reviewing the Earth Science SOL Practice Items with your students.

## APPENDIX A

### Answers to Earth Science SOL Practice Items

#### Question 1

The correct answer is the label *H*.

#### Question 2

The correct answers are:

Inner planets: *Mainly solid material, Few or no moons, Shorter orbital year*; and

Outer planets: *Mainly gases, Many moons, Longer orbital year*.

#### Question 3

The correct answers are *Talc, Gypsum, Calcite, Fluorite, Apatite, and Feldspar*.

#### Question 4

The correct answers are *Hardness, Density, Streak, and Reactivity with acid*.

#### Question 5

The correct order is: top left = *runoff*; top right = *habitats*; bottom left = *flooding*; and bottom right = *extinction*.

#### Question 6

The correct answers are *Oceanic trenches, Folded mountains, and Continental rifts*.

#### Question 7

From left to right, the correct bar heights are:

The height of the *Bottom of Zone of Aeration* bar should be at *200m*;

The height of the *Top of the Water Table* bar should be at *200m*; and

The height of the *Top of the Confining layer* should be at *300m*.

#### Question 8

The correct answers are *Sea Breeze* and *Daytime*.

#### Question 9

The correct answers are *Ridge is developing, Magma is released, Crust is separating, and Rift zone*.

#### Question 10

The correct answers are: in the upper box near the map title – *L*; in the lower box on the right near the Atlantic Ocean – *H*; and in the lower box on the left – *H*.

#### Question 11

The correct answers are *Red Supergiant, Neutron Star, and Black Hole*.

#### Question 12

The correct answer is *D, Solar*.

#### Question 13

The correct answer is *A, 3239 m*.

#### Question 14

The correct answer is *B, Mica*.

#### Question 15

The correct answer is *C*.

## APPENDIX A (Continued)

### Answers to Earth Science SOL Practice Items

#### Question 16

The correct answer is D.

#### Question 17

The correct answer is C, *Limestone*.

#### Question 18

The correct answer is B, *trenches*.

#### Question 19

The correct answer option is C, *Appalachian Mountains*.

#### Question 20

The correct answer is option B, *Position 5*.

#### Question 21

The correct answer is option D, *4*.

#### Question 22

The correct answer is option C, *Layer 5 is younger than layer 6*.

#### Question 23

The correct answer is option D, *Carbon dioxide*.

#### Question 24

The correct answer is  $2.7 \text{ g/cm}^3$ .

#### Question 25

The correct answers, beginning at the top empty box and moving clockwise, are *NT, ST, NT* and *ST*.

#### Question 26

The correct answers are: under *Intrusive: Granite*; and under *Extrusive: Pumice, Basalt, and Obsidian*, in any order. *Limestone* and *Schist* should not be used in either category.

#### Question 27

The correct answer is the box above *2 Half-Lives*.

## APPENDIX B

An overview of how student responses to technology-enhanced items will appear on the Section Review screen is outlined below.

### Fill-in-the-blank (FIB) Items

For all fill-in-the-blank items, when a student enters any character into the response box, the item will show as answered on the Section Review screen. If a student enters an answer, and then completely removes that answer from the fill-in-the-blank box, the item will show as unanswered on the Section Review screen.

### Histogram or Bar Graphing Items

For all histogram or bar graphing items, when a student raises any bar, the item will show as answered on the Section Review screen. If the student moves all bars back down to the original heights, the item will show as unanswered on the Section Review screen.

### Hot Spot Items

When the number of correct responses is indicated in the directions or in the item itself, the item will show as answered on the Section Review screen only when the student selects that number of hot spots. For example, if the student is directed to select three answers, then the Section Review screen will show unanswered if the student selects one or two answers and will only show as answered once the student has selected three answers. If the number of correct responses is not indicated in the directions or in the question itself, then the item will show as answered on the Section Review screen once the student selects one answer. For example, if the student is required to “Select all correct answers,” the item will show as answered once the student selects one answer option. In this case, it is assumed that the student thought there was only one correct answer. This practice avoids providing information as to how many correct answers there are in the “select all” hot spot items.

### Number Line or Coordinate Plane Items

Many number line or coordinate plane items require the student to plot one or more points as the response. When the number of points necessary to answer the item is indicated in the directions or the item itself, the item will show as answered on the Section Review screen only when the specified number of points has been plotted. When the directions or the item do not specify the number of points to plot, the item will show as answered on the Section Review screen once the student plots one point. Only points that have been plotted with the pointer tool are scorable responses. Points plotted with the dot tool are not scorable responses. If a student answers a question with the dot tool, the question will show as unanswered on the Section Review screen.

**APPENDIX B (Continued)****Drag and Drop Items**

Drag and drop items contain answer receptacles called “bays” and “dragers” that the student moves into the bays to answer the question. There are many types of drag and drop items, and each item is evaluated individually so that the student is given the most detailed information possible on the Section Review screen, without providing hints as to the correct answer. For items with a specified number of bays, the item will show as answered on the Section Review screen once the student uses that number of dragers. For example, if there are three bays and it is intended for a dragger to be placed into each bay, then the Section Review screen will show the item as answered once three draggers have been input by the student. Or, in another example, if the directions or question indicate that all draggers need to be used to answer the item, then the item will show as answered on the Section Review only when all draggers have been used. If the number of draggers necessary to answer the question is not indicated, such as an item that requires the use of a dragger to complete a model or pictograph, then the Section Review screen will show the item as answered once the student places one dragger in a bay.