Teaching Searchlight Books[™] Do You Dig Earth Science?



Interest Level: Grades 3–5 Reading Level: Grade 4

Titles in this series:

Examining Erosion Figuring Out Fossils Marveling at Minerals Researching Rocks Studying Soil Uncovering Earth's Crust











Standards

Next Generation Science Standards

- 1.8: Obtaining, evaluating, and communicating information
- 2.2: Cause and effect: Mechanism and explanation
- · 2.4: Systems and system models
- 2.7: Stability and change
- ESS2: Earth's systems
- ESS3: Earth and human activity

Common Core Reading (Informational Text)

- · Key Ideas and Details
- Integration of Knowledge and Ideas
- Range of Reading and Level of Text Complexity

Multiple Intelligences Utilized

· Verbal-linguistic, bodily-kinesthetic, visual-spatial, interpersonal, intrapersonal







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Classroom[™] ISBN 978-1-4677-1068-8

Lesson 1 Understand Diagrams

Materials

- Do You Dig Earth Science? series
- · Look at Diagrams p. 5
- · pencils

Prepare

- Prepare to show the diagram in Look at Diagrams p. 5 electronically.
- Copy Look at Diagrams p. 5 for each student. Alternatively, you might ask students to copy the questions into their notebooks when you show the diagram electronically.

Pretest

• What kinds of pictures and artwork can you find in science books?

• Why do you think science books include pictures and artwork?

Model

- Show Look at Diagrams p. 5 electronically.
- Explain the purpose of a diagram and point out major features, such as the title, labels, caption, and colors.

Practice

- Invite students to search for diagrams in Do You Dig Earth Science? books.
- Students will record where they found each diagram and then answer the questions in Look at Diagrams p. 5.

Purpose

Students will use diagrams to gather information.

Read

• Read a chapter of a Do You Dig Earth Science? book that contains a diagram.

Discuss

- Did studying the diagram before you read the chapter make it easier to understand the information in that chapter? Why or why not?
- Would you change anything on the diagram? What would it be and why?
- Which feature do you think is most important on any diagram?

Evaluate

• Evaluate Look at Diagrams p. 5 for completeness and accuracy.



Lesson 2 Earth Science Career Day

Purpose

Students will learn about careers in earth science.

Materials

- Do You Dig Earth Science? series
- Earth Science Careers p. 6
 reference materials (books
- and digital resources)
- · pencils

Prepare

- Copy Earth Science Careers p. 6 for students. To save paper, you might show this page electronically and ask students to copy the questions to their own paper.
- Gather reference materials related to careers in the field of earth science, including books, dictionaries, encyclopedias, online databases, and websites. The American Geological Institute website includes a list of earth

science careers: agiweb.org /workforce/brochure.html

Pretest

- What are some jobs that use earth science?
- List students' suggestions on the board.

Read

• Read books from the Do You Dig Earth Science? series.

Model

- Review the list of earth science jobs on the board. Add or delete jobs, as needed.
- Review Earth Science Careers p.
 6 with students and answer any questions.

Practice

- Each student will choose an earth science career to research.
- Students will find information about the careers in reference books and online sources.
- Students will complete Earth Science Careers p. 6 and note their sources.

Discuss

- Invite students to share what they learned about earth science careers.
- Ask students whether they think some of these careers are more important than others. What makes a career important or valuable?

Evaluate

• Evaluate Earth Science Careers p. 6 for completeness and accuracy.

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Purpose

Purpose

Lesson 3 **Earth Processes**

Materials

- · Do You Dig Earth Science? series
- · Earth Process Clues p. 7
- · pencils

Prepare

· Copy Earth Process Clues p. 7 for each student. Or show it electronically and have students copy it to their own paper.

Pretest

• What is a process?

Read

 Read books from the Do You Dig Earth Science? series.

Discuss

- As a class, make a list of the processes mentioned in the Do You Dig Earth Science? books.
- Explain the effects of these processes.

Model

- · Review Earth Process Clues p. 7.
- Students will read a clue (effect) and determine which process caused it.
- After completing the given clues,

students will write two additional clues of their own. They will trade with a partner for completion.

Practice

Students will identify the cause-and-effect

relationships of different earth processes.

· Students will complete Earth Process Clues p. 7.

Discuss

· Which earth processes are most important? Why? What would happen if those processes stopped happening?

Evaluate

· Evaluate Earth Process Clues p. 7.

Lesson 4 How Does It Happen?

Materials

- Do You Dig Earth Science? series
- · How Happens p. 8
- · pencils
- crayons or colored pencils
- glue
- construction paper

Prepare

 \cdot Copy How ___ students. Alternatively, ask students to draw ten equally sized boxes on their own paper and use those for this project.

Pretest

- What is a cycle? What is a process?
- · As a class, brainstorm a list of cycles

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and processes, such as life cycles and washing clothes.

Read

 Read books from the Do You Dig Earth Science? series.

Model

- · Demonstrate how to break down a cycle or process into stages or steps.
- Invite students to choose cycles or processes from the Do You Dig Earth Science? books.
- Students will list the stages or steps from the cycles or processes.

Practice

· Students will use How _ Happens p. 8 to illustrate their cycles and processes.

Students will illustrate an earth cycle or process.

- Students will cut apart their illustrated boxes, arrange them in order, and glue them to construction paper. If they illustrated cycles, the boxes will be arranged in circles.
- · Students will glue the title box above the cycle or process, or add decorative titles.

Discuss

- · How did you decide which stages to include?
- Why is your poster a good illustration of this cycle or process?

Evaluate

 Evaluate students' cycle and process posters for completeness and accuracy.

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_ Happens p. 8 for

Name ____

Date ____

Look at Diagrams

Directions: Use the diagram to answer the questions below.



- 1. What is the **title** of this diagram? _____
- 2. Write two of the **labels** used on this diagram.

3. How does this diagram show the different layers of a volcano?

4. What is the **purpose** of this diagram?_____

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Name _____

Date _____

Earth Science Careers

Directions: Choose an earth science career from this list or come up with your own idea. Use reference materials to help you answer the following questions.

1. Circle an earth science career from the list below or write in your own.

geologist	geophysicist	mineralogist	paleontologist	pedologist
petroleum geologist		seismologist	stratigrapher	volcanologist

2. What does this person study?

3. What is the purpose of this career?

4. Where does this person work?

5. What tools does someone with this career use?

6. Is this career important? Why or why not?



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Ν	a	m	e	

Date _

Earth Processes

Directions: Read each clue. Which earth process left each clue? Write your answer next to the clue. The word box may help you. Then write two of your own clues on your own paper. Ask a friend to guess which process left the clues.



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