

RESOURCE LIBRARY
ACTIVITY : 25 MINS

Cretaceous Clues

Students learn how fossils provide important clues to past life.

GRADES

6 - 8

SUBJECTS

Geology

CONTENTS

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OVERVIEW

Students learn how fossils provide important clues to past life.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/cretaceous-clues/>

Program



DIRECTIONS

1. Build background about fossils.

Ask: *What is a fossil?* Explain to students that the study of fossils and the fossil record is paleontology and that scientists who specialize in this research are paleontologists. Distribute and discuss the handout "A Fossil Forms." Tell students that fossil evidence provides clues about past life. By studying an individual fossil, for example, a paleontologist can infer the

age, size, brain capacity, locomotion, feeding preferences, and other information about an animal that lived millions of years ago.

2. Introduce the activity.

Write “Fossil Evidence” on the board. Tell students that fossils provide evidence about an animal’s physical appearance, behaviors, and interactions with other animals. Create a 2-column chart on the board with the heads “Fossil Evidence” and “Clues to ...?” Write the first evidence: “serrated teeth.” Prompt students to make inferences about this evidence, such as that the animal may eat meat. Ask students to explain their reasons, such as sharp teeth are needed to tear flesh. Continue with the other fossil evidence and clues listed below:

- Extremely long neck (Reach for food quickly or hard to reach places)
- Bones not fully developed (Possible juvenile)
- Marks on bones (Signs that other animals bit, chewed, or scavenged)

3. Have students brainstorm animal interactions.

Have students consider what clues two or more fossils together might provide. Sometimes this fossil evidence provides clues about the interactions between prehistoric animals. Have students brainstorm different ways in which animals behave and interact with one another, such as parasite/host, predator/prey, family group, communal group, reproduction, or feeding. Then have students brainstorm some examples of fossil evidence, to make inferences about possible animal interactions, and add them to the chart:

- Two different animal bones together (Possible interactions—parasite/host, predator/prey, family group, communal group, reproduction, or feeding)
- Clam shells inside rib cage (Animal ate clams)

Extending the Learning

Have students join a virtual dig at the Sea Monsters website.

OBJECTIVES

Subjects & Disciplines

- Geology

Learning Objectives

Students will:

- describe how fossils provide evidence about a prehistoric plant or animal
- explain how evidence found in fossils is used to understand prehistoric life

Teaching Approach

- Learning-for-use

Teaching Methods

- Brainstorming
- Discussions

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Remembering
 - Understanding

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- Standard 17:

How to apply geography to interpret the past

- Standard 7:

The physical processes that shape the patterns of Earth's surface

NATIONAL SCIENCE EDUCATION STANDARDS

- (5-8) Standard A-1:

Abilities necessary to do scientific inquiry

- (5-8) Standard D-2:

Earth's history

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Pencils
- Pens

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

Fossils are traces of an organism from the past that have been preserved in Earth's crust. Scientists called paleontologists study fossils to find out more about animals and plants that no longer exist.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
evidence	<i>noun</i>	data that can be measured, observed, examined, and analyzed to support a conclusion.
fossil	<i>noun</i>	remnant, impression, or trace of an ancient organism.
inference	<i>noun</i>	explanation derived by reasoning.
locomotion	<i>noun</i>	movement.
paleontologist	<i>noun</i>	person who studies fossils and life from early geologic periods.
paleontology	<i>noun</i>	the study of fossils and life from early geologic periods.
prehistoric	<i>adjective</i>	period of time that occurred before the invention of written records.
scavenge	<i>verb</i>	to feed on dead or decaying material.
sediment	<i>noun</i>	solid material transported and deposited by water, ice, and wind.
serrated	<i>adjective</i>	having a jagged or saw-like edge.

For Further Exploration

Websites

- [National Geographic: Sea Monsters—A Prehistoric Adventure](#)

FUNDER



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