

RESOURCE LIBRARY
ACTIVITY : 30 MINS

Fossil Impressions

Students make molds and casts of objects to make their own fossils.

GRADES

3 - 5

SUBJECTS

Geology

CONTENTS

7 Images

OVERVIEW

Students make molds and casts of objects to make their own fossils.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/fossil-impressions/>

Program



DIRECTIONS

1. Display the illustrations to show students one way a fossil forms.

Scroll through the color illustrations and read aloud each caption to help students understand how a fossil forms. Explain to students that fossils form in many ways. Sometimes a leaf, shell, or foot leaves an imprint in soft earth. When the imprint hardens, it forms a mold. Later, mud or other materials can fill the mold to make a cast—a copy of the original. Have students look

at the black-and-white illustration of what a mold and cast look like. Tell them they will make a mold and a cast of an object during this activity.

2. Have students choose an object and make a mold.

Provide students with some clay. Have each student shape the clay into a small circle slightly bigger than the object they selected. Have them place the circle on a flat, dry surface and make a rim around the top edge.

3. Have students use their selected object to make an imprint.

Have students smooth a small amount of vegetable oil on the object so it will not stick to the clay. Then ask them to carefully push the object into the clay and then remove it. Provide assistance, as needed. The imprint left behind will create a mold.

4. Help students make a cast.

Follow the mixing directions on the Plaster of Paris package. Quickly pour the mixture on students' clay models. Fill the mold to the rim. Tap and shake it to remove air bubbles.

5. Have students compare their casts to the original objects.

Allow the cast to dry for 30 minutes or more until it is cool and hard. Help students to carefully separate the cast from the mold. Then have a whole-class discussion. Ask: *How does it compare to the original object?*

OBJECTIVES

Subjects & Disciplines

Earth Science

- Geology

Learning Objectives

Students will:

- describe how a fossil forms
- create a model of a fossil mold and cast

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Hands-on learning
- Visual instruction

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Creating
 - Understanding

National Standards, Principles, and Practices

NATIONAL SCIENCE EDUCATION STANDARDS

- (K-4) Standard D-1:

Properties of earth materials

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- A small, solid object such as a shell, coin, key
- Clear cups or bowls
- Modeling clay
- Plaster of Paris
- Stir sticks
- Vegetable oil
- Water

REQUIRED TECHNOLOGY

- Internet Access: Optional
- Tech Setup: 1 computer per classroom, Projector

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

Scientists sometimes find casts of fossils. Casts are copies of the original object.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
cast	<i>noun</i>	impression formed when a liquid substance is poured into a form or mold, and then hardens into that shape.
fossil	<i>noun</i>	remnant, impression, or trace of an ancient organism.
mold	<i>noun</i>	hollow structure used to give form to a liquid substance as it hardens.

For Further Exploration

Websites

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

FUNDER



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