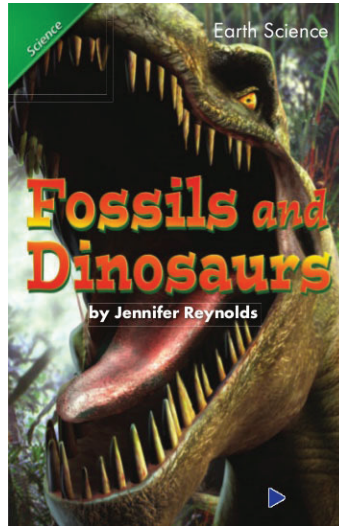


# Fossil Findings

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## Elementary Fossil Lesson

As a class, read together “Fossils and Dinosaurs” by Jennifer Reynolds, printed by Scott Foresman, or a similar book. Answer the following questions in your science notebook or on the worksheet provided.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What is a fossil?

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2. Where do we find them?

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3. How did they form?

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4. What types of fossils exist?

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# MOST\*

## VOCABULARY:

- Age Dating
- Cast
- Fossil
- Imprint
- Index Fossil
- Layers
- Mold
- Sedimentary Rock

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## Students should be able to:

- Define a fossil.
- Describe where a fossil is found.
- Describe how a fossil is formed.

# Activity: Guess What's in the bag?

Pass around the bag with the unknown item in it. When it is your turn, feel the object without looking at it. Ask a yes-or-no question about the object to your teacher. Pass the bag on to the next student. Listen to the questions and answers until you think you know what the object is. When you think you know the right answer write it down. Your teacher will disclose what the object is and show you once everyone has had a turn.

## Teacher Information and Directions:

- 1 Place a well defined fossil in a paper bag so that the students do not see it.
- 2 Pass the bag around and have the students feel the fossil and try to describe what they are feeling.
- 3 Play 20 questions. This is done by asking questions that can only be answered with yes or no. Example: Is it an animal? Does it live in the water? Can you see it in a museum?
- 4 The students can make guesses as to the content of the bag.
- 5 Once it is guessed as a fossil, work to identify the type of fossil using resource books from the library or share the picture and type of fossil that it is.
- 6 Place the fossil and the books out on display in the classroom to encourage more study and research.
- 7 Provide credit for finding three more facts about this or other fossils. Have the students share their information with the class.
- 8 The class can work to make fossils, molds, casts and prints.
- 9 Work as a class to write a research paper on fossils using the facts that the students discovered in question 7.

### MATERIALS NEEDED:

Paper bag

Well defined fossil

### Information For The Teacher:

<http://www.fossils-facts-and-finds.com/fossilization.html>

# Activity: Making fossils

## MATERIALS NEEDED:

Fossil samples, casts, molds and prints if available  
Shells (to make fossils)  
Plastic dinosaur (for prints)  
Plaster of Paris  
Pitcher of water  
Sifter  
Sand fine enough to flow through the sifter  
Aluminum baking pans

## Teacher Notes:

For the excavating of the fossils a station might be set up while doing other activities so fewer tools and goggles are needed. A prepared tray of fossils will need to be provided for each team. Plastic knives and tools are sufficient for excavating the plaster of Paris.

**Discuss** the difference between kinds of fossils, prints, molds, and casts. How are each of these types of fossils formed? What is the same between the fossil types and what is different? How do you think the differences occurred?

**The teacher should say the following parts in bold while completing the activity:**

Bring out a prepared container of plaster of Paris. Make sure it has tall edges to build up imaginary sedimentary rock layers. The prepared container of plaster of Paris has just that, a layer of plaster of Paris and fine sand sprinkled on it. Place the shells in the container on top of the dry plaster of Paris. **Image that the whole environment is under water.** Pour a small amount of water onto the layer of plaster of Paris.

**The soft body of the shellfish will decompose or become some other animals' dinner. The hard shell would then fill up with sediments and mineral-laden water.**

Using the sifter, sift a small amount of the remaining plaster and sand evenly over the water, allowing it to sink in and cover the shell. **Sand and other sediments would eventually cover the ancient animals bodies.** Continue to sift the plaster until a soft mud is formed. Keep adding the plaster until all of the water is soaked up. The plaster will now dry fairly quickly. Plaster of Paris sets up in about 30 minutes.

**This process could take up to thousands or millions of years. Over time, the ancient sea might begin to dry up. There are lots of reasons this could have happened: movement of the earth's crust, changes in temperature or volcanic activity could all change the depths of the ancient waters.**

Take a plastic dinosaur and make an imprint of their foot prints. **As the water level got lower and lower, muddy swamps and the thick vegetation they grew made good homes for species that could breathe the air, dinosaurs. As they walked or crawled through the swamps, their heavy bodies made tracks in the soft mud.** Allow the plaster to dry. You could proceed immediately using a prepared tray that is already hardened or you could end the lesson here and return to it when the tray is dry.

Once the tray is dry work to excavate the fossils carefully. See if the students can dig out the fossils and keep them whole and intact. Provide each team of students with some tools for cleaning and excavating. Goggles should be worn to protect their eyes.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

It took thousands of years for the muddy layers to turn into sedimentary rock layers that contained fossils. The sedimentary rock layers are found one on top of another. Just like you worked carefully to find the fossils we made, scientists work carefully to excavate fossils found in sedimentary rocks.

## Questions:

How old do you think fossils are?

\_\_\_\_\_

What type of rocks do fossils form in?

\_\_\_\_\_

What is the difference between a fossil print and a cast?

\_\_\_\_\_

What else do you know or did you learn about fossils?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## New York State Elementary Level Science Standards

Classifying, communicating, comparing and contrasting, creating models, generalizing, manipulating materials, observing.

### Standard 1: Scientific Inquiry:

Key Idea 1: s1.1, s1.2, s1.3

Key Idea 3: s3.4

### Standard 6:

Key idea 1

Key idea 2

### Skills and Strategies for interdisciplinary problem solving:

Working effectively, gathering and processing information, generalizing and analyzing ideas, realizing ideas, presenting results.

### General Skills:

i, ii, iii, iv, ix, x, xii, xiii, xiv, xvi, xviii, xix, xx, xxiii

### Standard 4: Physical Setting:

Key Idea 2: 2.1d

### Standard 4: Living science:

Key Idea 1: 1.2a