



Teacher's Activity Kit

"Making a Fossil"

A 60 minute lesson in life history
Grades 4-8

DESCRIPTION

Students will observe the process of fossilization through observation and analysis of several fossil specimens. Students will then re-create a fossil for themselves.

OBJECTIVES

Students Will:

- Define Fossils
- Describe some of the environments where fossilization takes place
- Be able to identify fossils and distinguish them from non-fossils

MATERIALS LIST

Several fossil specimens (examples: fossil leaves, fossil dinosaur bones, fossil shells, petrified wood, etc.), several non-fossil specimens (examples: a piece of modern day tree-bark, modern cow bone, modern leaf, living fish in aquarium, etc.), clear plastic container, plastic dinosaur (small enough to completely fit into container), differently colored aquarium gravel, modeling clay, plaster of paris, mixing bowl, mixing stick, several ammonite fossils.

PART ONE

GOAL: Identifying key Characteristics of Fossils

ACTIVITY: Divide the class into several small groups. At each table place several examples of both fossils, and their modern equivalents. Ask students to compare and contrast each of the available specimens. Tell them to look for differences in shape, color, density, texture, weight, etc. Discuss the results with your class.

PART TWO

GOAL: Defining Fossils/Lecture

ACTIVITY: Display several original fossils for the students to review. Define the word fossil and explain the many different types of fossilization. Discuss the fossil record, and have them think of environments where fossilization is currently taking place (lakes, rivers, streams, oceans, etc.). In the clear plastic container, place a thin layer of aquarium gravel and fill half full with water. Next place the plastic dinosaur. Then bury it with more aquarium gravel of a different color. Explain to the students that rapid burial is necessary for fossilization to take place. Next, have the students write an essay on fossilization detailing areas around the world where fossilization doesn't occur today (mountain ranges, plateaus, pastures, jungles, etc.). In this essay make sure they pay special attention to the animals that currently live in those environments, that we may never have examples of in the fossil record.

PART THREE

GOAL: Understanding How Fossils Form

ACTIVITY: At each table provide an original ammonite fossil (or other interesting specimen). Have the students take a large piece of modeling clay and roll it out into a ball. Taking turns, have the students push the original ammonite fossil into their clay ball making a deep impression. Carefully remove the fossil and pass it onto the next student. Once everyone has made their "fossil impression", mix a small quantity of Plaster of Paris and fill each of the depressions. Let the plaster harden and remove the "fossil" from the clay. Each student now has a replica cast of a fossil to take home with them which can also be painted (using acrylics).

Recommended Reading

1. Barrett (2001), *National Geographic Dinosaurs*. National Geographic Society
2. Lambert, Naish, and Wyse (2001), *The Dinosaur Encyclopedia*. DK Publishing
3. Stein, W. W. (2001), *So You Want To Dig Dinosaurs*. Dragon's Claw Press
4. Taylor, Paul D. (1990). *Fossils*. Eyewitness Books, Alfred A Knopf Publishers.

At the Rocky Mountain Dinosaur Resource Center

The RMDRC is dedicated to bringing teachers and students some of the most exciting prehistoric specimens of North America. Many of our exhibits will aid teachers in their preparation for the "Extinction Game". Our gift shop, Prehistoric Paradise www.prehistoricparadise.com, has books, videos, specimens, posters, and replica casts for sale that would assist in classroom education. Please visit our website at www.RMDRC.com for more information.