

**Project FOCUS
Best Lessons
THIRD GRADE**

Title of Lesson: Two Fossil Lessons

Theme: Earth/Space Science

Unit Number: **Unit Title:** Rocks, Minerals, Soil and Fossils

Performance Standard(s) Covered (enter code):

- S3E2. Students will investigate fossils as evidence of organisms that lived long ago.
b. Describe how a fossil is formed.

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Fossils: formation and excavation
*Math and writing components

Learning Activity (Description in Steps)

Abstract (limit 100 characters): Students will dig for and make their own fossils in two separate activities.

Details:

Part I

Before you begin the activity it is important that you teach the kids a lesson about how a fossil is formed and the job of a paleontologist. This lesson involves two different activities. For the first activity you should give each of the students a chocolate chip cookie, a toothpick, and a paint brush. Tell the kids not to eat the cookies, and tell them that they can have a cookie if they listen and follow directions during the activity. Next, you should write on the board a chart like the following:

Money Spent:

Cost of Cookie = \$5

Each Tool = \$2 x 2 tools = \$4

Money Earned:

Unbroken Cookie = \$20

Each Intact Chip = \$1

Explain to the students that each cookie costs \$5 and each tool costs \$2.

If the kids at the end of the lesson return an unbroken cookie, minus the holes where they dug out the "fossils" or chips they will receive \$20 and for each chip they will receive \$1. If the children choose to work with partners explain to them that they will have to subtract more money from their earnings at the end. The more people in the group the more money they must subtract for tools, but

they will also the opportunity to earn more money. The group or individual with the most money at the end wins the game. You can play the game for a prize, but probably to be fair you will want to just play it for fun, because some cookies have more chips to begin with. The kids will have to use multiplication, addition, and subtraction in order to figure out their total earnings. Allow the children about 20 minutes for the dig and about 5 minutes to figure out how much money they have earned.

Part II

For the second activity give each of the students a bowl, preferably disposable, and a plastic knife and spoon. Use the measuring cup and put about a 1/4 cup of plaster of paris into their bowl, and about 1/8 cup of water into each bowl. Tell the kids to mix the plaster until it is thick and creamy. Hand each of the students one thing to fossilize such as a dog bone treat, shell, or a leaf. Have the kids place their item into the plaster. Encourage them to not get the plaster on their hands. Have them cover their fossil completely so that it can no longer be seen. There should be a thick covering on all sides of the item. Allow the plaster to dry over night and then the next day help the kids to break open their fossil. Before opening the fossil ask the children to record their predictions about what the fossil will look like. The teacher or you should be the one to use the chisel and hammer. Place the chisel near the fossilized item and use the hammer to break the fossil apart. Allow the children to examine their fossils and write down their observations on what it looked like. Afterwards have the children do a show and tell where they read their predictions and observations to the class and show the class their fossils.

Materials Needed (Type and Quantity):

Part I

- Chips Ahoy Cookies - at least 1 per student
- Toothpicks, paint brushes, or other "tools" for extracting the chocolate chips - 1 per student

Part II

- Plaster of Paris - 1/4 cup per student
- Water - 1/8 cup per student
- Plastic spoons (or popsicle sticks) - 1 per student
- Measuring Cup
- Disposable plastic bowls - 1 per student
- Chisel and hammer
- Materials to fossilize: shell, dog bone treats, leaves - at least 1 per student

Notes and Tips (suggested changes, alternative methods, cautions):

- Safety: Make sure the students do not get Plaster of Paris in their eyes or mouths.
- Safety: Do not allow the students to use the hammer and chisel.
- Tip: You should try this experiment before doing it with your class. Prepare a fossil yourself and figure out the best way to break it apart. That way you will be better able to help your students during the activity.
- Tip: This lesson is meant to be spread over a minimum of two class periods. Part I and Part II can be done independently of each other.

Sources/References:

- 1) www.LessonPlansPage.com
- 2) www.glc.k12.ga.us

3) Originally submitted by Tara Kitchens, edited by Jessica Valle (2010)