

- Grades:** 4
Subjects: geology, language art
Objective: Students will make fossils and write a story about their fossil.
Materials: *Plaster fossil:* modeling clay, small plastic animals or bugs, shells, plaster of Paris, aluminum foil
Mud fossil: margarine tubs, small plastic animals or bugs, shells or leaves, mud, toothpicks, spoons, paintbrushes.
Play-dough fossil: play-dough (see recipe below), small plastic animals or bugs, shells, or leaves

Lesson Plan

1. **Review the definition of a fossil: remains or evidence found in rocks of plants and animals that lived long ago.** Ask the students to share their ideas about fossils.
2. **There are several ways to make fossils.** Select one of the three methods outlined below and have the class make fossils.

A. Plaster fossil

1. **Give each student or group of students a round, flat piece of modeling clay about ¼ inch thick and four inches in diameter.** Have the students fold up the edges of the clay to create a well in which you can pour the plaster.
2. **Instruct the students to use rubber animals and shells to create a mold or track impression in the clay.** Make sure they press the object hard enough so that it makes an impression in the clay but not so hard that it breaks through the clay.
3. **Once they've created a mold, they should place the clay on a piece of tinfoil and fold it up around the clay.** This will help catch any plaster of Paris that spills out of the mold. Then they can write their name on a piece of scrap paper, place it between the clay and foil, and set their mold in a place where you can pour plaster later.
4. **Pour plaster into each mold and let it dry for several hours or overnight, then carefully remove the clay from the plaster cast.**

B. Mud fossil

1. **Give each student or group of students a margarine tub.** Have them label it or number it.
2. **Have the students place a layer of mud in the margarine tubs, more than half-filling the tubs.** Then, they should press the chosen object (leaf, shell, plastic animal, etc.) into the mud, and cover it with 1 to 2 inches of mud. Let the mud mixture dry in the sun for 3 to 4 days.
3. **Give each student or group of students their filled margarine tub. Have students carefully break the mud apart, using spoons or toothpicks to find materials and imprints.** Emphasize that they are trying to get the fossils out in the best possible condition. They can use paintbrushes to remove the last bits of dirt.

C. Play-dough fossil impressions

1. **Make a large batch of clay, using the proportions in the recipe below.**
2. **Give each student a small chunk of clay, about lime-size.** Have them flatten it out to about $\frac{1}{4}$ inch thick, and then make an impression from a plastic animal toy, shell, or even their hand. Students can also scratch their initials into the clay with a pencil or toothpick.
3. **Let the play-dough air-dry for at least a day.** After it dries, students can paint or shellac it if wanted.

Play-dough recipe

1 cup flour	Mix the flour and salt together. Mix in
1/2 cup salt	the oil and water. Add food coloring if
1 Tbsp. oil	desired. Keep covered in the refrigerator
1 cup water	until needed.

3. **After the students have made a fossil, have them write and illustrate a story about what their fossil did or where it lived when it was alive.** You can prompt them to think of the different habitats they saw in the fossil matching game during the Stokes Nature Center visit (ocean, forest, swamp).