



# High Touch High Tech<sup>®</sup>

Science Experiences That Come To You

## Make a Fossil

### Supplies

- 1 cup salt
- 1 cup flour
- 1 teaspoon alum
- $\frac{3}{4}$  cup water
- bones, twigs, leaves, small toy figurines, seashells
- mixing bowl
- measuring cup
- large spoon

### Instructions:

In this activity, you can make your own fossil! Fortunately, this will not require 3 billion years to complete. You can do this at home.

You will need 1 cup salt, 1 cup flour, 1 teaspoon alum, and  $\frac{3}{4}$  cup water. You should also gather some leaves, small plastic toys (like dinosaurs), sea shells, and small bones. You need a large mixing bowl, and a large spoon.

First, mix together 1 cup salt, 1 cup flour, and 1 teaspoon alum. Mix with the spoon. Slowly add  $\frac{3}{4}$  cup water until a dough forms. The mixture should stick together.

Roll the dough into golf or ping-pong sized balls. Using your hand or a small cutting board, flatten the balls into a pancake.

Now, press the leaves, small toys, or seashells into the dough. This will make an impression, or mold, of the object.

Set the molds near a window. Let them dry. This is your fossil! Once dried, you can paint your new fossil.

### **More Fossil Activities:**

- In place of the homemade dough, use Plaster of Paris. To prevent sticking, make sure to rub petroleum jelly (Vaseline) on the objects.
- Make fossil cookies! You will need "slice and bake" cookie dough. Slice the roll of dough into  $\frac{1}{4}$  -  $\frac{1}{2}$  inch round slices. Use your fingers to make impressions. You can try different small kitchen tools to make decorative fossils on the cookie slices.



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- For a fun outdoor fossil activity, mix dirt, sand, and glue to make mud dough. Make a mud ball and flatten it to make a pancake. Use pinecones, rocks, and leaves to create impressions. Dry the object in the Sun to make a Mud Fossil.

## The Science Behind It:

Scientists estimate that the Earth is 4.54 billion years old! That is 4,540 million years old. Let's write this number: 4,540,000,000,000 years old! Now that is old. Scientists can also date prehistoric life, meaning before human history, 3.5 billion years ago. Now, that is amazing! How can scientists study evidence of early organisms that lived over 3 billion years ago? The answer is *fossils*.

*Fossils* are physical evidence of early, prehistoric plants and animals. Most organisms decay after they die, or they are eaten. However, occasionally an organism dies in the right circumstances. If an organism gets buried in mud, sand, or soil, especially on a river or sea bed, the tissues and bones are protected from decomposition and other animals. Over millions of years, the mud or sand is compressed and eventually forms rock. Over time, the organism slowly decays and the chemicals are replaced with other minerals. This process forms a mold of the organism and its bone. The actual bone is gone, but the fossilized object has the same shape as the organism. A fossil is a rock-like copy of the original!

Scientists that study fossils of plants and animals are called *paleontologists*. One of the coolest things about paleontologists is that they work with dinosaurs! Fossilized dinosaur bones provide the only true way to really get to know and understand these incredible prehistoric animals.

Paleontologists have found fossils of footprints, bones, internal organs, feathers, and eggs. Scientists have found dinosaur fossils on all seven of Earth's continents. These ancient impressions provide scientists with a wealth of information about the environment, eating habits, and daily lives of these animals. Amazingly, paleontologists find fossils and learn new information everyday. So far, scientists have discovered and named over 1,000 different species of dinosaurs. Fossils will continue to help scientists learn more about the prehistoric world of dinosaurs.

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