

Forming Fossils

A fossil is the preserved remains of any ancient life form. However, the fossil is not the actual organism—it is a rock! To become a fossil, the remains of an ancient organism needs to be covered in a sediment shortly after death. Over time, minerals from the sediment slowly soak into the remains, eventually replacing pieces of the organism (like a bone) with rock and producing a fossil.

Fossils are classified into two main categories: body fossils and trace fossils.

Body fossils are the remains of an actual organism, such as bones, shells, or teeth. Trace fossils, on the other hand, are evidence of how animals moved and lived. A dinosaur footprint is an example of a trace fossil.

Mold fossils are a specific kind of body fossil that occur when an imprint of the body is left in rock. A cast fossil is a replica of the body formed from a fossil mold. In this activity, we are creating both cast and mold fossils!

Materials needed:

- Mixing bowl
- $\frac{2}{3}$ cup flour
- $1\frac{1}{2}$ tablespoons salt
- $\frac{1}{4}$ cup water
- Natural objects (e.g., sticks, leaves, shells, plastic animals)
- Cardboard
- White liquid glue

Step-by-step instructions:

1. Combine flour, salt, and water in a large bowl.
2. Mix and knead with your hands until the dough is no longer sticky or wet.
3. Roll a piece of dough into a ball, then flatten it.
4. Press the natural object into the dough, then carefully peel it away, leaving an imprint.
5. Leave your mold fossil on a piece of cardboard to dry for 24 hours.
6. Fill your mold fossil with white glue and let dry for another 24 hours.
7. Carefully peel the cast fossil out of the mold.



Discussion questions:

- How long do you think it takes to form a fossil in real life?
- Is your mold/cast an example of a body fossil or a trace fossil?
- What can we learn from fossils about ancient life?
- How is a cast fossil different from a mold fossil?