

# Impressions in clay

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## Introduction

Fossils are any evidence of ancient life preserved (usually) in stone. Many fossils are impressions of ancient life, rather than any preserved part of the actual organism. Impressions of hard parts are more common than soft parts, but impressions of soft parts such as skin and scales have been preserved as fossils in rock. Fossil tracks are also impressions. To illustrate how impressions form, and how hard or easy it is for organisms to leave impressions, students will make impressions of different objects in clay. In nature, muddy or clayey sediments are the best sediments for leaving impressions, so using clay in the classroom is a good model for nature. You can see examples of fossil impressions on-line at the Kentucky Geological Survey's **pictures of different fossil types**.

**Grade Level :** K-8

**Time :** 15-30 minutes in class (or can be done as part of an outside classroom activity)

## Materials :

- Objects to make impressions. You can substitute objects, but there should be a mix of hard and soft objects. Small, low-relief to flat objects work the best
- Cotton ball
- Coin
- Blade of grass
- Leaf
- Shell or other hard natural object like a paper clip or nail
- Modeling clay or Playdo to make impressions
- Paper and pencil to take notes
- Activity **worksheet**

## Exercise:

- In addition to the objects suggested, you can have the students collect different types of plant material for making impressions, or other natural objects (shells, teeth, bones) where available. The important thing is that each student or group of students starts with 5 different objects, some of which are hard, and some of which are soft.
- Working in groups or individually, have students mold their clay into a pancake shape.
- Have students place one of objects on their desk (or if outside on their hand). Write the name of the object on the worksheet. Is this a hard or soft object? Write hard or soft in the appropriate column on the worksheet.
- Press the clay pancake over the object (either on the desk or in your hand if outside). Peel back the clay and separate the object from the clay.
- What is the quality of the impression (none, poor, good, excellent). Write an "x" under the column that best describes the quality of the impression.
- Repeat the procedure for five different items, or have each person in a group test a different object and fill out one chart. Compare the quality of impressions from the different objects. Answer the questions on the **worksheet**.
- You should be able to see that not all objects have the same potential to leave an impression and not all details of an object are preserved. How good was the impression? Can you tell what the object was from the impression? Which objects leave the best impressions?

# Sample Impression Worksheet

Name \_\_\_\_\_

In the table, write the name of the object you are using. In the next column classify it as a soft or hard object. After you make an impression, put an x under the column for the quality of that object's impression (none, poor, good, or excellent).

## Impressions Quality

Object name or description	Soft or hard	None	Poor	Good	Excellent
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____

Based on the data you collected, answer the following questions.

- 1). Which objects (name or description) made the best impressions?
  
  
  
  
  
  
  
  
  
  
- 2). Which objects (name or description) made the worst impressions?
  
  
  
  
  
  
  
  
  
  
- 3). Imagine a dead animal or plant that was buried in the mud. What parts of that animal or plant might make good impressions?