

# Making Animal Fossils

## 4<sup>th</sup> Grade

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### **Benchmarks & Objective:**

- LS-4: Observe and explore how fossils provide evidence about animals that lived long ago and the nature of the environment at that time.

### **Materials:**

- Plaster of Paris
- Clay
- Dixie cups
- Plastic animals (e.g. fish, dinosaurs, birds etc.)
- Plastic shovels
- Toothbrushes
- Sand
- Dirt
- Plastic bins

### **Target Concept:**

Students will learn how fossils are made, but also how scientists discover (i.e. excavate) fossils.

### **Initial Introduction:**

Start the lesson with a Type 1 writing exercise to get an initial feeling for what the students know about fossils and their importance. After the writing exercise, follow-up with a reading exercise about fossils (The Best Book of Fossils, Rocks and Minerals by Pellant, Chris).

### **Procedure:**

#### Day One

1. Pass out a ball of clay, one plastic animal or plant and one Dixie cup
2. Have the students roll their clay into a ball then place the clay into the cup bottom
3. Have the students press the clay within the cup until the bottom is filled
4. Have the students take their plastic specimen and press it into the top of the clay

#### Day One-night (teacher/fellow only)

1. Take each clay cup and fill it with plaster of Paris
  - a. Be sure to spray the clay and plastic animal with coking spray
2. Once the plaster has cured tear off the cup and remove the clay and plastic animal
3. Using one plastic bin per four students, place four plaster fossils in plastic bin and cover with sand/dirt/rocks
  - a. Be sure that the fossil made by a student is not the fossil that student finds on Day Two
  - b. Place a ruler in each bin so that the students can record how far down they found their fossils

- i. By placing different types of fossils at different levels the teacher/fellow can teach that not all animals/plants come from the same time period

Day Two

1. Pass out the plastic shovels and toothbrushes
2. Have the student groups dig through the plastic bins and find one (each) fossil
3. Once all students have a fossil, let the students clean off the fossils using the toothbrushes
4. With all fossils cleaned, teacher/fellow team can have the students talk about what their fossils are.

**Target Observations:**

- Fossils give a good representation of the original animal/plant etc.
- Fossils are like snowflakes; they are all different
- Fossils come from animals or plants
- Fossils are delicate so scientists must be careful during excavation

**Final Target Concept:**

The students should have learned that fossils offer proof that animals and plants existed long ago.

**Summary & Discussion:**

Discuss with the students the usefulness of fossils (e.g. what they teach us about the past, what animals/plants were present in the past, how those animals/plants are similar to today's animals/plants) and what measures must be taken to successfully recover fossils from the ground.