

# Plaster Jacket Preparation

Grades: 2-8

Prepare fossils from plaster jackets – a step in the process of paleontology where fossils are carefully removed from matrix (dirt and rock), cleaned and prepared for study or display.

## MATERIALS

- Paper dessert bowls
- 1½ cups fine sand
- 1 cup kitty litter
- 1 cup plaster of Paris
- 1 tablespoon salt
- 1 cup water
- Objects to represent fossils (e.g., seashells, clean chicken or fish bones, pieces of wood)
- Tools: paint brushes or toothbrushes, wooden picks



## ENGAGE

Show photos of paleontology field work and plaster jackets. Paleontologists work long, hard hours at research sites searching for fossils. Some fossils are excavated on site while others are packaged to be prepared back in a lab. Scientists create a plaster jacket around them to safely transport them. Once back in the lab, they spend many hours digging through the matrix to remove the fossils. Explain that today students will be working to prepare plaster jackets.

## EXPLORE

- Distribute pre-made plaster jackets (see instructions below) and ask students to begin preparing them. Once a student has decided where a fossil is located, suggest they use a small brush or pick to gently scrape off the top layer of the matrix.
- Once they see the edges of the fossil, they should carefully scrape and brush around the edges until they have a good outline of it.
- Monitor progress. Remind them about proper technique – to work slowly and meticulously. Since fossils can be fragile, they need to work carefully to expose them. The slightest chip in the wrong place could damage the fossil.
- As discoveries are made, talk to students individually about what they found.
- Clean up: Do not rinse the plaster mixture down the sink.

## EXTEND

- Have students clean fossils and display in the classroom.

## EVALUATE

- Ask students about the process of preparing fossils. What were some of the challenges?

### Plaster Jacket Directions

1. Add sand, kitty litter. Mix.
2. Add plaster of Paris and salt and mix well.
3. Slowly add water until the mixture is the not too runny and not too thick (consistency of mashed potatoes).
4. Half fill the paper dessert bowls and place the “fossils” into the mixture. Press some down so that the fossils are covered and leave some partially exposed.
5. Mixture should set within 12 hours.

**Hint:** Pre-mix dry ingredients to make a large number of plaster jackets. Mix well before adding water.

**Clean-up:** Do not rinse the plaster mixture down the sink.