

RECIPE FOR BIRD BONE PALEONTOLOGY JACKETS

Introduction:

Fossils, like dinosaur bones, are evidence of past life. People who study fossils are called paleontologists. Paleontologists study fossils to predict changes in plant and animal life over time as a result of shifts in weather, climate, and geography. Fossils are studied by comparing them to animals and plants found on earth today, which may provide clues to past adaptation and behavior.

Before dinosaur bones are studied in the museum laboratory, the bones are carefully removed from the field. Then the dinosaur remains are transported and cleaned by museum preparators. Modern bird bones (like chicken and turkey bones) encased in a homemade sandstone, made of sand and plaster, provide a method to explore the process of field excavation and lab preparatory work completed by paleontologists.



Materials:

- 2 to 4 whole chickens, turkey, or other bird. It must be bird bones because they are in the evolutionary family of dinosaurs. All modern day birds evolved from raptor type dinosaurs. The amount of bones needed depends on how many jackets you want to make and the number of bones you want in the each jacket. For example, 2 whole chickens will provide enough bones for 15 butter tub jackets or 4 whole chickens for 6 larger shoe box size containers.
- Plastic containers to hold the sand/plaster matrix. Butter tubs are the ideal size if you want each student to have their own jacket. Otherwise larger containers work well for students to work in groups on one jacket.
- 1 Part Plaster of Paris
- 2 Parts Sand
- 1 Part Water
- Excavation tools: Paleontologists' primary tools for excavation both in the field and the lab are: dental picks and toothbrushes. If you would like to use dental picks, dentists regularly discard old dental picks and usually are more than willing to give them to educators.
 - o Bamboo skewers are a good substitute for dental picks

Assembly:

It works best to create the jacket mixture the day before the class. The mixture will still be semi-wet making it easier to pick at.

1. Eat the chicken and save the bones. Boil the bones for approximately one to two hours. Boiling helps to loosen and remove the meat and tendons off the bones.
2. Clean off all meat and tendons and let dry.
3. Sandstone Mixture: First, mix 2 parts sand, 1 part Plaster of Paris, and 1 part water in disposable container. Mix thoroughly.
4. Pour a small amount of the sand/plaster mixture into the bottom of jacket tub.
5. Place bones on top of mixture.
6. Place a second layer of the sand/plaster mixture on top of the bones covering them thoroughly. Do not bury the bones too deep. The more you cover them the longer it takes to excavate.

To Do and Notice:

Carefully excavate and explore the bird bone jackets with the bamboo skewers and toothbrushes. Look at the arrangement, density, and types of bones. Are they all the same? How long does it take? Can you identify the bones?