

Activity - Digging a Dinosaur

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Dinosaur bones are extremely fragile when first discovered in the field. They almost always require excavation (removal from the ground) and a protective covering, called a jacket, before they can be moved safely. The basic tools and material needed to collect a bone include:

Excavation tools (marker, brush, awl, hammer, chisel)

Jacket materials (plaster, burlap, a separator like paper, and water)

The jacket looks like the white plaster casts doctors make for broken human bones. The plaster comes as a powder and is mixed with water. Plaster is much stronger if burlap is dipped in it and then wrapped around the bone. The plaster and burlap, however, cannot be placed directly on the bone because it would be very difficult to remove the jacket later. A separator, like paper, is used to cover the bone before the plaster-dipped burlap is applied. Once the plaster dries, the jacket can be labeled with a permanent marker. It is very important to label the jacket and record its contents in a field book, because the bone can no longer be seen.

If the bones were completely exposed in the field, lying on the surface, it would be easy to make a complete jacket all at once, but most bones are buried, and so the jacket must be made in two stages. First, the bones are cleaned on the top and sides, and the top half of the jacket is completed. Now the bone is strong enough to turn over, so that it rests on the newly-made jacket, with its bottom surface facing upward. The second jacket is completed over the bottom surface of the bone.

Directions:

Below are the actions necessary for excavating and jacketing a dinosaur bone. Number them in the correct order.

- ___ Clean and outline bones in place in the ground
- ___ Label jacket
- ___ Clean bottom surface of rock
- ___ Let plaster jacket dry
- ___ Add separator and plaster-dipped burlap to bottom of bone
- ___ Add separator and plaster-dipped burlap to top and sides of bone
- ___ Mix plaster with water and cut burlap strips
- ___ Flip half-jacket