

## ***'Dinosaur Dig' Paleontology Simulation for Elementary Grades***

v.6/08

### **Description**

In this activity, students use sifters, buckets, brushes, and trowels to locate 'fossils' and other objects in a sandy enclosure. Measurements and observations are collected for debriefing. A school sand play area is perfect, but wood chips around play equipment can be used in a pinch. If your PTO is interested, a dedicated paleontology 'sandbox' can be created, replete with dinosaur tracks. Dinosaurs are really the 'hook' in this inquiry based activity. The 'dig' is an opportunity to use tools, measure what students find, plan an exploration, and draw conclusions from observations. The activity has been very successful at the end of first grade, but could be used through fifth. I suspect a more detailed study could be used in middle or high school in a forensics unit.

**Time frame:** pre-teach 1+ sessions, dig 50-60 minutes, debrief 1 session

### **Materials**

sifters – old upright fan housings work, so do old oven racks and kitchen colanders

A handy person could make simple sifters with hardware cloth and a wood frame.

scoops, trowels, small shovels – beach style

old paintbrushes, scrub brushes, toothbrushes

centimeter rulers

gram balance (like AIMS with 'gramstacker' masses)

folding table (for your recorders to work from and to display 'finds')

artifacts: fossil models, prepared turkey/chicken bones, unusual rocks, wooden 'dino bones'  
human stuff like soda cans and candy wrappers

### **Preparation**

You will need to arrange with your principal to make your study area 'off limits' the day you will do the dig. Before school, you will need to 'seed' the site with your artifacts. From past experience, a rough map will allow you to reclaim most of the artifacts which are missed during the activity. Like a real dig, you may want to cordon off the area with rope. Spectators at recess will be fascinated by the dig! It doesn't hurt to dress a bit like Indiana Jones (sans whip and pistol).

Be sure to prep parents about sunscreen, hats, and insect repellent. Also, students should wear digging clothes and avoid sandals/flip-flops.

## **Procedure**

Pre-teaching a bit about paleontology/archeology will help everyone get in the mood. Check the literature connections page for suggestions. Because this is a very exciting hands on activity, it is important to have each child doing a job and rotating through the various job descriptions, which are listed below.

### ***Job descriptions:***

It will be important to go over all the job descriptions and tools before going outside.

**mapper (1)** – keeps track of where the probers have worked and directs prober/digger/sifter crews to new locations

**probers (4)** – use thin dowels to find locations for diggers to work

**diggers (4)** – use trowels to uncover specimens

**sifters (4)** – sift sand from diggers to find small specimens

**cleaner** – brushes loose dirt from all specimens

**recorders (2-3)** – measure specimens, make simple drawings and descriptions

**curator (1)** – labels specimens, collects questions from other students

Two or three job changes during the activity will keep most people happy. The teacher, volunteers and paraprofessionals will be monitoring safe tool use, sharing, shift changes, and assisting the recorders/curators in their work.

## **Debriefing**

Collecting good questions during the activity will insure an interesting and productive debriefing session. Time scale is difficult for this age group, and is not crucial to the activity. Measurement and description are important skills. Simple deductions like ‘how deep is the human trash compared to the fossils?’ and ‘why were all the bones in one area?’ are good. It will be potluck!

See: *Preparing Bones*

This document and all activities presented are available at [www.lmnts.org](http://www.lmnts.org) Click the ‘modules’ button and then click ‘Connecting the Rocks’ to access materials.