

ELEMENTARY SCHOOL SCIENCE ASSOCIATION
OF NEW YORK

20 Marlene Drive
Syosset, NY 11791

newsletter

GREGORY GRAMBO

WE "DIG"
SCHOOL ARCHEOLOGY
PROJECTS YOU CAN DO
AT YOUR SCHOOL

SPRING 1996
ESSA Newsletter

pages 8,9

**WE "DIG"
SCHOOL-ARCHAEOLOGY PROJECTS
YOU CAN DO AT YOUR SCHOOL**

Gregory Grambo

Archeology, some say it is a branch of science, others say it is merely treasure hunting. Archaeologists do not only dig to find the treasures of an ancient civilization. They sift through the past trying to find out about earlier environments and how these environments may have influenced us. Archeologists believe that ancient peoples, their settlements, land use, and diet were determined by the available food sources of the time. They want to understand more about the natural landscape and ancient agricultural practices. Radio carbon dating systems aid the archeologist in figuring out the question of "when?" This frees them to answer the more important question of "why?"

Close observations allow one to see if an area is of interest, archaeologically speaking that is. Construction, maintenance and reconstruction offer many opportunities for the budding archeologist, i.e., the slave cemetery found in lower Manhattan. Trenches for sewer pipes, telephone or gas lines, digging out for foundations of buildings, these all give us a glimpse of what lies below the surface, and allows us to see what was there before. Not all discoveries were made by trained archeologists. A few years ago, a boy named Muhammad Adh-Dhib threw a stone into a cave beside the Dead Sea. He heard something that sounded like pots breaking apart. When he went in to investigate, he found scrolls among the jagged shards. These scrolls are now known as the famous "Dead Sea Scrolls", and are still being translated.

A key to good archeological work is a keen eye for observation, and exact record-keeping. Everything must be written down, diagramed or photographed. Remember, sometimes you find artifacts by accident. If you don't map out an area carefully, you may never locate the site again.

An area near your school or on-school property would make an excellent spot to go on a dig. Start with a freehand drawing of the site, and label everything. After you have drawn the details of the site, look again to make sure that what was drawn accurately resembles the site. Put in landmarks buildings so that your drawn map can be related to a printed map of the area. Photographs taken of your site from different angles will also provide a valuable record of the site. While you go over the surface of the site you should be establishing a record of the area. A grid from allows for greater observation of an area.

Make a grid frame from one inch by two inch lumber that measures one meter by one meter square. Run eye hooks and nylon fishing line every ten cm. to form a grid pattern. (See diagram A). Place this grid frame over an area on your site. Using graph paper with a similar, but smaller, grid pattern, draw what you see box by box from the grid frame onto the graph paper. This graph sheet should be labeled and glued into a composition notebook that will now become an archeologist's field notebook.

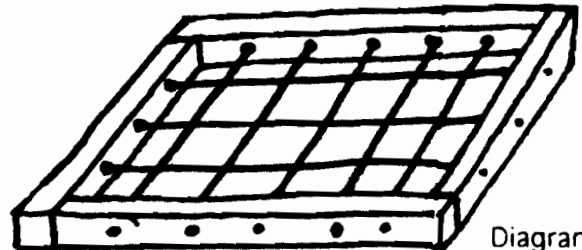


Diagram A

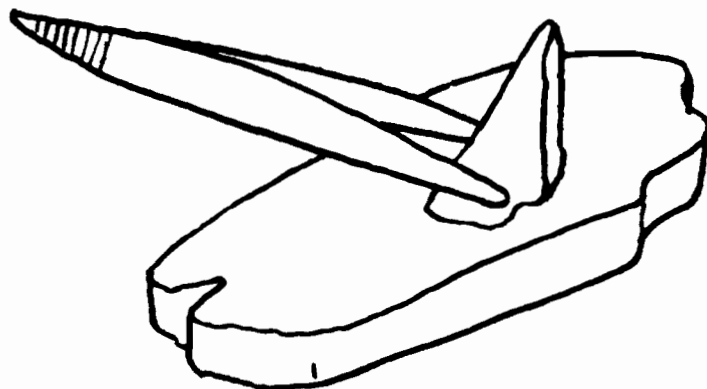
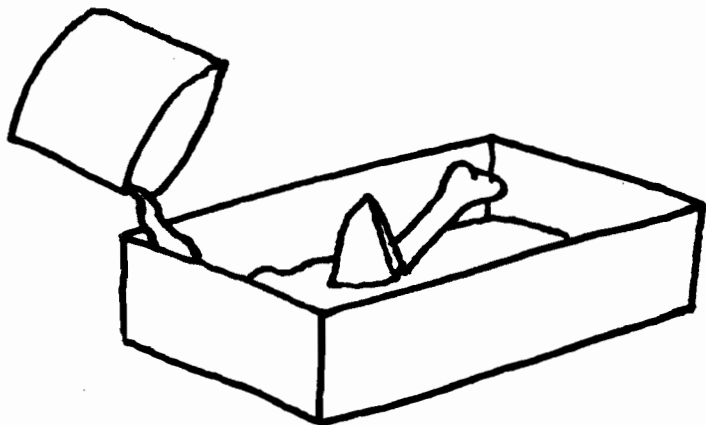
After studying, drawing freehand, and mapping the surface, it is time to see what lies below. Metal detectors can be used in scanning under the surface, but digging up every piece of metal that a detector finds will only destroy a site. You will find that a shovel, brush, broom, toothbrush and dental tools will be of greater help in investigating a site. While excavating is under way, archeologists use "find trays" in which they place the materials they uncover. Each layer, as you go down deeper into the earth, needs a separate "find tray". These trays need to be carefully labeled by level as they are removed. Many times objects are photographed or sketched in site location before they are removed from the site and placed into the "find trays".

Even the most careful archeologists may miss something. It is useful to sieve the excavating soil through a screen to check for smaller objects you may not readily see. Plans, sections and photographs, along with descriptions, and the nature of the materials found, need to be recorded. It is useful to sieve the excavating soil through a screen to check for smaller objects you may not readily see. Plans, sections and photographs, along with descriptions, and the nature of the materials found, need to be recorded. Daily entries should be made in the field notebooks. These entries should show what is being excavated, what progress is being made along with other information such as weather conditions and the names of all the workers on the site. This information could be written in a dated diary format, a standardized format, or you can use pre-printed recording sheets that can be glued into the field notebook.

An archeology project that can be done right inside the classroom allows your students to work on their project during inclement weather conditions, or when no site space is available outside your school. For this project you will need chicken or beef bones or some clay pottery. You will also need water, plaster of Paris, a mixing bowl, mixing stick, soil, sand and brown tempera paint.

Begin by mixing plaster of Paris according to package directions. Mix in some tempera paint with the added water to give the plaster the color of soil.

Pour some plaster along with some dry soil for texture into the box. Place the bones or the pottery (broken into pieces) into the box of plaster and then cover the objects with more plaster.



After the plaster dries, allow students to work in small groups picking apart the plaster as they would look through soil and rock on an outdoor site. As they pick everything apart (dental tools work well for this project) have them look at the plaster commenting upon how it feels. Have them tell about particle size in the soils you added. What lies along with the bones or pottery? Objects found should be numbered and labeled.

Some archeologists paint a white spot on the objects and then write upon the spot. Others use self adhesive labels on which they write with a permanent marker. Drawings should also be made noting the objects placement in the plaster.

Pottery was invented more than ten thousand years ago because it was inexpensive and easy to make. It is the most common item found at archeological sites. After your students uncover the pottery shards have them examine the pieces. This examination may show techniques used in the manufacture of the pots. If possible have the students reconstruct the pottery from the shards, or have the students form a partial skeleton from the bones embedded in the plaster.

All this information is as important as the actual objects they find and everything should be written down in their field notebooks. What you find, where you find it, and how you found it are all important observations. On Roman sites one may find a lot of pottery shards (pieces of broken bottles) while an a Bronze Age site, a single piece of pottery or a single shard may be unusual.

Archeology projects will teach children about the importance of observation skills and document physical information will help them develop skills in record-keeping.