

Excavating Archaeological Layers: a Prehistoric Lesson Plan

**Title: "Digging Through Time in Our Bowmanville Backyard"—
A Culminating Activity for The Timeline of Illinois Cultures**

Grade: 3

Duration: Two class periods

Illinois State Standards: English 1.C: Comprehend a broad range of reading materials; Math 7.A: Measure and compare quantities using appropriate units, instruments and methods; Social Science 16.A: Apply the skills of historical analysis and interpretation; 17.A: Understand relationships between geographic factors and society; Science 13: Understand the relationships among science, technology and society in historical and contemporary contexts.

Objective: To give students an introduction to archaeological practice by engaging in a simulated dig of two excavation units inside the classroom. Each small group of students will excavate one layer of a unit, representing a cultural period. Students will take appropriate measurements, analyze and sift the "soil", and identify the artifacts found with the help of a site catalog. Each student group that is excavating corresponding layers in the two units will then join together to interpret their findings. The class can then set up a museum and report their results.

Vocabulary: artifacts, closing elevation, datum point, deposits, excavation, layer, level, lithics, Munsell color, opening elevation, sediment, sherds, trowel, unit

Materials: Two large, 64-quart clear plastic bins
Four medium-sized plastic buckets
Four trowels
Lunch-sized paper bags and gallon plastic bags
Assortment of animal bones, pottery sherds,
lithic artifact replicas, shell fragments
Variety of beans (see Material Preparation)
Two measuring tapes, two levels, nylon string
Two sifting screens of varying gauges per team
Tarps, dust pans and brushes
Clipboards and recording sheets
Hand lenses, Munsell charts, site catalogs

Teacher Background: The Bowmanville site (CK-38), located on a sandy ridge along the east side of the Chicago River under what are now developed neighborhoods and the Rose Hill Cemetery, has yielded tens of thousands of artifacts spanning the Archaic through Historic periods in Illinois.

The Rosehill spit upon which the site is located was formed during the Calumet Stage of glacial Lake Chicago around 10,000 years ago. It was a low and swampy area broken by sandy ridges that would have provided its human visitors with a wide variety of marsh fauna and flora. Two springs located near the shallow river, as well as large populations of waterfowl, would have made the area quite attractive for those passing through. Historical notations of a large Miami village at the site have been the only determinations of permanent habitation at Bowmanville, since no actual

excavations were ever done before the site was encroached upon by the expanding city. The artifacts were surface collected by avocational archaeologist Philip Schupp from the early 19th century. Because parts of the collection were sold or loaned to area museums and universities, the entire collection has never been systematically analyzed.

A site catalog with drawings of lithics and pottery sherds from a 1958 analysis by Gloria Fenner will assist students in identifying the representative artifact replicas included in this exercise. Pictures and photos are also included of wetland faunal items that might have been found at various levels. Likewise, the catalog will identify various other items that were not included in Fenner's analysis but are plausible additions for the sake of this activity.

Student Preparation:

1. Students will have read and matched the picture and copy cards for each Period on the Timeline of Illinois Cultures. They will have completed the comparison grid and will also have completed an additional activity from the Timeline control cards. Students will also have been exposed to a presentation of artifacts and hands-on project for each of the periods.

2. The teacher will lead a "K-W-L" discussion to assess students' initial knowledge of archaeology. Students will complete the "With a Little Help From Our Friends" activity to learn about the various experts involved in archaeology fields.

3. The teacher will then discuss how archaeologists determine the viability of a site and lay it out in grids. Students will complete the "How to Read a Grid Map" and "Locking in on a Grid" exercises for homework.

Material Preparation

1. The teacher will prepare each of the plastic storage bins, representing an excavation unit. She first will place the Archaic artifacts, including the groundstone axe, the celt, the scraper and a point, and cover them with the "soil", the large white lima beans.

The teacher will then take each of the plastic bags of material artifacts in the order listed below and divide them between the two plastic bins. She will then cover the artifacts with the "soil" as listed below:

	<u>artifacts</u>	<u>soil</u>
Layer 1 (at bottom)	Archaic	large white limas
Layer 2	Early/Mid Woodland	red kidney
Layer 3	Late Woodland	brown pintos
Layer 4	Upper Mississippian	tan navy
Layer 5	Historic	yellow split peas

Finally, the teacher will attach one end of the nylon string to the "datum point" (the hook on the left bottom edge of the opening of each bin) and make sure it will reach to the nail at the top right edge. Attach the level to the string.

Class 1 Presentation:

1. The teacher will divide the class in half and assign each half to either Unit #1 or Unit #2.

The teacher will then divide each half into five smaller groups, one group for each layer. Students should then be assigned roles: *engineer* (to measure before and after); *recorder* (to fill out the sheets); *excavator(s)* (to scrape the "soil" and place in buckets); *bagger* (to label paper bags with appropriate unit/layer information and bag artifacts

as they are uncovered); *sifter* (to operate sifter) and *anthropologist* (to identify artifact from site catalog). *Note that in smaller classes, students may have multiple roles.*

Explain that all team members are to help to put the beans back into the plastic bags when the sifting is complete, and all are to help develop a theory as to the interpretation of the artifacts.

2. The teacher will then explain that since there are very few open places left in Chicago where archaeologists can dig, the students are going to participate in a simulated dig at a very important site, called Bowmanville, right in the middle of Chicago. "Let's imagine that they've knocked down an old apartment building to build a new house and we've been given permission to dig in the back yard. The whole site has been divided into excavation units, each with the same measurements, just like that grid map we just worked with. Each of these storage bins represents one excavation unit. Instead of digging through rocks and dirt, which would be tricky and a mess to boot, we'll be digging through layers of something else. First team, come on up here—everyone else, pay attention, since you'll need to follow these same steps."

Teacher then models:

◆ *Engineer* takes (and *Recorder* records) opening measurements, after stretching string and level across top of bin to find center measurement;

◆ *Excavator(s)* take(s) small scoop of surface "soil" and check it against the Munsell chart. *Recorder* records information. *Excavator(s)* take positions along side and begin(s) to use trowel to scrape from center to side, placing beans in buckets and STOPPING when next layer is reached;

◆ *Sifter* collects bucket(s) as they are half-filled and brings them to sifter site over tarp;

◆ *Bagger* notes info on paper bag and positions self to gather artifacts as they are revealed;

◆ *Engineer* and *Recorder* then take and record closing measurements while *Anthropologist* makes initial identification of artifacts from site catalog;

◆ All members clean beans from tarp and place in plastic bag before yielding unit to next group. *Recorder* completes Excavation Record and turns into staff member.

At end of class period, all groups turn in completed forms, bags of beans and artifacts, and place all measuring and excavating materials inside of storage bins.

Class 2 Presentation:

Teacher asks class to sit with their teams and recall which layer they excavated. Layer 1 teams are then asked to sit together, followed by Layers 2 through 5. Once they are settled, teacher passes out completed Excavation Forms, bags of artifacts, and Site Catalogs for further reference. She then explains that the teams will join together to interpret the artifacts and complete the Artifact Catalog form. The teacher indicates the boxes, where a team member is to draw each artifact. She also points out the line asking the team to indicate which expert they would consult with to gain more information on that artifact. Then, based on their

knowledge of the periods of Illinois cultures and the information on the Bowmanville site located in the Site Catalog, teams are to complete the Layer Interpretation form and select a representative to give a brief oral report before the end of class today.

Class 3 Presentation (optional):

Teams will meet once again with their artifacts and completed forms and will be asked to create a museum display for other classes to view. Display cards should be created for each artifact, as well as a narrative card for each layer with information from the Layer Interpretation form.

Representatives of each team not involved with the museum set-up should prepare oral presentations. Topics should include background information on the site, the role of each team member during the excavation, and personal opinion pieces on what was learned from this exercise and the role of archaeology in Chicago.

Closure: Of course, inviting a local archaeologist in to review students' layer interpretations and answer their questions would be great, but Montessori teachers have found that children of this age really enjoy creating a display or giving a report to older and younger students (and even their parents!), thus the museum option was suggested. Even if that option is not possible, teachers should complete the "K-W-L" exercise so students can verbalize what they've learned.

Teachers could also lead discussions on the following topics:

- ✓ identifying artifacts without the use of a Site Catalog
- ✓ identifying artifacts without the aid of stratification

- ✓ **the team approach to interpreting sites**
- ✓ **the role of archaeology in rewriting history**
- ✓ **the role of archaeology in cities**
- ✓ **preserving the past**