DISCOVERING MAINE'S PREHISTORY THROUGH ARCHAEOLOGY

An Interdisciplinary Curriculum Unit for Grades 5-8

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for the Maine Historic Preservation Commission

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This project began with a survey of other State Historic Preservation Offices conducted by Dr. Arthur Spiess, Maine Historic Preservation Commission, to see what other, if any, educational materials exist. Our feeling was that time could be saved and some errors avoided by reviewing these materials. Only a few state agencies, universities and museums have developed curriculum units.

However, it was encouraging to see others around the country engaged in the very same process. Of these I would especially like to thank the following: Jim Carpenter, TVA's Land Between the Lakes, and Kathryn Fraser, Murray State University, both of the Kentucky Prehistory Curriculum Project; Giovanna Pebbles, State Archaeologist, Division for Historic Preservation, Vermont, and Lauren A. Kelley, Colchester High School, Vermont; Nancy W. Hawkins, Division of Archaeology, Office of Cultural Development, Louisiana; Rene Attean, Director of the Wabanaki Curriculum Development Project, Boston Indian Council, Inc.; and Barbara Robinson, Concord Antiquarian Museum, Massachusetts. They kindly provided me with the materials which they had developed, along with permission to borrow from them. So many materials were reviewed, but those ideas and activities which I am aware of having "borrowed" are referenced as such.

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Diane Kopec
The Abbe Museum
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I. INTRODUCTION

People lived in Maine in a changing environment for approximately11,000 years before Europeans explored and settled here. These 11,000 years comprise the prehistoric period of Maine, the time before written records. Cultures of past people are studied through the science of archaeology.

In the past fifteen years archaeologists working in Maine have made great contributions to our knowledge of the early people of our state. But, unfortunately, only a very small segment of our population is aware of Maine's exciting prehistory.

We feel an important need to share these discoveries with the public. We are not the only ones feeling this need though. Time and again teachers have requested educational materials on archaeology and the Native Americans of Maine and our "visiting archaeologist" program is in great demand. But the "visiting archaeologist" program is just scratching the surface. *Discovering Maine's Prehistory Through Archaeology* is another, but more in-depth, program which we hope will work towards the fulfillment of this need.

II. DESCRIPTION

Discovering Maine's Prehistory Through Archaeology is a curriculum unit designed to introduce elementary students to the discipline of archaeology and the early people of Maine. The interdisciplinary nature of this unit will enable students to combine various areas of study, such as social studies, science and history. Through this unit students will develop and utilize interdisciplinary skills, discover their state's past and realize the importance of their role in preserving our state's heritage.

Intended Learners: This unit is intended for students in grades 5-8. However, the flexibility of the unit, along with learning activities which can easily be adapted to different levels, make it possible to incorporate this unit into the curriculum at other grade levels.

Time Frame: The enclosed suggested unit plan requires approximately six weeks. Once again, the flexibility of the unit allows teachers to shorten the unit to one week by selecting portions of the unit, or to extend the unit through additional activities for a more in-depth study.

III. ORGANIZATION & GENERAL PROCEDURES

The curriculum unit is organized by educational goals. For each of the broad goals there are behavioral objectives, content materials, learning activities and evaluation methods. These are all outlined in the suggested unit plan in Chapter V. Chapters VI through XII contain the learning activities along with the evaluation methods for the unit plan. Most of the learning activities require one class period (approximately 45 minutes). Chapter XIII contains sources and references utilized in the preparation of this unit, addresses for materials needed in the teaching of the unit, supplemental resources for teachers, a teacher bibliography, and a glossary. The slide program and artifact kit to be used in conjunction with the unit are available from the Abbe Museum, Bar Harbor.

This unit has been designed to provide flexibility so that the teacher can select activities most appropriate to their students and to their preferred teaching methods. It is hoped that teachers will build from the suggested unit plan to tailor a curriculum unit that is kept current and that works for them and their students.

While the unit is designed to allow for substitutions, deletions and additions, learning activities and content materials taken *out of sequence* will not be beneficial to students. This

unit is arranged to insure that necessary preparation preceeds each activity and that later activities build upon past learning. Likewise, it is necessary to keep in mind the goals and learning objectives when making changes to the unit. Do not substitute an activity which does not meet the goals or objectives. Barbara Robinson of the Concord Antiquarian Museum says it well--"Isolated activities without proper preparation and follow-up, and without relevance to the curriculum, can be meaningless" (1984:3).

Teachers without a background in archaeology and Maine prehistory should consult the teacher's bibliography in Chapter XIII. An archaeological text, along with a few journal articles most applicable to their region of Maine, should be considered required reading for teaching this unit. It is critical that misconceptions not be perpetuated. Plus, the more background information you can read, the more you will enjoy teaching the unit. In addition, the slide narrative which accompanies the slide program summarizes archaeological methods and Maine prehistory and should be read before presenting the slides.

IV. EDUCATIONAL GOALS AND BEHAVIORAL OBJECTIVES

Educational goals are, by nature, broad and theoretical. The goals of this curriculum unit follow:

1. Students will define archaeology and understand the cultural concept on which the science is based.
2. Students will synthesize social studies, science, math, art, literature and career education through an interdisciplinary program in archaeology.
3. Students will trace and interpret their state's unique prehistory.
4. Students will develop and/or utilize skills and methods which are part of the archaeological process but applicable to many areas of study.
5. Students will tie past peoples of Maine to Native Americans living in Maine today, realize their influences, and recognize racism.
6. Students will develop a greater appreciation of the past, thus increasing preservation of the state's historic and prehistoric sites.

Each goal is divided into behavioral objectives. The behavioral objectives of the unit are the anticipated specific outcomes of classroom instruction. These objectives are listed within the unit itself along with methods to evaluate whether or not students are achieving these objectives.

V. UNIT PLAN

Goals/ Behavioral Objectives	Content/ Learning Activities	Evaluations
I. WHAT IS ARCHAEOLOGY		
GOAL: The students will define archaeology and understand the cultural concept on which the science is based.		
1. Correct popular misconceptions about prehistory and archaeology.	Pretest	Class Participation
2. Define and give examples to demonstrate an understanding of archaeology, culture and basic terms of the discipline.		
3. Identify problems of studying artifacts out of context, thereby realizing the importance of context to archaeology.	What is a Penny?	Class Participation
4. Give examples of artifacts to show an understanding of their representation of culture.	Capsule of America	Class Participation Time Capsule
5. Express an understanding that cultural differences are not negative, but adaptive.	Cross-Cultural Comparison	Report Presentation
II. DOING ARCHAEOLOGY: THE ARCHAEOLOGIST AND METHODS		
GOAL: Students will synthesize social studies, science, math, art, literature and career education through an interdisciplinary program in archaeology. (This goal continues through the unit.)		
1. Describe education and training required to become an archaeologist in contrast to a "pot hunter."	Slides, Part I	Worksheet Day in the Field
2. Explain the carbon 14 dating method, its assumptions, problems, and usefulness to the archaeologist.		
3. Explain how different disciplines assist archaeologists to study the past.	Pollen Analysis	Laboratory Notebook
III. DOING ARCHAEOLOGY: PREHISTORY		
GOAL: Students will trace and interpret their state's unique prehistory.		
1. Define theory and hypothesis and relate them to prehistory.	Film: <u>The Early Americans</u>	Class Participation
2. Trace route of Native Americans into and across North America and identify variations in cultures.		
3. Describe the way of life of prehistoric groups and environmental changes in Maine.	Slides, Part II	Summary Sheet, Class Partipation, Word Puzzle, Pretest
4. Place events of Maine's prehistory into the proper time perspective.	Time Line	Class Participation

IV. DOING ARCHAEOLOGY: EXCAVATION & INTERPRETATION

GOAL: Students will develop and/or utilize skills, methods and principles which are part of the archaeological process, but applicable to many areas of study.

1. Classify tools and relate this method to classification systems they use in everyday life.	Tool Classification	Demonstration Class Participation
2. Determine tool functions and make inferences about site activities and environments.	Tool Function	Demonstration Today's Tools
3. Demonstrate an understanding of the principle of stratigraphy.	Building a Site	Demonstration Class Participation
4. Demonstrate how the natural processes of deposition/erosion and the influences of human acitivity contribute to creating a site.		
5. Demonstrate how Maine's prehistory is linked to the stratigraphic concept.		Stratigraphic Puzzle
6. Demonstrate archaeological excavation skills.	An Excavation	Demonstration Field Notes
7. Organize products of excavation with notes and maps to assist in site interpretation.		Class Participation
8. Identify absences in the archaeological record and the reasons for the absences, thereby realizing the limitations of archaeology.		
9. Interpret site evidence and make inferences about the site's environment, cultures and activities, thereby describing cultures through artifactual remains.		Site Report
10. Express an appreciation of skills and methods utilized in archaeology, thereby realizing that only trained archaeologists should excavate sites.		Class Participation Quiz

V. LIVING ARCHAEOLOGY

GOAL: Same as goals of sections II and IV.

1. Observe and interpret cultural behavior, thereby realizing the difficulty of interpreting cultural behavior based on observation.	Writing an Ethnography	Field Notes/Ethnography Presentation
2. Research/explore/reconstruct different aspects of Native American culture, some of which are not well represented in the archaeological record, to give a more complete picture of the past.	Research-Project	Presentation

VI. NATIVE AMERICANS TODAY

GOAL: Students will tie past peoples of Maine to Native Americans living in Maine today, realize their influences, and recognize racism.

1. Identify influences of Native Americans in Maine today.	Influences	Class Participation
	Place Names Map	Prepare Map
2. Link Native Americans in Maine today to the early people of Maine.	Native Americans Today	Response Paper
3. Identify racism in Maine today.	Indian Island Mystery	Book Report
		Class Participation

VI. YOU AND ARCHAEOLOGY

GOAL: Students will develop a greater appreciation of the past, thus increasing preservation of the state's historic and prehistoric sites.

1. Relate the irreplaceable role of sites in acquiring knowledge of our state's past.	Bandelier	Class Participation
		Write Newspaper Article
2. Express an understanding of the role cultural resource management plays in conserving our cultural resources.		
3. List three ways sites are being lost and remedies.		
4. Cite the ways they can help to preserve our state's past.		Design Poster
		Unit Test

VI. WHAT IS ARCHAEOLOGY

PRETEST

Purpose: A pretest of the students' understanding of prehistory/archaeology at the beginning of the unit serves as a vehicle for discussion in which many of the important terms and concepts are introduced. It will also be useful for later evaluative purposes.

Objectives: Students will:
1. correct popular misconceptions about archaeology and prehistory.
2. define basic terms of archaeology.
3. relate archaeological concepts to their own lives.

Materials: Pretest (following next page): titled "How Much Do You Know About Prehistory/Archaeology?"

Procedure: Following an introduction by the teacher outlining the goals, content, activities, and students' responsibilities, a pretest will be given. The pretest is a true/false quiz. Inform the students in advance that it will not be graded. (All of the statements are false.)

The discussion following the pretest is critical as it provides them with the basics necessary for the unit. After the students complete the pretest instruct them to cross off the heading "How Much Do You Know About Prehistory/Archaeology?" and retitle it "Common Misconceptions About Prehistory." At this time discuss #1 through #17. (Save discussion of 18-25 until they have viewed Slides, Part II.) Students should take notes from the discussion.

Suggestions for Discussion: The following terms and concepts should be thoroughly covered in the classroom. Have students relate as many of the terms and concepts as possible to their own lives, i.e., misconception, culture.

misconception; culture; prehistory; pot hunter; time of dinosaurs and cavemen; site; historic; primitive; archaeologists; archaeological training; paleontology; interdisciplinary

Evaluation: Through participation in class discussion, students will provide definitions and examples from their everyday life to show an understanding of the definitions.

Source: *Studying the Prehistory of Man in Kentucky* (modified).

HOW MUCH DO YOU KNOW ABOUT PREHISTORY/ARCHEOLOGY?

Mark the following statements T(true) or F(false). YOUR NAME _____

1. "Prehistory" only refers to the time of dinosaurs and cavemen.

2. Prehistoric events happened before the time of Jesus, after that time all events are historic.

3. Archaeologists study dinosaur bones.

4. Another word for archaeology is "paleontology."

5. Only "advanced" civilizations have culture, and it is the members of the upper classes who participate in cultural activities.

6. Another word for archaeologist is "pot hunter."

7. All a person needs to practice archaeology is a shovel and a place to dig.

8. The typical archaeologist is trying to find beautiful, valuable objects for display or sale.

9. An archaeological site is the place where a town or village was located in prehistoric time.

10. Archaeologists only investigate important or well-known sites.

11. The Indians came to North America from India.

12. Prehistoric Indians of America depended on game for food; they had a very limited diet.

13. The Indians shared a way of life which included hunting buffalo, carving totem poles, living in tipis, eating corn, and building mounds.

14. The main hunting weapon of the prehistoric Indians was the bow and arrow which they used from horseback.

15. Indians of Maine belonged to the same culture as did the European settlers.

16. Indians were too primitive and uncivilized to live as well as we do.

17. The only reason people study the past is because they think its interesting.

18. Dinosaurs and cavemen were the first animals and people living in Maine.

19. Maine's environment has been the same since people began living here.

20. People have been living in Maine for only 3,000 years.

21. All of the Indians in Maine over the past thousands of years used the same kinds of tools and ate the same foods.

22. Indians killed most of the Europeans when they first arrived in Maine.

23. Instead of doing archaeology we could learn all about the Indians by reading what the early Europeans wrote about them.

24. We have just as many Indian sites in Maine today as we had about 100 years ago.

25. If everybody digs in and helps, we can learn a lot more about Maine's past.

HOW MUCH DO YOU KNOW ABOUT PREHISTORY/ARCHAEOLOGY?--DISCUSSION OF POSSIBLE MISCONCEPTIONS

1. *"Prehistory" only refers to the time of dinosaurs and cavemen.*

Prehistory is the study of what occurred before written records were kept. The time of dinosaurs and cavemen (and the two were not simultaneous) is included in prehistory.

2. *Prehistoric events happened before the birth of Jesus; after that all events are historic.*

The line between prehistory and history varies. In Maine, prehistory continued until the Europeans arrived during the 16th and 17th centuries.

3. *Archaeologists study dinosaur bones.*

Archaeology is a branch of anthropology, which is the study of people. Archaeology is a method for the recovery, study and reconstruction of the human past through analysis of their material remains. It has nothing to do with dinsaur bones.

4. *Another word for archaeology is "paleontology."*

Although both words mean knowledge of "old things," paleontology is the study of the life of past geologic ages through examination of the fossil remains of ancient plants and animals. Archaeologists study the relics left by ancient man. Paleontologists study past animal life. The disciplines only overlap in studying the past 2 million years when human beings have been present on Earth.

5. *Only "advanced" civilizations have culture, and it is the members of the upper classes who participate in cultural activities.*

Although our everyday language uses the word "culture" to mean the correct way to behave in various situations or what we get when we read "good" books, in scientific usage, the word means the array of habits and customs shared by the members of a particular society. In their study of the fragmentary remains of human activity, archaeologists are seeking to learn more about the culture of a particular people of the past.

6. *Another word for archaeologist is "pot hunter."*

A "pot hunter" is a collector of prehistoric Indian artifacts for personal gain or private pleasure; he generally has little or no interest in the scientific interpretation of what he recovers. An "amateur archaeologist" often keeps careful, complete records and shares his conclusions with others; his goal is to contribute as much as possible to our knowledge about the culture and lifestyle of a prehistoric people, although he doen't do archaeology as a paid job.

7. *All a person needs to practice archaeology is a shovel and a place to dig.*

Professional archaeologists undergo many years of academic training, as well as experience in the field and laboratory. Moreover, today's archaeology involves more time spent in the laboratory classifying and analyzing the material recovered than time spent in the field at an excavation site.

8. *The typical archaeologist is trying to find beautiful, valuable objects for display or sale.*

The caricature of the archaeologist as the bearded fellow in the pith helmet rifling ancient tombs dies hard--witness "Raiders of the Lost Ark." However, most archaeologists are more concerned with using the physical remains of past peoples as tools in reconstructing the life patterns of those people than in the relics themselves. A charred grain of corn from an ancient hearthfire may be the most valuable item recovered from a site.

9. An archaeological site is the place where a town or village was located in prehistoric times.

In simplest terms, an archaeological site is a place where an archaeologist finds evidence of past human activity. It may be a campsite, a cemetery, a quarry, or perhaps simply the place an animal was slaughtered or a boulder was decorated with pictographs.

10. Archaeologists only investigate important or well-known sites.

The investigations of important or well-known sites are the ones which are publicized. Archaeologists investigate everything and anything they can--after all, who can predict which sites will turn out to be significant? Archaeologists are often unable to investigate sites carrying great potential significance because the public plans other uses for the land. "Salvage archaeology"--a hurried, piecemeal sort of archaeology--is sometimes undertaken when destruction of an area's cultural resources is inevitable because of public construction.

11. The Indians came to North America from India.

Our knowledge of the origins of people in North America is sketchy, but prehistorians believe that man entered the North American continent through a land bridge which stretched from Siberia across to Alaska at least 20,000 years ago. Christopher Columbus, convinced he had reached southeast Asia in 1492, was responsible for misidentifying the Native Americans as "Indians."

12. The prehistoric Indians of America depended on game for food; they had a very limited diet.

Archaeological investigation of charred plant fragments from prehistoric Indian sites has revealed that long before the cultivation of crops, the Indians had a varied diet from the natural foods in their environment, including many types of wild grains, vegetables (roots, leaves, stems, and barks), fruits, and nuts. Indeed, there is evidence to suggest that man's diet deteriorated after cultivation of crops began, e.g., dentition studies of skeletal remains have shown that tooth decay increased when people turned to corn for the bulk of their diet.

13. The Indians shared a way of life which included hunting buffalo, carving totem poles, living in tipis, eating corn, and building mounds.

There were many different Indian societies in America, a cultural diversity which extended to language, religion and ideology, architecture, economics, socio-political organization, and so on. Each changed and developed and waned over time. Totem poles, for example, are characteristic of Indian tribes in the American northwest, but only during the years 1650-1900.

14. The main hunting weapon of the prehistoric Indians was the bow and arrow which they used from horseback.

The bow and arrow was a comparatively recent development, wihtin the past 2000 years. The layman tends to call all stones shaped to a sharp point for use as a weapon "arrowheads", an incorrect designation as many were actually spear points or other weapons. Horses were introduced to the Native Americans by the Spanish, therefore they were not used during prehistoric times. In Maine they were never used.

15. Indians of Maine belonged to the same culture as did the European settlers.

Even though the Indians and settlers lived in the same area, they were not from the same culture. Each group had distinctive cultural traits of its own.

16. Indians were too primitive and uncivilized to live as well as we do.

"Primitive" and "uncivilized" are terms which are subjective and should be avoided. What is considered primitive or uncivilized to one culture may be considered as advanced to another. We should be aware of our ethnocentric tendencies, the belief that one's culture is superior to all others. Actually. they lived just as comfortably as did the European settlers of the 1600s.

17. The only reason people study the past is because they think it is interesting.

It is believed that studying the past helps us better understand the present and make links to the future. The fact that it is interesting is a fringe benefit.

18. Dinosaurs and cavemen were the first animals and people living in Maine.

Too often students think that Maine Indians were cavemen hunting dinosaurs. The Maine Indians were not cavemen. Dinosaurs lived many millions of years ago (more than 65 million years ago!) No human being ever saw a dinosaur.

19. Maine's environment has been the same since people began living here.

Maine's environment has changed continuously since the first people lived in Maine. People first lived in a tundra environment. The tundra later changed to a forest. The conifer-dominated forest during a cool period changed to a hardwood-dominant forest in a warmer period by 5,000 years ago and back again to a cooler period.

20. People have been living in Maine for only 3,000 years.

The first inhabitants of Maine arrived around 11,000 years ago--much longer than 3,000 years.

21. All of the Indians in Maine over the past thousands of years used the same kinds of tools and ate the same foods.

At different times in Maine's prehistory, groups made and used different types of tools and ate different foods. Remember that a change in the environment means a change in the animal and plant populations also.

22. Indians killed most of the Europeans when they first arrived in Maine.

A large percentage, approximately 80%, of the Maine Indians died at this time, most from diseases brought by Europeans. There were many Indians and Europeans killed during the colonial period.

23. Instead of doing archaeology we could learn all about the Indians by reading what the early Europeans wrote about them.

These early written records are a great help. Unfortunately, the early written accounts of Maine Indians were written 100 years after contact, so the accounts include changes in Indian culture resulting from a century of European influence. Also, they do not address all aspects of Indian life in detail.

24. We have just as many Indian sites in Maine today as we had about 100 years ago.

Due to construction, erosion and vandalism, there are fewer sites in Maine today.

25. If everybody digs in and helps, we can learn a lot more about Maine's past.

No one but trained archaeologists should dig a site. Years of education and experience are needed to excavate a site properly. People without the training are destroying valuable information and, therefore, Maine's past. There are , however, opportunities for volunteers and students to help professional archaeologists.

WHAT IS A PENNY?

Purpose: Through studying an artifact out of context, students will realize the value of context to archaeological interpretations.

Objectives: Students will:
1. define artifact.
2. list ten observations of our culture based on a single artifact.
3. observe that artifacts represent culture.
4. consider the possibility that our culture will end.
5. observe that an artifact studied out of context may yield incorrect observations.

Materials: A penny per student.

Procedure: Note: With all of the learning activities, teachers should first explain the activity's purpose and objectives (expectations). The teacher asks students to pretend that it is the year 4000 A.D. No one alive knows anything about our culture. One day, though, a student discovered an object along the banks of a river, like the one each student in the class is holding. The teacher asks students to list ten things they can tell about the lost culture, based only on the coin. The answers don't have to be truly representative; i.e., "They spoke Latin." "The god they worshipped was Lincoln." "They lived in huge houses with columns." The teacher then lists on the board as many answers as the class can produce.

Suggestions for Discussion: Discussion should pivot around the key ideas: we all use artifacts, that artifacts represent our culture, clues taken out of context may yield faulty information, and our culture, like all others, will continue to change and will pass from recognition.

Evaluation: Class Participation

Source: A Teacher's Guide to Project Outreach: A Public Awareness Program in Vermont Archaeology (modified).

CAPSULE OF AMERICA

Purpose: Through the selection process and discussion, students will think about their own culture and interpret American life based on artifacts.

Objectives: Students will:
1. define culture.
2. identify artifacts which represent their culture.
3. isolate parts of culture represented by the artifacts.
4. improve group interaction skills.

Procedure: Students are to pretend they have been chosen to select objects to send to a distant place where nothing is known about America. The class as a whole will eventually decide on 20 artifacts that will portray our life.

1. Discuss the meaning of "artifact" and what an artifact can show about the people who use it. Artifacts are objects that people have made or modified. They indicate how advanced the maker's technology is and can give information about the values and practices in the society.

2. Divide the class into four groups. Have each group list 10 artifacts to send to a distant place (New Guinea? another planet?) that represent American life. Each group should list the artifacts and what they tell about our life.

3. Bring the groups together and have each group read its list of artifacts and reasons. Have the class decide on a list of the 20 artifacts that tell the most.

4. Lead a group discussion about the list.

Suggestions for Discussion: Some topics for discussion are: Are all aspects of culture represented by theirselected artifacts, i.e. religion, clothing, food, etc. What is the view of American life based on the artifacts? What things are missing or misrepresented? Do their artifacts represent all parts of the country and subcultural groups? Should they?

Evaluation: Class Participation
Time Capsule (see following page)

Source: Classroom Archaeology, Louisiana (modified)

TIME CAPSULE

Purpose: Evaluation of "Capsule of America." Students will demonstrate their understanding of artifacts as representative of culture through the preparation of a time capsule.

Materials: Box to be used as time capsule
Compass, paper, pens for mapping (optional)

Procedure: Describe a time capsule to the students. A time capsule contains objects that are both current and typical of a particular place, intentionally buried or otherwise hidden by people for other people from the future to find. People today sometimes make time capsules to celebrate special events, such as the anniversaries of towns, cities, and countries.

Inform the students of the size of the time capsule. Decide on the date the capsule is to be excavated (50 years from now?). But inform them that they should select artifacts as though the capsule were not being opened for thousands of years. The people who are to open it will know nothing of our culture and they will need to reconstuct our culture based solely on the artifacts in the capsule. Students will select as many artifacts as will fit in the capsule. During the selection process be sure they give reasons for their choices. No artifact can be included unless the majority agrees.

Optional: Students bury the time capsule, create a map indicating itslocation, and present the map and information to the principalfor safe keeping until the designated year of excavation.

Suggestions for Discussion: Discussion during this activity should focus on their selection process and the fact that an archaeological site, represented by the time capsule, does not contain a complete picture of the past. Have students consider the problems of preservation and portions of sites which are excavated (represented by the size limit of the capsule). Also, besure they are aware of the possibility that the future culture
may not be able to decipher our language.

Source: Studying the Prehistory of Man in Kentucky and A Teachers Guide to Project Outreach: A Public Awareness Program in Vermont Archaeology (modified)

CROSS-CULTURAL COMPARISON

Purpose: By researching another culture students will realize that not only are cultures different, but that there are reasons for these differences.

Objectives: Students will:
1. research a culture other than their own.
2. isolate components of the culture.
3. compare/constrast this culture to their own.
4. analyze the culture to determine possible reasons for similarities/differences.
5. write a short report on culture and present it to the class.

Materials: Magazines, books, etc.

Procedure: Assign a short research paper to students on another culture. Although it would be fine if several students researched the same culture for comparison purposes, be sure a number of different cultures are reported on. Ask students what various cultural components they should be looking for, i.e., religion, clothing, subsistence, etc. Their papers should include a description of these components followed by a comparison to their own culture. They should then try to determine why there are similarities/differences from our culture.

Suggestions for Discussion: As the reports are presented, students should compare/contrast the cultures they researched with those being presented. Lead the discussion to the point that cultures are different, but that these differences are the ways cultures adapt to their environments. Adaptation is not negative, but necessary for the culture's survival.

Prepare the students for the following activity (topic of ethnocentrism) by asking them if they think it is possible to "look" objectively at a culture to which you don't belong and select which cultural components to study. Remind them of the difficulty they had agreeing upon their own cultural artifacts in "Capsule of America." Do they think members of that culture would select the same components to report on and would they report them the same way? This discussion should be open-ended; no conclusions need be reached--just start them thinking about it.

Evaluation: Short paper
Presentation
Class Participation

VII. DOING ARCHAEOLOGY: THE ARCHAEOLOGIST AND METHODS

SLIDES, PART I

Purpose: Part I of the slide program contains the content information on archaeology as a career, methods used in excavation and analysis,and the interdisciplinary aspectof archaeology.
Materials: Slides, available through the Abbe Museum, Bar Harbor, or the Maine Historic Preservation Commission, Augusta.

Procedure: Introduce students to contents of slides and instruct them to take notes. The notes are important since the slides are presently the major source of content information for the unit.

Evaluation: Worksheet (following page)

Students should write an account of their first "Day in the Field." This essay should include their preparation for the field and an equipment list to reinforce the information obtained from the slides.

WORKSHEET FOR SLIDES, PART I

1. Define archaeology.

2. What is the meaning of "prehistory"?

3. When did history begin in Maine?

4. Describe the education and training necessary to become an archaeologist.

5. What is a site?

6. List 5 tools you would need to excavate a site.

7. Why is "context" important in archaeology?

8. Explain how Carbon 14 dating works.

9. Think of 3 things which can be found in Indian sites in Maine which can be Carbon 14 dated.

10. What does 5000 B.P. mean?

11 Name three other sciences which archaeologists use and how these sciences help us to interpret the past.

ANSWER SHEET FOR SLIDES, PART I, WORKSHEET

1. Archaeology is a science which studies past people through material remains.

2. Prehistory is the time before written records.

3. History began in Maine with the arrival of the Europeans, about 1600 A.D.

4. To become an archaeologist one must major in anthropology or archaeology in college, obtain a master's degree (a Ph.D. is necessary for some positions), and work in the field and laboratory for experience.

5. A site is a place where people lived or performed some activity.

6. Tools needed to excavate a unit include trowel, scoop, bucket, screen, measuring tapes, metric rules, paper, etc.

7. Context is important to archaeology because a single artifact, out of the ground, without accompanying notes or maps, does not tell very much about how people lived in the past. Finding artifacts in place allows us to associate it with other artifacts and the soil (clues to past environments) which makes it possible to piece together the past.

8. All plants and animals absorb Carbon 14, a radioactive type of carbon, while they are alive. After they die, the radiocarbon decays at a measured rate. The substance can be sent to a laboratory, such as the Smithsonian Institute, where it isplaced in a machine which measures the rate of decay. This information then tells us how long ago the plant or animal died. This method can be used only on organic remains, such as wood, bone and shell. This is an added reason why finding artifacts in "context" is important.

9. Examples of substances which can be Carbon 14 dated are: charcoal, bone, shell, and wood.

10. It means 5000 years before present. (However, for consistency purposes, the present is maintained as 1950. But the difference in years between 1950 , wqhen radiocarbon dating was invented. to convert BP to BC, just subtract 2000 years , and forget about the extra 50 years.

11. Other sciences and their uses to archaeology are:
Geology - stratigraphy, and rock types used in making tools
Palynology - pollen studies
Zoology - faunal anaylsis (identification of animal bones to determine foods eaten by the people and environmental changes)
Soils - soil chemistry
Physics--radiocarbon and other dating methods
botany--identification of pieces of wood, seeds, etc.

POLLEN ANALYSIS
RECONSTRUCTING PAST ENVIRONMENTS

Purpose: By learning the method of reconstructing past environments through pollen analysis (palynology), students will realize the role other sciences play in archaeology.

Objectives: Students will:
1. demonstrate proper use of field guide.
2. identify field samples.
3. research habitat and preferred weather conditions.
4. observe pollen grains under a microscope.
5. explain the utility of pollen analysis to reconstructing past environments.

Materials: Field guides
Microscopes
Wax paper or newspaper
Notebooks (students)

Procedure: Discuss the physical nature of pollen with the students. Why is it useful to the archaeologist who seeks information about a past environment? Pollen from different species can be readily identified with a miscroscope and the tough outer coat of pollen makes it virtually indestructible-- even after thousands of years.

Have the students collect samples of the flowering plants in the schoolyard. Try to include as many different varieties as possible. Students should identify their samples, using standard field guides, and research general information about habitat and preferred weather conditions. Have the students preserve their plants by pressing them between sheets of newspaper or waxpaper inserted in heavy books. When they are dry, fix them to paper in the notebook and identify with the species name, habitat and preferred weather conditions.

Then have students view the grains of pollen under a microscope. (Perhaps the science teacher would be willing to make this a joint activity with his class.) Students should draw the outline shapes of the pollen grains in their laboratory notebooks along with the pressed plant and habitat information. Keep sizes standard.

Explain to the students that palynologists working with archaeologists make similar collections of modern flora in order to compare them to the prehistoric pollen grains they have ob
tained from archaeological investigations

Suggestions for Discussion:

1. How do archaeologists and palynologists obtain prehistoric specimens of pollen from an archaeological site?

2. The natural environment of any group conditions its cultural environment. What assumptions does palynology permit the archaeologist to make about the culture of a prehistoric people? Could he tell what they ate and what they lived in? Could he describe the weather? What sorts of changes in the natural environment would suggest the beginning of human habitation?

3. What could an archaeologist of the future deduce about modern-day culture if he found grains of pollen from the plants the students collected? What could he tell about the climate? The way we live?

4. Try to obtain an aerial photograph or a drawing of the schoolyard area before the school was built. What changes do the students note? Whey did they occur? How does the plant life from an uncultivated area near the school differ from the specimens in the schoolyard? Do the students think this "untouched" area is in the same condition it was before the town was built?

5. What other methods do archaeologists use to reconstruct past environments? (Shell analysis [malacology], botanical identification of charred plant remains and the zoological identification of bones.)

6. How can the science of Palynology help archaeologists learn about the past peoples of Maine?

Evaluation: Student Laboratory Notebooks

Source: *Studying the Prehistory of Man in Kentucky* (modified).

Optional Activities: Tree-ring Dating
Rock Typing
Faunal Analysis

VIII. DOING ARCHAEOLOGY: PREHISTORY

THE EARLY AMERICANS

Purpose: The Early Americans traces man from his arrival in the New World to various parts of the country, including Maine. It will provide students with a background on early man and a broad over-view of cultures across the country.

Materials: Film, *The Early Americans* (41 minutes)

Procedure: Preview the film to enable you to introduce it to the students. Follow the viewing with class discussion.

Suggestions for Discussion: The film comes with a handout which includes questions for discussion. You may wish to add some of your own. Bring the terms--theory and hypothesis--into the discussion. Can they separate fact from theory in the film? These terms will come up again in the Slides, Part II.

SLIDES, PART II

Purpose: Part II of the slide program begins with the arrival of early man into the New World, describes environmental and cultural changes up until the arrival of the Europeans in Maine, and discusses the ways in which sites are being destroyed and what can be done to stop this loss.

Materials: Slides, available through the Abbe Museum, Bar Harbor, or the Maine Historic Preservation Commission, Augusta.

Procedure: Introduce students to contents of slides and instruct them to complete the Summary Sheet while viewing the slides. Use the sheets for discussion of the slide program.

Evaluation: Summary Sheet (following page)
Class Participation
Complete #18-#25 of Pretest
Students will prepare a word puzzle (crosswords, matching, etc.) using the terms and definitions from the slides. The teacher will distribute the puzzles to other students to complete.

SUMMARY SHEET FOR SLIDES, PART II

Period/Group	Dates	Environment	Artifacts	Features
Paleo-Indian				
L.Paleo,Early & Middle Archaic				
Late Archaic: Laurentian				
Susquehanna				
Ceramic				

1. What was the route of the early americans into the New World?

2.Give two reasons why shellheaps are important to archaeologists working in Maine.

3. Describe a house pit.

4. What was the cause of death of approximately 80% of Maine Indians in historic times?

5. Name three ways in which sites are destroyed.

6. What should you do if you find a site?

ANSWERS FOR SUMMARY SHEET, SLIDES, PART II

Period/Group	Dates-BP	Environment	Artifacts	Features
Paleo-Indian	11-10,000	tundra-cold,windy, low ground cover, permafrost	fluted points	
L.Paleo,Early & Middle Archaic	10-6,000	cool, scrub oak, pine, poplar	little known	
Late Archaic: Laurentian	6-3,800	warmer, hardwoods dominant	slate tools plummets gouges	red ochre burials
Susquehanna	3,800-2,500	cooling,conifers dominant	drills broad spears	cremations
Ceramic	2,500-	cooler, conifers still dominant	pottery small points	house pits shell heaps

1. Siberia, across the Bering Sea, and into Alaska.

2. Clam shells release a calcium carbonate which neutralizes the acid soil, thereby preserving faunal remains. From these faunal remains bones, etc. from food they ate, we can determine their diets and the environment.

   The hinge of the clam shells has growth rings. From these growth rings we can determine the season of the year in which they collected the clams and occupied the site.

3. A house pit was built by digging a shallow pit in the ground, approximately 30 cm. deep, and covering the floor with beach gravel. They are 3.5 x 4 meters in size and oval shaped. Trees, acting as posts, supported birch bark or animal hides, which covered the pit. Sometimes, shells were piled up around the outside of the house, where the covering met the ground, perhaps for insulation. The floors, black and greasy from the organic remains, hold many tools which were used in the house.

4. Diseases brought here by European explorers and settlers.

5. Sites are being destroyed by erosion, construction and vandalism.

6. Never, never dig at a site. Even scraping in the bank will destroy the site as you are speeding up the erosion process.

Contact an archaeologist at a university or museum. This is important information and the archaeologist will obtain proper data to complete state records.

TIME LINE

Purpose: It is very difficult for students to conceptualize time when dealing with thousands of years of prehistory. Through constructing a time line of prehistoric and historic events, students will be able to link events through time to better understand sequence and change through time.

Objectives: Students will:
1. research prehistoric and historic events.
2. place events in proper sequence to establish relationship through time.
3. express an understanding of changes through time.
4. give examples of differences in cultures at the same times in the past.

Materials: 4x6 cards, masking tape, optional: old magazines

Procedure: Begin this learning activity by discussing what a time line is and how it helps us view events through time to see the sequence of events and changes through time.

Instruct students as an outside assignment to research history books and magazines for important prehistoric and historic events and select 10 events. They should, also, be able to explain the event and its importance. Instruct them to put each event on, for example, a 4x6 card. They should draw or cut out a picture to depict the event for one side of the card and write the event and date on the other side. Decide whether to use BP or BC dates and inform them of which to use for consistency. (BP means before present. They can just add or subtract 2000 years to make the conversion.)

After the assignment is completed the class will work together to construct a time line of their researched events. Using a classroom wall(s), you or students should mark off 500 year intervals as a guide and label them with dates. Ask students for the oldest events and have them explain their events and place them on the time line. In case of duplicates either select the best drawing or photo or place one on top of the other. Work your way to the present. (You can even take a class picture with an instant camera to place at "Today" on the time line.) The teacher should add events to fill in the gaps. Be sure they have included important dates for Maine prehistory from their notes. It is good to have a card for the ages of dinosaurs and "cavemen", as students sometimes think of Maine Indians as cavemen hunting dinosaurs.

Suggestions for Discussion:

1. Discuss the terms prehistory and history. Is there much of a difference in dates for the beginning of the historic period around the world? Do students believe that Maine Indians didn't have a written language or have we simply not found evidence yet? Did they need a written language? Could they have used something else in place of it?
2. Discuss the term BP compared to BC. Did they have trouble making the date conversion?
3. Were there periods or areas of great change? What are some of the changes evident through the time line?
4. Have students compare events at the same time periods. Why does one culture seem so more "advanced" than another at the same time? (Compare events in Maine to Egypt, Rome and Greece.) They make come up with ideas such as environment, trade, innovations.

Evaluation: Class participation

Optional: Response paper on discussion question #4

Source: *Studying the Prehistory of Man in Kentucky* (modified)

IX. DOING ARCHAEOLOGY: EXCAVATION & INTERPRETATION

TOOL CLASSIFICATION

Procedure: Through classifying tools and other objects from prehistoric sites, students will utilize one method used by archaeologists to study past peoples. They will also relate classification to other disciplines and every day use.

Objectives: Students will:
1. observe data and select classification criteria.
2. classify objects according to several of their own systems of classification.
3. explain the utility of classification systems in studying people.
4. compare classification systems used by archaeologists to classification systems they use today.

Materials: Artifact kit

Procedure: Discuss the definition of classification, a systematic grouping of objects based on established criteria. Divide students into four groups and give each group a collection of objects. Direct them to observe as many different aspects of each object as they can think of and then select from these their basis for classification (i.e. material, shape, size, color, weight, function, age, technology, etc.) Have them group the objects several times based on different criteria, keeping records of their systems and the artifacts within their groupings.

Suggestions for Discussion: Through discussion, students should explain why their groups chose their classification systems and how these systems can help us learn about people. What do these groupings tell us? Why not just study each object alone instead of as part of a group? (They should consider the difficulty of studying thousands of ojbects as individual items instead of as part of a group.) What other information would they like to have about the objects to help them in their classification. (Would context and stratigraphic levels help?) What are the problems of grouping objects for study? (Information is bound to be lost from individual items. Different people use different classification systems, thereby coming up with different interpretations. Ask them if people within their group wanted to use different systems from each other.)

The final discussion should focus on classification systems used today. See how many they can think of and discuss the utility of these systems and compare them to ones used in archaeology.

Source: *A Teacher's Guide to Project Outreach: A Public Awareness Program in Vermont Archaeology* (modified)

TOOL FUNCTION

Purpose: By determining tool functions and making inferences about site activities, students will engage in the same analytic procedures conducted by archaeologists.

Objectives: Students will:
1. synthesize knowledge gained in the slide show, classification learning activity, and their tool observations to predict activities at sites.
2. engage in the same basic processes of analysis as do archaeologists.
3. examine artifacts which were found in Maine and list observations about them.
4. analyze artifacts to determine how the tools were used by people.
5. organize their findings and draw conclusions about how the early people lived based on their artifacts.
6. deduce that contextual information is necessary in order to make more complete statements about past lifeways.
7. recognize that there are absences in the archaeological record, state reasons for these absences and explain how these absences could affect site interpretations.
8. gain small group experience and report their data and group conclusions to the class.

Materials: Worksheet (page following activity)
Artifact kit

Procedure: Divide students into four groups. Inform them that they are groups of archaeologists analyzing the artifacts from sites which they excavated the previous summer. Explain that they will be conducting the same type of analysis as do archaeologists by determining uses of tools and what this informationcan tell us about people. Let them know that they have been prepared for this activity through the slides and previous learning activities.

Before giving each group a collection of artifacts, inform them that the artifacts are real, some 5,000 years old, fragile, very important and irreplaceable. UTMOST CARE SHOULD BE TAKEN IN THEIR HANDLING OF THE OBJECTS.

Give each group their "site's" artifacts and worksheets. Tell them that each object is numbered and that they should use this number on their worksheets. As a group they should work on object #1 first by passing it around, writing their observations on the worksheet and discussing its use. Once they have determined its use they should then make inferences as to what this tells us about their lives, i.e. use-woodworking, activities at site-cutting trees, making tent posts, making dugouts, etc. Making inferences about site activities is the most difficult step of this activity for students, so encourage them to think .pa
about life at a site and the types of activities that could have gone on using these tools.

After the groups have completed their worksheets, each group should present their findings to the rest of the class. One way of doing this is to have each student describe one tool, its uses and the activities people may have been engaged in at the site.

Suggestions for Discussion:

1. Take the discussion back to cultural components and ask students which artifacts tell us about food, clothing, housing, site locations/environment, religion, etc. For example, how did they obtain food, how did they process and prepare it, what did they use for clothing, what tools would they use to make clothes, what did they use for housing, what tools did they use to build the house, did they live on the coast, river, etc.

2. Is it possible to determine which tools would have been used by women, men, or children?

3. Whey do we have to be careful in predicting a use from a tool? (One tool could be used for different functions.) Can they think of some of the tools which could have more than one use? What about several tools having the same function but shaped differently--what reasons could there be for this?

4. What other information do they need to make more complete statements about prehistory? Lead the discussion to context and association.

5. What objects or information are missing from their archaeological record? How can these absences sway their interpretations?

6. Do students feel it would have taken more skill to live then or now. There isn't an answer to this, but it leads them away from thinking in terms of "primitive" or "civilized".

Evaluation: Today's Tools

Direct students to collect pictures of current tools from newspapers, magazines and catalogues to compare to prehistoric tools. Have the students write an essay, entitled "The More Things Change the More They Stay the Same," based on their comparisons.

Optional Activities:

1. The students could write a piece of prehistoric fiction in which they place themselves at a site thousands of years ago and describe a day in their life--their role, activities, feelings. They should bring into their account some of the tools and inferences discussed during the activity.
2. The students could draw a site map or village scene demonstrating an understanding of the environment and tool usage.
3. Through charades each group of students could act out their site demonstrating an understanding of the environonment and tools. The other students could interpret the activities.

Source: *A Teacher's Guide to Project Outreach: A Public Awareness Program in Vermont Archaeology* (modified)

TOOL FUNCTION WORKSHEET

Observations (4 per object)	Use of Tool	What it tells us about activities at the site
Object#		

BUILDING A SITE

Purpose: By taking part in the building of a site, students will learn how the natural process of deposition/erosion plus human activity combine to create a site. Through this process they will understand the importance of stratigraphy to archaeologists in interpreting the past.

Objectives: Students will:
1. define stratigraphy.
2. describe natural processes and human activities which create sites.
3. explain how the concept of stratigraphy helps archaeologists interpret sites.
4. distinguish between relative and absolute dating methods.
5. identify ways in which stratigraphic layers become disturbed.

Materials: 1-10 gal. aquarium
sand
5 shades of dry tempera paint (to mix with sand)
[1-till(orange), 1-post holes(black), 1-decay/ weathering, 1-wind-blown, 1-river deposit]
stones (for bedrock)
gravel (for till and house pit floor)
pebbles (for fire place)
charcoal (for fire place)
6 index cards (to make paper tubes for post holes)
small funnel or paper to make funnel
artifacts: dried beans, plastic beads, marbles, etc.
spoon
graph paper
metric rulers

Procedure: Initiate this activity with a few questions: Why do we have to dig holes in the ground to find Indian tools? Did they bury them? Was the ground surface 3,000 years ago the same as it is today? These are actual questions which students have asked before learning about stratigraphy.

Define stratigraphy--There is a continuous deposition of soils on earth and this deposition takes place in orderly layers. These layers represent a chronological sequence of events.

Explain that as a class you are going to build a site typical for Maine. Either work with a small group or conduct the demonstration yourself with the assistance of some students and the remainder of the class participating through discussion. The following steps of the activity are numbered to correspond with example stratagraphic sketches to aid you in the building of the site. (The sketches are located on the page following this activity.)

1. Draw on the board or show pictures of "picture-book" stratigraphic layers found in some parts of the world, but rarely in Maine. Relate the definition of stratigraphy to the slides or drawing. Ask the questions--Where would the oldest artifacts be found? Where are we today? Explain the relative sequence--the oldest artifacts would be at the bottom and the youngest, or most recent, at the top. The only way this would not be true is if they were "mixed" by people, animals or events. A complete understanding at this point is not necessary--that will come through the activity.

2. Starting at the base ask students to think about what would be at the bottom of the site. Discussion should lead to bedrock. (Explain bedrock if the students are not familiar with it). Have students put a few stones down for bedrock.

3. Ask students to think about the slides--what was the first physical event or environment they can recall from Maine. Their answers should be the glacier. Describe till--soil with different sizes of rocks and gravels within it which the glacier deposited. Have students put till in the site (orange sand plus gravel). Leave a few large pieces of gravel on the surface of the till to represent "erratics"--boulders the glacier left which you see littered across Maine's landscape today.

4. Ask students to describe the type of environment in Maine after the glacier melted. A "tundra" environment is harsh, windy, ground is frozen all year, vegetation is low, and if there are any trees, they are stunted in size. Lead the discussion to vegetation decaying, rocks weathering, water-carried sediments, and the wind factor since there are few trees to block it. Remind students that very little soil is actually built up in Maine by the decay and weathering processes, but for the purposes of this activity you need to add enough to cover the levels. Have students use one colored sand to represent deposit of decaying vegetation and weathering rock and another color for wind-blown sand. Have them place one type of artifact in this layer (ex., kidney beans)to represent a Paleo-Indian occupation. Note: Don't use too many "artifacts" because during the excavation activity each artifact's location will need to be measured and mapped.

5. Lead students to the next environmental change in Maine. They may recall from the slides that around 5,000 years ago it was warmer with a deciduous hardwood forest. Because of this increased vegetation there would be more decay. Put down another layer of soil resulting from the decay and weathering, perhaps a little wind-blown sand, along with another type of artifact (ex. pea beans) to represent an Archaic occupation. Build a fire place with pebbles and charcoal. Inform the students that the site is located on a river which floods periodically. Add sand to part of the site to represent the sediments left by the flooding.

6. The last major change in the environment was that it got cooler and the conifer forest increased. Put down some more soil from decay and weathering, another river deposit, and now, create some erosion. Remove some of the soil--some is blown away, some carried away by water. Create a Ceramic period site by building a house pit. Cut and roll the index cards into tubes and tape. Stick them in the soil in an oval outline. Using paper or a tiny funnel, fill them with the fifth color or sand (black would be good). Ask students how the house pits were made--they dug a shallow hole, put gravel down for a floor--and have them build one. Be sure they notice how digging the house pit hole and putting the soil elsewhere at the site affects the site's stratigraphy. Add artifacts (ex., pinto beans) to represent the Ceramic period. Now cover the site almost to the top of the paper tubes with sand from decay/weathering, wind and water. Pull tubes out. The site is built.

7. You may add a layer for the historic period if you wish.
Just continue the same way with soil deposition and erosion; add artifacts (i.e. nails).

Suggestions for Discussion:

1. Ask again the questions which you began the activity with.
2. Discuss the relative ages of the layers--which is the oldest layer, youngest?
3. What distinguishes levels from one another at the site? (They are lighter or darker or composed of different materials than other layers.) Does a level correspond to a particular cultural level or to a period of occupation or use? What makes one level thicker than another? (Explain to the students that in some cases one layer would represent one cultural period and that is when stratigraphy is most helpful, but their site is more typical of Maine in which you usually cannot tell one occupation period from another by the color of the soil. One reason is because of our environment and type of vegetation there is very little soil build-up over time as compared to some parts of the country/world.)
4. What are the causes of the layers of soil at their site and how do these processes complicate the "unraveling" of the past?

5. Discuss archaeological "context." Why is it important to know at what level an artifact is found and what is found associated with it? Do students understand why an archaeologist is so frustrated when a collector brings him an artifact he has "found" but can't remember exactly where? (The context in which the artifact is found determines the extent to which the archaeologists can make statements about the people who made and used it.)

6. Why is stratigraphy regarded as a method of dating? (Stratigraphy reveals the order of succession of cultures at a particular site; by comparing the data from several sites, the archaeologist may be able to estabish the succession ofcultures for a region.)

7. What is the difference between relative and absolute dating? (Relative dates can tell us that an event is older or younger compared to another event. Absolute dating can tell us how long ago something happened.)

8. Discuss ways in which the stratigraphy can become disturbed, i.e. plowing, rodent burrows, etc.

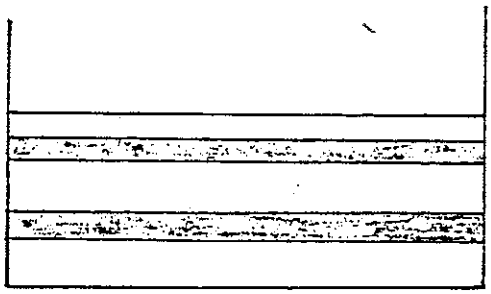
Follow-up: Have students draw the stratigraphy of the site in profile on graph paper using metric rulers. They should only draw what they see from the side of the aquarium. Label the layers from the top (Layer 1) down and identify how the layers were formed, i.e. wind, water, etc.

Evaluation: Demonstration/class participation.
Stratigraphic Puzzle (following pages)

Source: *Studying the Prehistory of Man in Kentucky* and *Frontiers in the Soil: The Archaeology of Georgia* (modified)

Building a Site -- Example Sketches

1



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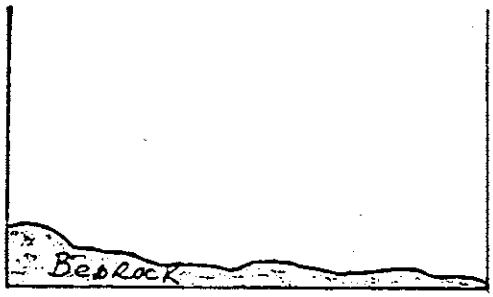

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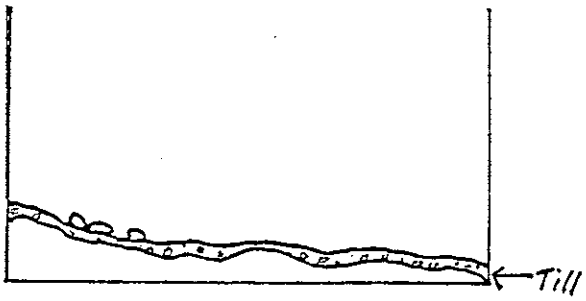

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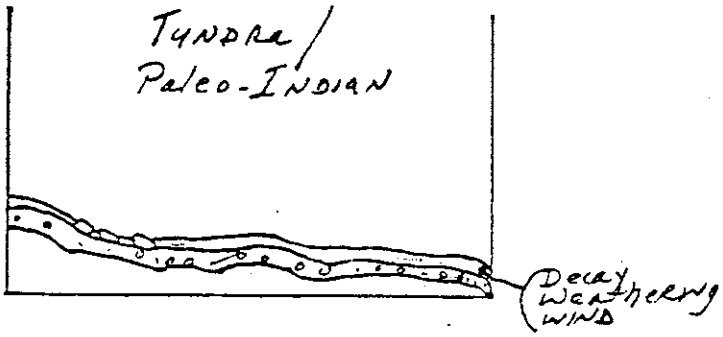

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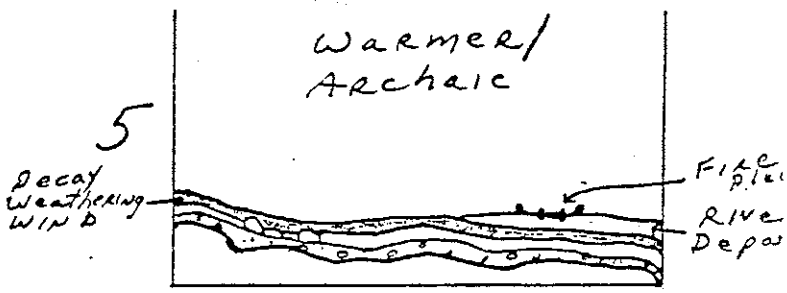

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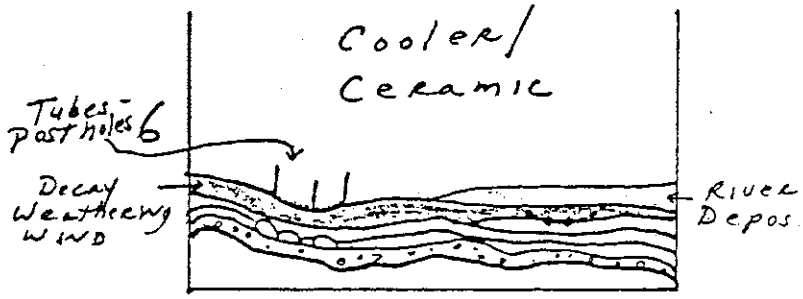
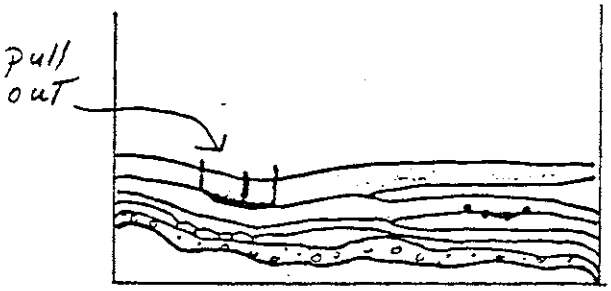


Pull out



A STRATIGRAPHIC PUZZLE

Purpose: Evaluation of "Building a Site." Students will demonstrate their understanding of stratigraphy and Maine prehistory by putting the artifacts in the proper layers.

Materials: Worksheet (following page)

Procedure: Instruct students to recall concepts learned in "Building a Site" with information obtained from the Slides, Part II. Place the items in their proper layers. If they have difficulty remembering the artifacts, their notes from the slides should help. It's more important that they learn the chronological and stratigraphical order than memorize artifacts.

Suggestions for Discussion: Discussion should focus on the reasons for their artifact placement. For example, why does the bone sewing needle go in the Ceramic period? (Bone sewing needles could have been used earlier, but do we not find them because of poor preservation. The most common environment for preservation of bone is a shell midden, and most shell middens found in Maine are of the Ceramic period.)
Source: Frontiers in the Soil: The Archaeology of Georgia (modified)

Key to Worksheet:

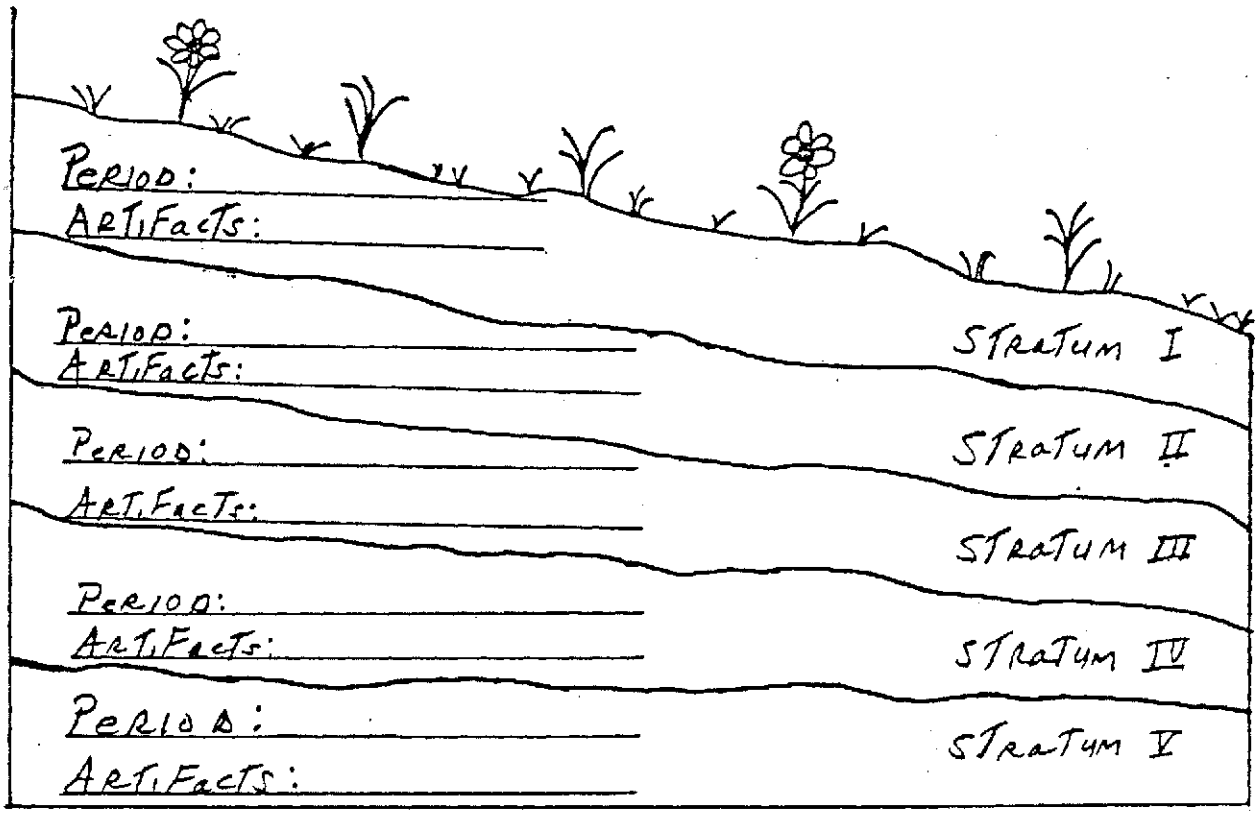
Historic: penny, license plate, bricks
Ceramic: house pit, clam shells, pottery, small projectile point, bone sewing needle
Susquehanna: cremation, stone drill
Laurentian: gouges, plummets, red ochre burial, slate point
Paleo-Indian: fluted points

A STRATIGRAPHIC PUZZLE - WORKSHEET

Judy visited an area where a group of archaeologists were excavating a site. Because of her excitement and knowledge of Maine's prehistory, they gave her a tour of the site and explained some of their findings. The archaeologist explained how they had found 5 different stratigraphic layers which represented different time periods: Historic, Paleoindian, Ceramic, Laurentian, Susquehanna.

Label each stratum (layer) with one of the time periods from those listed above. Using the following list of artifacts and activity spots at the site, assign each item to the correct stratigraphic layer:

a penny	1950 license plate	prehistoric pottery
gouges	clam shells	red ochre burial
housepit	plummets	small projectile point
cremation	bricks	bone sewing needle
fluted points	stone drills	slate point



AN EXCAVATION

Several excavation activities are provided for your selection: aquarium (or shoe box), mock dig, or sandbox dig. The behavioral objectives can be achieved through any one of these activities. Your selection depends on time, flexibility and training.

The aquarium excavation fits easier into a classroom situation because it doesn't require as much time, adult supervision, scheduling flexibility or teacher preparation and training as does the mock or sandbox dig. However, the mock or sandbox dig, as a follow-up to the aquarium activity,gives all students an active role in the excavation and more closely simulates a real excavation.

For both types of excavation the Purpose, Objectives, Suggestions for Discussion and Evaluation are the same; only the Materials and Procedures are different.

Purpose: Through the excavation of a "site," students will utilize skills employed by archaeologists to excavate and interpret prehistoric Indian sites in Maine.

Objectives: Students will:

1. identify excavation tools.
2. demonstrate proper excavation procedures including organization and preparation, proper tool use, note-taking, measuring, converting to scale, and drawing a unit and/or site map.
3. describe evidence at the site.
4. determine environments, time periods and activities based on site evidence.
5. list reasons for absences in the archaeological record and reasons for them.

Suggestions for Discussion: Discussion should focus on:

1. skills used during excvation, i.e. why use trowels and screens, why take notes, etc.
2. evidence found at site.
3. interpretation of this evidence and inferences about people based on their interpretations.
4. absences in the archaeological record and how these affect their interpretations, i.e. many food bones but few plant remains leads us to think that they only ate meat.
5. reasons why only trained archaeologists should excavate sites. (Perhaps some students should argue that everyone has the right to dig sites for debate.)

After this discussion stress that excavations should be done only by trained archaeologists. The following passage could be read:

Archaeology is a fascinating study. It is man in search of his past. When an archaeologist helps tell the story of man's past he also creates a wider and better understanding of man.

Because you have studied something about archaeological methods does not mean that you ought to try to dig a site. Archaeology is a science. It takes years to train archaeologists. It is easy to describe archaeological methods. It makes it sound as if archaeological work is easy. It is not. Many valuable archaeological sites have been ruined by untrained diggers.

If you find an archaeological site, do not try to excavate it. Contact the museum nearest you, the state or local archaeological society, or archaeologists at the University in your area (Rice 1966).

Evaluation: Demonstration of excavation skills
Class participation
Site report

Source: *Native American Source Book*, Concord Antiquarian Museum, *Frontiers in the Soil: The Archaeology of Georgia, Studying the Prehistory of Man in Kentucky*, and *Classroom Archaeology, Louisiana* (modified).

Optional Activity: Dig II Simulation

AQUARIUM EXCAVATION

Materials: Spoon
Sifter
Paper for field notes
Graph paper for map
1 paper bag for each level
Large sheet of paper

Procedure: Excavate the site you built in "Building a Site" in either natural or arbitrary levels, depending on how much mixing there is. If this is done as a class demonstration with one aquarium, assign duties to students and switch roles for different layers, i.e. excavator, screener, artifact measurer, note recorder, and mapper.

Excavate Level 1 with the spoon and sift it onto a large sheet of paper. Be careful not to mix layers. On the graph paper, measure the locations of all artifacts and place on map by level. Measure and draw any features. Remove the artifacts, place in bag, and label "Level 1." Write how you excavated the level in the field notes. Continue this process through the levels, using a new piece of graph paper to map each level and new bag for the level artifacts.

MOCK DIG

A mock dig can be conducted in a sandbox or empty field. Either way requires a lot of preparation time in collecting materials and "preparing" the site. Only teachers with archaeological experience should conduct this activity. In addition, teachers should review a text on field techniques, such as *Field Methods in Archaeology*, by Hester, Heizer and Graham.

Materials: Numbers of materials needed varies with the number of students.

Excavation materials--
screens
trees for screen tripod
rope to tie screens
buckets, trowels, scoops
pruner, root cutters
sod cutter
line levels
measuring tapes
folding rules
clipboards
note paper
graph paper
pencils
string
bags
trays
toothbrushes
stakes or large nails
tarps, camera, film
compass, shovels

Cultural materials--
Historic level:
nails
bricks
pennies
tin, etc.
Prehistoric level:
food bones
nuts/seeds
clam/mussel shells
pictures of artifacts
in plastic bags or casts
fireplace-rocks
charcoal
ashes
shell midden-shells
bones

Procedure: The teacher should start collecting the cultural materials well in advance. Dig one meter square units (2 students per unit). Bury the prehistoric materials in lower levels and the historic ones in the top level. If possible, select an area without sod and large roots, or the fun will quickly turn into blisters for you and frustration for the students. Don't attempt this activity with more than ten students at a time unless you have another adult to assist.

Two class period should preceed the dig, one on excavation techniques and one on metrics and mapping.

Class 1: Excavation Techniques. The following topics should be discussed:

1. Discuss why you are not excavating a real site and what they will accomplish by excavating a mock site.
2. Discuss the fact that sites are excavated to answer a research question. Have students develop a research problem to be tested.
3. Inform them of what they need to bring and how to dress.
4. Explain that they will be excavating in 5cm arbitrary levels, instead of by natural stratigraphy, and that it is important not to go deeper than the 5cm so as not to mix levels.
5. Go over all of the equipment with them. It would be best to demonstrate the usage of tools using a box of sand, aquarium, etc.

6. Explain how to write notes.
7. Explain bagging and labeling system.
8. Explain their roles, i.e. one excavate and one screen and take notes.
9. Explain what to measure (artifacts and all parts of features).

Class 2: Metrics/Mapping

1. Review metrics
2. Explain how to make measurements in field and convert the measurements to paper scale.
3. Have students set up a map on graph paper, give them field locations and have them convert the locations and put them on the map.

Optional Activities: Produce film of excavation
On-site explanation/demonostration for other classes

X. LIVING ARCHAEOLOGY

WRITING AN ETHNOGRAPHY

Purpose: Through viewing an ethnographic film, students will be simulating field work to determine the role subjectivity plays in studying cultures, thereby realizing the possible pitfalls of using ethnographic materials to study prehistory.

Objectives: Students will:
1. define ethnography.
2. observe a culture.
3. write field notes based on their observations.
4. synthesize their observations and previous study of cultural components.
5. demonstrate an appreciation for the difficulty of observer objectivity.
6. relate their appreciation of skills necessary to write an ethnographic account.
7. determine what would become a part of the archaeological record and, given the absences, how they might be interpreted.

Materials: Videocassete, Mi'kmaq

Procedure: Tell students to imagine that they are actually in the field observing the culture. Explain what an ethnography is. Tell them to recall the definition of culture and what they've learned about the different components of culture, i.e. housing,clothing, religion, etc. Instruct students to take field notes of their observations. After seeing the tape or the film, their assignment will be to write an ethnography based on their recorded observations.

Collect the ethnographies and field notes; select some for oral presentation and discussion. After a few presentations it will be obvious that students have selected different items to focus on and, when they have selected the same items, they have interpreted them differently.

Suggestions for Discussion:

1. Why do different people select different items to report on? Why did they interpret the same things differently. Lead the discussion to subjectivity of the observer--different people perceive things differently. Why is writing an ethnography difficult? Are they surprised at how different their ethnographies are?
2. Ask students what would have helped them interpret the culture? Lead the discussion to the difficulty of understanding behavior without understanding the language.
3. How much difficulty did they have going from their notes, written in a hurry during observation, to writing their ethnograpy? Did they miss much? What skills are important in writing an ethnography?
4. The videotape Mi'kmaq is an excellent reconstruction of the Micmacs of Nova Scotia about 1500 AD. Ask students which of the objects used is the tape would become a part of the archaeological record and which objects would not be preserved. How might these absences in the record affect archaeological interpretations?

Evaluation: Written Ethnography and Field Notes
Oral Presentations
Class Participation

Source: Idea from Ager,Lynn Price, *Anthropology and Education Quarterly.*

RESEARCH PROJECT

Purpose: Students will research one aspect of Native American life and duplicat the craft or skill as an aid in reconstructing the past.

Objectives: Students will:
1. Research and.or explore an aspect of Native Americna life;
2. develop their findings into a project to reconstruct an activity from the past;
3. synthesize archaeology with other disciplines such as art, literature, home economics, etc.

Materials: depends on the project

Procedure: Explain the prupose of the project to students and let them brainstorm to conceive ideas for their projects. Some activites are listed below. (See Chapter XIII fpr referneces listed by activity.)

Myths and legends
Make a site diorama
Make pottery
Make baskets
Make tools and demonstrate usage
Find Indian foods
Make model birch bark canoes
Play Indian games and make toys

Evaluation: Students will present thier projects to the class. Their presentation coudl take any number of forms: oral presentations, simulations, dmeonstrations, etc.

Source: Listed with references in Chapter XIII.

XI. NATIVE AMERICANS TODAY

INFLUENCES

Purpose: Through researching their surroundings and library, students will realize the numerous influences of Native Americans present in Maine today.

Objectives: Students will:
1. conduct library research.
2. identify Native American influences.
3. express an appreciation for the ingenuity and longevity of these influences.

Materials: Books and Magazines.

Procedure: Ask students if they can think of people, places or things today which reflect the Native American influence. After a short discussion direct them to research influences in the library. They should make a list of the items they come up with. Some of the items they will probably come up with are canoes, snowshoes, places names and foods. They should also recall, from the tool function activity, how some of today's tools are similar to stone and bone tools from prehistoric times.
Suggestions for Discussion: Through class discussion ask students why they think these influences have survived so long. Are they surprised by how many influences they identified? How do they think ideas for innovations get started?

Evaluations: Class Participation

Indian names and meanings matched

(Answers to quiz on page WM1)

1. g	11. k	21. pp	31. vv	41. ww
2. uu	12. l	22. o	32. q	42. b
3. dd	13. w	23. x	33. c	43. u
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6. tt	16. kk	26. ee.	36. qq	46. f
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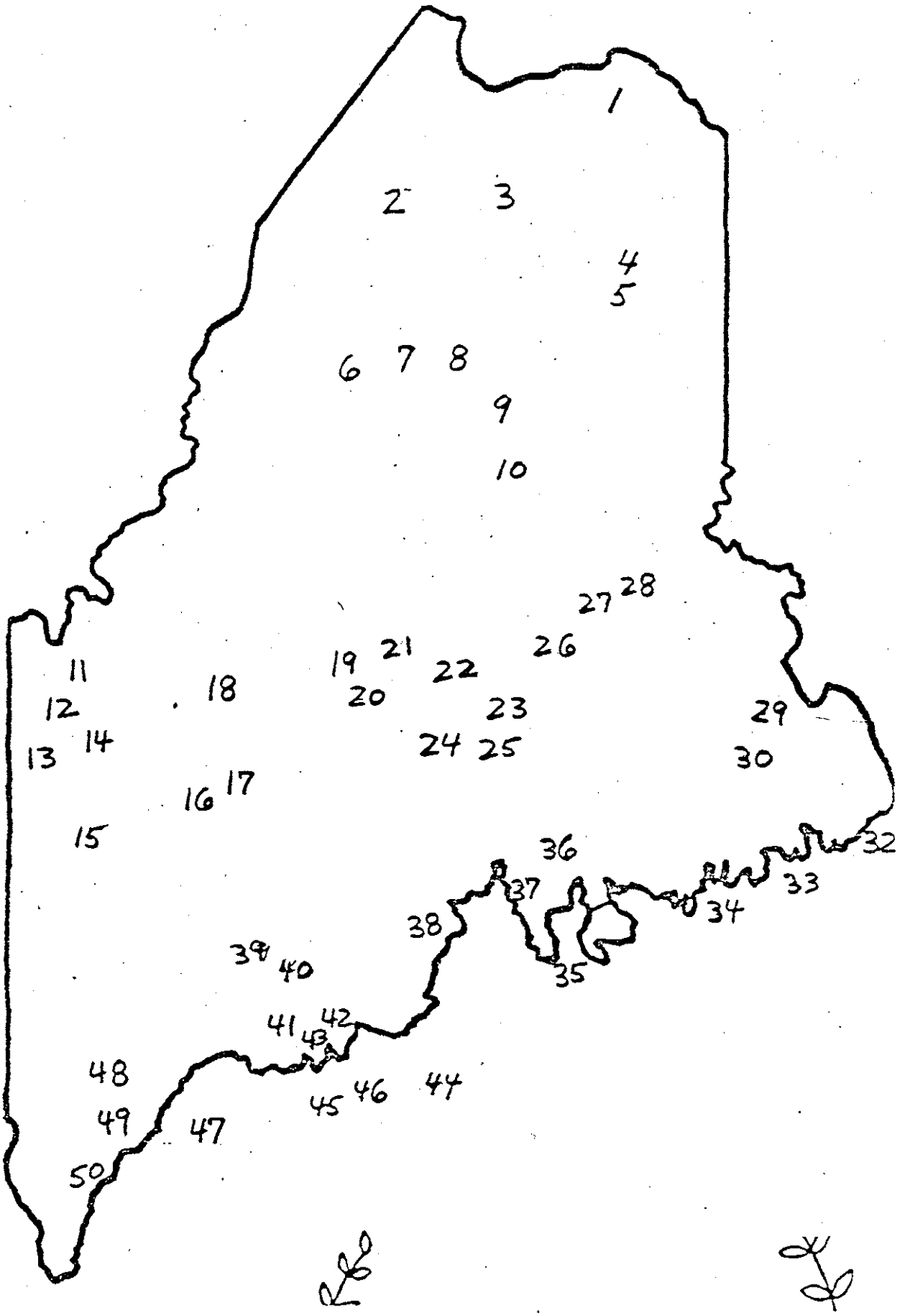
9. d	19. y	29. nn	39. cc	49. p
10. n	20. ss	30. mm	40. aa	50. i

Maine rich with Indian name:

1. "Where one river runs into another," or "Where there is much hay," or "Having its outlet among reeds" (Micmac).
2. "Bark cabin" (Abnaki).
3. "Beautiful" or "Shining river" (Micmac).
4. "Bear's den" (Abnaki).
5. "Place of white clay" (Abnaki).
6. "At or near the large stream" (Abnaki).
7. "At the place of the principal outlet" (Abnaki).
8. "Swift stream between mountains" (Abnaki).
9. "Principal mountain" (Abnaki).
10. "This place is admirable" (Abnaki).
11. "Long pond" or "Large lake" (Abnaki).
12. "Slender blue trout" (Abnaki)
13. "Clear lake" (Abnaki).
14. "Portage to the moose-feeding place" or "Moose-feeding among trees" (Abnaki).
15. "Place where fish are cured" (Abnaki).
16. "Little falls and smooth water above and below" (Abnaki).
17. "Place of waiting and watching (fish spearing place)" (Abnaki).
18. "Forbidding or crooked stream" (Abnaki).
19. "Much water" (Abnaki).
20. "At the river branch" (Abnaki).
21. "Extended" or "Berries" (Abnaki?).
22. "Alewife Stream" (Abnaki).
23. "Rapids over gravel beds" (Abnaki)
24. "Eel weir place" (Abnaki).
25. "At descending rocks or at extended ledges" (Abnaki? Malecite?).
26. "Fishing place beyond gravel bar" (Abnaki?); "Rapids at mouth" (Malecite?); "On a sandbar" (Micmac?).
27. "Wet ground, bog" (Abnaki).
28. "At the place where there are alders" (Abnaki).
29. "Stumps in the brook" (Abnaki?, Abnaki/English?)
30. "Plenty of alewives" (Passamaquoddy/Abnaki).
31. "Poloock plenty place" (Malecite)
32. "Rocks under water" (Malecite).
33. "Bad little falls" (Abnaki).
34. "Shell bay" (Abnaki?).
35. "Place at the end" (Abnaki).
36. "At the fish spawning place" (garbed Malacite).
37. "Large tidewater stream" (Micmac).
38. "Big mountain harbor" (Micmac? Malecite?).
39. "Plenty of sturgeons" (Abnaki).
40. "Long, quiet water" (Abnaki).
41. "At the hidden outlet" (Abnaki).
42. "Plenty of alewives" (Abnaki).
43. "Extended land" (Micmac).
44. "Far out island" (Abnaki).
45. "Out to sea island" (Malecite/Micmac).
46. "Small island" (Abnaki, corrupted).
47. "Almost separated" (Abnaki)
48. "Big lake" (Abnaki).
49. "Flowing out" (Abnaki).
50. "Place of waves" (Abnaki)

a. Nesowadnehunk Lake
b. Damariscotta
c. Machias
d. Mount Katahdin
e. Penobscot River
f. Manana Island
g. Madawaska
h. Sebago Lake
i. Oqunquit
j. Caratunk
k. Kennebago Lake
l. Oquossic
m. Mooselookmeguntic Lake
n. Millinocket
o. Monhegan Island
p. Saco
q. Cobscook Bay
r. Kenduskeag
s. Chesuncook Lake
t. Naskeag Point
u. Pemaquid
v. Matinicus Island
w. Umbagog Lake
x. Passadumkeag
y. Sebec Lake
z. Squa Pan
aa. Kennebec River
bb. Androscoggin River
cc. Cobbosseecontee Lake
dd. Aroostook County
ee. Mattawamkeag
ff. Macwahoc
gg. Wytopitlock
hh. Masardis
ii. Bagaduce River
jj. Chebeague Island
kk. Norridgewock
ll. Megunticook Lake
mm. Meddybemps
nn. Poccomoonshine Lake
oo. Mattamiscontis Township
pp. Ebeemee Lake
qq. Alamoosook Lake
rr. Wonsqueak Harbor
ss. Piscataquis River
tt. Seboomook Lake
uu. Allagash River
vv. Passamaquoddy Bay
ww. Wiscasset
xx. Skowhegan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PLACE NAMES MAP

Purpose: By synthesizing map work and Native American place names, students will discover the Native American meanings of numerous palces in Maine.

Objectives: Students will:
1. demonstrate proper usage of map and knowledge of geography.
2. locate Native American place names on map of Maine.
3. link Native American place names to their meanings.
4. express an appreciation for the usefulness of Native American place names.

Materials: Per student--Map of Maine
Place Names Map and Multiple Choice

Procedure: Give one copy of each of the above materials to students. Instruct them to, beginning with #1 on the Place Names Map, find on their map of Maine a place whose location corresponds to the number and is listed in the multiple choice page. They should then put the letter of the name with the meaning.

Suggestions for Discussionn: Ask students how Native American place names are similar or different from non-Native American names in Maine. Of what usefulness did such names and meanings serve? (Students should determine that the Native American names are not named after individuals or places, but are descriptive. The usefulness of descriptive names to people who travel by water and hunt,fish and gather for their food should be noted.)

Evaluation: Students should prepare a place names map by selecting Native American names and researching their meanings. This is most effective if done for the students' local area. A good source is Fannie Hardy Eckstrom's Indian Place-Names of The Penbscot Valley and The Maine Coast. If this book is unavailable or does not cover your location, an optional evaluation is to have students prepare a word puzzle with the place names from the activity. These should then be exchanged and completed by other students.

Source: Dick Shaw, Bangor Daily News, Weekly Magazine, March 17- 18, 1984.

NATIVE AMERICANS TODAY

Purpose: Students will realize that Native Americans, whose ancestry can be traced to prehistoric times, still live in Maine today.

Objectives: Students will:
1. identify Native American tribes in Maine today.
2. locate reservations in Maine.
3. list occupations of Native Americans in Maine today.

Materials: Native American Newswpapers, Maine Dirigo "I Lead", and/or Wabanaki Curriculum Project

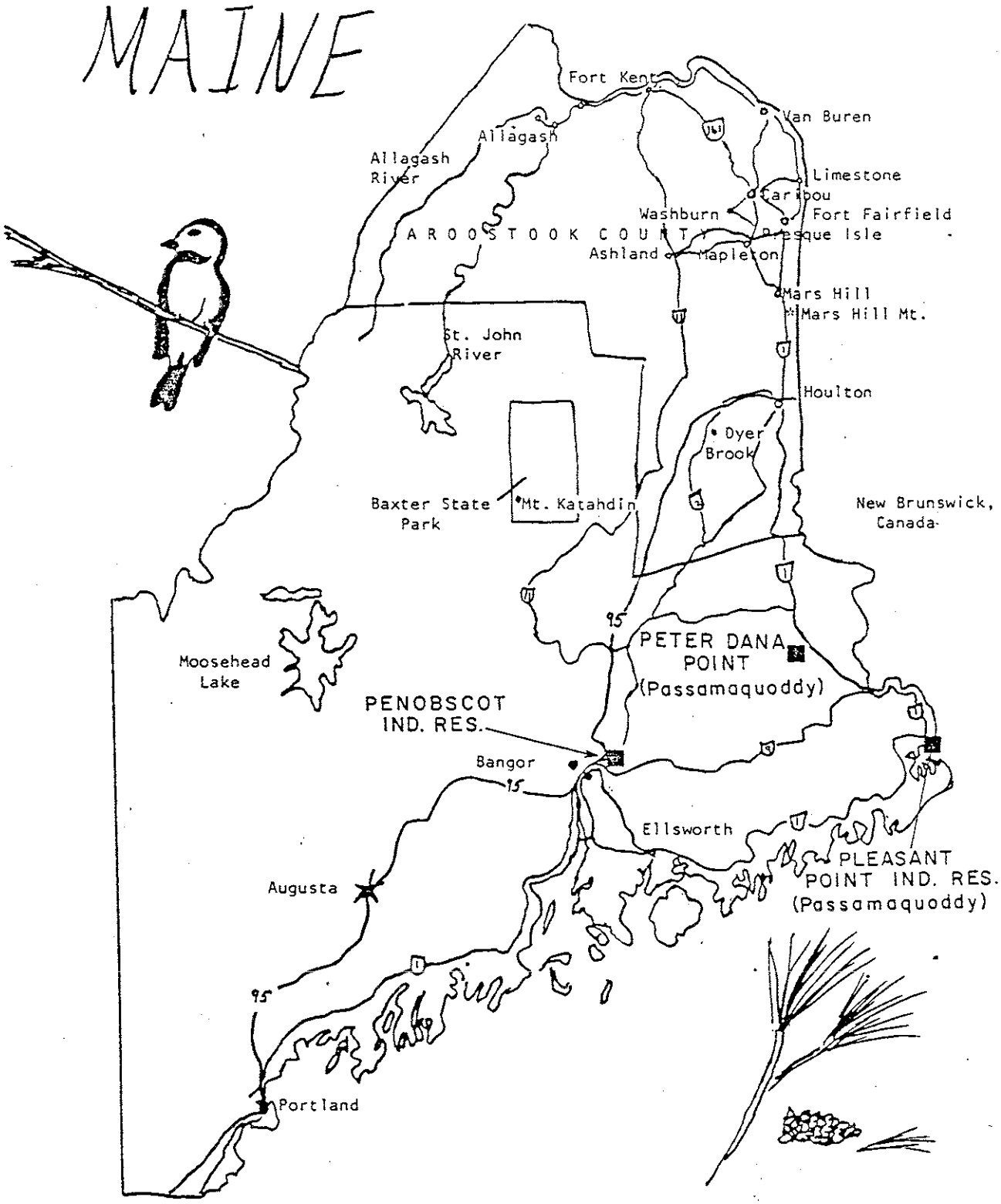
MAP OF RESERVATIONS

Procedure: Questions which students always ask are: Are there Indians living in Maine today? Where? What do they look like? Do they still hunt and fish for a living? These questions need to be discussed. There are various ways to accomplish the objectives. The best way would be to invite a Native American to visit your class. However, this is probably not feasible for most classses. The topic of Native Americans in Maine today is dealt with in a number of publications, many by Native Americans. Therefore, it is suggested that you utilize these resources if a guest speaker is not available. The Wabanaki Curriculum Development Project and textbook Maine Dirigo "I Lead" provide content material. In addition the Wabanaki Curriculum Development Project contains a semi-annotated bibliography. Another source of content material is the Wabanaki Alliance. This newspaper is no longer in operation, but you may be able to locate some old copies. Have students read the materials and lead discussions around the objectives.

Suggestions for Discussion: Discuss various tribes of the Wabanaki Confederacy-Maliseet, Micmac, Passamaquoddy and Penobscot. The content materials provide information on these tribes. (Remind students that prehistorically we do not know tribe names, as there were no written records.) Through the discussion of occupations (also in content materials) students will realize that Native Americans hold many of the same occupations as do non-Native Americans.

Evaluation: Students should write a response paper identifying how the early peoples of Maine still influence our lives and describe how the Native American culture has changed.

Optional Activities: The Wabanaki: A Resource Book has many activities dealing with Native Americans today (see Chapter XIII).



Maine Indian Reservations. Courtesy of Aroostook Indian Education Program. Drawing by Marlene Sanipass Morey

INDIAN ISLAND MYSTERY

Purpose: By reading a contemporary novel set in Old Town and on Indian Island, students will see racism through the eyes of the children.

Objectives: Students will:
1. identify racism in contemporary Maine.
2. examine reasons behind the racism.
3. relate racist events in the novel to events they have seen or experienced.

Materials: Indian Island Mystery, by Mary C. Jane.

Procedure: Ask students to define racism. Have students read Indian Island Mystery and look for comments, thoughts or events which are examples of racism. They should keep a list of these, with page numbers. When they have completed their reading, go over their lists of examples of racism.

Suggestions for Discussion: Discussion should focus on the examples they identified and those which they may have missed. Ask students to think about the reasons behind these events--why do they think the people feel the way they do about Native Americans in the story? Can they think of events from real life which they now realize are racist? What are the Indian children like--different from themselves?

Evaluation: Students should write a book report and take part in class discussion.

XII. YOU AND ARCHAEOLOGY

BANDELIER

Purpose: Through participating in a simulation game,students will realize the problems involved in preserving our cultural heritage, an unrenewable resource, and the role of Cultural Resource Management.

Objectives: Students will:
1. demonstrate an understanding of issues involved in Cultural Resource Management.
2. explain problems involved in making decisions regarding cultural resources.
3. make decisions based on simulation.
4. express an appreciation for the difficulty of making decisions when values and ehtics are involved.

Materials: Optional, Box of Props

Procedure: The game of Bandelier requires at least two class periods with overnight preparation. Be sure the students understand the terms simulation game and cultural resource management before you begin.

The day before you plan to play the game, describe the problem faced by the residents of the town of Bandelier to the students. You may wish to give each student a copy of "The Situation" (following pages). Assign eight students the roles of individuals who will address the town council of Bandelier on the proposed archaeological excavation. The remaining students will be the residents of Bandelier who will vote on the issue; they will be given the opportunity to participate in the discussion following individual presentations. Give each student chosen to play a major role a slip of paper with the name of his character and the opinion he holds. Members of the audience should receive the "Notes to Audience" sheet (following pages). You, the teacher, will play the role of the mayor of Bandelier, who acts as the moderator of the council.

Tell the students assigned major roles to prepare a 3-5 minute presentation of their character's position. Encourage them to be as expressive as possible. They may elaborate upon their character as much as they wish. For example, Jane Andrews might complain that involving the townspeople in the excavation would interfere with her research. Ms. Thompson might be a member of the Bandelier Garden Club, looking forward to landscaping the new park. One of the characters in favor of the park might introduce the rivalry with the neighboring town of Jennings. The students playing members of the audience should review the situation and begin thinking of possible solutions to the problem.

The next day, bring a box of props (optional) to class, e.g., a tin foil star for the chief of police, an oversized book for the school principal. Arrange chairs for the members of the panel facing the audience. As mayor, review the situation and introduce each participant, in the order in which they are listed. Other speakers and members of the audience are not permitted to ask questions or make comments during the presentations.

After the speakers have concluded their presentations, summarize the significant points briefly. Then open the floor for discussion. Members of the panel are permitted to take part. Members of the audience may question them, or they may simply state their own views. Encourage free debate. Allow 20-30 minutes for the discussion.

Following the discussion, write the proposed solutions to the problem on the blackboard. There should be at least four: the archaeological excavation, the park, half-and-half, and "hands-off." Students may come up with other feasible alternatives (and some not so feasible.)

Call for the vote. (Remember that the result of the vote is not important.) Students playing roles must vote according to their assigned character; Jane Andrews and Stephen Abernathy may not vote as they are not residents of Bandelier.

The Situation

The town council of Bandelier is planning to build a new park to celebrate the town's centennial next year. Practically everyone is in favor of the new park. Townspeople are especially eager that the park be even more beautiful than the one in the neighboring town of Jennings. An intense rivalry exists between the two towns.

Bandelier, population 5013, is located in the middle of the farm belt. The town is fairly prosperous because it serves as a central market for outlying potato districts. Bandelier is an old, established community. The residents are very proud of their small and friendly town and are determined that it will not lose its distinctive character.

The town owns a two-acre strip of propertyclose to the downtown shopping area which would be an ideal location for the park. There is no other suitable location within the town's budget. The proposed site is a pretty area--it's slightly hilly, and a small stream runs part way around the perimeter. It's only two blocks north of the Bandelier Savings and Loan and the Dairy Queen.

Local merchants and service organizations are quite excited about the project. A group of downtown businessmen has formed a "Spark Behind the Park" organization to help raise money. High school students have offered to contribute funds raised by candy sales and carwashes. The Bandelier Savings and Loan is sponsoring a contest to choose the best park logo from designs submitted by town residents. Bids have already been made for the construction contract.

However, last Friday an archaeologist from the state university at Jennings spoke to a special meeting of the town council. She told the council that she believes there is a prehistoric Indian site in the middle of the proposed site for the new park. She exhibited a sizeable collection of pottery pieces and stone artifacts from the area to support this statement. Her findings and conclusions have been verified by the state archaeolgist's office.

The archaeologist is petitioning the town of Bandelier for permission to subject the site to a complete archaeological analysis. She is certain that excavation of the site would contribute greatly to knowledge about the area's prehistoric inhabitants.

Members of the town council were very disturbed by this request. After a long debate, they voted to hold a public hearing on the proposed park construction. They have invited individuals representing various viewpoints to make presentations at the meeting. Following the presentations, residents of Bandelier will be asked to consider the various alternatives and register their preference. A simple majority is all that is necessary to make a binding decision, in most modern municipalities. (You may wish to alter the rules to reflect the decision-making procedure in many Indian communities, where a consensus must be reached before a matter is decided, so that there is no disgruntled minority.)

Character Descriptions

JANE ANDREWS, Archaeologist from Jennings State University:

Dr. Andrews discovered the site at the location of the proposed park. She wants to excavate it, analyze the findings, and publish the results. She believes that the new information will contribute greatly to knowledge about the area's prehistoric inhabitants.

SAM OWENS, Local Merchant:

Mr. Owens, who owns the local hardware store, was the organizer of the "Spark Behind the Park" group. He believes the park will add to the town's prestige in the county and help the town to grow more prosperous. Moreover, his son is a construction worker, and Mr.

Owens is afraid the proposed excavation will take jobs away from Bandelier residents.

SARAH PETERS, Principal of Bandelier High School:

Ms. Peters regards the proposed archaeological project as an unparalleled educational opportunity for the children of Bandelier. She thinks the students will learn a great deal from watching (or helping) the archaeologists excavate the site. She believes the residents should not stand in the way of the opportunity to learn more abut themselves and their past.

CARL POTTER. Chief of Bandelier Police:

Chif Potter doesn't want the archaeologists in town. He fears that the new ideas and different lifestyles of the university crowdwill destroy the character of his "nice little town."

STEPHEN ABERNATHY, State Archaeologist:

Dr. Abernathy wants the site left untouched, so that the cultural resources will be preserved until a workable plan for excavation and analysis can be developed by his office.

PAULA THOMPSON, President of the the Elementary School PTA:

Ms. Thompsonis in favor of the park because children in Bandelier need a safe place to play. She believes that an attractive, well-designed park would encourage family togetherness and be good for the community.

HOWARD SUSSMAN, President of the County Historical Society:

Mr. Sussman wants to encourage interest in local history. He suggests that the artifacts recovered from the excavation be displayed in a small museum to be established in Bandelier.

Notes to Audience

You will be given an opportunity to question the members of the panel following their presentations. You may wish to phrase your questions in the character of a resident of the town of Bandelier. Here are some examples:

--a retired homeowner whose land adjoins that of the proposed park. You wish neither park nor excavation because either invades your privacy.

--Mr. Owens' son, a construction worker. You are afraid you'll have to accept welfare if you don't get the job working on
the park site.

--a member of the Garden Club. You are looking forward to landscaping the proposed park and have heard ofsome statewide contests inpark landscape design in which Bandelier could compete.

--a local amateur archaeologist. You are eager to share your knowledge of prehistory with the professional archaeolgists and excited about the possibility of learning more about the prehistory of the Bandelier area.

--a local merchant who has contributed a large sum to the "Spark Behind the Park" group. You threaten to withdraw this amount if the park project does not go through.

Use any of these or think up your own characters. Feel free to express your opinions (or those of your character) forcefully.

When it comes time to vote, remember, compromises aren't always possible.

Suggestions for Discussion:

1. Ask individuals why they voted as they did. Was your mind made up from the beginning or did you change it? Who were the most convincing speakers?

2. Ask the students who played the roles of major characters for their reasctions. Were your "gut" feelings different from your assigned role? Do you think you could have been more persuasive if you had a role you sympathized with?

3. Ask the students to explain what they learned from the simulation.

4. Review information from the Slides, Part II, dealing with ways sites are lost. Ask students how they (for example, as sixth graders) can help preserve our state's past.

Evaluation: Each student writes a newspaper article summarizing the reasons for hold the hearing and the results of the vote; or each student chooses a character and in the identity of that character writes an editorial for the newspaper explaining his position.

Students should design posters to assist in site preservation, i.e. public awareness, legislation, etc.

Source: *Studying the Prehistory of Man in Kentucky* (modified).

XIII. SOURCES, REFERENCES, TEACHER BIBLIOGRAPHY, AND GLOSSARY

Following are the sources of concepts and/or learning activities utilized in the preparation of this unit.

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1966 *The Development of Man and His Culture: Pupil Text, Grade 5.* Anthropology Curriculum Project Publication No. 31, Athens, Georgia.

Carpenter, Jim and Kathryn Fraser
1983 *Studying the Prehistory of Man in Kentucky.* The Kentucky Prehistory Curriculum Project, TVA's Land Between the Lakes, Golden Pond, Kentucky, and Murray State University, Murray, Kentucky. Project funded jointly by the Tennessee Valley Authority, Murray State University, and the Kentucky Humanities Council.

Dickens, Jr., Roy S., and James L. McKinley
1979 Frontiers in the Soil: the Archaeology of Georgia. Frontiers Publishing Company Chapel Hill, North Carolina.

Hawkins, Nancy W.
1984 *Classroom Archaeology.* Division of Archaeology, Department of Culture, Recreation and Tourism, Baton Rouge, Louisiana. Project funded in part by the Department of the Interior, National Park Service.

Kelley, Lauren A.
1983 *A Teachers Guide to Project Outreach: a Public Awareness Program in Vermont Archaeology.* A Master's Degree Project, University of Vermont, for Division for Historic Preservation, Agency of Development and Community Affairs, Montpelier, Vermont. Project prepared for the Vermont Division for Historic Preservation.

Robinson, Barbara
1984 *Native American Source Book.* Concord River Basin Prehistory Project, Concord Antiquarian Museum, P.O.B. 146, Concord, Massachusetts. Funded by matching grant-in-aid from Massachusetts Historical Commission, with funds from Department of the Interior, National Park Service.

Wabanaki Curriculum Development Project
1982 *A Teacher-training Manual* and *A Semi-annotated Bibliography.* Boston Indian Council, Inc., 105 S. Huntington Avenue, Jamaica Plains, Massachusetts. Funded through Title IX of the Elementary and Secondary School Act: Ethnic Heritage Studies.

The following are the resources to be used in conjunction with this unit.

Discovering Maine's Prehistory through Archaeology. Slides, Part I and II, Abbe Museum, P.O.B. 286, Bar Harbor, Maine 04679 or The Maine Historic Preservation Commission, State House Station 65, Augusta, Maine. Postage and handling fee.

Artifact Kit. For Classification and Tool Function activities, Abbe Museum, P.O.B. 286, Bar Harbor, Maine 04679. Postage and handling fee.

Early Americans. Shell Film Library, 1433 Sadlier Cir. W. Dr., Indianapolis, Indiana 46239 or phone (813)541-5763. Rental fee-$17.50.

Indian Island Mystery. Mary C. Jane, 1965, Harper Row, New York, and 1978, paper edition, Downeast Books, Camden.

Mi'kmaq. Set of 6 Videocassets, Nova Scotia Museum, Halifax, Canada, available through State Department of Education, Media Services, 289-2956, or the Maine Historic Preservation Commission, Augusta. Postage fee.

Following are references for the Research-Project learning activity along with supplemental resources. Those for the learning activity are listed by project.

Indian Myths and Legends:

Anastas, Peter
1973 *Glooskap's Children: Encounters with the Penobscot Indians of Maine.* Beacon Press, Boston.

Gill, Sam D.
1982 *Native American Religions.* Wadsworth, Belmont, California.

Hill, Kay
1979 *Glooscap and His Magic: Legends of the Wabanaki Indians.* LP record, read by Rita Moreno, Caedmon, New York.

Leland, Charles G.
1884 *The Algonquin Legends of New England or Myths and Folkore of the Micmac, Passamaquoddy and Penobscot Tribes.* Houghton Mifflin & Co., Boston.

Nicolar, Joseph
1979 *The Life and Traditions of the Red Man.* Fredericton, Saint Annes Point Press.

Wilbur, C. Keith.
1978 *The New England Indians.* Globe Pequot Press, Chester, Connecticut.

Make a site diorama.

Simon, Nancy and Evelyn Wolfson
1978 *American Indian Habitats: How to Make Dwellings and Shelters with Natural Materials.* David McKay Publishing Co., New York.

Wilbur, C. Keith
1978 *The New England Indians.* Globe Pequot Press, Chester, Connecticut.

Make pottery.

Carpenter, Jim and Kathryn Fraser
1983 *Studying the Prehistory of Man in Kentucky.* The Kentucky Prehistory Curriculum Project, TVA's Land Between the Lakes, Golden Pond, Kentucky and Center for Environmental Education, Murray State University, Murray, Kentucky.

Robinson, Barbara
1984 *Native American Source Book.* Concord Antiquarian Museum, P.O.B. 146, Concord, Massachusetts.

Make baskets.

Butler, Eva L. and Wendell S. Hadlock
1957 *Uses of Birch-bark in the Northeast.* The Robert Abbe Museum, Bar Harbor, Maine.

Project Indian Pride
n.d. *Baskets of the Dawnland People.* Maine Indian Education, Calais, Maine.

Indian foods.

Carpenter, Jim and Kathryn Fraser
1983 *Studying the Prehistory of Man in Kentucky.* The Kentucky Prehistory Curriculum Project, TVA's Land Between the Lakes, Golden Pond, Kentucky, and Murray State University, Murray, Kentucky.

Densmore, Frances
1974 *How Indians Use Wild Plants for Food, Medicine and Crafts.* Dover Publications, Inc. New York.

Robinson, Barbara
1984 *Native American Source Book.* Concord Antiquarian Museum, Concord, Massachusetts.

Walker, Rachel
1981 *Great State Alive. Unit 2: Native Americans in Vermont.* Vermont Historical Society, Montpelier, Vermont.

Birch bark canoe.

Fernald, Peggy and Alice N. Wellman
1970 *Brief Description of Birch Bark Canoe Building.* Bulletin IX, Robert Abbe Museum, Bar Harbor, Maine.

Robinson, Barbara
1984 *Native American Source Book.* Concord Antiquarian Museum, Concord, Massachusetts.

Indian games and toys.

Favour, Edith
1974 *Indian Games, Toys, and Pastimes of Maine and the Maritimes.* Robert Abbe Museum, Bar Harbor, Maine.

Speck, Frank G.
1970 *Penobscot Man.* Octagon Books, New York.

Supplemental.

American Friends Service Committee, Maine Indian Program
n.d. The Wabanaki: A Resource Book. In process of being developed. Contains materials for grades 4-8 2on Maine Indians during the historic period.

Day, Michael E. and Carol Whitmore
1977 *Berry Ripe Moon.* Tide Grass Press, Peaks Island, Maine.

Eckstorm, Fannie Hardy
1932 *The Handicrafts of the Modern Indians of Maine. Bulletin III, Robert Abbe Museum, Bar Harbor, Maine.*

1941 Indian Place-names of the Penobscot Valley and the Maine Coast. University of Maine Studies, Second Series, No. 55, University Press, Orono.

Hester, Thomas, Robert Heizer and John Graham
1975 *Field Methods in Archaeology.* Mayfield Publishing Co., Palo Alto, California.

Maine Studies Curriculum Project
1980 *Maine Dirigo "I Lead".* Down East Books, Camden, Maine.

Whitehead, Ruth Holmes and Harold McGee
1983 *The Micmac.* Nimbus Publishing Company, Halifax, Nova Scotia.

Newsletters.

Anthro Notes: National Museum of Natural History Newsletter for Teachers. Issued three times annually, free of charge. Write to: Department of Anthropology, Smithsonian Institution, Washington DC 20560.

Practicing Anthropology. Subscription of $14.00 annually. Write to: P.O. Box 24083, Oklahoma City, OK 73124.

Teaching Anthropology Newsletter. Issued two times annually, free of charge. Write to: Department of Anthropology, Saint Mary's University, Halifax NS B3H 3C3.

The Maine Archaeological Society Bulletin and *Newletter.* The *Bulletin* is a magazine published twice yearly with articles on Maine archaeology. The *Newletter* contains news and such announcements as opportunities to participate in digs. Subscription is by memberhsip in the Maine Archaeological Society, Inc. P. O. Box 982, Augusta, Me. 04330. Rate: $10 per year for individuals.

Following are a few archaeological texts and journal articles on Maine archaeology and prehistory. It is recommended that teachers read one of the texts along with several of the journal articles for background information:

Deetz, James
1967 *Invitation to Archaeology.* Natural History Press: Garden City, New York.

Fagan, Brian M.
1981 *In the Beginning.* Little, Brown: Boston, 4th edition.

1983 *Archaeology: A Brief Introduction.* Little, Brown and Company, second edition.

Sharer, R.J. and Wendy Ashmore
1980 *Fundamentals of Archaeology.* Benjamin/Cummings: Menlo Park.

GLOSSARY

absolute dates - dates obtained through methods, such as radiocarbon dating, which are stated according to the calendar.

anthropology - the study of man.

archaeology - a branch of anthropology which studies past peoples through the remains they left behind.

artifacts - objects which have been made or modified by people.

BP/BC - before present/before Christ. Either may be used with dates. 1950 is used as the "present" for BP dates for consistency.

context - the relationship of artifacts and features to the site's environment (surrounding soil deposits).

culture - learned patterns of habits and customs belonging to a particular group of people.

deposition - process of laying down soil and rock through wind, water or ice.

erosion - the carrying away of soil and rock by wind, water or ice.

ethnography - the observation, collection and study of the culture of a living group of people.

feature - an activity area within a site, such as a fireplace, a housepit or toolmaking area.

historic - time period which begins with the introduction of written records. The historic period, therefore, begins at different times around the world. In Maine, the historic period began with the arrival of Europeans.

interdisciplinary - a field, such as archaeology, which involves two or more academic, scientific, or artistic disciplines.

midden - a deposit of refuse material. In Maine, most middens are shell middens and contain abundant clam shells along with food bones and broken tools.

palynology - science which studies pollen and spores.

pothunter - someone who destroys sites to obtain artifacts for him or herself, rather than using scientific methods to learn about the past.

prehistoric - time period before written records. In Maine, prehistory began with the first arrival of people around 11,000 years ago and ended with the arrival of Europeans.

relative dates - dates applied to artifacts and sites in relation to other dates, i.e., one is older or younger than another.

site - place where human activity took place in the past, i.e.,habitation site or quarry site.

stratigraphy - sequence of layers; when undisturbed, the bottom layer is the oldest and the