DOCUMENT RESUME

ED 393 721 SO 025 292

AUTHOR	Hawkins, Nancy W.
TITLE	Classroom Archaeology: An Archaeology Activity Guide for Teachers. Third Edition.
INSTITUTION	Louisiana State Dept. of Culture, Recreation, and Tourism, Baton Rouge. Office of Cultural Development.
SPONS AGENCY	National Park Service (Dept. of Interior), Washington, D.C.
PUB DATE	91
NOTE	117p.
AVAILABLE FROM	Division of Archaeology, Office of Cultural Development, Department of Culture, Recreation and Tourism, State of Louisiana, P.O. Box 44247, Baton Rouge, LA 70804.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Ancient History; Anthropology; *Archaeology; Community Characteristics; Cultural Background; Cultural Education; Elementary Secondary Education; *Heritage Education; Higher Education; *Local History; *Material Culture; Middle Schools; Social Studies

ABSTRACT

This guide describes archaeology activities appropriate for middle school students, but some activities can be used in intermediate and primary grades or high school and college classes. The activities range in length from less than one hour to 15 hours. A sequence of activities may be used together as a unit on archaeology, or individual activities may be used alone. The activities generally are arranged in the guide in order of increasing complexity. The guide is divided into five parts: (1) "Resources"; (2) "Short Activities"; (3) "Games"; (4) "Record a Site"; and (5) "Analyze a Site." (EH)

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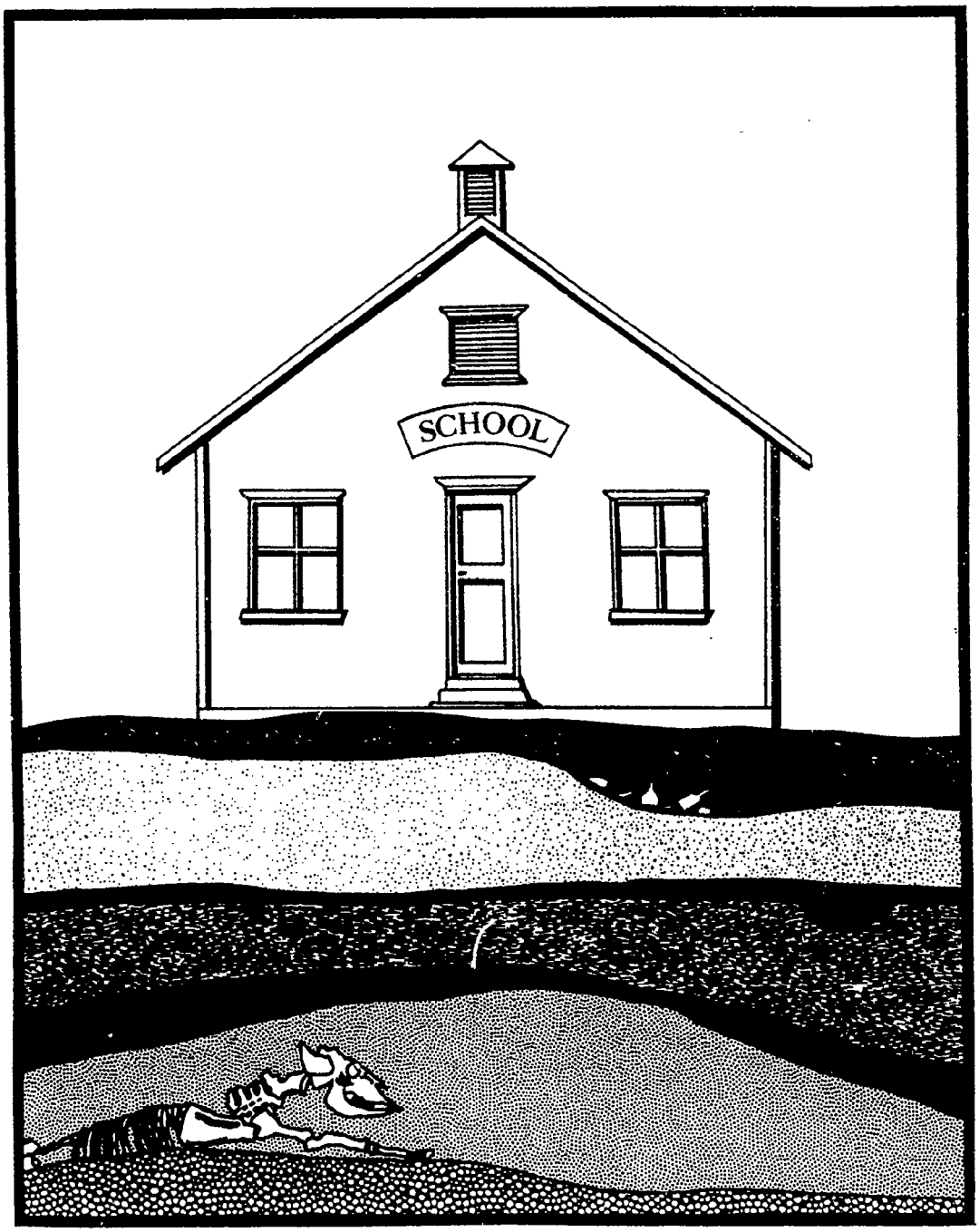

Classroom Archaeology

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CLASSROOM ARCHAEOLOGY

An Archaeology Activity Guide for Teachers

Nancy W. Hawkins

Division of Archaeology
Office of Cultural Development
Department of Culture, Recreation and Tourism
State of Louisiana

Published by:

Division of Archaeology
P. O. Box 44247
Baton Rouge, LA 70804

First Edition.....July 1984
Second Edition.....April 1987
Third Edition.....January 1991

This public document was published at a total cost of $380.00. Two hundred (200) copies of this public document was published in this third printing at a cost of $380.00. The total cost of all printings of this document including reprints is $3555.96. This document was published for the Division of Archaeology by Emprint Digital Imaging,5425 Florida Blvd., Baton Rouge, LA 70806 to make available to citizens of Louisiana information about prehistoric and historic archaeology under authorization of La. R.S. 41:1601-1614. This material was printed in accordance with standards for printing by state agencies established pursuant to R.S. 43:31. Printing of this material was purchased in accordance with the provisions of Title 43 of the Louisiana Revised Statutes.

This publication has been funded in part with Federal funds from the National Park Service, Department of the Interior, through the Department of Culture, Recreation and Tourism, Office of Cultural Development, Division of Archaeology. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior.

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INTRODUCTION

Archaeologists in Louisiana study sites that have been here for thousands of years, from Paleo-Indian times 12,000 years ago to recent years. Prehistoric and historic archaeologists have discovered information about our state's past that could not be known any other way. This information gives students a better understanding of Louisiana's history, and provides the only information available about more than 10,000 years of prehistory.

In addition, activities about archaeological techniques and findings provide an excellent way for students to develop social studies, science, art, and communication skills. Specifically, they help students develop:

- the ability to think and solve problems through conceptualization, generalization, and application of new knowledge

- an understanding of how society works through examining patterns of culture in Louisiana from prehistoric times to today

- an understanding of how scientific methods can teach about people

- research and communication skills through preparing charts, maps, written reports, and oral reports

- social skills through working in small groups to research, compile, analyze, and present information.

- visual expression skills through translating ideas into drawings, paintings, and objects

CLASSROOM ARCHAEOLOGY describes archaeology activities that any teacher can use. They are all appropriate for middle school students, but some can be used in intermediate and primary grades, and many have been used successfully in high school and college classes. The activities range from those that take less than one hour to one that takes 15 hours. A sequence of activities may be used together as a unit on archaeology, or individual activities may be used alone. The activities are generally arranged in the guide in order of increasing complexity.

The guide is divided into five parts:

- **Resources** for teachers that include vocabulary words, recommended books, and sources of additional activities

- **Short Activities** that can be used independently or in sequence to introduce methods and findings of Louisiana archaeologists

- **Games** that can be played with a deck of cards showing cultural traits in Louisiana

- **Record a Site** activity in which students map, describe, and photograph an actual archaeological site

- **Analyze a Site** activity in which students interpret information about a real archaeological site in order to determine who used the site, when, and why

These activities are coded so teachers can quickly identify activities that relate to various subject areas:

social studies

language arts

science

art

The revised edition has an expanded Resources section.

CLASSROOM ARCHAEOLOGY is not copyrighted, so teachers are invited to photocopy or duplicate any part of the activity guide.

Resources

VOCABULARY

absolute dating--analysis that determines the approximate calendar date that an artifact or feature was used

anthropology--the study of man

archaeology--the branch of anthropology that is concerned with the scientific study of remains of past human life

archaeomagnetic dating--a way of determining when clay was last heated to a high temperature

artifact--any object people have made or modified

chronology--an arrangement (of cultures or sites) based on the order of occurrence

context--the interrelated conditions in which a site, artifact, or feature occurs

culture--an arbitrary name that archaeologists assign to prehistoric Indians who lived in a designated area at approximately the same time, and whose sites and artifacts are similar

dendrochronology--a technique for finding out the age of wood based on the variation in a tree's annual growth rings

excavation--the study of an archaeological site by carefully digging the layers of earth

feature--cultural remains more complex than a single artifact (such as house floors, storage pits, fire hearths, burials, or cooking pits)

function--the way something was used; its purpose

geology--a science dealing with the earth's history as recorded in rocks

grid--a network of uniformly spaced lines that divide a site into equal-size squares

historic archaeology--the study of sites that have at least some non-Indian remains; these sites date to the years after Europeans arrived in Louisiana

hypothesis--a tentative assumption that can be further investigated

paleontology--a branch of geology dealing with fossil remains of plants and animals such as dinosaurs

prehistoric archaeology--the study of archaeological sites that date to the time before European explorers arrived in an area

preservation--keeping from injury or destruction; protection

projectile point--a point used on the tip of a spear, dart, or arrow

relative dating--a process of comparing the age of an artifact, site, or culture by saying that it is older, younger, or the same age as another one; this method does not give an age in calendar years

radiocarbon (Carbon 14) dating--a method used in determining the age of organic remains, especially wood charcoal

screening--the process of sifting excavated soil through 1/4" or 1/8" wire screen in order to catch small remains

sherd--a piece of broken pottery

site--any place that has remains of past human activity

stratigraphy--a sequence of strata; in undisturbed locations, younger levels are above older ones

stratum (plural: strata)--a distinct layer in the earth

temper--the material that pottery makers mix with clay to strengthen it and make it less likely to crack during drying; various prehistoric Indian groups used dried clay, shell, plant fiber, and sand as temper

test pit--a pit that is excavated at an archaeological site to determine the importance of buried remains

thermoluminescence--a technique used to find out when pottery was made, based on the light the pottery gives off when it is heated

topographic map--a detailed map that shows natural and manmade features like hills, rivers, roads, and buildings

OUTLINE OF LOUISIANA PREHISTORY

I. Man in North America
   A. Came from northeast Asia via Bering Strait
   B. Probably first arrived between 20,000 and 40,000 years ago
   C. Was the modern species, Homo sapiens sapiens
   D. Hunted migratory animals that roamed across the land bridges from Asia: bison, moose, mammoth, and caribou
   E. Almost certainly reached Louisiana by 12,000 years ago (10,000 B.C.)

II. Paleo-Indian Culture
   A. 10,000 B.C.-6000 B.C., at end of Ice Age
   B. Lived in small nomadic groups
   C. Hunted with spears tipped with lanceolate stone points
   D. Made no pottery, raised no crops

III. Meso-Indian Culture (Archaic Period)
   A. 6000 B.C.-2000 B.C.
   B. Lived in small, semi-nomadic groups
   C. Hunted deer, rabbits, and other animals that are alive today
   D. Hunted with a short spear and spear thrower (atlatl)
   E. Collected many wild plants for food

IV. Poverty Point Culture
   A. 2000 B.C.-500 B.C.
   B. Built large horseshoe-shaped ceremonial centers, like Poverty Point site. Poverty Point:
      1. Has six concentric semicircular ridges
      2. Is in West Carroll Parish
      3. Was largest manmade earthworks in the Western Hemisphere at the time it was built
   C. Conducted long distance trade to places as far away as the Great Lakes and Appalachian Mountains
   D. Made unusual objects
      1. Clay cooking balls used like charcoal briquettes
      2. Stone plummets used as weights on nets or bolas
      3. Stone and clay figurines
      4. Beads and pendants of stone, copper, and gems
      5. Very small stone tools called microliths
   E. Probably grew wild plants in gardens

V. Tchefuncte Culture
   A. 500 B.C.-A.D. 200
   B. Lived primarily in coastal and lowland areas

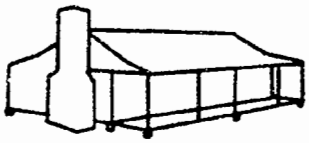
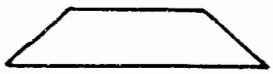
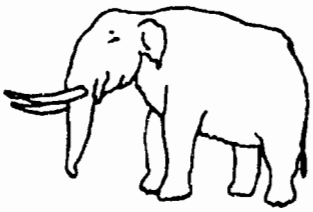
C. Were first people in Louisiana to make a lot of pottery
D. Hunted, fished, and trapped
E. Ate brackish water clams, creating piles of shells called middens
F. Grew squash and gourds along with wild plants in gardens

VI. Marksville Culture
A. A.D. 100-A.D. 400
B. Culturally related to Hopewell Culture in Ohio and Illinois
C. Built dome-shaped burial mounds
D. Buried dead in mounds with distinctive objects
1. Pottery with geometric shapes and stylized birds
2. Clay pipes, sometimes in the shape of animals
3. Special jewelry of copper, shells, pearl, or stones
E. Hunted, fished, and gardened much as Tchefuncte Indians did

VII. Temple Mound Cultures (Late Prehistoric Period)
A. A.D. 400-European arrival
B. Built flat-topped pyramidal mounds, often around a plaza
C. Were first in Louisiana to grow corn and beans
D. Were first in Louisiana to hunt with bows and arrow
E. Had small villages away from ceremonial centers where ordinary people lived
F. Included several cultures
1. Troyville-Coles Creek
2. Plaquemine
3. Mississippian
4. Caddo

VIII. Historic Contact
A. First occurred with DeSoto's entrada in 1540s
B. Continued with LaSalle and other explorers
C. Included trade between Indians and Europeans
1. Indians provided salt, meat, horses, oil, and skins
2. Europeans provided guns, ammunition, metal tools, glass beads, and metal ornaments
D. Exposed Indian groups to disease that led to epidemics

LOUISIANA'S PAST

A.D. 1542 to Present	Historic	
A.D. 400 to A.D. 1542	Coles Creek - Plaquemine - Mississippian - Caddo	
500 B.C. to A.D. 400	Tchefuncte - Marksville	
2000 B.C. to 500 B.C.	Poverty Point	
6000 B.C. to 2000 B.C.	Meso-Indian	
10000 B.C. to 6000 B.C.	Paleo-Indian	

RECOMMENDED BOOKS

Books listed below are helpful in understanding Louisiana archaeology and archaeological techniques. They are generally available at public libraries and school libraries.

Primary Grades

Muller, Carrel and Brenda Muller
1985 **Louisiana Indians.** 60pp. Provides pencil and paper activities about prehistoric and early historic Indians for young students. Good resource focusing on Louisiana's past.

Searcy, Margaret Zehmer
1974 **Ikwa of the Temple Mounds.** University of Alabama, University, Alabama. 73pp. Tells a delightful story about a Mississippian Indian girl who lived 800 years ago in a temple mound community. Through the story, the daily life of prehistoric Indians is described.

Intermediate Grades

Baldwin, Gordon
1965 **The Riddle of the Past; How Archaeological Detectives Solve Prehistoric Puzzles.** Norton, New York. 150pp. Explains the skills and techniques of archaeological fieldwork and laboratory work. Tells how amateurs can work with professional archaeologists.

Coy, Harold
1973 **Man Comes to America.** Little, Brown, Boston. 150pp. Discusses the various theories of early man's arrival in the Americas, his settlement, and means of survival. Provides general overview of North American prehistory and good suggestions for further reading.

Folsom, Franklin
1966 **Science and the Secret of Man's Past.** Harvey House, Irvington-on-Hudson, New York. 192pp. Charts how archaeology developed because of the scientific discoveries made over the past 300 years. Tells how the work of many scholars has made it possible to find out the age of archaeological remains.

Glubok, Shirley
1978 **The Art of the Southeastern Indians.** MacMillan, New York. 48pp. Provides a beautifully illustrated survey of the art and history of various Southeastern Indian groups from 5000 B.C. to the present.

Grimm, William C.
1973 **Indian Harvests.** McGraw-Hill, New York. 128pp. Describes the ways Indians used many native plants, including persimmons, cattails, and milkweed.

Kniffen, Fred B.
1965 **The Indians of Louisiana**, 2nd edition. Pelican Publishing, Gretna, Louisiana. 110pp. Includes information on how archaeologists work, and on the prehistoric and historic Indians of Louisiana. Has stories telling about the daily life of prehistoric and historic Indians, and Indian tales. First edition published in 1945 and since has been widely used in Louisiana classrooms.

Muller, Carrel and Brenda Muller
1985 **Louisiana Indians.** 60pp. Provides pencil and paper activities about prehistoric and early historic Indians for young students. Good resource focusing on Louisiana's past.

Poole, Lynn and Gray Poole
1961 **Carbon 14 and Other Science Methods that Date the Past.** McGraw-Hill, New York. 160pp. Discusses radiocarbon dating, thermoluminescence, and other techniques for telling the age of archaeological sites.

Searcy, Margaret Zehmer
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Searcy, Margaret Zehmer
1981 **The Charm of the Bear Claw Necklace.** University of Alabama, University, Alabama. 80pp. Depicts the life of Indians living in the Southeast over 7,000 years ago, during Archaic (Meso-Indian) times. Well-written fictional account brings the past to life.

Middle School

Baldwin, Gordon C.
1965 **The Riddle of the Past; How Archaeological Detectives Solve Prehistoric Puzzles.** Norton, New York. 150pp. Explains the skills and techniques of archaeological fieldwork and laboratory work. Tells how amateurs can work with professional archaeologists.

Baldwin, Gordon C.
1967 **Calendars to the Past; How Science Dates Archaeological Ruins.** Norton, New York. 139pp. Discusses in understandable terms how information from geology, astronomy, physics, and other sciences can be used to determine the age of archaeological remains.

Brennan, Louis A.
1964 **The Buried Treasure of Archaeology.** Random House, New York. 248pp. Provides an overview of interesting archaeological sites from around the world. Of particular interest to Louisiana readers are chapters on mounds in America, the Hopewell People, and Poverty Point ("The First Permanent Settlement North of the Rio Grande").

Claiborne, Robert and editors.
1973 **The Emergence of Man: The First Americans.** Time-Life, New York. 157pp. Presents a well-illustrated and easily understood description of important discoveries and interpretations relating to man's arrival in the United States and Canada. Also discusses later prehistoric and historic Indian cultures, but does not focus on the Southeast.

Coy, Harold
1973 **Man Comes to America.** Little, Brown, Boston. 150pp. Discusses the various theories of early man's arrival in the Americas, his settlement, and means of survival. Provides general overview of North American prehistory and good suggestions for further reading.

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Folsom, Franklin and Mary Elting Folsom
1983 **America's Ancient Treasures**, 3rd edition. University of New Mexico Press, Albuquerque. 420pp. Profiles nearly 400 archaeological sites and numerous museums that are open to the public. Gives a good general introduction to the prehistoric archaeology of the United States and Canada. Over 300 illustrations.

Glubok, Shirley
1978 **The Art of the Southeastern Indians.** MacMillan, New York. 48pp. Provides a beautifully illustrated survey of the arts and history of various Southeastern Indian groups from 5000 B.C. to the present.

Grimm, William C.
1973 **Indian Harvests.** McGraw-Hill, New York. 128pp. Describes the ways Indians used many native plants, including persimmons, cattails, and milkweed.

LaFarge, Oliver
1960 **The American Indian, Special Edition for Young Readers.** Golden Press, New York. 213pp. Gives a brief overview of prehistory, then focuses on Indians in the United States from the time of European contact. Brief, but beautifully illustrated, section on Indians of the Southeast shows what Indians of this area were like when Europeans first arrived.

Lyttle, Richard B.
1980 **People of the Dawn.** Atheneum, New York. 181pp. Traces the history of people in the New World through descriptions of important archaeological discoveries. Of special interest is the chapter on mound builders.

National Geographic Society
1976 **Clues to America's Past.** Prepared by the National Geographic Society, Washington, D.C. 199pp. Tells about American archaeology through stories about excavations at various sites. Chapter 3, "From the Words of the Living: The Indian Speaks," describes Indians at the time Europeans arrived, based on eyewitness accounts. Much of this chapter is about the lower Mississippi Valley.

Pinney, Roy
1970 **Underwater Archaeology; Treasures Beneath the Sea.** Hawthorn Books, New York. 214pp. Tells about interesting underwater sites, the history of diving, the technology of underwater archaeology, and the training of underwater archaeologists. Of local interest is the chapter on American history underwater.

Poole, Lynn and Gray Poole
1961 **Carbon 14 and Other Science Methods that Date the Past.** McGraw-Hill, New York. 160pp. Discusses radiocarbon dating, thermoluminescence, and other techniques for determining the age of archaeological sites.

Sibley, J. Ashley Jr.
1967 **Louisiana's Ancients of Man.** Claitor's, Baton Rouge, Louisiana. 257pp. Gives an overview of Louisiana prehistory and a brief discussion of Indians after Europeans arrived in the state. Has many illustrations.

Silverberg, Robert
1970 **The Mound Builders.** New York Graphic Society, Greenwich, Connecticut. 276pp. Describes the findings of Smithsonian Institution investigators and other scientists who studied the mounds built by Poverty Point, Adena, Hopewell, and Temple Mound peoples. This is an abridged edition of the author's **Mound Builders of Ancient America.**

High School

Baldwin, Gordon C.
1967 **Calendars to the Past; How Science Dates Archaeological Ruins.** Norton, New York. 139pp. Discusses in understandable terms how information from geology, astronomy, physics, and other sciences can be used to determine the age of archaeological remains.

Brennan, Louis A.
1964 **The Buried Treasure of Archaeology.** Random House, New York. 248pp. Provides an overview of interesting archaeological sites from around the world. Of particular interest to Louisiana readers are chapters on mounds in America, the Hopewell People, and Poverty Point ("The First Permanent Settlement North of the Rio Grande").

Ceram, C. W.
1971 **The First American: A Story of North American Archaeology.** Harcourt, Brace, Jovanovich, New York. 357pp. Describes the history, techniques, and theory of North American archaeology. Tells about important discoveries from all over the country, and explains how archaeologists sort truth from myth. Gives archaeological explanations for how and when man came to North America and covers major developments of prehistoric Indians. Of special interest is the description of the study of mounds in eastern North America. Readable and well-illustrated.

Claiborne, Robert and editors
1973 **The Emergence of Man: The First Americans.** Time-Life, New York. 157pp. Presents a well-illustrated and easily understood description of important discoveries and interpretations relating to man's arrival in the United States and Canada. Also discusses later prehistoric and historic Indian cultures, but does not focus on the Southeast.

Culin, Stewart
1975 **Games of the North American Indians.** Dover Publications, New York. 846pp. Provides an excellent source of information about the traditional games of the American Indians. Originally published in 1907.

Deetz, James
1967 **Invitation to Archaeology.** The Natural History Press, Garden City, New York. 150pp. Is an excellent, well-written, easy-to read introduction to the methods of prehistoric archaeology.

Deetz, James
1977 **In Small Things Forgotten: The Archaeology of Early American Life.** Anchor Books, Garden City, New York. 184pp. Gives a readable and enjoyable introduction to historic archaeology. Highly recommended.

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1983 **America's Ancient Treasures,** 3rd edition. University of New Mexico Press, Albuquerque. 420pp. Profiles nearly 400 archaeological sites and numerous museums that are open to the public. Gives a good general introduction to the prehistoric archaeology of the United States and Canada. Over 300 illustrations.

Haag, William
1971 Louisiana in North American Prehistory. **Melanges,** No. 1. Museum of Geoscience, Louisiana State University, Baton Rouge. 45pp. Provides an overview of Louisiana prehistory and early history. Has good black and white artifact drawings and maps.

Hole, Frank and Robert F. Heizer
1977 **Prehistoric Archeology: A Brief Introduction.** Holt, Rinehart, and Winston, New York. 477pp. An introductory textbook that explains concepts that provide the theoretical basis for prehistoric archaeology, methods of analyzing archaeological finds, and ways of interpreting and writing about these. Has an excellent glossary and extensive suggestions for further reading.

Jennings, Jesse D.
1974 **Prehistory of North America**, 2nd edition. McGraw-Hill, New York. 436pp. A good introductory textbook that describes the prehistoric cultures of North America. Has a glossary and a lengthy bibliography.

Kavasch, Barrie
1979 **Native Harvests.** Random House, New York. 202pp. Provides a well-researched description of how Indians used native plants.

MaCaulay, David
1979 **Motel of the Mysteries.** Houghton Mifflin, Boston. 95pp. Is a well-conceived spoof about an excavation in the year 4000 that results in misinterpreting twentieth century American life.

McHargue, Georgess and Michael Roberts
1977 **A Field Guide to Conservation Archaeology in North America.** J. B. Lippencott, Philadelphia. 319pp. Describes ways ordinary people can learn more about, and participate in, archaeology.

National Geographic Society
1976 **Clues to America's Past.** Prepared by the Special Publications Division, National Geographic Society, Washington, D.C. 199pp. Tells about American archaeology through descriptions of excavations at various sites. Chapter 3, "From the Words of the Living: The Indian Speaks," tells how Indians were living at the time Europeans arrived, based on eyewitness accounts. Much of this chapter is about the lower Mississippi Valley.

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Stuart, George E. and Gene S. Stuart
1969 **Discovering Man's Past in the Americas.** National Geographic Society. Washington, D.C. 211pp. Discusses the prehistory of people in the Western Hemisphere through visits to important archaeological sites. Beautifully illustrated.

Sullivan, George
1980 **Discover Archaeology: An Introduction to the Tools and Techniques of Archaeological Fieldwork.** Doubleday, Garden City, New York. 273pp. Provides an introduction to archaeological techniques. Focuses on specific ways ordinary people can participate in archaeological research.

Adult

Ceram, C. W.
1971 **The First American: A Story of North American Archaeology.** Harcourt, Brace, Jovanovich, New York. 357pp. Describes the history, techniques, and theory of North American archaeology. Tells about important discoveries from all over the country, and explains how archaeologists sort truth from myth. Gives archaeological explanations for how and when man came to North America and covers major developments of prehistoric Indians. Of special interest is the description of mounds in eastern North America. Readable and well-illustrated.

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Hester, Thomas R., Robert F. Heizer, and John A. Graham
1975 **Field Methods in Archaeology**, 6th edition. Mayfield Publishing Palo Alto, California. 408pp. Is an authoritative textbook presenting techniques of archaeological fieldwork.

Hole, Frank and Robert Heizer
1973 **An Introduction to Prehistoric Archeology**, 3rd edition. Holt, Rinehart and Winston, New York. 575pp. Is a comprehensive college textbook that provides a thorough introduction to prehistoric archaeology, including theory, techniques of survey, excavation, analysis, and interpretation. Includes an extensive bibliography in each chapter.

Hole, Frank and Robert Heizer
1977 **Prehistoric Archeology: A Brief Introduction.** Holt, Rinehart and Winston, New York. 477pp. An introductory textbook that explains concepts that provide the theoretical basis for prehistoric archaeology, methods of analyzing archaeological finds, and ways of interpreting and writing about these. Has an excellent glossary and extensive suggestions for further reading.

Hudson, Charles M.
1976 **The Southeastern Indians.** University of Tennessee Press, Knoxville, Tennessee. 573pp. Describes the culture, society, prehistory, and history of the southeastern Indians. Draws on oral traditions, historical documents, and scholarly reports to build this vivid depiction of Indian life. Covers belief systems, social organization, subsistence, ceremonies, art, music, and games, in addition to chronology.

Jennings, Jesse D.
1974 **Prehistory of North America**, 2nd edition. McGraw-Hill, New York. 436pp. A good introductory textbook that describes the prehistoric cultures of North America. Has clear black and white drawings and a lengthy bibliography.

Kavasch, Barrie
1979 **Native Harvests**. Random House, New York. 202pp. Provides a well-researched description of how Indians used native plants.

MaCaulay, David
1979 **Motel of the Mysteries**. Houghton Mifflin, Boston. 95pp. Is a well-conceived spoof about an excavation in the year 4000 that results in misinterpreting twentieth century American life.

McHargue, Georgess and Michael Roberts
1977 **A Field Guide to Conservation Archaeology in North America**. J. B. Lippencott, Philadelphia. 319pp. Describes ways ordinary people can learn more about, and participate in, archaeology.

National Geographic Society
1976 **Clues to America's Past**. Prepared by the Special Publications Division, National Geographic Society, Washington D.C. 199pp. Tells about American archaeology through descriptions of excavations at various sites. Chapter 3, "From the Words of the Living: The Indian Speaks," tells how Indians were living at the time Europeans arrived, based on eyewitness accounts. Much of this chapter is about the lower Mississippi Valley.

Neuman, Robert W.
1984 **An Introduction to Louisiana Archaeology**. Louisiana State University Press, Baton Rouge. 366 pp. Describes findings about Louisiana prehistoric Indian cultures and early Indian-European contact. Fully illustrated.

Noel-Hume, Ivor
1969 **Historical Archaeology**. Alfred A. Knopf, New York. 355pp. Presents the techniques and procedures of historic archaeology in an easy-to-understand way. Written by the director of archaeology at Williamsburg.

Noel-Hume, Ivor
1970 **A Guide to Artifacts of Colonial America**. Alfred A. Knopf, New York. 323pp. Lists in alphabetical order a wide range of artifacts found at British-American sites from the seventeenth and eighteenth centuries. A standard guide for identifying artifacts found on historic sites of this age.

Robbins, Maurice and Mary B. Irving
1981 **The Amateur Archaeologist's Handbook**, 3rd edition. Harper & Row, Cambridge, Massachusetts. 306pp. Describes in nontechnical terms how archaeological work is conducted. Provides an overview of surveying, planning, and carrying out an excavation, as well as analyzing artifacts.

Silverberg, Robert
1968 **Mound Builders of Ancient America; The Archaeology of a Myth.** New York Graphic Society, Greenwich, Connecticut. 369pp. Discusses myths about the origin of earthen mounds in the Mississippi valley and southeastern United States. Then describes the scientific study of these mounds conducted by early Smithsonian Institution investigators whose landmark studies laid the foundation for scientific archaeological study of mounds.

Stuart, George E. and Gene S. Stuart
1969 **Discovering Man's Past in the Americas.** National Geographic Society, Washington D.C. 211pp. Discusses the prehistory of people in the Western Hemisphere through visits to important archaeological sites. Beautifully illustrated.

Sullivan, George
1980 **Discover Archaeology: An Introduction to the Tools and Techniques of Archaeological Fieldwork.** Doubleday, Garden City, New York. 273pp. Provides an introduction to archaeological techniques. Focuses on specific ways ordinary people can participate in archaeological research.

Webb, Clarence H.
1982 **The Poverty Point Culture**, 2nd edition, revised. Geoscience and Man, vol. XVII, School of Geoscience, Louisiana State University, Baton Rouge. 85pp. A technical report about Poverty Point people. Clearly illustrated with numerous black and white drawings and maps.

Wilson, David
1975 **The New Archaeology.** Alfred A. Knopf, New York. 349pp. Describes recent archaeological applications of scientific and technological innovations. Includes remote sensing, chemical analyses, pollen analysis, and computers. Also explains theories of the "new" archaeology.

MAGAZINES AND JOURNALS

ANTHRO.NOTES. Newsletter for teachers from the National Museum of Natural History. Discusses recent anthropological research in understandable terms and suggests films, books, activities, and workshops of interest to teachers. Published three times a year. Free. To be added to the mailing list, write Ann Kaupp, Department of Anthropology, Stop 112, Smithsonian Institution, Washington, D.C. 20526.

Archaeology. Developed for the layman, includes articles about recent research around the world, as well as listing of current archaeological exhibits, books, and films. Published bimonthly. Subscription cost available from the Archaeological Institute of America, Post Office Box 385, Martinsville, New Jersey 08836.

Expedition: The Magazine of Archaeology/Anthropology. Beautifully illustrated magazine has articles on archaeological and anthropological research. Published quarterly. Subscription cost available from the University Museum, University of Pennsylvania, 33rd and Spruce, Philadelphia, Pennsylvania 19104.

Louisiana Archaeology. Bulletin of the Louisiana Archaeological Society. Includes reports of archaeological work in Louisiana conducted by professional and avocational archaeologists. Somewhat technical, but very informative. Published annually. Subscription information available from Linda Church, LAS Treasurer, Post Office Box 50879, Amoco Building, New Orleans, Louisiana 70150.

National Geographic. Beautifully illustrated magazine frequently includes articles on current archaeological field research. Published monthly. For subscription information write National Geographic Society, Post Office Box 2895, Washington, D.C. 20013.

Scientific American. Often publishes articles detailing major discoveries or interpretations in archaeology and in human evolution. Published monthly. Subscription information available from Scientific American, 415 Madison Avenue, New York, New York 10017.

Smithsonian. Publication of the Smithsonian Institution includes articles on natural sciences, history, art, and technology. Articles on archaeology are infrequent, but well done. Published monthly. Subscription information available from Smithsonian, Post Office Box 2955, Boulder, Colorado 80322.

MATERIALS AVAILABLE FROM THE DIVISION OF ARCHAEOLOGY*

ANTHROPOLOGICAL STUDY SERIES BOOKLETS
(no charge)

No. 1 **On the Tunica Trail** by Jeffrey P. Brain (OUT OF PRINT)
No. 2 **The Caddo Indians of Louisiana** by Clarence H. Webb and Hiram F. Gregory--tells the story of Caddo Indians from prehistoric times to the twentieth century
No. 3 **The Role of Salt in Eastern North American Prehistory** by Ian Brown--explains prehistoric techniques for refining salt in south-central Louisiana
No. 4 **El Nuevo Constante** by Charles E. Pearson et al.--relates the history and underwater excavation of a Spanish merchant vessel that wrecked on the Louisiana coast in 1766
No. 5 **Preserving Louisiana's Legacy** by Nancy W. Hawkins--describes how government, industry, business, landowners, and you can contribute to the preservation of Louisiana's archaeological sites
N 6 **Louisiana Prehistory** by Robert W. Neuman and Nancy W. Hawkins--gives an overview of prehistoric Louisiana Indians from 10,000 B.C. to European contact
No. 7 **Poverty Point** by Jon L. Gibson--discusses the spectacular Poverty Point culture that flourished in northeastern Louisiana 3,000 years ago

CLASSROOM EXHIBIT MATERIALS
(no charge except cost of returning materials)

El Constante--includes illustrations, maps, and actual artifacts from the eighteenth century Spanish merchant vessel
Poverty Point--includes maps, photographs, drawings, and artifacts relating to Poverty Point culture

ARCHAEOLOGY NEWSLETTER
(no charge) printed twice a year

AUDIOVISUAL PROGRAMS
(no charge except the cost of returning programs)

El Constante Slide/Tape Show--15 minutes long
Poverty Point Slide/Tape Show--12 minutes long
Louisiana Archaeology Slide/Tape Show--12 minutes long
Recording a Site Slide/Tape Show--8 minutes long

* Division of Archaeology/ P. O. Box 44247/ Baton Rouge/ LA 70804

MATERIALS THAT MAY BE PURCHASED FROM OTHER SOURCES

ANTHROPOLOGY CURRICULUM PROJECT SERIES

Available from:
Director
Anthropology Curriculum Project
University of Georgia
107 Dudley Hall
Athens, Georgia 30602

The Anthropology Curriculum Project has developed materials about archaeology for grades K-12. One of the publications, Archaeological Methods, is particularly appropriate for supplementing a unit about Louisiana archaeology for grades 5-7. This programmed text introduces scientific archaeological techniques and can be used as a self-paced unit for students. Teachers may purchase sample sets or classroom sets of curriculum materials.

ARTIFACT REPLICAS

Available from:
Carolina Biological Supply Company
Burlington, NC 27215

Replicas of Indian stone, bone, antler, and shell artifacts from various times and places are available for purchase. Other materials of interest include human fossil replicas, books about physical anthropology and linguistics, and audiovisual materials about human fossil finds and Indian archaeology. Write for catalog.

DIG 2: A Simulation of the Archeological Reconstruction of a Vanished Civilization

Available from:
Interact
Box 997C
Lakeside, CA 92042

Social Studies School Service
10,000 Culver Boulevard
P. O. Box 802
Culver City, CA 90230

In Dig 2, two competing teams secretly create two cultures, design and construct artifacts, and place them in the ground. Then each team excavates, restores, analyzes, and reconstructs the other team's artifacts and culture. This simulation reflects the most exciting and exotic aspects of classical archaeology

including secret tombs, hieroglyphics, "Rosetta Stones," wall murals, and highly developed art and religion. This focus on the exotic and the emphasis on inventing imaginative cultures means that the sites created will not simulate sites found anywhere in the United States. However, the simulation provides an accurate introduction to scientific excavation techniques. Unfortunately, the analysis and interpretation portion is much less realistic in its portrayal of actual procedures. Includes student guides and teacher guide. Grades 5-12.

SLEUTHING THROUGH HISTORY: An Introduction to Archaeology

Available from:
Social Studies School Service
10,000 Culver Boulevard
P. O. Box 802
Culver City, CA 90230

This collection of pencil and paper activities introduces students to the principles and techniques of Old World and New World archaeology. These are easy-to-use, clear, and relatively self-contained lessons that can be used individually or as a complete unit. Although some of the content is specifically oriented toward Old World archaeology, certain activities would be useful in teaching Louisiana archaeology. These include ones on the purpose of archaeology, locating and selecting sites to study, archaeological terms, preservation, dating techniques, and artifact function. Package includes teacher's guide and reproducible student activities. Described as appropriate for secondary students, but may also be used with younger students.

STONES AND BONES: A Laboratory Approach to the Study of Physical Anthropology

Available from:
Stones and Bones
Project Disseminator
Physical Anthropology Center
6625 Balboa Blvd.
Van Nuys, CA 91406

"Stones and Bones" is a collection of printed instructional materials and either fossil casts or life-size photographs of fossils that provide innovative ways for secondary level students to learn about physical anthropology. The program is pecifically designed to be used to expand and enrich biology, eneral or life science courses, or to be used alone as a emester-long course. The project was jointly developed by the s Angeles Unified School District, the L. S. B. Leakey ndation, and the Los Angeles County Museum of Natural History. lessons require a minimum of teacher preparation, are self ective, and highly motivational. They include emphasis on

written and oral language, social science, and mathematics skills. Informational brochure and description available at no charge. Highly recommended.

TEACHERS' RESOURCE PACKET: ANTHROPOLOGY

Available from:
Public Information Office
Department of Anthropology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20560

The Smithsonian Institution has compiled an outstanding collection of bibliographies, activities, and other materials to help junior and senior high school teachers integrate all subfields of anthropology (cultural anthropology, linguistics, archaeology, and physical anthropology) into their social studies and science classes. Highly recommended.

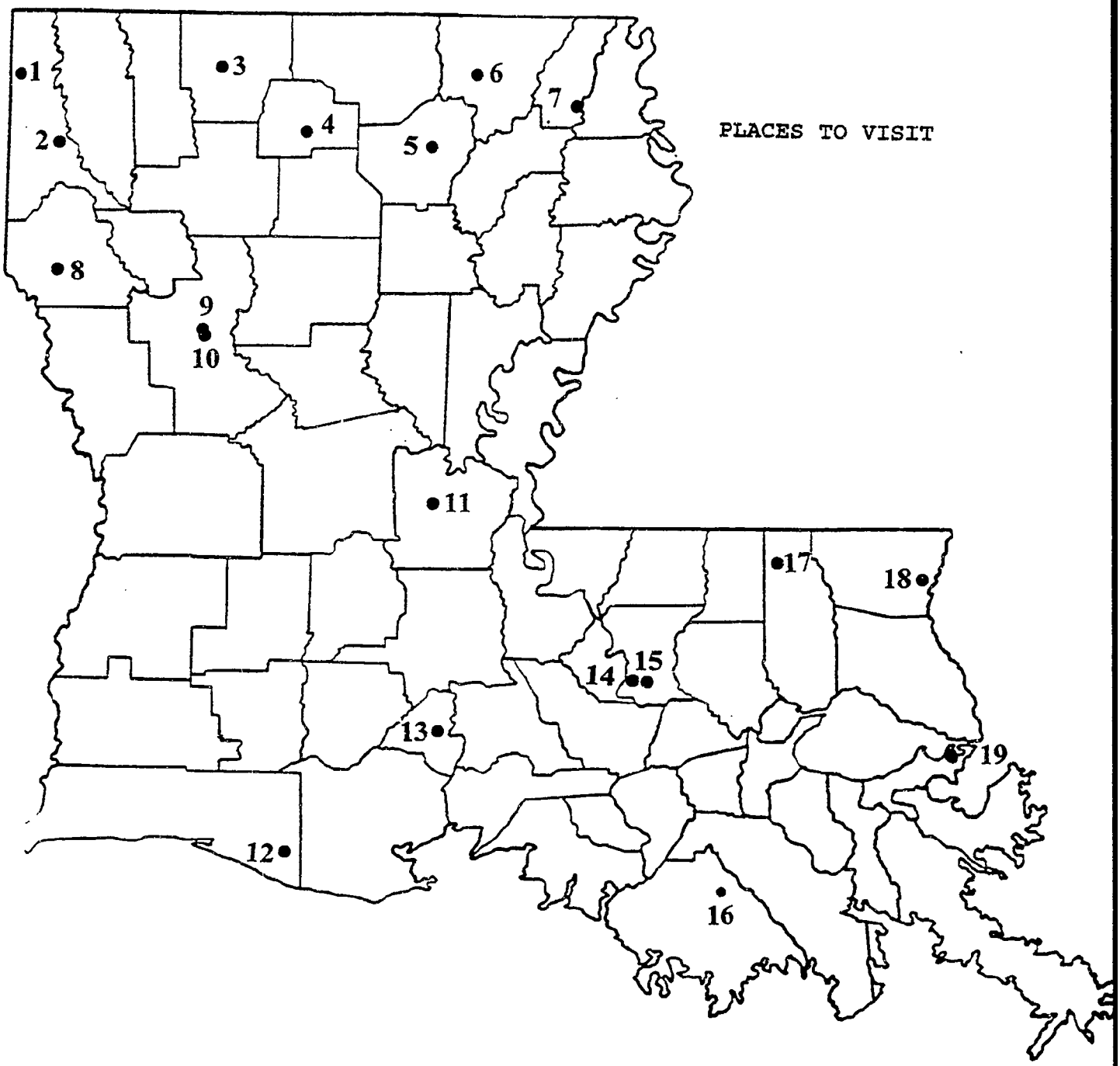
TIME CAPSULE: An Interaction Unit Preserving a Record of Today's Culture for the Next Generation's Discovery and Analysis

Available from:

Interact	Social Studies School Service
Box 997C	10,000 Culver Boulevard
Lakeside, CA 92042	P. O. Box 802
	Culver City, CA 90230

After an introduction to artifacts of the past and what they can tell about a culture, students select artifacts to represent today's American culture. These are buried in a time capsule to be removed 30 years in the future. This activity illustrates major concepts in archaeology: that artifacts tell about culture, and that everyday objects from the past may give information that is not included in history books. The activity includes student guides and a teacher guide with detailed lesson plan. Grades 5-12.

CATALOGS for both Interact and Social Studies School Service may be obtained from the addresses above. These include many other activities that may be useful if you are teaching a unit less specific than Louisiana archaeology. For example, they describe activities about classical archaeology (Rome, Egypt, etc.), American Indians, and American history.



Numbers correspond to numbered descriptions that follow.

PLACES TO VISIT

Before taking a class to visit one of the parks or museums listed below, call or write to see if the facility will be open when you plan to visit and if any special arrangements need to be made. The mailing address and telephone number follow each entry. If the location differs from the mailing address, it is given at the end of the description.

1. Caddo-Pine Island Oil and Historical Society
   P. O. Box 897
   Oil City, LA 71061
   (318) 995-6845
   Museum's Indian room has display of artifacts from Paleo-Indian to Caddo. Located at 200 Land Ave. in Oil City.

2. Louisiana State Exhibit Museum
   P. O. Box 38356
   Shreveport, LA 71133
   (318) 632-2020
   Houses large exhibits of prehistoric Indian artifacts and historic artifacts. Located at 3015 Greenwood Rd. in Shreveport.

3. Herbert S. Ford Memorial Museum
   519 South Main Street
   Homer, LA 71040
   (318) 927-3271
   Collection on display includes Indian artifacts and farm implements.

4. Louisiana Tech Museum
   c/o Louisiana Tech News Bureau
   Louisiana Tech University
   Ruston, LA 71272
   (318) 257-2264
   Has large collection of prehistoric points and pottery on display. Located in Wylie Tower, Rm. 324.

5. Natural History Museum
c/o Geosciences Department
Northeast Louisiana State University
Monroe, LA 71201
(318) 342-1878
Has interpretative exhibit of archaeological materials. Good collection of Poverty Point artifacts. Located on the 3rd floor of Hanna Hall.

6. Snyder Memorial Museum
1620 East Madison Avenue
Bastrop, LA 71220
(318) 281-8760
Displays a small collection of prehistoric artifacts from the area. Located on Route 165 East.

7. Poverty Point State Commemorative Area
Route 1, Box 207-C
Epps, LA 71237
(318) 926-5492
Is one of the most important and impressive prehistoric sites in Louisiana. Has visitors' center with a museum that houses a large collection of Poverty Point artifacts in addition to maps and illustrations relating to the site. Located on LA 577 northeast of Epps.

8. Mansfield State Commemorative Area
15149 Hwy. 175
Mansfield, LA 71502
(318) 872-1474
hundred seventy-eight-acre park commemorates the Civil Battle of Mansfield. Interpretative museum includes ibits of Civil War artifacts. Located 4 miles south of Mansfield on LA 175.

9. Williamson Museum
Department Social Sciences
Northwestern State University
Natchitoches, LA 71497
(318) 357-4364
Displays of prehistoric Indian artifacts, historic Indian crafts and artifacts, and colonial French and Spanish artifacts. Located in John Keyser Building, Rm. 210.

10. Fort St. Jean Baptiste State Commemorative Area
P. O. Box 1127
Natchitoches, LA 71458
(318) 357-3101
Reconstructed fort, built and furnished to show what Fort St. Jean Baptiste may have been like in 1732. Located on Mill St.

11. Marksville State Commemorative Area
700 Martin Luther King Drive
Marksville, LA 71351
(318) 253-8954
Park includes important prehistoric Indian site with mounds and museum with exhibits that tell about Louisiana archaeology and the significance of the Marksville site.

12. Rockefeller Wildlife Refuge
Route 1, Box 20-B
Grand Chenier, LA 70643
(318) 538-2276
Has small interpretative display of artifacts from the shipwreck *El Nuevo Constante*. Located on LA 82 between Grand Chenier and Pecan Island.

13. Lafayette Natural History Museum & Planetarium
116 Polk Street
Lafayette, LA 70503
(318) 268-5544
Museum features changing exhibits relating to natural history.

14. Howell-Russell Indian Exhibit
Museum of Natural Science
Louisiana State University
Baton Rouge, LA 70803
(504) 388-6562
Has large collection of prehistoric and historic artifacts on display. Located on the 2nd floor of the Howe-Russell building, on Tower Dr.

15. Rural Life Museum
4560 Essen Lane
Baton Rouge, LA 70809
(504) 765-2437
Buildings and displays depict rural life in Louisiana during the nineteenth century. Note: each child under 12 must be accompanied by one adult. Located at Burden Research Center, Essen Ln. at I-10.

16. Southdown Plantation House
Terrebonne Museum
La. Hwy. 311 at St. Charles Street
Houma, LA 70360
(504) 851-0154
Houses exhibit entitled Native Peoples of Louisiana. Exhibit includes prehistoric artifacts from Terrebonne Parish and artifacts from the United Houma Nation.

17. Camp Moore State Commemorative Area
P. O. Box 25
Tangipahoa, LA 70465
(504) 229-2438
Six and a half acre site includes a cemetery for Confederate soldiers and monument for Louisiana's unknown soldiers. Museum houses Civil War artifacts. Located on US 51.

18. Bogalusa Indian and Pioneer Museums
City of Bogalusa
P. O. Drawer 1179
Bogalusa, LA 70427
(504) 735-5223
Museums house archaeological artifacts and artifacts of early settlers. Located in 600 Block of Willis Ave., Cassidy Park.

19. Fort Pike State Commemorative Area
Route 6, Box 194
New Orleans, LA 70129
(504) 662-5703
Fort was constructed after the War of 1812 to defend navigational channels leading into New Orleans. Interpretative museum includes some artifacts along with documents and uniforms. Located 23 miles east of downtown New Orleans on US 90 at Rigolets.

Short Activities

CAPSULE OF AMERICA

Rationale

This activity provides an opportunity for students: 1) to learn what an artifact is, 2) to think about American culture through artifacts, and 3) to improve group interaction skills.

Objective

During this activity, students will list 20 artifacts that represent American culture.

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. What is the picture of American life based on the artifacts? What things are missing or misrepresented?

TODAY'S ARTIFACTS

Rationale

This activity gives students an opportunity: 1) to examine American culture through artifacts, 2) to participate in the archaeological activity of artifact analysis, 3) to learn the meaning of "artifact function," and 4) to improve descriptive and analytical skills.

Objectives

As a result of this activity students will 1) describe the appearance of five objects used in America today, 2) list possible functions of the artifacts, and 3) suggest what the artifacts tell about the culture.

Procedure

Students are to pretend they are archaeologists in the year 3000 who have excavated several artifacts from a site somewhere in Louisiana. The students will describe and assign possible functions to the artifacts.

1. Select five artifacts for students to analyze. Any artifacts may be used, but suggestions to consider are coins, pop tops from aluminum cans, records, kitchen utensils, religious jewelry or figurines, and toys. The students will need to be able to handle and examine these, so it is a good idea to bring multiple sets of the artifacts. One set of five artifacts for each five students is an ideal number. This way, each student can examine and describe an artifact then exchange with another student. Label each artifact with an identifying number or letter.

2. Have each student select an artifact and write a description of the appearance of the artifact. For example, artifact #16 (a record) might be described as a "black flat circular disc with grooves on both sides."

3. After the students have described all the artifacts, they will assign a function to each. They should pretend they are archaeologists in the year 3000 who know very little about twentieth century life in Louisiana. The conclusions they draw about how these artifacts were used should be logical, but may be completely untrue. For example, artifact #16 could have been

used as a recreational object to throw between two people or a wheel on a child's cart. Students should be encouraged to be creative without being ridiculous.

4. Students should draw conclusions about the culture based on the artifacts analyzed. Once again, the ideas should be logical, but not necessarily correct. The conclusions should be drawn from all five artifacts studied together.

5. Lead a discussion about the activity. What did students learn about how archaeologists draw conclusions? How was the activity similar to the way an archaeologist works? (Like archaeologists, the students described the artifact's appearance, function, and what it showed about the culture.) How was the activity unlike real archaeological work? (Ordinarily, when archaeologists study artifacts from a site they 1) look at more than five artifacts, 2) compare the findings with those from other sites, 3) know about features at the site, 4) know the context of the artifacts, and 5) are very conservative when they suggest artifact function and what the artifacts tell about the culture.)

SITE IN A BAG

Rationale

This activity: 1) helps students understand the importance of artifact context, 2) improves skills of analysis and conclusion-drawing, and 3) illustrates how archaeologists learn about people from artifacts.

Objectives

During the activity, students will 1) choose objects which tell about themselves and 2) analyze objects other students have selected to determine whose they are.

Procedure

Each student will be acting as both the creator of a site and as the archaeologist analyzing a site. In this activity, the "site" will be a paper bag containing objects a student has chosen to represent himself.

1. Ask the students to bring five to ten objects that tell about themselves. These should not be obvious (no names, addresses, or telephone numbers), but should give clues about personality and interests. Each student should bring these to school in a closed grocery bag. Bring a few extra bags for those who do not have any at home.

2. Discuss with students the way an archaeologist studies a site. The greatest amount of information can be determined from careful excavation. When archaeologists excavate a site, they photograph or draw soil changes and artifacts as these are uncovered. After artifacts are removed from the ground, they are labeled with information that shows where they were found. These steps assure that an archaeologist can tell the context of artifacts (where they are found, and how the artifacts related to each other). An archaeologist can tell many times more about a group of people if he can analyze a collection of artifacts found together rather than a single artifact with no known context.

3. Illustrate this point by holding up a pencil and asking what the class can tell about the person who owned it. Obviously, with one clue alone, very little can be said. Archaeologists often feel equally helpless when asked to evaluate a single

artifact that someone has found. Much, much more can be determined from a group of artifacts that are known to have been found together.

4. Pass out the bags, being sure that no one gets his/her own. Ask each student to write a list of conclusions that can be drawn about the owner based on the artifacts. Then, have each student show the objects in the bag, and list conclusions, without guessing whose they are. Let all students show the "artifacts" then ask students to guess the owners.

5. Lead a discussion about the exercise. Why were some bags easier to interpret than others? When drawing a conclusion about the people who used certain objects, does the number of artifacts make a difference? How does this activity relate to archaeology?

ARTIFACTS ON THE COFFEE TABLE*

Rationale

This activity 1) develops skills of observation and analysis, 2) illustrates how archaeologists draw conclusions about social status, household size, and social structure, and 3) exposes students to archaeological hypothesis testing.

Objectives

As a result of this activity 1) students will write a list of observations about someone's home, and 2) list conclusions about the people who live in the house.

Procedure

Students will use the detective skills of archaeologists in studying an unknown family's home. They will try to determine the number of people in the household, their age, sex and appearance, and the relative social status of the family.

1. Choose a house for students to analyze. You probably have friends, relatives, or fellow teachers who will volunteer a home.

2. Discuss the purpose of the activity and encourage students to think of ways to determine information about people based on their belongings. Suggestions might include 1) counting the number of beds, 2) examining the size and style of clothing, and 3) comparing the size and type of house with others in town.

3. Based on students' knowledge of their culture, have them list hypotheses about the owners of the house. These hypotheses will be investigated at the "site." Hypotheses might include: "A mother, father, and two children live in the house;" "The family has two cars;" "The family is middle-class;" and "The mother and father both work." For each hypothesis, have students list ways it can be investigated. Discuss these ideas. Record the hypotheses and ideas for testing them.

4. Visit the house before taking your students there. Decide which parts of the house to assign to the students to study. You may want to have two students in each of the smaller rooms (like

*This activity was created by Bruce Porell and is described in Teacher, Sept., 1978

bathrooms) and more in larger rooms (or yards). Discuss with the owner the guidelines you will give the students. See if certain areas should not be included in the observation.

5. Arrange for the visit. Plan for one or more chaperons to accompany the class.

6. Brief the students. Tell each to take pencils and notebooks to the house to record observations. Remind them of the guidelines for observation. Students must leave everything exactly as they found it, and certain areas may be off limits. Tell the students where each will be working.

7. After the visit, encourage students to discuss their observations and conclusions. Were they able to test their hypotheses? What did they find out about the people? You may want to arrange for the owner of the house to attend the discussion and let the students see how accurate they were. Then lead students in a discussion of ways archaeologists might study a prehistoric house. What clues would they look for to determine household size, social status, and community organization? How might they form and test hypotheses?

NEWSPAPER ARCHAEOLOGY

Rationale

This activity gives students an opportunity 1) to improve skills in logic and analysis and 2) to understand the ways archaeologists draw conclusions about people based on the things they discard.

Objective

As a result of this activity, students will write descriptions of people based on clues about things they are selling through the classified ads.

Procedure

Students will compile ads from the paper that could have been placed by one family. Each student will then describe another student's advertisement family.

1. Discuss with students the types of artifacts archaeologists study. Usually most of the remains at an archaeological site are those that were discarded or abandoned. This means that archaeologists may not get a complete view of all the artifacts that people used at the site. This exercise will give students a chance to draw conclusions based on partial evidence.

2. Ask each student to select 10 for-sale ads from the newspaper or community advertising tabloid. These ads should be ones that could have been placed by one imaginary family. The ads will provide clues about the size of the family, the number and age of the children, whether the family lives in a rural or urban area, and whatever other clues are possible. Students should cut the ads out of the paper, eliminating the names, addresses, and telephone numbers of the sellers. Each student should paste or tape the 10 ads on a piece of paper.

3. Based on the ads, each student should write on a separate piece of paper a brief description of the imaginary people who placed all the ads. The description should explain why the family had each of the items that are now for sale. For example, someone selling a five-bedroom house for $400,000.00 is probably wealthy and may have several children.

4. Have students turn in the ads and the family descriptions to you. Then redistribute the ads to other students, being sure that each one has a new page. Each student should write an analysis of the new family's "artifacts." Collect these pages and review them.

5. Discuss the activity. How is analyzing for-sale items similar to analyzing remains at an archaeological site? Why do people sell things now? Why do people leave things at an archaeological site? Compare students' interpretations of the same artifacts. How were they alike? How do they differ? What does this indicate about the conclusions an archaeologist draws? Does this explain why archaeologists are so careful to recover all the information possible at an archaeological site?

5 FOOD PRESERVATION

Rationale

This activity helps students 1) think about the preservation at an archaeological site and 2) consider American eating and packaging practices.

Objective

Students will list foods from our kitchens that would be preserved at an archaeological site and foods that would not be preserved.

Procedure

Students are to think about American food and what archaeologists in the year 3000 could tell about what we eat, based on what will be preserved that long.

1. Discuss the preservation of food at archaeological sites. When archaeologists excavate an archaeological site, they do not find remains of everything people ate because most food decays quickly. Archaeologists usually draw their conclusions after identifying fragments of bones, shells, nutshells, and seeds found in the refuse areas.

2. Tell students that they are going to list foods from three parts of American life that will survive under normal archaeological conditions until the year 3000. Divide the class into three groups. Assign each a menu for one of the following meals: 1) a typical dinner at home, 2) a meal at a fast-food hamburger restaurant, and 3) a lunch at a school cafeteria. Have each group list which of the foods (not containers) will survive at a site.

3. After each group has completed its list, have a spokesman from each present the group's conclusions to the other students. Then lead a discussion about other remains (containers, cooking utensils, etc.) that will give information about our food preferences. Remind the students that aluminum, ceramics, plastics, and glass survive a long time, but that paper and ink do not.

4. Discuss what this exercise teaches about archaeological sites of the past. Do archaeologists get a good idea of what people ate? Consider the changes in food preparation and food preferences through time. Can archaeologists ever be sure of all the foods people ate at any archaeological site? Discuss other types of remains that may not be completely preserved at an archaeological site. What about clothing and tools (made of wood, fiber, or bone) that might have been used 1,000 years ago? Would archaeologists find evidence of all of these? When an archaeologist excavates a site that is 5,000 or 10,000 years old and only finds stone points, what does this mean? Discuss the limitations of archaeology because of preservation.

SITES AND THREATS

Rationale

This activity introduces students to: 1) the importance of archaeological sites and 2) the effect of modern activities on archaeological sites.

Objectives

Each student will draw or find a picture of 1) an archaeological site and 2) an activity that harms archaeological sites.

Procedure

Students are to work together to prepare a mural of ways archaeological sites are destroyed.

1. Discuss with the class the importance of archaeological sites. Any place where people have left remains in the past is an archaeological site. Often these sites are the only record in Louisiana of people who lived here years before. Even sites that date to historic times, after Europeans came to the state, provide information about everyday life that cannot be found in written descriptions. This means that archaeological sites contain information that is as important in understanding our cultural past as that contained in books. Just as books are protected in the library, it is important to protect archaeological sites.

2. Have students describe different types of archaeological sites. Suggestions might include Indian campgrounds, Spanish shipwrecks, remains at antebellum plantations, Indian mounds, and historic forts. Hundreds of other specific ideas might be mentioned. It is important for students to know that both historic and prehistoric sites are studied and that both large and small sites give information about the people who lived there.

3. Encourage students to discuss threats to archaeological sites. Any activity that disturbs the ground can harm a site. Threats that should be mentioned include road and building construction, farming, energy exploration, timber harvesting, and artifact collecting. All of these destroy the relationships of the artifacts, and therefore reduce the amount of information that can be obtained from the site.

4. Attach a long piece of paper to the wall. Have students draw or find a picture of an archaeological site and a picture of one threat to that site. Each student will contribute these pictures to form a long mural of sites and threats.

5. Lead a discussion about what can be done to protect archaeological sites. Mention legislation that prevents projects that have federal funding or that require federal permits from proceeding before archaeologists check to be sure no known sites are in the area. All sites on publicly-owned (federal or state) land also are protected in this way. People who own land where artifacts have been found have to make personal decisions about whether to allow destruction of a site. They can help save a site by not disturbing the land in that area and by preventing digging for artifacts at the site. This protects the site for future generations.

STRATIGRAPHY AND CHRONOLOGY

Rationale

This activity gives students an opportunity 1) to practice using logic to solve problems, 2) to learn how an archaeologist uses relative dating, and 3) to learn the terms strata and relative dating.

Objective

During this activity students will place in order, by age, the letters which represent strata at three archaeological sites.

Procedure

Students are to pretend that the three columns of letters below represent cultural strata at three archaeological sites. Every letter is a stratum, with the oldest level at the bottom and the youngest at the top. Each site only has three of the possible eight cultural strata found at archaeological sites in this area. The students are supposed to put all the strata in order, to determine the relative age.

1. Explain to students the importance of relative dating. Sometimes archaeologists are unable to use absolute dating techniques (such as radiocarbon dating) in order to get a calendar date for a cultural level. Instead they will use relative dating to establish that one level (or site) is older or younger than another one. One method of relative dating correlates strata from several test pits at one site or several sites within an area. This exercise illustrates stratigraphic correlation.

2. List on the board the strata from three sites (each letter represents a different stratum).

Site #1	Site #2	Site #3
H	C	H
R	R	C

3. Tell the students to copy these onto their papers and to put these strata in order, with the oldest listed on the bottom line and the youngest listed on the top line. Point out that within each column, the strata are now in order, with the oldest at the bottom and the youngest at the top.

4. The correct order is shown below:

H
C
R

5. Show your students how each "site" above gives unique information about the chronology. Now try "sites" with three strata:

Site #1	Site #2	Site #3
E	G	A
G	A	T
T	T	P

6. The correct order is:

E
G
A
T
P

7. Now try "sites" with four strata:

Site #1	Site #2	Site #3
G	S	J
J	V	N
S	W	Q
W	Z	S

8. The correct order is shown below:

G
J
N
Q
S
V
W
Z

9. Discuss how relative dating helps archaeologists establish a chronology for a region. If it turned out that after excavating 20 sites in a certain area, archaeologists found only eight distinctive groups of artifacts and they could always put them in the same order through relative dating, what could they conclude? This process is the one used by archaeologists to establish chronologies showing the order in which cultures occurred.

ABSOLUTE DATING

Rationale

This activity gives students an introduction to the methods prehistoric archaeologists in Louisiana can use to determine the age of a site.

Objective

Students will demonstrate their understanding of four types of dating techniques by successfully matching the methods with materials they can date.

Procedure

This activity is an exercise in learning and using new vocabulary words.

1. Discuss the concept of the absolute dating techniques. Archaeologists use this term to describe several types of analyses that may determine the approximate calendar date that an artifact or feature was used. This is contrasted with relative dating in which materials are said to be older or younger than others, but no specific age of the remains is assigned.

2. Discuss four methods of absolute dating that archaeologists use:

   a. **Archaeomagnetic dating** is a way of determining when fire hearths were used. Most soil contains some clay that is partially iron ore. When clay is heated, the grains of iron ore line up with the magnetic field of the earth. They remain in this position, even after the clay cools. The earth's magnetic field varies through time, and records of these changes can be compared with the alignment in an archaeological sample, to determine when it was heated. This means that, through archaeomagnetic dating, an archaeologist can tell when a prehistoric fireplace was used.

   b. **Dendrochronology** is a technique for finding out the age of wood at archaeological sites. Certain trees grow rapidly at one time of the year. When a tree like this is cut down, the annual growth spurts can be seen as rings in the trunk

of a tree. The tree rings are then compared with charts that show patterns of rings from the present time back into prehistory. An expert can tell what year the tree was cut. Ordinarily, it is safe to conclude that the tree was used soon after it was cut.

c. **Radiocarbon (Carbon 14) dating** is a method for determining the age of organic remains. This technique is based on the principle that all living things contain carbon and a fraction of all carbon is a radioactive type, Carbon 14. All plants and animals absorb Carbon 14 while they are alive. After they die, the radiocarbon decays at a constant rate that can be measured. Although all substances that have been alive (wood, grass, bone, shells) can be radiocarbon dated, the ideal material is wood charcoal. Radiocarbon dating is the most commonly used absolute dating technique in Louisiana.

d. **Thermoluminescence** is a way of dating pottery. Naturally occurring radioactive materials in the clay give off radiation. Some of the electrons excited by this radiation become trapped in the pottery. When pottery found at an archaeological site is heated to a high temperature, these electrons return to their ground state, giving off light. The more light given off, the longer it has been since the pottery was last at a high temperature. Ordinarily this indicates when the pottery was made, since a high temperature firing is part of pottery manufacturing. Although these techniques are used to determine the age of an archaeological site, students should understand that these techniques are not perfect. Each process has many steps in which error can be introduced. In addition, the processes are still being refined. Students interested in learning more about these methods can read about them in one of the books recommended on the reading lists.

2. List the following archaeological materials on the board. Ask students to decide which absolute dating technique can be used for each sample:

a. wooden roof beam (dendrochronology or radiocarbon dating)

b. woven grass mat (radiocarbon dating)

c. pottery figurine (thermoluminescence)

d. prehistoric fireplace that has no burned wood in it (archaeomagnetic dating)

e. prehistoric fireplace that has large pieces of burned wood and baked clay cooking balls in it (archaeomagnetic dating for the soil around the hearth, radiocarbon dating and possibly dendrochronology for the burned wood, and thermoluminescence for the baked clay cooking balls)

3. Discuss why an archaeologist might use several dating techniques at the same site. Each method had a certain margin of error. If more than one technique is used to determine the age of a single feature, the date will be more likely to be accurate. In addition, an archaeologist will need to use different techniques for different remains found at the site.

DATE CLUES

Rationale

This activity 1) introduces students to a dating technique used in historic archaeology and 2) helps improve logic skills.

Objective

In this activity students will determine the age of a trash dump based on the date various discarded items were manufactured.

Procedure

Several artifacts are described below. Students will pretend that these were found together during excavation of an archaeological site, and will draw conclusions about when they think the site was used.

1. Discuss the conclusions archaeologists can draw about the date a site was used from artifacts found together. The artifacts at an archaeological site are often items that were discarded when they were broken or out-of-date. If archaeologists can determine when these were made, they can get a good idea about when the site was used. Historic archaeologists study sites that date from the years after Europeans arrived in Louisiana. Non-Indian artifacts from historic sites can usually be dated relatively well, because manufacturers kept records of their designs. When archaeologists know the date an artifact was first made, they can conclude that the site was used sometime after that.

When several artifacts are found together during site excavation, and there is no indication of disturbance, the archaeologist can conclude that these were probably left there at the same time. Therefore, the archaeologist uses all the artifacts found together to give an indication of when the site was used.

2. Show the students the list of artifacts below, and tell them that these were found together at a plantation site in Louisiana. Listed on the left is the artifact and on the right is the range of dates during which this type of item was manufactured.

ointment jar: 1780-1830
stoneware plate: 1750-1820

medicine bottle: after 1780
square cut nails: 1790-1820
pipe stem: after 1760
brass button: 1800-1830

3. Have the students estimate when the site was used and discuss their reasoning. If all the objects were discarded at approximately the same time, they must have been left there after 1800. This can be determined because the button type was not manufactured until 1800. It is difficult to say with certainty when the last date is that these items could have been discarded, because any of them could have been used for several years after they were last made. For example, if a china pattern was discontinued in 1950, it could be well cared for and still used into the twenty-first century. Therefore, an archaeologist will hesitate to say with complete certainty when a site was last used.

However, since two of the artifacts listed above were manufactured by 1830, it is likely that these were left at the site around this time. A reasonable conclusion is that the site was used between 1800 and 1830. To be safe, an archaeologist might add 20 years to the latter date, and say the site was used during the first half of the nineteenth century.

POTTERY RECONSTRUCTION

Rationale

This activity gives students an opportunity 1) to create and study pottery, 2) to participate in a common type of archaeological artifact analysis, and 3) to understand why pottery is important to archaeologists.

Objectives

As a result of this activity, each student will 1) design a ceramic pot that later will be broken, and 2) will reconstruct a piece of pottery that someone else has made.

Procedure

Students will be pretending they are pottery makers of the past, present, or future. They will design or decorate a pot, then you will carefully break each one. The students will pretend they are archaeologists as they reconstruct and study the ceramic objects.

1. Discuss with the students the significance of pottery to archaeologists. Early people discovered that clay could be formed into pots and fired at high temperatures. These pottery containers were used for storing food and water and also for cooking. The process of firing the clay not only made the containers useful at the time, but also formed a material that survives for at archaeological sites.

Archaeologists are very interested in studying pottery because it often can indicate how old a site is. For example, through years of study, archaeologists have found that pottery was not made in Louisiana before Poverty Point times. Therefore, whenever pottery is found, archaeologists know it was made after 2000 B.C. Furthermore, three pottery characteristics varied through time: shape, decoration, and temper. (Temper is the name archaeologists give to material mixed with the clay to make the pot stronger and less likely to crack. Various groups of prehistoric Indians used clay, shell, and sand as temper.) Experienced archaeologists can examine a piece of prehistoric pottery and tell, within a few hundred years, when it was made. This is usually a more precise date than any other artifacts will give.

The study of historic ceramics gives even more precise information. Archaeologists compare pieces of china found at an archaeological site with information in reference books to find out the place the ceramics were manufactured, the dates that they were made, and the relative cost of the ceramics. This helps archaeologists determine who lived at the site, when, how wealthy they were, and where they bought their household goods.

2. Have students plan what type of pottery they want to make. They can make prehistoric-type pots out of natural clay or clay bought from a handicraft shop. Try to find clay that will harden without firing unless your school has a kiln. Students can also buy, or bring from home, inexpensive dishes or flowerpots. These can be painted to resemble prehistoric or historic ceramics. Students may even draw pots on construction paper or cardboard. They may choose to duplicate designs of actual pieces found at archaeological sites or may want to create their own designs.

3. Each student should bring materials to make a pot along with a small paper bag. After the students make their pots, break or cut each one into pieces. Archaeologists rarely find all the pieces, so set aside a few sherds from each one and put these in a bag. Then for each pot, place the remaining pieces in a bag.

4. Randomly reassign the bags to students, checking to be sure that no one has the pieces he/she made. Encourage the students to examine the pieces and glue together any that fit. Then have each student estimate the total size of the ceramic piece, describe the process of manufacturing, and guess whether it is supposed to be from the present, past, or future. This information may be written or orally presented.

5. Mix together the remaining sherds. See if students can find the additional ones needed to complete their pots. They will be selecting the appropriate ones by examining color, type of decoration, construction material, and approximate size. These are the same things an archaeologist looks for when analyzing pottery to determine age and origin. Discuss this observation with the students.

SPECIAL TECHNIQUES

Rationale

This activity gives students an opportunity 1) to learn about technical analysis in archaeology, and 2) to think about the problems with untrained people excavating sites.

Objectives

Students will 1) list types of technical analyses used in archaeology and 2) list analyses used in the study of the shipwreck of El Nuevo Constante.

Procedure

Request a copy of the booklet **El Nuevo Constante** from the Division of Archaeology.

Explain to the students the specialized types of analyses that archaeologists use, then discuss how some of these were used in one investigation (of El Nuevo Constante).

1. Discuss with students the importance of specialists in archaeology. Often, the director of an excavation will consult several other scientists who help with site interpretation. These people may be other archaeologists who have specialized in a specific type of analysis or they may be scientists from other fields.

Ask students to name types of archaeological materials that specialists might analyze. Write these materials on the board in a column. Then have students suggest what the analysis can tell; write students' ideas next to the type of analysis. The list below will help you guide the discussion.

a. **Animal bones and shells** found at an archaeological site can be identified by experts. These are sometimes recognized as being altered by people who made the raw materials into ornaments or tools. Other faunal remains of special interest are from animals that people at the site probably ate. Analysis can indicate how much meat was eaten, which animals were most frequently eaten, where the animals were butchered, and which cuts of meats were preferred.

b. **Human bones** at a site are usually excavated and analyzed by a physical anthropologist. This person is trained in recognizing and interpreting these fragile remains. Careful study can show the age and sex of the individuals, their general health, and sometimes, the cause of death. This may lead to an understanding of the average life span of a group of people, some of their common diseases, and whether certain sex or certain age persons were buried in a special way.

c. **Metal and stone artifacts** can be chemically analyzed to determine their purity and the source of the raw materials used. This helps archaeologists to understand manufacturing techniques and to trace trading relationships from one region to another. Microscopic examination may show techniques used to make the artifact, and how it was used. For example, characteristic microscopic wear patterns indicate whether a prehistoric stone tool was used for cutting or scraping, and whether it was used on plants, bones, or skins.

d. Pieces of **prehistoric pottery and historic ceramics** are examined by experienced archaeologists who can recognize and categorize similar pieces based on many traits. These include shape, color, and design of the vessels, the type of clay mixture used, and the firing conditions. Microscopic examination shows what material was mixed with the clay to strengthen it and prevent it from cracking. Analysis can also determine the presence or absence of certain chemical components in the clay. This study helps archaeologists chart variation in pottery through time and across the state. It also shows whether people were making items locally or obtaining them from another area.

e. Stone and ceramic artifacts are often the only types found at prehistoric archaeological sites. However, at historic sites, experts may be asked to identify and describe **firearms, glassware, farm implements, industrial equipment**, and other artifacts.

f. **Plant remains** such as wood, fibers in baskets, nutshells, seeds, and berries are sometimes preserved at archaeological sites. A specialist can tell what plants these are from in order to determine which species were preferred for various uses. Based on the edible varieties recovered, archaeologists can suggest some of the plant foods people at the site were eating. Also, the botanical specialist may be able to tell whether certain remains were from wild varieties or domesticated varieties.

g. **Pollen** from archaeological sites can be recovered from the soil or from artifacts. An expert (palynologist) who examines the pollen microscopically can identify the plant

that produced it. This tells the archaeologists what plants were growing near the site and may show environmental differences between the site then and now. Edible plants that are identified may have been foods that people at the site were eating.

h. **Residues or impressions** in ceramics, pipes or other artifacts sometimes can be identified to show how the artifacts were used. This may tell what was cooked or stored in a container or what was smoked in a pipe.

i. **Samples** of various materials can be analyzed to determine the age of a site (see the **Absolute Dating** activity). These samples are sent to the appropriate laboratory that specializes in archaeomagnetic dating, dendrochronology, radiocarbon dating, or thermoluminescence.

j. **Maps, diaries, drawings, books, newspapers, public records**, and other sources may tell very precisely when a location was occupied, and how it was used.

k. **Soil** at an archaeological site is sometimes examined by a geologist. This study can show the environment at the time the site was used, how the soil was deposited, whether man or nature has altered the soil, and the approximate age of a site. For example, through examination of the soil layers, a geologist might tell whether an earthen mound was natural or man-made, or that a site was once on the shore of a lake.

l. **Remote sensing** techniques help archaeologists identify and interpret sites. Aerial photographs and satellite images can show vegetation patterns that give clues to where sites are buried, and where earthworks are man-made. Underwater archaeological sites (such as shipwrecks) are identified using a magnetometer, side scan sonar, and sub-bottom profiler. These instruments give an indication of what is on the floor of the ocean or on the bottom of the river. All of these remote sensing devices show archaeological remains that are not ordinarily apparent.

2. Using the booklet **El Nuevo Constante**, discuss examples of how specialists helped with the study of this shipwreck. You may want to give this assignment to the students. Using the page numbers below as guides, discuss some of the specialists' findings.

a. animal bones--pages 25-26
b. human bones--none at site
c. metal and stone artifacts--pages 36-37
d. prehistoric pottery and historic ceramic pieces--pages 26-30
e. other historic artifacts--pages 18-25
f. plant remains--pages 16-18, 21, 33

g. pollen--none discussed
h. residues or impressions--page 26
i. samples for absolute dating--not discussed
j. documents--page 12 and others
k. soil--not reported
l. remote sensing--pages 12, 14

3. Lead a discussion about specialists in archaeology. Is it surprising to find out how many scientists contribute to understanding an archaeological site? Is an untrained excavator at a disadvantage in interpreting a site? If specialists are not consulted, is important information lost?

VISIT AN ARCHAEOLOGICAL STATE COMMEMORATIVE AREA

Rationale

This activity gives students a chance to see a major archaeological site and a museum interpreting the site.

Objectives

Students will 1) visit one archaeological site that is open to the public and 2) write an essay about the visit.

Procedure

Two prehistoric archaeological sites in Louisiana are open to the public: Marksville State Commemorative Area in Avoyelles Parish and Poverty Point State Commemorative Area in West Carroll Parish.

1. Decide which site your class can visit, and plan a tentative date.

2. Contact the curator of the commemorative area 1) to be sure the commemorative area is open to the public, 2) to discuss the date and time for your field trip, and 3) to find out what rules should be followed during the class visit. Write or call Marksville State Commemorative Area, Marksville, LA 71351, (318) 253-9546 or Poverty Point State Commemorative Area, HC60, Box 208-A, Epps, LA 71237, (318) 926-5492.

3. Review with your class the importance of each site. You can read about these sites in the booklet **Louisiana Prehistory,** which is distributed by the Division of Archaeology. Another booklet, **Poverty Point**, gives more details about that site. If possible, visit the site before you take the class.

4. Arrange permission, transportation, finances, and itinerary.

5. Visit the site and discuss the significance of the artifacts and earthworks at the commemorative area.

6. Have students write brief essays describing three facts they learned at the site. Encourage them to include any drawings and photographs they made of the site.

ARCHAEOLOGY IN THE LIBRARY

Rationale

This activity 1) gives students an opportunity to learn more about archaeology and 2) shows the importance of publishing archaeological findings.

Objectives

Each student will 1) read an article about an archaeological site and 2) write a brief summary of the article.

Procedure

Your students will be reading reports of archaeological work, if these materials are available in your area.

1. Several national magazines report archaeological finds. These include National Geographic, Smithsonian, and Archaeology, along with national news magazines. Local professional and avocational archaeologists sometimes publish their work in the newsletter and bulletin (Louisiana Archaeology), published by the Louisiana Archaeological Society (LAS). Check your public library to see which of these publications it has, and which are appropriate for your students. The reports in the national magazines are sometimes less technical than those in the Louisiana Archaeology journal. However, if students can handle the technical nature of these articles, these may be of more interest since they relate to Louisiana. Other sources for student reports are books listed on the recommended reading lists and booklets in the Division of Archaeology's Anthropological Study Series.

2. Discuss with your students the ethics of publication. Anyone engaging in archaeological work is obligated to report the finds. Otherwise the information is lost forever. Part of any survey, excavation, or testing project is writing a report of the findings. Archaeologists usually publish their observations in technical journals. These reports are then used by other archaeologists who want to do research in the same geographical area or on a similar site. In this way archaeologists learn from each other and are able to work together to explain the history and prehistory of an area.

Most archaeological reports are highly technical and are difficult for non-archaeologists to understand. However, unusual and significant finds are often described in newspapers, magazines, and booklets for the public. Students can read these reports and enrich their understanding of archaeology.

3. Assign articles for students to read or suggest sources for students to check in order to find reports of archaeological work. Decide whether you want to limit them to research in the state, region, or nation. Make a list of information students should write down about what they read. Suggestions are:

Title and author of article or book
Name (if any) of site(s)
Location of site(s)
Importance of site(s)
What archaeologists found at the site(s)

4. Have the students prepare oral or written reports about their readings.

5. Discuss as a class the new things students learned about archaeology. Did the readings suggest ideas or theories the students would like for archaeologists to investigate? What might happen if archaeologists did not publish their findings?

PREHISTORIC CULTURE CHART

Rationale

This activity helps students 1) to record the changes in Louisiana prehistoric Indian cultures through time and 2) to learn to recognize the cultural traits that archaeologists study.

Objective

As a result of this activity students will prepare a chart comparing Louisiana's prehistoric Indian groups.

Procedure

Using the booklet **Louisiana Prehistory** as a reference source, students will help complete the chart on the following page.

1. Request a copy of **Louisiana Prehistory** from the Division of Archaeology.

2. Either make a large wall chart for the entire class to complete or reproduce the chart for each student to fill out individually.

3. As your class studies each culture, have the students complete the section relating to that culture.

4. Discuss the chart, observing trends that occurred through time. Point out that, although all changes did not proceed in a regular progression, the cultures generally became more complex as time passed.

5. You may want to discuss with your students the arbitrary nature of the "culture" designations. These are labels that archaeologists assign on the basis of similar archaeological remains. When archaeologists excavate sites that are the same age and have similar artifacts and other remains, they say that the people who lived at the sites were of the same culture. This is an arbitrary way of breaking down into units the gradual variations that occurred across the state, through time. This means that what we call a culture might not even have been recognized by the people who were alive at the time.

Directions: For each culture listed on the left, answer the six questions below. Write the answer in the column that has the same number as the question.

	1.	2.	3.	4.	5.	6.
Paleo-Indian						
Meso-Indian						
Poverty Point						
Tchefuncte						
Marksville						
Troyville-Coles Creek						
Caddo						
Plaquemine-Mississippian						

1. During what approximate dates did the people live?

2. Did they live most of the year in the same place? Write nomadic, sedentary, or unknown.

3. What was their main hunting weapon? Write spear, atlatl and spear, or bow and arrow.

4. What did the people grow in gardens? Write nothing, wild plants only, squash, squash and corn, squash, corn, and beans, or unknown.

5. What type of ceremonial centers did they have? Write one of the following: none, horseshoe-shaped earthworks, dome-shaped burial mounds, or mounds around a plaza.

6. What type of clay objects did they make? Write one of the following: none, pottery and clay cooking balls, "footed" pots, Hopewell-style pots, clay-tempered pottery, or elaborate and unusual pottery.

TIME LINE

Rationale

This activity helps students 1) to conceptualize the relatively long period of prehistory in Louisiana and 2) to recognize that the rate of change in cultures increases as the culture becomes more complex.

Objective

During this activity, students will make a time line that shows major cultural changes in Louisiana.

Procedure

Students will draw pictures to represent the way of life of Louisianians for thousands of years. These will be glued on a long piece of paper with dates clearly marked.

1. Request a copy of **Louisiana Prehistory** from the Division of Archaeology. Discuss Louisiana prehistory with the class. Indians first came to the area approximately 10,000 B.C. and have lived here ever since. As far as archaeologists can tell, changes occurred very gradually during the first few thousand years that people lived here. This slow rate of change indicates that the simple hunting and gathering way of life was probably a very effective way to live. As time passed, however, certain technological and social developments took place. Throughout the rest of the prehistoric period, there was a general trend toward increased complexity of society and more rapid changes in patterns of living. This same trend can be seen in Louisiana in the past 200 years.

2. Take to class a roll of paper at least 12 feet long. You can use photocopying paper, shelf paper, or butcher paper. Decide on a scale to use for marking off units of time. For example, one foot might equal 1,000 years. If you have enough paper and wall space, you may want to allow one meter of paper for 1,000 years. This is the easiest proportion to use, and the length of paper allows plenty of room for illustration. Before attaching the paper to the wall, label it with dates from 10,000 B.C. to today, in 500-year intervals.

3. Using the booklet **Louisiana Prehistory** as a guide, assign tasks for illustrating the prehistoric period. A history

textbook can be used for the time since Europeans arrived in Louisiana. You may want to divide students into groups, assigning a culture period to each group. The groups will then select major technological or cultural innovations to illustrate. For example, students might show when the first atlatl was used, when the first pottery was made, when the first corn was grown, and when the first Europeans arrived. Check the selected subjects before students proceed. Be sure the students know when the innovations occurred.

4. Decide whether you want students to draw or paint these on white paper, cut silhouettes out of construction paper, or use another technique. Assemble needed materials. After all illustrations are completed, supervise gluing these onto the time line. Double check dates to be sure illustrations are placed appropriately on the time line.

5. Lead a discussion about the activity and the student's observations. Students may be surprised to see how long the prehistoric period is compared to the historic period, and how relatively recently many innovations occurred. This activity helps illustrate the importance of archaeology, since this is the only way to learn about most of Louisiana past.

ARCHAEOLOGY WORDS

Rationale

This activity helps students review archaeological terms.

Objective

Students will write down one word having to do with Louisiana archaeology for each letter in the term chosen.

Procedure

After you write an archaeology term on the board, vertically, students will write related words horizontally, with each new word incorporating one of the letters in the original term.

1. Decide on a term and how closely related the horizontal words need to be. One example is shown below.

```
F E A T U R E
    R E C O R D I N G
    C U L T U R E
  C H R O N O L O G Y
    A R T I F A C T
    E X C A V A T I O N
  T R O W E L
A N A L Y S I S
    C O N T E X T
M A P P I N G
S T R A T I G R A P H Y
```

2. You may want to list the horizontal word choices for your students or write definitions for the words.

3. Be sure your students understand the meaning of all the words used in this activity.

Games

CULTURE CARD GAMES

Rationale

This activity 1) gives students an opportunity to analyze Louisiana's prehistoric and historic cultures by identifying distinguishing traits and 2) helps students learn characteristics of various Louisiana cultures.

Objectives

After study of Louisiana prehistory, students will 1) list attributes of various prehistoric and historic cultures, 2) illustrate these attributes on cards, and 3) play games with these cards.

Procedure

This activity will be used best as a follow-up to a unit on Louisiana prehistory that precedes a general study of Louisiana history. The free booklet, **Louisiana Prehistory**, can be used to introduce students to the prehistoric cultures.

1. Select seven cultures for students to research. These must each have five distinctive traits. Suggested culture periods are: 1) Paleo-Indian, 2) Poverty Point, 3) Marksville, 4) Late Prehistoric, 5) European-Indian Contact, 6) Antebellum Louisiana, and 7) Louisiana Today. These prehistoric cultures are suggested because they are relatively distinctive. "Late Prehistoric" includes the contemporary Caddo and Plaquemine/Mississippian cultures that had much in common.

2. Divide the students into seven groups, one for each culture period. Then, tell each group to list five to ten traits of its culture period. You should suggest reference material for the students to use. Copies of **Louisiana Prehistory**, and a Louisiana history text may be all that are needed. The students can include dates, typical artifacts, types of crops, and other distinctive characteristics.

3. Have each group tell the rest of the class the traits it has found, and list these on the board. After all groups have had their turns, review each group's traits. Encourage other students to evaluate the suggestions, proposing new ideas and rejecting those that might apply to another category. Help

students decide on five relatively distinctive traits for each category. A list of suggestions follows, to give an idea of the types of things that can be included.

Paleo-Indian
- 10,000 B.C.-6000 B.C.
- nomadic groups
- spears
- mastodons alive
- no pottery

Poverty Point
- 2000 B.C.-500 B.C.
- plummets
- clay figurines
- clay cooking balls
- horseshoe-shaped ceremonial centers

Marksville
- pottery with bird designs
- connections between Louisiana Indians and Hopewell Indians
- platform pipes
- dome-shaped burial mounds
- A.D. 100-A.D. 400

Late Prehistoric
- bow and arrow main weapon
- copper cut in the shape of hands
- A.D. 400-1500
- mounds arranged around a plaza
- first corn, beans, and squash gardens

European-Indian Contact
- trade of skins, food, Indian pottery for guns, metal pots, European ceramics
- Indians and Europeans meet
- Europeans arrive
- Indians get sick with European diseases
- 1540-1800

Antebellum
- first railroad in Louisiana
- heyday for sugarcane and cotton plantations, steamboats
- steamboats
- Louisiana becomes a state
- 1800-1860

Today
- many people live in cities
- interstate highways
- soybeans an important crop
- 1980s
- oil and gas production

4. Tell the students to return to their groups and decide on a way to represent each culture trait symbolically. They may decide to use simple, one- or two-word statements or they may decide to draw some of the traits. Review each group's decisions to be sure the designs are simple enough for each student in the group to reproduce. If your students are just beginning to learn the cultures, they will need to include the culture names on the fronts of the cards

5. Ask students to bring, or provide for them, white, unruled index cards that are 4" x 6". Each student will need ten 4" x 6" cards. These will be cut in half to make playing cards that are 3" x 4". Each student will be making 15 playing cards, but it is a good idea for each to have 20, to allow for mistakes or revisions. Decide whether you want students to use pens, pencils, colored pencils, or other media to make the playing cards. Be sure each student has these.

6. Have the students return to their groups and make playing cards illustrating their assigned culture period. Each student should make 15 cards: three sets of cards for one culture period. When all students are finished, check the cards to be sure they are clear and relatively uniform. Arrange the cards in decks of 35 each (seven culture periods with five cards each). Label all the cards in each deck with a designation (geometric shape, color, number, or letter) on back so cards can be resorted into decks after being shuffled together. You should have one deck of cards for every three students (actually one deck for every 2.33 students).

7. Before playing any games, students should be familiar with the symbols on the cards, and should be able to see a list of cultures and traits. This will help students who do not yet know the traits. You may either write a list on the board or have students write their own lists.

8. Play one or more of the games described on the following pages. Each description tells how many players can use each deck and how many people can play together. Several games can be played simultaneously so all students can participate.

I DOUBT IT

2 to 4 players per deck
up to 10 players per game

Deal all cards to the players. It does not matter if players have different numbers of cards. The first player places one or more cards in the middle of the table, face down, and calls out the number of cards and the earliest culture. For example, "Two Paleo-Indian cards." Actually the cards may be from any culture period. The next player must put one or more cards on the stack, stating the number of cards and the next culture period, chronologically. For example, "One Poverty Point card." Play continues, with each person calling out the culture that is next chronologically.

A player who names a culture out of order must collect all the cards on the table and add them to his or her hand.

After each turn, any player may say, "I doubt it." The last cards played are turned face up. If any card does not belong to the culture stated, the person who played them picks up all the cards in the pile. However, if all the cards are correct, the challenger must take all the cards. If more than one player says, "I doubt it," then the one nearest the player's left gets to be the doubter.

The player who gets rid of all the cards first wins the game. The last cards are played face up.

CULTURE RUMMY

3 players per deck
up to 6 players per game

Shuffle cards and deal seven cards to each player. Place the remaining cards face down in a stack. Players will draw from this stack. Turn the top card over and place it to one side, face up. This will be the discard pile.

The first player draws a card from either the stack or the discard pile. After drawing, the player examines his or her cards to see if there are three or more cards from the same culture period. If so, the player places these face up on the table. More than one group of cards may be played during one turn. The turn ends when the player discards one card from his or her hand and places it face up on the discard pile.

The next player draws, and then may play three or more matching culture cards or may play one or more cards that match those an opponent has played.

The first person to play all the cards in his or her hand wins. If no one has won before the stack of cards has been drawn, then the discard pile is turned face down and is used as the drawing stack.

CULTURE CONCENTRATION

up to 6 players per deck
up to 6 players per game

For this game, each culture period in the deck must have an even number of cards. Remove one card from each culture period. Then, shuffle the cards and lay each card face down, forming columns and rows (for example, six rows of five cards each). No cards should be touching.

The first player turns over two cards, one at a time. If the two are from the same culture period, the player keeps them and turns over two more. If they are from different culture periods, they are turned face down in their original positions, and it is the next player's turn.

The object of the game is to recognize traits from the same culture period and to remember the locations of the cards. The player who collects the most pairs wins.

CULTURE MATCH

up to 5 players per deck
1 deck for the leader
any number of players per game

Shuffle enough decks together so that there is at least one deck for every five players. The more cards that are used, the longer the game lasts. Deal the same number of cards to each player. Each player should arrange the cards so they are face up, with each one visible, and none touching.

Shuffle another deck and keep these face down. Turn over one card at a time, call out the name of the culture represented, and write the name of the culture on a piece of paper or on the board. Each player should examine his or her cards for a trait of that culture period. If there is a match, the player turns over one matching card. Even if the player has several matching cards, only one may be turned over. Allow time for all players to examine their cards very thoroughly before calling out the next culture period.

The player who has all cards face down first announces it to the others. He or she then compares the cards to the list of cultures called. Check to be sure all cards were correctly identified and matched. If the player made no mistakes, he or she is the winner. If an error is found, play continues until another player has all cards face down.

GO DIG (GO FISH)

up to 3 players per deck
up to 6 players per game

Shuffle cards (use two decks if 4 to 6 people are playing). Deal five cards to each player. Place the rest of the cards face down in the center of the table.

One player turns to any other and asks for all cards of a specific culture. For example, "Steve, do you have any Paleo-Indian cards?" The player asking must have at least one card of this culture. The player who was asked must turn over all cards of that culture. The "asker's" turn continues as long as he or she is successful in getting more cards. When the player asked has no cards of the culture, he or she says, "Go Dig!" The player then draws the top card from those in the center of the table, and the turn passes to the next player. (Some students prefer to let the "asker's" turn continue if he or she draws a card of the correct culture.)

When a player gets all five different cards of a culture, he or she shows them to the others and puts them down on the table. When more than one deck is used, two sets of five cards will be formed for each culture. The player who collects the most sets of culture cards wins.

Record a Site

RECORDING AN ARCHAEOLOGICAL SITE

Rationale

This activity gives students an opportunity: 1) to participate in an ethical, nondestructive part of archaeology, 2) to develop an understanding of part of the cultural past, and 3) to help record their area's history by contributing to statewide records of archaeological sites.

Objectives

As a result of this activity, students will: 1) locate an archaeological site on a map, 2) measure the size of the site, 3) draw artifacts from the site, 4) photograph the site and artifacts, 5) describe the site, 6) complete an archaeological site form, and 7) mail that form to the Division of Archaeology.

Procedure

The general process of recording an archaeological site is described below. One way of carrying out the project is to divide the class into teams, with each team having responsibility for certain tasks. The teams that can be used are described later.

1. **Select a site.** In almost every class, at least one student knows about an old cemetery, remains of old buildings, Indian mounds, or areas where artifacts such as projectile points (arrowheads), old dishes, or Civil War minie balls can be found. All of these places are considered to be archaeological sites, and any one can be reported.

2. **Contact the landowner.** You or the students must find out who owns the land, then explain to the owner that the class wants to visit the site and fill out a site form about it. The owner can be assured that the state has no plans to excavate or even visit any site that is reported. Once the form is sent in, only research archaeologists will be able to see it. Their interest will be in finding out about who lived in the area in the past. The owner must give permission for the students to record the site before the students proceed. If tenants are living at the property, they should also be contacted so they will know what the students are doing.

3. **Obtain maps of the area.** The location of the site should be recorded as precisely as possible, so the larger the scale of the map, the better. If the site is in or near a city, a city map will be sufficient. Otherwise, a parish map can be used. Archaeologists record sites on United States Geological Service topographic maps. These can be bought at engineering supply stores and camping supply stores. Another place U.S.G.S. quadrangle maps can be obtained is the state Department of Transportation and Development, Office of Public Works, P. O. Box 94245, Baton Rouge, LA 70804. Each map costs $2.00, and payment must be made in advance by check. The check should be made out to DOTD-Office of Public Works.

Before you try to order a U.S.G.S. map, you must find out either the name of the map or the township, range, and section that the map needs to include. If you are unable to provide this, try using a road map with the area marked. You also need to indicate whether you need a 7.5' or a 15' quad. The 7.5' shows a smaller area, in more detail, than the 15' does. Having a topographic quadrangle will facilitate discussions about the site's geographic setting.

4. **Arrange the site visit.** The time for the class visit to the site should be discussed with the landowner and tenants, if any. Then school officials and parents must give permission for the visit, and transportation must be arranged. The activity will take at least an hour at the site, and you may want to extend it to half a day. You will probably want to visit the site yourself before taking the students there.

5. **Assemble equipment for recording the site.** Students will need to use the following equipment to record the site: map(s), compass, camera, notebook paper, 8 1/2" x 11" white paper, pencils, and a long tape measure or string that is marked off in feet or meters.

6. **Review the planned activity.** A simplified Louisiana archaeological site form is included. Students should be familiar with the kinds of information they will need to record at the site. Also, it is a good idea to discuss your policy about collecting artifacts. As a general rule, it is best for all artifacts to remain at the site, just as they were discovered. This way, they will be in place if, one day, an archaeologist comes to study the site. However, sometimes people collect artifacts from a site if it is being destroyed by plowing, construction, or erosion. Students should understand that those artifacts may be the only record left in Louisiana about a certain group of people who were in a certain place at a certain time. For this reason they are very important.

If you want to consider allowing the students to collect artifacts, several rules should be followed. First, the landowner must give permission. All artifacts legally belong to

the owner, so nothing should be taken without the owner's knowledge. Then, if collecting is permitted, the students drawing and describing the artifacts must have finished these tasks before anyone takes anything from the site. This increases the probability of having a complete record of the types of artifacts at the site. The final suggestion is that any artifacts collected should be kept together in one place. They can be stored or displayed at the school, at a local museum, or at a university. This encourages interest in the study of artifacts and the sharing of artifacts with other people instead of uncontrolled personal collecting, which often leads to the destruction of sites.

7. **Transport students and equipment to the site.** You must make these arrangements in accordance with your school's policies about field trips.

8. **Document the site.** Even if you choose not to use a team approach throughout the activity, you may want to use teams at the site. Suggested tasks at the site for each team are described later. At the site, students will be taking notes about the natural setting, current use of the land, and evidence of past cultures, as well as plotting the site on a map, measuring the site, drawing the artifacts, and photographing the site.

9. **Discuss findings.** You will probably want to have at least two discussion periods about the site--once at the site and once back in the classroom. At the site, take time for the students to sit down on the ground and imagine this site as it was years ago. Based on students' observations, who used this place? Why did they choose the area? How did the people dress? What did they look like? What were the most important things in their lives while they were using the site? What did the area look like than? Later, in the classroom, encourage students to describe their tasks, their findings, and their conclusions based on these findings. This discussion can immediately precede the next step.

10. **Prepare the site form.** The class will fill in the site form, and send it, along with photographs, drawings, and map(s) to the Division of Archaeology, P. O. Box 44247, Baton Rouge, LA 70804.

11. **Clean and store artifacts.** If anyone took artifacts from the site, these should be washed carefully and allowed to dry. Then they should be labeled with the site number that the Division of Archaeology assigns to the site. Archaeologists label artifacts by writing directly on them with an artist's pen and India ink. Then the artifacts may be displayed, returned to the landowner, or stored.

Owner/Tenant Team

Your tasks are listed below:

1. Find out the name and address of the people who own the land where the site is.

2. Find out whether tenants (people other than the owner) live on the property. If so, find out their names and addresses.

3. Visit, telephone, or write the owner and ask permission for your class to visit the site and fill out a form about it. Tell the owner that the form will be sent to the Louisiana Division of Archaeology where it will be part of the confidential files about the parish. The Division of Archaeology has no plans to excavate or even visit any site that is reported. The purpose of reporting the site is to improve the records of each parish, giving a better idea about who lived there in the past. You may want to ask whether the owner will let the class pick up artifacts from the site.

4. If the owner gives permission for you to visit the site, your teacher and class will have to select a date. Your teacher and class will also discuss the class policy about picking up artifacts at the site. Then, you need to contact the owner again in order to

- ask to visit on a specific date
- ask approval for the class policy about picking up artifacts
- ask if you need to notify tenants at the site that you will be coming

5. On the day of the site visit, your job is to write down observations about how the land is being used and whether the site is in danger of destruction because of natural or human actions.

6. When the class fills out the site form, you will provide information for the following categories:

Present Use of Land
Type of Erosion, Development, or Other Site Disturbance
Owner's Name
Owner's Address
Tenant's Name
Tenant's Address

Map Team

Your tasks are listed below:

1. You will need to find one or more maps that show the site area. Discuss with your teacher whether a city map, parish map, or U.S.G.S. topographic map would be best to use.

2. Draw a small pencil dot on the map(s) to show the approximate location of the site. Write directions for reaching the site from your school.

3. Take the maps and a pencil to the site. Study the natural and man-made features of the area to see whether you have marked the site in the correct location.

4. Work with the measuring team to draw the outline of the site, to scale, on your map(s).

5. Review your written directions for reaching the site. Can these be improved?

6. When the class fills out the site form, you will provide information for the following categories:

   Parish
   Instructions for Reaching Site from Nearest Major Road

You will also provide a map that clearly shows the site. This will be sent with the site form to the Division of Archaeology.

Measuring Team

Your tasks are listed below:

1. You must arrange for your class to have a compass and a tape measure to use at the site. The tape measure should reach at least 12 feet. If you know that the site is a large one, you will want to use a longer tape or you may make a measure by marking off feet or meters on a long string or rope.

2. Take the compass, tape or string measure, pencils, and paper to the site. Find what you think is the center of the site and mark it with a notebook or a piece of paper. Determine which way is north, using the compass. One person should walk north from the center of the site to the edge of the site (where there are no more artifacts or indications of the site) and should wait there. Another person should walk from the center to the southern edge of the site and should wait there. Other students will measure from the northern edge of the site to the southern edge of the site. This distance is the site size, north to south. Write this down. Repeat the process in order to determine the site size, measured from the eastern edge to the western edge.

3. Observe the site to see if its outline is regular. Is it generally circular, oval, rectangular, or is it an unusual shape? Sketch the outline of the site.

4. Work with the map team to draw the correct size and shape of the site on the map.

5. When the class fills out the site form, you will provide information about the site size. A copy of your sketch map, that shows the outline of the site, will also be sent along with the site form to the Division of Archaeology.

Site Description Team

Your tasks are listed below:

1. Take pencils and notebook paper to the site. You are responsible for observing and describing the site in general. You will make notes about all the things that let you know that this is an archaeological site. For example, you may see one or more of the following things: earthen mounds, gravestones, old buildings, or artifacts on the ground. Describe on paper as many details as you can about the site. If you notice that certain features are clustered in one area, or if you can estimate the size of the features you observe, write this down.

2. When your class fills out the site form, you will provide information about the following categories:

   Characteristics of Site
   General Site Description

Artifacts Description Team

Your tasks are listed below:

1. Take pencils and 8 1/2" x 11" white paper to the site. You are responsible for observing and drawing the different types of artifacts at the site. You will draw as many different types of artifacts as possible by tracing their outlines on white paper. You can sketch on the drawings any designs you see on the artifacts. You should replace the artifacts on the ground where you found them, after tracing.

2. After you have walked all over the site, estimate how many artifacts you have seen. This may be as few as zero or as many as thousands. If you are having difficulty estimating the total number of artifacts, you can estimate the density, instead. You do this by finding an area that seems to have an average number of artifacts. Mark off a square that is a foot, or a yard, or a meter on each side (the measuring team can help you). Then count the total number of artifacts in the square. Write down the number of artifacts you found and the size square where you found them. This is the artifact density.

3. When your class fills out the site form, you will provide information about the following categories:

   Kinds of Artifacts
   Estimated Number of Artifacts (total number or artifact density)

Copies of your drawings will also be sent along with the site form to the Division of Archaeology.

Photography Team

Your tasks are described below:

1. Take a camera and film to the site. Your team is responsible for photographing the artifacts, the site as a whole, and any interesting features (buildings, mounds, grave markers) at the site. You will need to ask the measuring team which way is north so you can take at least two photographs of the site looking north. Each time you take a photograph, you need to write down what the subject is, what the date is, who the photographer is, and, if possible, what direction the photographer is facing.

2. After the photographs are developed, you will transfer the notes about each photograph to the back of each picture. You can either write directly on the back or on adhesive labels that are then placed on the backs of the photographs.

3. You will select the photographs that show the most about the site so they can be sent along with the site form and maps to the Division of Archaeology.

Community Contacts and Natural Setting Team

Your tasks are described below:

1. Talk to parents, people who live around the site, and to older people in the community to find out what the site was like in the past, and whether it is different today. Write down what the people tell you. Ask them if they know of anyone who has artifacts from the site. Write down the names (and addresses, if possible) of these people.

2. Take notebook paper and pencils to the site. At the site, you will be doing something completely different. You will examine the natural setting of the site. Is the site area the same general elevation as the surrounding area? Is it near water? Are there any other characteristics of the natural setting that might have made this place more useful than the surrounding area? Write down anything you observe.

3. When your class fills out the site form, any information you have about people who have artifacts from the site will be recorded in the section labeled "People Who Have Collections from the Site."

4. All other information you have collected about what the site was like in the past and about the natural setting of the site will be recorded in the section of the site form labeled "Additional Comments."

Teacher Only

An outline of your tasks are reviewed below:

1. Select the site. Visit it to be sure it really is a site.

2. Work with the owner/tenant team to be sure permission is granted for the class to record the site.

3. Work with the map team to decide which types of maps should be used. You may want to buy or order a U.S.G.S. topographic quadrangle.

4. Decide what your policy is on students collecting artifacts. Be sure this is discussed with the landowner and the students.

5. Make arrangements for the site visit, including date, time, transportation, length of visit, parent supervisors, etc.

6. Be sure students have been able to assemble all the equipment needed.

7. Review the site form with the students before the visit, and be sure each team understands its job.

8. Supervise site visit, helping any students who need help. Lead a discussion about the people who once used the site.

9. Back in the classroom, help teams organize their findings and conclusions. Coordinate presentations of these.

10. Assign a person to fill out the site form. Each team may need to present a written contribution, showing how its findings should be recorded on the form.

11. Lead "whole class" discussion of additional information to be added to the form.

12. Photocopy the form, photographs, and maps and send the originals (if possible) to the Division of Archaeology.

13. If artifacts were collected, supervise careful washing, and later labeling, of artifacts. These should be stored carefully, at the school, a museum, or a university, or they may be displayed. If artifacts are to be exhibited, students may want to display copies of their maps, site form, and notes along with the artifacts.

Whole Class

The tasks that the whole class will do are listed below:

1. Decide on a name to call the site. If people in the community always call it by a certain name, then that should be recorded on the site form. If there is no common name, or in addition to this name, you may give a name to the site. The name(s) should be recorded on the site form in the Site Name section.

2. Be sure the name of the class, the school, the school's address, and the school's phone number are filled in on the site form in the space indicated.

3. See if anything else can be added to the form. Students may have information that will supplement that gathered by another team. Any information that relates to the site but that does not fit in any other spot can be added as Additional Comments.

Please mail this to:

DIVISION OF ARCHAEOLOGY
P. O. BOX 44247
BATON ROUGE, LA 70804

Site Name (if any) _____ Parish _____

Instructions for Reaching Site from Nearest Major Road _____

_____

_____

Owner's Name _____

Address _____

_____

Tenant's Name _____

Address _____

_____

Characteristics of Site: mound(s) ____, scatter of artifacts ____,

shell heap(s) ____ old building(s) ____, other: _____

General Site Description _____

Site Size _____

Kinds of Artifacts: bones _____, shells _____, stone chips _____,

Indian pottery pieces _____, projectile points (arrowheads) _____,

beads _____, pieces of old dishes _____, old bottles _____ ,

other: _____

Estimated Number of Artifacts _____

Present Use of Land _____

Type of Erosion, Development, or Other Site Disturbance _____

_____

People Who Have Collections from the Site:

Name _____

Address _____

_____

Name _____

Address _____

_____

Your Name _____

Address _____

_____

Telephone Number _____

Date _____

Additional Comments:

IF POSSIBLE, PLEASE ACCOMPANY THIS FORM WITH A ROAD MAP WITH THE SITE MARKED, PHOTOGRAPHS OF THE SITE, AND SKETCHES OF REPRESENTATIVE ARTIFACTS.

Interpret a Site

WHAT HAPPENED AT SITE X?

Rationale

This activity provides an opportunity for students 1) to participate in interpretation of remains from an archaeological site, 2) to find out what information artifacts, features, and written records provide, and 3) to learn about an important site in Natchitoches Parish.

Objective

From information about an archaeological site, students will write answers to questions about how the site was used, who used it, and when it was used.

Procedure

This activity is based on actual reports of archaeological work at Los Adaes, an eighteenth century Spanish fort in Natchitoches Parish. You will divide students into teams, giving each team a portion of the information about the site. Each team will then interpret the information and share its conclusions with the class.

1. Review the material provided. It is designed to include a general introduction, specific information for each team to digest, and conclusions drawn by the archaeologists who studied the site. You will probably use these summaries or conclusions for reference only, to suggest alternative ways to interpret the findings. There are no conclusions included for the written records information, since the other students provide the answers to what might be found at the site.

2. Decide how many teams to have and which students to have on each team. The written records assignments are the most demanding, so you may want to consider this when choosing students for the teams. You may have up to nine teams (two written records teams, two artifacts teams, and five features teams). However, you may reduce the number of teams by combining the artifacts teams or combining the features teams.

3. Reproduce the assignment pages. Ideally, each student should have a copy of his or her team's assignment.

4. Divide students into teams. Introduce the activity by either giving each student a copy of the page labeled "General Introduction" or by telling the students the information on that page. Be sure they understand what features are.

5. Pass out the work sheets and instruct students to write down their conclusions.

6. Ask students to present their interpretations. Let the written records teams go first, but ask the students to report only the artifacts and structures they expect to be at the site, not the name of the site or how it was used. Then ask the features teams to report, giving a description of each feature and the team's interpretation. Finally, the artifacts teams should tell about the artifacts and their conclusions.

7. Have the written records teams tell the name of the site, when it was used, how it was used, and who used it. Then encourage students to review their conclusions about how the features and artifacts were used.

8. Discuss with the students what they learned from only having part of the information about the site. It is hoped that this helped students understand the complexity of archaeological interpretation. Study is not based on artifacts, features, or written records alone, but by a combination of these. Students also need to recognize that the more complete the site is, the more complete the archaeologist's understanding of it is. If construction destroys half the features or if looters take half the artifacts, the site will be less well understood than if it is intact.

During this exercise, the written records team(s) may have predicted several features and many artifacts that the other teams did not know about. These may once have been at Los Adaes. Unfortunately, people have taken hundreds of artifacts from the site, and construction has affected some of the features. This means that archaeologists do not have a complete record of the site.

Fortunately, however, the importance of Los Adaes was recognized before the site was damaged any further. Archaeologists hope that this will be the trend in the future. If an important site cannot be protected from destruction, it is hoped that it will be studied before all information is lost.

GENERAL INTRODUCTION

Site X is an actual archaeological site somewhere in Natchitoches Parish. Archaeologists have tested the site, excavating only portions of it. From their study of Site X, they were able to discover many things about the site. They found out what it was, who used it, how it was used, and when it was used. You are going to try to do the same thing today.

The archaeologists combined information from the **written records**, from the **artifacts**, and from the **features** to learn about the site. You are going to do this, too. You will be divided into teams, and each team will get some information. Your team will try to draw conclusions about Site X. Then everyone will share ideas to get a more complete picture of life at the site.

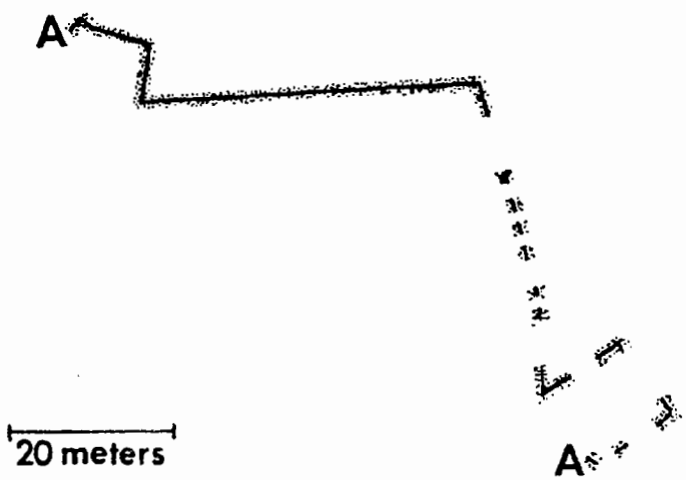
Written records give background information about Natchitoches Parish. The written records teams will be the only ones that know exactly where the site is. By studying the history of the parish, these teams will find out the name of the site, when it was used, and will predict what was found at the site.

The **artifacts** teams will have a list of tools and objects excavated from all over the site. These teams will have to find out about artifacts that no one else will know about.

Five teams will study information about **features**. They will be able to discover information about specific areas of the site. At Site X, the features were places with 1) soil that was different from nearby areas, and 2) artifacts that were grouped together. The archaeologists drew maps of these features and also kept records of what artifacts were found there. Sometimes it is relatively easy for an archaeologist to figure out how a feature was used. For example, if archaeologists found a small area with a lot of burned wood, a stainless steel fork and some fishbones, they could conclude that this was a place where fish were cooked, and that the camp fire or fireplace was probably used recently, after stainless steel forks were manufactured.

At Site X, the evidence is a little more complicated. You may come up with several logical ideas about how the features were used. After all the teams discuss their conclusions, you will have a chance to change your interpretation. Then, you can compare your ideas with those of the archaeologists.

FEATURE A: EVIDENCE



The solid and dotted lines show areas where archaeologists have found Feature A. The spaces between the lines are places where archaeologists have not excavated.

Archaeologists found out that Feature A was a trench 90 centimeters deep and 1 meter wide. Oak and cedar posts had been placed standing up in the trench, one next to the other. The posts were 8 to 10 centimeters in diameter. From excavation, archaeologists could not tell how tall the posts once were.

Pieces of sandstone and siltstone were found wedged in the trench, next to the posts. Also in the trench around the sandstone, archaeologists found clay, large iron spikes, and pieces of ceramic dishes. The ceramics were made in Mexico, Spain, and France between 1690 and 1740.

What was Feature A?

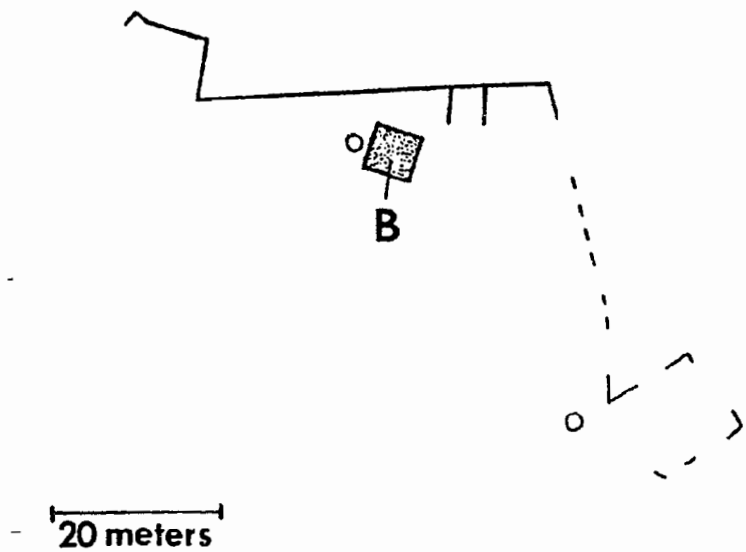
How was it used?

Who used it?

When was it used?

What else can you conclude?

FEATURE B: EVIDENCE



At Feature B, archaeologists discovered cedar posts that are 8 centimeters in diameter. The posts had been driven into the ground approximately 30 centimeters apart. They formed the outline of a square, 6 meters on each side. The places between the posts were filled with a mixture of moss and mud. Large wooden beams had fallen into the middle of Feature B. The shaded square on the map shows the location of Feature B.

All around the feature archaeologists found handmade nails that look like ones used in buildings built in Texas and Mexico in the 1700s. Inside Feature B, archaeologists found pottery cups made by Indians. Pieces of Chinese porcelain dishes were both inside and outside of Feature B. Chinese porcelain was shipped all the way from the Orient to Mexico by boat. Then a mule train carried it to its new destination. Almost all of the porcelain found at Site X was from Feature B.

What was Feature B?

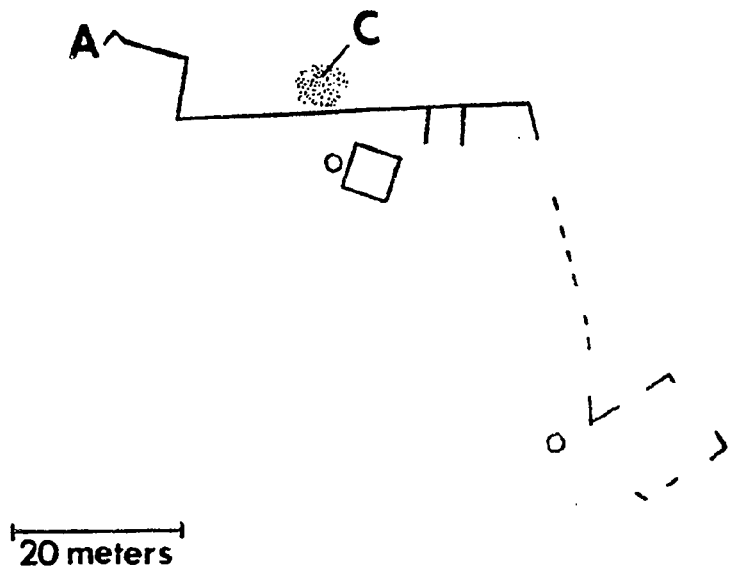
How was it used?

Who used it?

When was it used?

What else can you conclude?

FEATURE C: EVIDENCE



Feature C is in a slight depression next to Feature A. Feature C was covered with a layer of a white powder called lime. Archaeologists found scattered animal bones, pieces of dishes, pieces of Indian pottery, pieces of stones used to grind grains and nuts, and several corncobs. The corn was a variety that is not grown in Louisiana today. Two short oak shingles were also found along with five gunflints and two buttons.

What was Feature C?

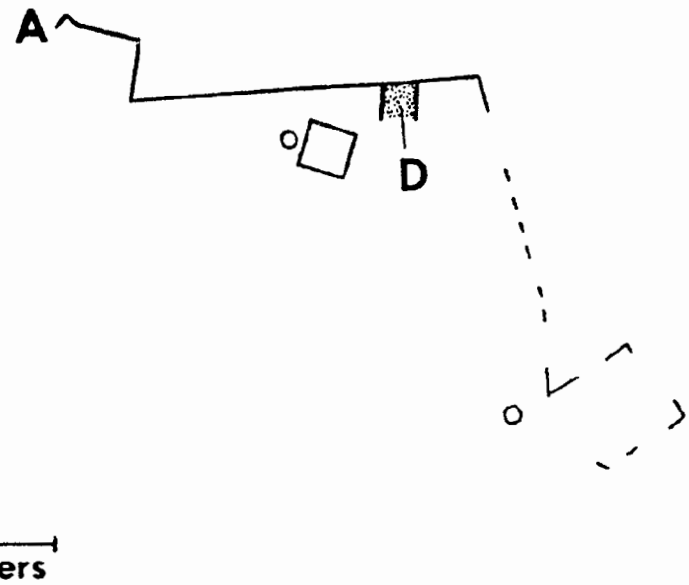
How was it used?

Who used it?

When was it used?

What else can you conclude?

FEATURE D: EVIDENCE



At Feature D, archaeologists found two rows of closely spaced posts that had been placed in the ground standing up. These are shown as black lines at Feature D on the drawing. The rows of posts met another row of posts from Feature A. Inside these, in the area shaded gray on the drawing, archaeologists found a spur that looks like ones made in Spain between 1710 and 1740. They also found a chain for a horse's bridle, an iron saddle piece, made in Spain, and knives. The three knives were made in France in the 1700s and brought to Louisiana for trade to the Indians.

What was Feature D?

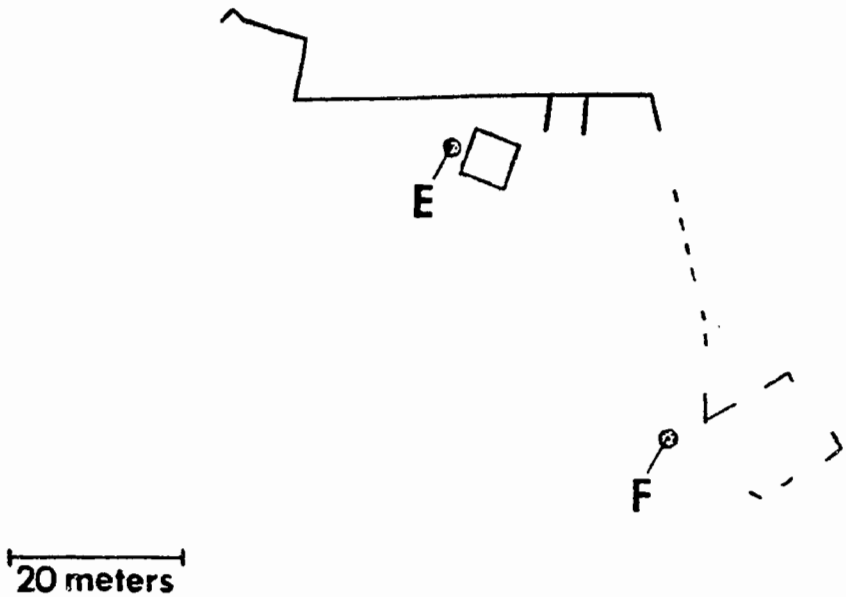
How was it used?

Who used it?

When was it used?

What else can you conclude?

FEATURES E AND F: EVIDENCE



Features E and F are very similar. They are both holes in the ground, approximately 3 meters deep. At the top, the holes are 1 1/2 meters across and at the bottom they are approximately 1/2 meter across. When archaeologists excavated them they found that the holes were completely filled with animal bones, broken Indian pottery, broken European-style dishes, sand, clay, and dirt. When these were removed from the features, archaeologists saw leach lines on the inside of the holes. Leach lines occur when water seeps through earth, and a small amount of white material stays on the surface.

The Indian pottery found is Caddoan pottery, made by Indians in northwestern Louisiana, southwestern Arkansas, eastern Texas, and eastern Oklahoma. The designs on the pottery are the type that were used after 1650. The European-style dishes were made in Mexico sometime between 1690 and 1730.

What were Feature E and Feature F?

How were they used?

Who used them?

When were they used?

What else can you conclude?

WHAT THE ARCHAEOLOGISTS FOUND: PAGE A

Animal Bones:

cow
deer
horse
pig
elk
goat
chicken
duck
alligator gar
channel catfish
turtle
alligator
freshwater mussel

Indian Pottery:

7,952 pieces
almost all were types that Caddo Indians made in the 1700s
almost all were like those found at sites in northwestern Louisiana and eastern Texas
16 pieces were like those found at a Spanish mission site near San Augustine, Texas
14 pieces were made by the Choctaw Indians (they lived in Mississippi)
19 pieces were made by the Natchez Indians (they lived near the modern city of Natchez, Mississippi)

Other Dishes and Pottery:

1,025 pieces
48% were made in France
33% were made in Mexico under Spanish direction between 1690 & 1740
12% were made in the Orient and shipped to Louisiana via Mexico

Based on the artifacts archaeologists found at Site X, what do you conclude about the site?

How was Site X used?

Who used Site X?

When was it used?

Why were the animal bones at the site?

WHAT THE ARCHAEOLOGISTS FOUND: PAGE B

Small Artifacts:

glass beads made in Italy or Belgium between 1720 and 1770
brass rings
bracelets
thimbles from Spain
scissors
folding knives of a type made in France and traded to Indians in the United States during the 1700s
pieces of French wine bottles
lumps of vermillion (red pigment used to color the skin)
buckles
tiny, fancy, brass buttons
pewter buttons with glass pieces set in them
grinding stones
keys
handmade nails
Spanish spur
chain from a bridle
iron saddle parts

Weapons:

knives made in Spain and Mexico
Spanish muskets of the type Spanish soldiers used in 1700s
Spanish flintlock pistol--1700s design
French rifles of the type traded to Indians before 1750
shot
musket balls
short Spanish swords
gunflints

Based on the list of artifacts archaeologists found at Site X, what do you conclude about the site?

How was Site X used?

Did people live here?

Who used Site X?

When was it used?

What did people at the site wear?

WRITTEN RECORDS: DESCRIBE THE BUILDINGS

Pretend you are an archaeologist. You have just found a site in Natchitoches Parish called **Site X**. Its location is marked on the map. You want to find out several things:

- -the name of the site
- -when it was used
- -who used it
- -how it was used
- -what types of buildings were probably once there

At Site X you find so many artifacts that you think this must have been a very important site. The artifacts look like ones Indians and Europeans made around 1700. You read about local history to find out why so many European and Indian artifacts would be found together at one place. After reading, you narrow the possible sites down to two: a French fort called St. Jean Baptiste and a Spanish military post called Los Adaes. Pictures of these are on another page.

The French fort was built in 1701 at a place that later became the town of Natchitoches. The Spanish post was built northeast of the present town of Robeline in 1723. This was very near a mission that the Spanish had built for the Caddo Indians a few years before.

Look at the map that shows where Site X is located. Based on the map and on the information in the paragraph above, answer the following questions:

What is the real name of Site X? _____

What kind of place was it? _____

Who lived there? _____

When was it built? _____

The Spanish, French, and Indians began trading with each other. The thousands of Caddo Indians who lived in the area were farmers and traders. They supplied their Indian neighbors, as well as the French and Spanish, with salt, horses, and cattle. The French and Spanish gave them things from Europe.

Small groups of Indians from other tribes also came into the area to hunt and trade.

The Spanish people at Los Adaes and the French people at Fort St. Jean Baptiste were supposed to be enemies. Actually, they helped each other. The French supplied the Spanish with European manufactured goods and with food (wheat, corn, rice, beans, tobacco, melons, potatoes, and vegetables). The Spanish supplied the French with horses, cattle, dyes, sugar, imported tobacco, and silver.

This trading relationship ended when the Louisiana territory was ceded to Spain in 1763, at the end of the French and Indian War. From that time, St. Jean Baptiste was no longer used as a French fort. In 1773, the Spanish abandoned Los Adaes.

Now, answer these other questions:

When did the people stop living at Site X? _____

Who, other than the people living at Site X, might have built shelters near at Site X? _____

What buildings were probably at and around Site X?

_____

_____

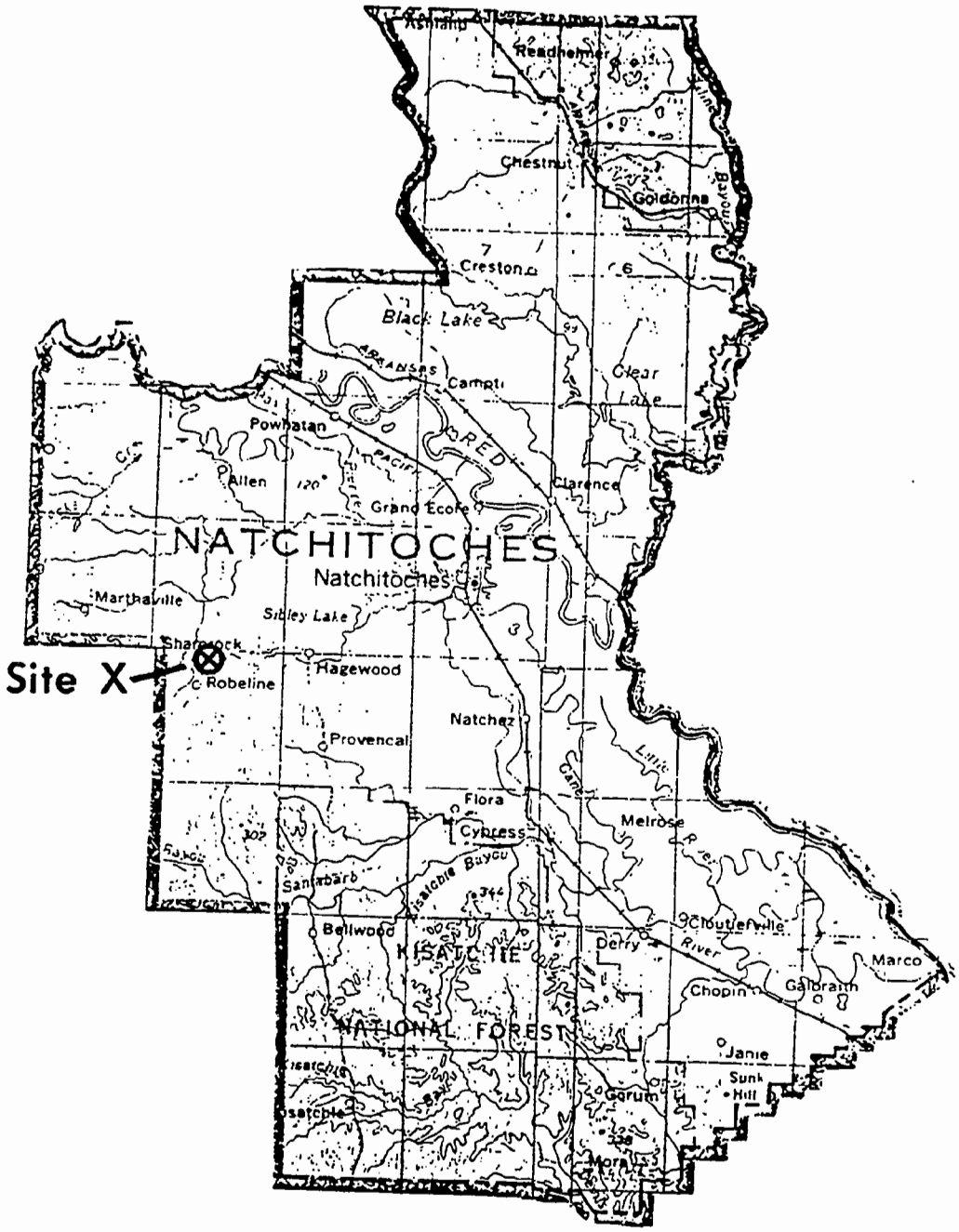
_____

_____

Keep all of this a secret until your teacher asks you to tell about it.

First, you will tell about buildings that might have been at the site. Don't tell anything else.

Later, you will tell everyone what else you found out about the site.



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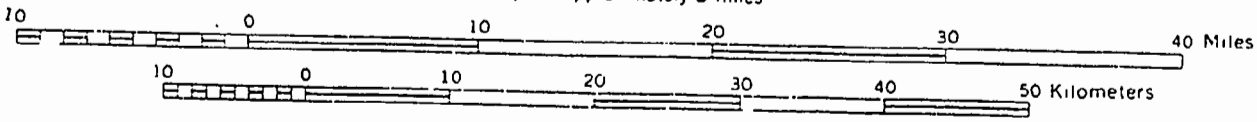
1 inch equals approximately 8 miles



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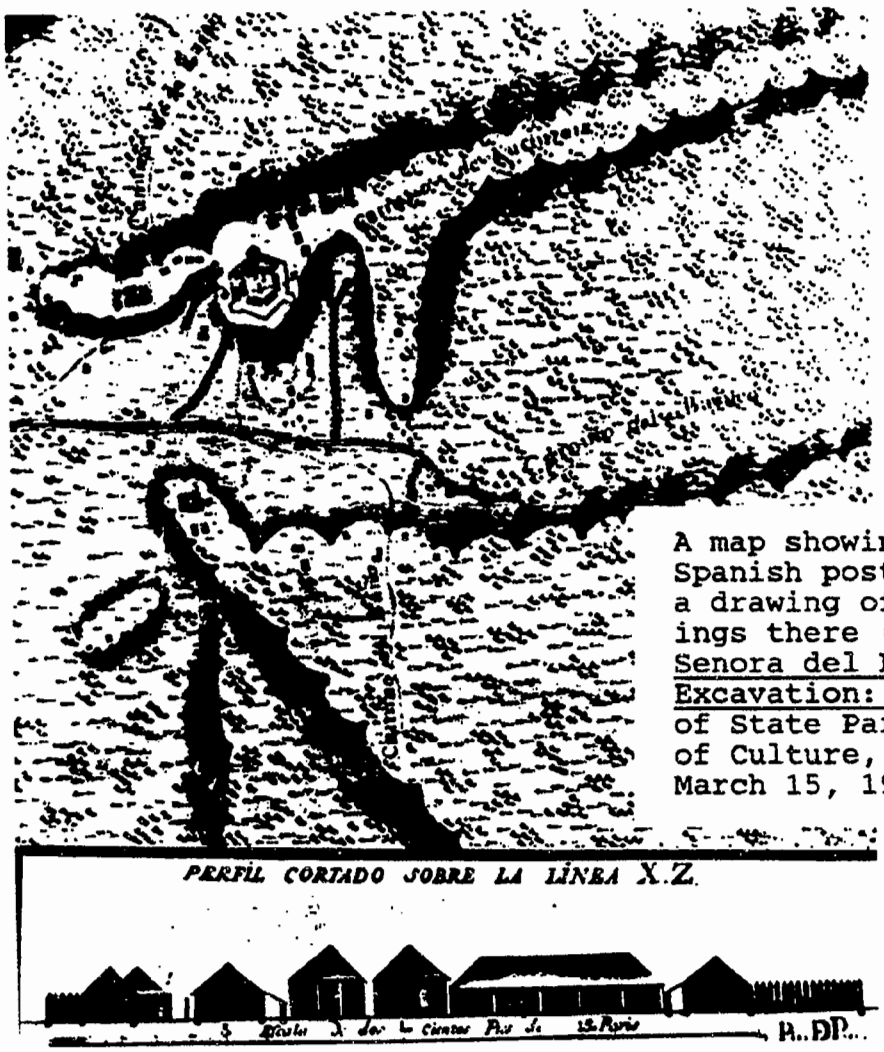
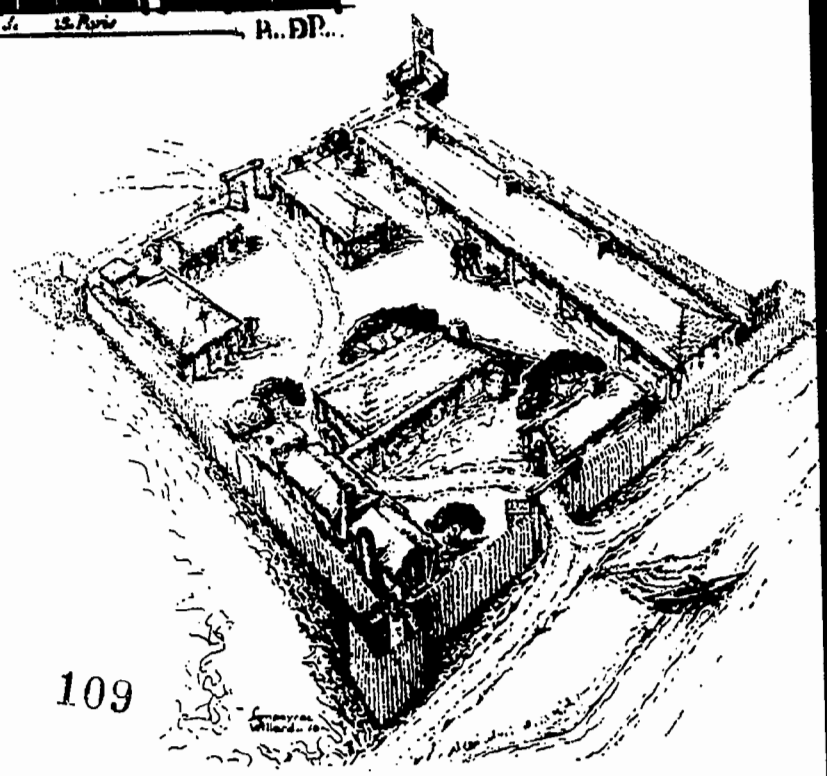


A map showing the six-sided Spanish post of Los Adaes, and a drawing of some of the buildings there (from Presidio Nuestra Senora del Pilar de los Adaes, Excavation: 1979, for Division of State Parks, State Department of Culture, Recreation and Tourism, March 15, 1980).



A drawing of the French Fort St. Jean Baptiste, in Natchitoches, (from Louisiana: A Narrative History, 3rd ed., by Edwin Adams Davis, Claitors Publishing Division, Baton Rouge, 1971).

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WRITTEN RECORDS: DESCRIBE THE ARTIFACTS

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This trading relationship ended when the Louisiana territory was ceded to Spain in 1763, at the end of the French and Indian War. From that time, St. Jean Baptiste was no longer used as a French fort. In 1773, the Spanish abandoned Los Adaes.

Now, answer these other questions:

When did the people stop living at Site X? _____

Who, other than the people living at Site X, might have left artifacts at Site X? _____

What artifacts would archaeologists find at Site X?

_____

_____

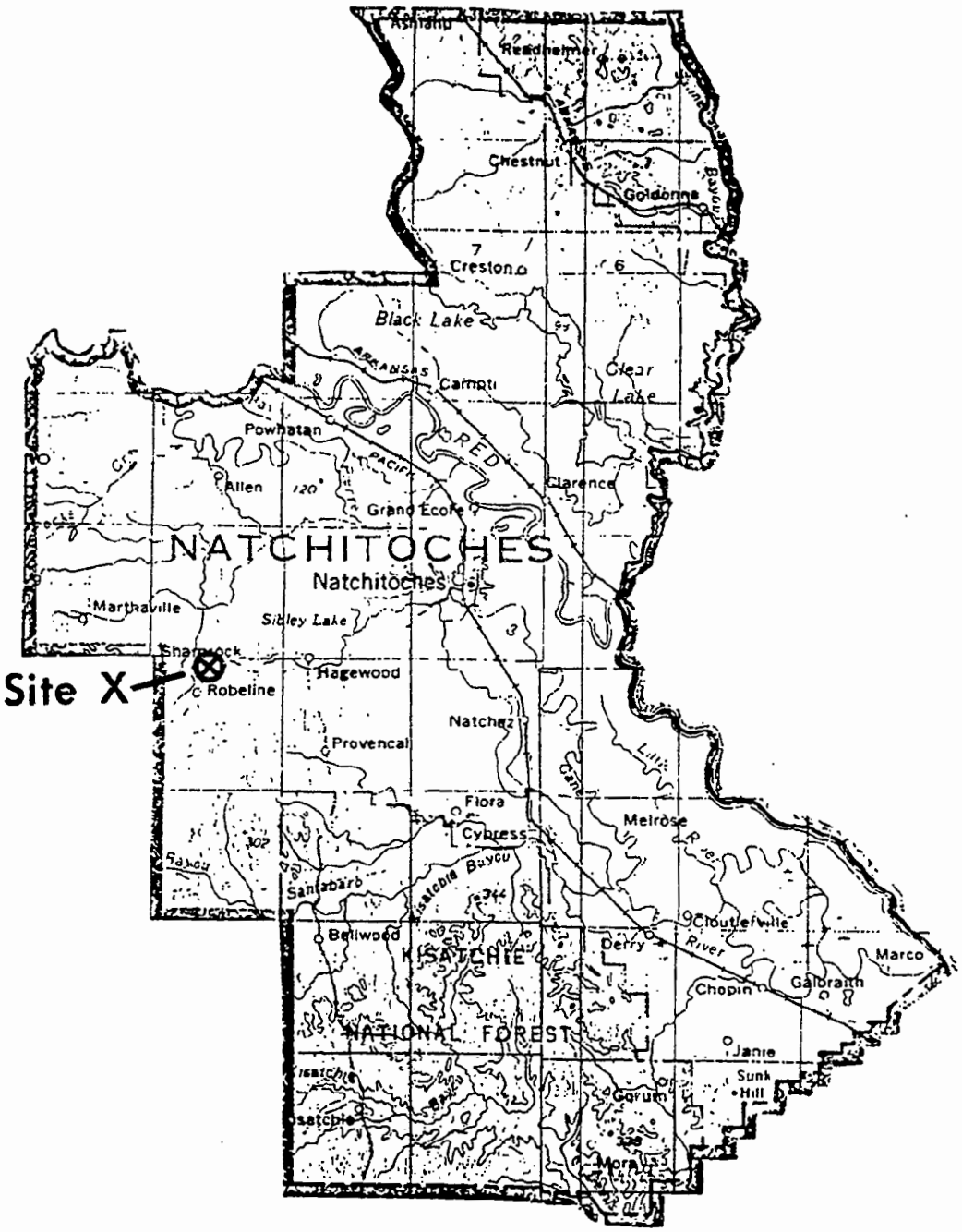
_____

_____

Keep all of this a secret until your teacher asks you to tell about it.

First, you will tell what artifacts might have been at the site. Don't tell anything else.

Later, you will tell everyone what else you found out about the site.



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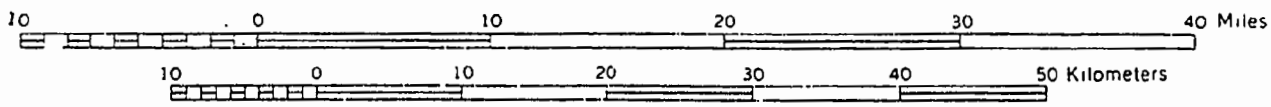

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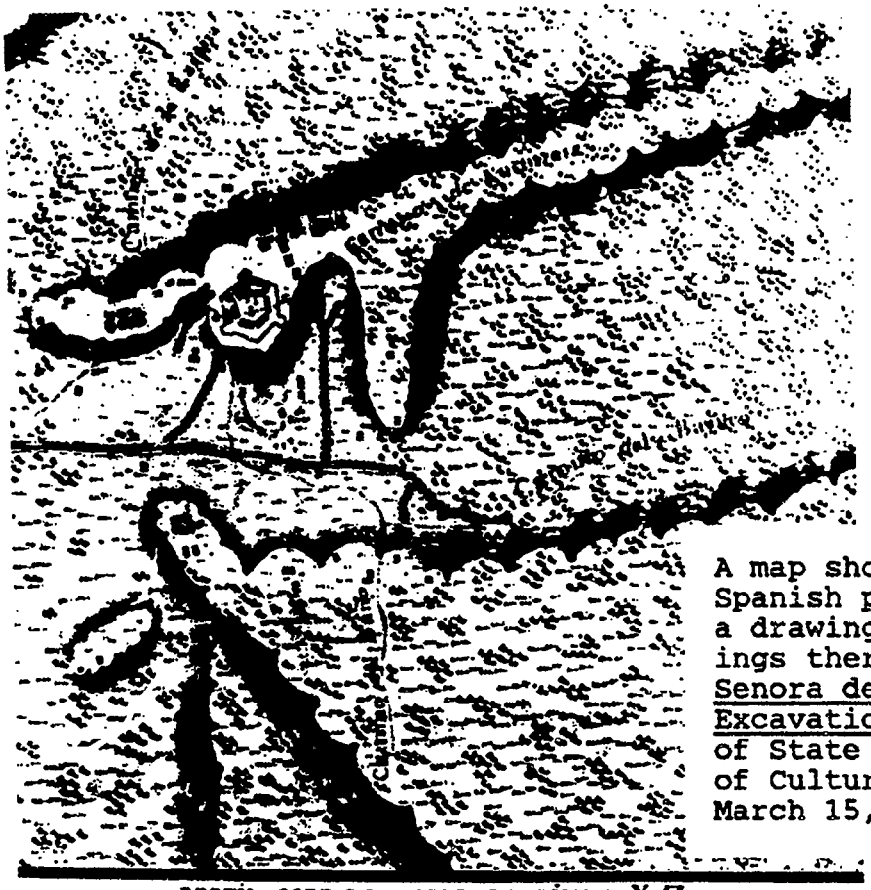

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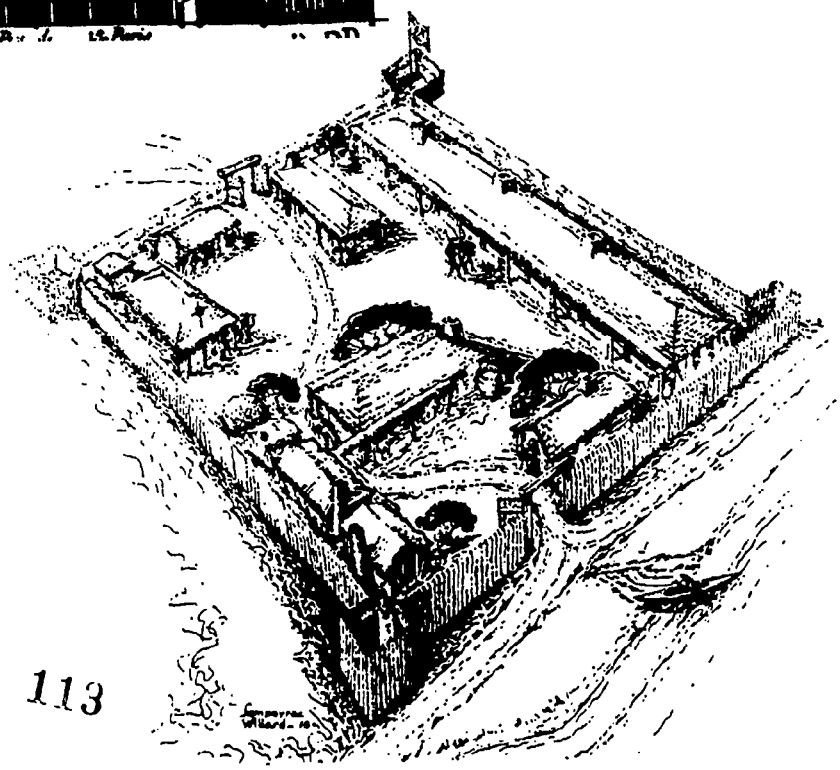

A drawing of the French Fort St. Jean Baptiste, in Natchitoches, (from Louisiana: A Narrative History, 3rd ed., by Edwin Adams Davis, Claitors Publishing Division, Baton Rouge, 1971).

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FEATURE A: CONCLUSIONS

Archaeologists conclude that Feature A is the area where the stockade was built. A tall fence was built to provide a fort for the soldiers who worked at Los Adaes. The poles stood upright in a trench and were held in place by large pieces of rock. The spaces between the rocks were filled with clay, broken dishes, and other trash. Large iron spikes were once on the posts that made up the wall.

The dates of the ceramic pieces tell when they were made. They were used sometime after that. So the earliest that they might have been put in the trench is 1690. This gives a general idea of when the wall was built.

FEATURE B: CONCLUSIONS

Archaeologists think that Feature B was the Governor's house. The Spanish territorial governor lived there when he was at Los Adaes. At other times, the military captain or important guests probably stayed there.

The posts found at Feature B went from the ground to the roof of the house. The walls were then made of mud mixed with moss. The large beams found inside were roof beams that had fallen down.

Nails were commonly found because they were used to build the house. They resembled ones from Mexico and Texas because the same people (the Spanish) built all the buildings during the 1700s.

Chinese porcelain must have been very expensive because of the cost of shipping it all the way from the Orient to Los Adaes. Only an important person could have afforded to own the porcelain. Since this house is where most of it was found, the house probably belonged to the most important person to use the post: the governor.

FEATURE C: CONCLUSIONS

No one knows for sure why this depression was covered with lime. Archaeologists think it may be for the same reasons that people in the area lime their yards and areas along the edges of their houses today. They say the white powder keeps down weeds and grass, and keeps the yards looking clean.

Because of the goods associated with cooking, archaeologists think Feature C may have been an outdoor kitchen. The oak shingles may once have been on the roof of the shed or shelter over the kitchen. The gunflints and buttons may have been accidentally dropped nearby or may have been thrown there when the inside of the post was cleaned.

Many people who came to Los Adaes camped or lived outside of the enclosed area. They may have sometimes cooked at this shelter near the wall. French and Spanish soldiers and traders as well as Indians visited and lived at Los Adaes.

FEATURE D: CONCLUSIONS

The pieces of bridles, saddles, and spur show that Feature D was a place where these were kept. The posts were part of the walls of a barn or storage shed for horses' supplies. The people who rode the horses could have been Spanish, French, or Indian. However, the spur and saddle pieces were Spanish, so the owners were probably also Spanish.

The French trade knives could have been dropped by anyone: a French trader, or an Indian or Spanish person who received them in trade.

The artifacts show that Feature E was used during the 1700s and probably between 1710 and 1760. The spur couldn't have been used before 1710, and it was probably used within 20 years of the last time it could have been made.

FEATURES E AND F: CONCLUSIONS

Features E and F were wells inside the stockade at Los Adaes. They were relatively shallow and the sides sloped in so that rainwater was funneled into them. This way they were used as cisterns. The leach lines were formed when water in the wells seeped through the walls. For some reason, people stopped using the wells and filled them with trash. This must have happened after 1690, since this is the earliest time the Mexican dishes were made.

WHAT THE ARCHAEOLOGISTS FOUND

PAGE A: CONCLUSIONS

The Spanish military post at Los Adaes was a place for trade between Indians and Europeans and Spanish and French. The thousands of pieces of Caddo pottery were made by the local Indians. The Spanish may have used them because European ceramics were difficult to get. Or, the pottery may have been used by the many Indians who lived in and around Los Adaes. The non-Caddoan Indian pottery was probably traded to the Caddo Indians by the other Indian tribes.

Many of the European-style ceramics used at Los Adaes were French. This was probably because they were obtained through trade with the French people at Fort St. Jean Baptiste.

The many animal bones indicate the varied diets of the people at Los Adaes.

WHAT THE ARCHAEOLOGIST FOUND

PAGE B: CONCLUSIONS

Most of the weapons found at Los Adaes were made in Spain or Mexico. This is a good indication that Site X was a Spanish military post. Most of the other items of non-Spanish manufacture were trade goods that could have belonged to either the Spanish or the Indian people living at the post.

Many of the people at the post probably dressed in frontier-type clothing. Men may have worn buckskin caps, leggings, moccasins, and fringed shirts or jackets. Women may have worn buckskin skirts and tops. Indians sewed small glass trade beads onto buckskin clothing and also made them into necklaces. They twisted small pieces of brass into cones and attached these onto the fringes of the clothing.

Artifacts like buttons, buckles, and crochet hooks show that European clothes were also worn at the post, but these were probably less common than the simple Indian-style ones.

Lumps of vermillion may have been used by women, as rouge, or may have been traded to the Indians who used it to decorate their bodies.

Other small artifacts show the variety of European and Indian goods common at a military post in the 1700s.