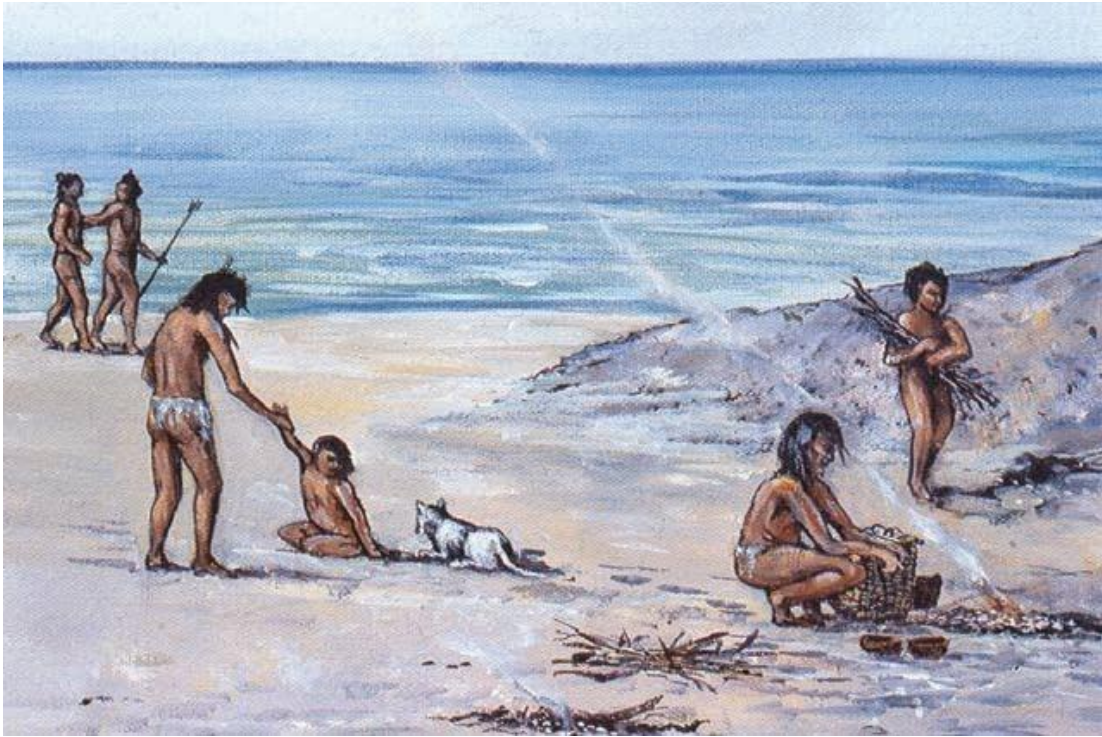


Introduction to Archaeology and Indigenous Peoples at Historic Spanish Point
Campus

Grades 3-5



Curricular Unit Designed and Prepared by Tracy Calla, 2020



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Standards covered by this unit:

Science

SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.3.N.1.2 Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.

SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

SC.3.N.1.4 Recognize the importance of communication among scientists.

SC.3.N.1.5 Recognize that scientists question, discuss, and check each other's evidence and explanations.

SC.3.N.1.6 Infer based on observation.

SC.3.N.1.7 Explain that empirical evidence is information, such as observations or measurements, that is used to help validate explanations of natural phenomena.

SC.3.N.3.1 Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.

SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.

SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.4.N.1.2 Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.

SC.4.N.1.3 Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.

SC.4.N.1.4 Attempt reasonable answers to scientific questions and cite evidence in support.

SC.4.N.1.5 Compare the methods and results of investigations done by other classmates.

SC.4.N.1.6 Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

SC.4.N.1.7 Recognize and explain that scientists base their explanations on evidence.

SC.4.N.2.1 Explain that science focuses solely on the natural world.

SC.4.N.3.1 Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.

SC.5.N.1.2 Explain the difference between an experiment and other types of scientific investigation.

SC.5.N.1.5 Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."



SC.5.N.1.6 Recognize and explain the difference between personal opinion/interpretation and verified observation.

SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.

SC.5.N.2.2 Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.

Social Studies

SS.3.A.1.1 Analyze primary and secondary sources.

SS.3.A.1.2 Utilize technology resources to gather information from primary and secondary sources.

SS.3.A.1.3 Define terms related to the social sciences.

SS.3.G.2.4 Describe the physical features of the United States, Canada, Mexico, and the Caribbean.

SS.3.G.2.5 Identify natural and man-made landmarks in the United States, Canada, Mexico, and the Caribbean.

SS.3.G.3.1 Describe the climate and vegetation in the United States, Canada, Mexico, and the Caribbean.

SS.3.G.3.2 Describe the natural resources in the United States, Canada, Mexico, and the Caribbean

SS.3.G.4.1 Explain how the environment influences settlement patterns in the United States, Canada, Mexico, and the Carib...

SS.3.G.4.2 Identify the cultures that have settled the United States, Canada, Mexico, and the Caribbean.

SS.3.G.4.3 Compare the cultural characteristics of diverse populations in one of the five regions of the United States with Canada, Mexico, or the Caribbean.

SS.3.G.4.4 Identify contributions from various ethnic groups to the United States.

SS.3.E.1.1 Give examples of how scarcity results in trade.

SS.3.E.1.3 Recognize that buyers and sellers interact to exchange goods and services through the use of trade or money.

SS.3.E.1.4 Distinguish between currencies used in the United States, Canada, Mexico, and the Caribbean.

SS.4.A.1.1 Analyze primary and secondary resources to identify significant individuals and events throughout Florida history.

SS.4.A.1.2 Synthesize information related to Florida history through print and electronic media.

SS.4.A.2.1 Compare Native American tribes in Florida.

SS.5.A.1.1 Use primary and secondary sources to understand history.

SS.5.A.1.2 Utilize timelines to identify and discuss American History time periods.

SS.5.A.2.1 Compare cultural aspects of ancient American civilizations (Aztecs/Mayas; Mound Builders/Anasazi/Inuit).

SS.5.A.2.2 Identify Native American tribes from different geographic regions of North America (cliff dwellers and Pueblo people of the desert Southwest, coastal tribes of the Pacific Northwest, nomadic nations of the Great Plains, woodland tribes east of the Mississippi River).

SS.5.A.2.3 Compare cultural aspects of Native American tribes from different geographic regions of North America including but not limited to clothing, shelter, food, major beliefs and practices, music, art, and interactions with the environment.



SS.5.E.1.1 Identify how trade promoted economic growth in North America from pre-Columbian times to 1850.

Math

MAFS.3.MD.2.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step how many more and how many less problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

MAFS.3.MD.2.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units whole numbers, halves, or quarters.

MAFS.4.MD.1.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

English Language Arts

LAFS.3.W.3.7 Conduct short research projects that build knowledge about a topic.

LAFS.3.W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

LAFS.3.W.4.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

LAFS.3.SL.1.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others ideas and expressing their own clearly.

- a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
- d. Explain their own ideas and understanding in light of the discussion.

LAFS.3.SL.1.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

LAFS.3.SL.1.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

LAFS.3.SL.2.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

LAFS.3.SL.2.5 Demonstrate fluid reading at an understandable pace, adding visual displays and engaging audio recordings when appropriate to emphasize or enhance certain facts or details.



LAFS.3.SL.2.6 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

LAFS.4.SL.1.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others ideas and expressing their own clearly.

- a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- b. Follow agreed-upon rules for discussions and carry out assigned roles.
- c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
- d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

LAFS.4.SL.1.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

LAFS.4.SL.1.3 Identify the reasons and evidence a speaker provides to support particular points.

LAFS.4.SL.2.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

LAFS.4.W.2.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

LAFS.4.W.2.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

LAFS.4.W.2.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

LAFS.4.W.3.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

LAFS.4.W.3.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

LAFS.4.W.3.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply grade 4 Reading standards to informational texts (e.g., Explain how an author uses reasons and evidence to support particular points in a text).

LAFS.5.SL.1.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others ideas and expressing their own clearly.

- a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- b. Follow agreed-upon rules for discussions and carry out assigned roles.



- c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

LAFS.5.SL.2.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

LAFS.5.SL.2.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

LAFS.5.W.2.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 13 above.)

LAFS.5.W.2.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

LAFS.5.W.2.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

LAFS.5.W.3.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

LAFS.5.W.3.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

LAFS.5.W.3.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply grade 5 Reading standards to informational texts (e.g., Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]).

Visual Arts

VA.3.S.1.2 Use diverse resources to inspire artistic expression and achieve varied results.

VA.3.S.1.3 Incorporate ideas from art exemplars for specified time periods and cultures.

VA.3.S.2.1 Integrate the structural elements of art and organizational principles of design with sequential procedures and techniques to achieve an artistic goal.

VA.3.S.2.2 Follow procedures, focusing on the art-making process.

VA.3.H.2.1 Compare differences or similarities in artworks across time and culture.

VA.3.H.2.2 Examine artworks and utilitarian objects, and describe their significance in the school and/or community

VA.3.H.3.1 Discuss how knowledge gained in the visual art classroom can serve as prior knowledge in other classrooms.

VA.4.S.1.1 Manipulate tools and materials to achieve diverse effects in personal works of art.

VA.4.S.1.3 Create artworks that integrate ideas from culture or history.



VA.4.S.2.1 Organize the structural elements of art to achieve an artistic objective.

VA.4.S.2.2 Demonstrate the ability to recall art procedures and focus on art processes through to the end of production.

VA.4.H.1.1 Identify historical and cultural influences that have inspired artists to produce works of art.

VA.4.H.1.3 Describe artworks that honor and are reflective of particular individuals, groups, events, and/or cultures.

VA.4.H.2.1 Explore works of art, created over time, to identify the use of the structural elements of art in an historical event or art style.

VA.4.H.2.2 Identify differences between artworks and utilitarian objects.

VA.5.S.1.2 Use media, technology, and other resources to inspire personal art-making decisions.

VA.5.S.1.3 Create artworks to depict personal, cultural, and/or historical themes.

VA.5.S.2.2 Identify sequential procedures to engage in art production.

VA.5.S.2.3 Visualize the end product to justify artistic choices of tools, techniques, and processes.

VA.5.H.1.1 Examine historical and cultural influences that inspire artists and their work.

VA.5.H.1.3 Identify and describe the importance a selected group or culture places on specific works of art.

VA.5.H.2.1 Compare works of art on the basis of style, culture, or artist across time to identify visual differences.

VA.5.H.2.2 Describe the ways in which artworks and utilitarian objects impact everyday life.

Unit Vocabulary:

Archaeologist

Culture

Artifacts

Mounds

Nomadic

Interpret

Sherds

Preserve

Traditions

Interdependent

Community

Goods

Resources

Culture

Estuaries

Mangroves

Raw materials

Archaic Period



Stratigraphy
Chronology
Analyze
Looting

NOTE TO TEACHERS: It is important to emphasize to students that the activities presented in this unit are for educational purposes only. They do not represent archaeological training. Professional archaeologists have specialized skills and advanced degrees. Students and the general public should not try to do archaeological excavations on their own as it requires proper training and permits. Students with an interest in archaeology should look for public archaeology days in their community.

Teacher Background Information

Archaeology is the scientific study of people and their culture. In these lessons, students will learn how scientific investigations and excavations have revealed information about life on the Southwest coast of Florida.

The melting cycle of the Ice Age ended about 10,000 years ago. The climate of Florida became slowly warmer and tropical plants began to grow in the southern half of the state. Coastlines stabilized and estuaries formed where fresh water from rivers and creeks mixed with the sea water. Islands formed and protected the estuaries from the surf of the Gulf of Mexico. The calm waters of the estuary became home to fish, shellfish and water birds. Marshes and mangroves thrived along the shoreline and mangrove islands formed in the bays.

Archaeologists call this era the Archaic Period. During the early Archaic Period, people were nomadic, but as time passed, people began to settle along the coast of Southwest Florida. Life in and around estuaries like the one at Historic Spanish Point provided an abundant source of food from fish, shellfish, deer and other animals hunted in the woods surrounding the estuaries. Fresh water flowed from creeks and springs.

Archaeologists surmise that life was good for Indigenous peoples—warm climate, plenty of food, fresh water, and materials for shelters and clothing. Over time, the lives of Indigenous peoples developed stability and structure. As basic resources were readily available, there was more time to spend on developing group activities such as ceremonial events, games and storytelling. Groups shared information about different solar and climatic events. They observed the changes in the seasons, the stars and the cycles of the sun, moon and the tides, fish and animals. Families grew in size and the groups began to diversify and share the duties and responsibilities for their survival. They began to develop traditions that were important to building unity.



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Individuals explored and experimented with their environment and developed creative activities. They began to decorate their bodies with tattoos and decorations such as shell pendants to be recognized as individuals. People began, collectively and individually, to experiment with better ways to adapt to their environment. Individuals developed creative skills, and demonstrated their ability to make or create, hunt, fish, lead, heal and teach. Seeking a way to express their own personal beauty and worth, they decorated their bodies with tattoos and wore shell jewelry. These adornments could also signify some formal recognition of deeds, achievements or political status in the community.

Mounds, consisting mainly of shells, were created by Indigenous peoples in their communities along the coast of Southwest Florida. Mounds are monumental architecture (large human-made structures) and some were built to great heights. An important leader may have lived on top of a mound or the mounds may have been used for ceremonial purposes. The top of the mound would offer a view of the surrounding area and may have been high ground during a coastal storm. Artifacts—anything made or used by people—such as pottery sherds (pieces or fragments of pottery), shell tools, animal bones, and ceremonial items were found in the mounds. Wooden artifacts and plant material, including woven fibers, have been excavated from early sites in Florida, but most of these kinds of artifacts decay due to the climatic conditions. Archaeologists excavate mounds to learn about the lifeways of local inhabitants: what they ate, their tools, their shelters, and their art.

Discarded and left-behind items offer clues to a group's culture. Sometimes these items are the only clues we have, particularly for peoples without written records and whose primary means of transmitting and sharing their culture is through oral tradition.

It is important to gather information about Florida's early Indigenous peoples to preserve the past. When we are learning about Florida's early Indigenous peoples, we are learning about the cultural heritage of the Seminole Tribe and the Miccosukee Tribe who continue to live in Florida today. By understanding the past, we can connect with our history and those who came before us through time.

As modern Americans moved into Florida and built homes, roads, schools and towns, most of the sites of prehistoric communities were destroyed. Preservation is key to saving history. Archaeologists must weigh the benefits of excavation against destruction of the site. Excavation destroys a site; prehistoric sites are nonrenewable resources.

Preparing a site for excavation follows an accepted methodology. Once permission has been obtained from the landowner for excavation, a surface examination of the site is conducted. An excavation is laid out with the four corners of the grid facing North, East, South and West, respectively. Using stakes or markers and cord, the site is divided into equal size blocks called a grid. Once the dig has been completed, the artifacts—called finds—together with extensive written and pictorial data, are taken to



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the laboratory for analysis and testing. Some archaeologists say that every hour spent at the dig requires up to 30 hours in the laboratory to fully analyze and interpret what has been found.

Introductory Activity: Creating a Timeline

Objectives:

Students will:

- Demonstrate an understanding of timelines and their function.
- Create a timeline representing 5000 years of human history.
- Determine averages.
- Calculate dates and measure intervals of time.

Materials:

- Roll of butcher paper or rope
- Cards or post-it notes
- Pencils or pens
- Internet access or history textbooks for historical research

Procedure:

1. Tell students that they are going to walk back in time! Introduce the concept of a timeline by telling them that a timeline visually shows important events in the order they occurred. A timeline also depicts, accurately, the length of time between events. (for example 1,000 years should be twice the width of 500 years on the timeline). In this unit, students will begin their timeline with today, and will go back in time to 5000 years ago.
2. Tell the class that on this timeline, one footstep (choose either the average student's foot length, or length of one stride) equals 500 years. Have students calculate how many footsteps would represent 5000 years.
3. Walk the distance of 5000 years as a class. Cut the butcher paper or rope to the appropriate length.
4. Have students measure and mark each 500-year interval on the timeline (if using a rope, they can clip on cards labeled with the date). Don't forget to put "today" at the very end!
5. Brainstorm with students about important historical events they know of. Record student responses on cards or on the board.
6. Have students research when these events occurred and place or write them in the correct locations on the class timeline.
7. Allow students to do further research to find additional events that would be appropriate to add to the 5000 year timeline, and place them on the timeline (Teachers should review the events submitted by the students. You may also need to add events to provide a balanced timeline.)

Some suggested timeposts to research:



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- 5,000 - 2,000 years ago *Pyramids in Egypt were being constructed. Mayan calendar begins. Linen was made in the Middle East. First Olympic games. Archaic Shell Ring at Historic Spanish Point.*
 - 4,000 - 1,000 years ago *The Great Wall of China was built. Rome was founded.*
 - 3,000 - 1,000 years ago *Trojan Wars. Roman invasion of Britain. Roman empire splits into East and West. Shell Ridge Midden at Historic Spanish Point.*
 - 2,500 - 800 years ago *Visigoths sacked Rome. The Third Crusade was led by Richard The Lionhearted.*
 - 1,000 - 400 years ago *Oxford University was founded in England. Marco Polo travels to China. Bubonic plague devastates Europe. Eyeglasses were invented. Europe experiences the Dark and Middle Ages.*
 - 500 - 350 years ago *Pizarro conquered the Inca empire. Protestant religion emerges in Europe. English settled Jamestown. Ponce de Leon explores Florida.*
8. Inform the students that all the history we have about the US, since its “discovery” by Europeans, is only the last 500 years of the timeline! Tell students that the class timeline goes to 5,000 years ago because that is the earliest approximate time we know of when humans lived at Historic Spanish Point. Based on the archaeological record, we know that humans have inhabited the Sarasota area for 12,000 years! Indigenous peoples of the Seminole and Miccosukee Tribes still live in Florida today and their culture is preserved from the stories and traditions passed down by their ancestors.
9. Tell students that they will be learning about Florida’s first people, and the important archaeological sites at Historic Spanish Point that helped us understand how they lived.

Activity: A Video Visit to Historic Spanish Point Campus

Materials:

- internet access: go to <https://www.youtube.com/watch?v=b6bll5raBmc&feature=youtu.be>

Procedure:

1. Show the video.
2. In the video, there are several questions posed by hosts Amy and John. Stop the video at these points and have the students discuss their answers to the questions.
3. Inform the students that they will have the opportunity to try their hands at archaeology, too.

Activity: Be an Archaeologist!

Adapted from Florida Museum of Natural History, Fossil Cookie Excavations, Cassandra Rae Harper

Objectives:

Students will:



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- Demonstrate an understanding of the process of excavating artifacts.
- Create scale maps using a grid.
- Map locations of objects along coordinate pairs of a grid.

Materials:

One of each per student:

- Chocolate chip cookies, or granola bars with add-ins like chocolate chips or fruit and nuts (These are shaped more like an archaeological unit)
- Toothpicks
- Small plates
- Graph paper (optional)
- Pencils (optional)

Background:

Excavation is the method that archaeologists use to extract artifacts out of the ground.

The work is very difficult and has to be detail-oriented since the archaeologist is destroying the very thing he/she is trying to study by removing it from its context. There are no “do-overs.” It is also impossible for the archaeologist to know exactly what is underground, so he/she has to be very careful not to damage artifacts they cannot see while excavating artifacts at the surface.

Procedure:

Teacher FYI: The level of complexity for this activity varies with the type of cookie being excavated. For example, M&M “artifacts” pop out easily, while an extreme chocolate chunk cookie like Chips Ahoy will be more challenging.

1. Pass out the materials to each student.
2. Tell the students that they are archaeologists and must excavate their artifacts (the chocolate chips) from their archaeological site (the cookie). Archaeologists must be careful to remove artifacts to the best of their ability by keeping them intact and not disturbing or damaging other ones that might be buried deeper in the site.
3. Allow students to excavate for _____ minutes. At the set time, stop excavation and find out which students were successful in excavating their artifacts
4. Ask the students:
 - What challenges did they encounter excavating their artifacts?
 - Was it easy to determine where all the artifacts were ?
 - Did anyone excavate an artifact only to discover they had damaged or lost another one underneath?

Extension:



5. Use cookies with colored candy pieces or granola bars with varied “add-ins” that can represent different kinds of artifacts. For example, yellow can be pottery sherds, blue are tools, red are bones and blue are shells.
 - Ask students to note concentrations of types of artifacts in certain areas and think about how that might be interpreted. For example, a lot of yellow in one spot may be where people made pottery. If there are also red chips in that area, maybe that’s where people cooked and ate animals they hunted..
6. Include gridding and mapping of the chips as they are excavated.
 - Have students place the cookie on a piece of graph paper and inform them not to move it from that spot. Students should draw a square surrounding the cookie, and replicate that square next to the “site” or on a separate sheet. This will be the site map.
 - Have students sketch the outline of the cookie on the map along the appropriate coordinates, and plot their artifacts on the grid precisely as they excavate them.

Activity: Digging Into Site Formation and Stratigraphy

Objectives:

- Students will use math and mapping skills to demonstrate an understanding of stratigraphy and be able to explain its importance to the field of archaeology.
- Explain the Law of Superposition and how stratigraphy is used to date sites and artifacts.
- Make scaled profile maps of the stratigraphy.
- Students will use scientific measurements to create accurate maps of artifacts recovered.
- Participants will also be able to discuss archaeological survey techniques, and tools.

Materials:

- Old fish tank or clear plastic storage bin
- Different types of soils (native soil, playground sand, potting soil, etc.)
- Small items such as beads, buttons, toys, nails, broken pieces of pottery, animal bones or teeth, or replicas that represent artifacts from different time periods and technologies. Include items that indicate specific occupations, age groups, genders, ethnic groups, economic statuses, etc. You may want to make a key identifying time periods or types of artifacts.
- Measuring tapes
- Rulers
- Calculators
- Graph paper/pencils
- Paint brushes
- Magnifying lenses
- Journals or notebooks



- Spoons
- Pieces of cardboard or stiff cardstock to act as dustpans
- Toothpicks
- Sieve
- Internet access: go to <https://www.youtube.com/watch?v=PcT1vGyJzyg>
- *Optional for this exercise (but not for a real dig!)*
 - Camera - used to record the excavation photographically.
 - Bag - used to hold finds to be taken to the laboratory for further examination.
 - Markers - to label the bags with the grid location where the finds were located.

Background:

Understanding how a site is created is essential for gaining information from the site. In addition, stratigraphy is an important tool in determining the relative chronology of a site. Stratigraphy is the arrangement of materials in layers. As layers are deposited, the oldest is usually on the bottom and the youngest on top. By examining the materials found in these layers and their relationships to each other, archaeologists can determine what artifacts are older or younger than others, and how the people inhabiting the site and their lifeways changed over the years.

Procedure:

1. Use different soil types to create stratigraphic layers in the fish tank.
2. Scatter artifacts top of each layer before adding another layer. "Oldest" objects will be in the deepest layer, while "newest" ones are in the top layer.
3. Have students lay out a grid across the "site." One good way to do this is using string to create a "tic tac toe" grid across the top of the bin or tank.
4. Discuss the natural and man-made conditions that can affect formation and destruction of a site (erosion, soil deposition, storms, floods, construction, plowing, etc.).
5. Before students begin, Review the cookie excavation activity and discuss the importance of context and recording, and how grids are used by archaeologists to keep track of and understand context. Stratigraphy is also important in an excavation.
6. Have students draw scale maps of units within the grid. Make sure they measure exact dimensions and locations of artifacts or features. They should also use accurate measurements to create scale profile maps of the tank or bin showing the depth and arrangement of the layers and any artifacts they can see.
7. Discuss what extra information can be learned by knowing the exact location of the artifact or feature rather than just its presence or absence.
8. As you distribute the tools, discuss how each relates to the job of an archaeologist.
 - a. Tape measure/ruler - used to measure the depth of an artifact from the line of the grid so you can chart location of artifacts.
 - b. Spoon - used to scrape material into the dust pan.



- c. Dust Pan - used to hold the material between the dig and the sifter.
 - d. Sieve - used to separate the dirt or sand from the solid objects.
 - e. Journal - used to keep written records of the excavation process.
 - f. paintbrush - used to remove dirt and sand from an artifact for closer examination.
 - g. Magnifying glass - used to further examine an artifact.
 - h. Pen and pencil - used to record information in the journal.
9. Show the video from the University of Oregon that demonstrates the process of excavation.
 10. Allow students to collect the artifacts from the tank through a systematic method for _____ minutes or class periods. Remind them that to properly excavate the site they must proceed carefully, one layer at a time.
 11. Ask the students whether they could read their layers if the contents of the tank were stirred up, plowed or stomped on. Explain that this is what happens when people disturb (plow, bulldoze, or even walk on) a site. How does this affect our understanding of history?
 12. Inform the students that the field of archaeology is itself a destructive science. As an archaeologist excavates and removes data, he or she is actually destroying the site! In order to maintain context, understanding how each piece of the puzzle relates to its surroundings, archaeologists make meticulous records about everything they see and do in the field.

Activity: Meanwhile, Back at the Lab

Objectives:

- Students will study a selection of artifacts and demonstrate an ability to provide a written or verbal description of the integrity of the archaeological record and its effect on interpretations,
- provide a statistical analysis (through graphs or charts) about a set of artifacts and explain how results can be manipulated.
- Provide written descriptive interpretation of artifacts based on a previous knowledge of history.

Materials:

- The artifacts collected from the fish tank dig site. You may also opt to include additional new artifacts to this collection (Tell the students that these items came from previous or subsequent excavations at the site).

Background:

Only a small amount of an archaeologist's time is spent excavating in the field, the rest is spent in the lab interpreting what was discovered. Even with very good records, sometimes artifacts and their contexts can't be fully understood until the whole picture comes together, sometimes long after the excavation is complete.



Archaeologists look at material types, manufacturing methods, decorations, etc. to determine the time period, culture, or characteristics of individual people who occupied the site. The artifacts can't tell archaeologists everything, though. Materials do not always survive due to weathering or decomposition, or they go missing as a result of looting, movement by animals, man-made changes to the terrain, etc. These missing puzzle pieces can change the way archaeologists understand the story of the people who came before.

Procedure:

1. Divide the class into small groups.
2. Give each group a selection of artifacts and allow them to have a few moments to study and discuss the contents.
3. Have student groups sort their artifacts into different categories (time, type, etc.).
4. Discuss the chronological order of the artifacts and time period each represents. Use this information as well as other observations (color, material, manufacture technique, technology, etc.) to do basic statistical analysis.
5. Make charts and graphs to show results (for example color of pot sherds quantity of beads found in each layer).
6. Ask the students:
 - a. What kinds of questions can these statistics answer?
 - b. How might the results be manipulated or changed?
8. Conduct initial classroom discussions about the artifacts in their respective collections and what they tell us about the site and the people who inhabited it. Some questions to stimulate discussion:
 - a. What kind of site was it?
 - b. What can be said about the people who left these things behind?
 - c. What kinds of activities or jobs did they do?
 - d. What resources were available to them?
 - e. How long did they occupy the site?
9. Have each group write the site's history based on the artifacts provided to them. Encourage them to try to determine and describe the time period, ethnicity, gender, age, economic status, occupation, etc. of the people who may have used or owned the objects. Remind students to apply knowledge of history rather than fiction or fantasy to make these interpretations, and to draw scientific conclusions only from the evidence available.

Extensions:

10. Select a random artifact to eliminate from each collection. Have students discuss: How would the story differ if that artifact hadn't been there at the beginning of this activity? What happens to the picture of the person/ community/ culture?



11. Assign one artifact to each student: Have them write a biography or biographical story about the individual who owned or used the item and how the item played a part in their life. Students should consider the following questions to begin developing their story

- Who used it?
- Why and/ or how did they use it?
- Is the item necessary to survive or is it an enhancement to their quality of life?
- What does the artifact tell you about the culture or daily life of the person or community?

Activity: Pottery-Making

Objectives:

- To understand the importance of the development of pottery by early Indigenous peoples.
- To appreciate that pottery sherds are all that remain from the ancient bowls, pots and jars made by early Indigenous peoples.

Materials:

- Air dry or oven-bake clay (~1/2 pound per student)
- toothpicks
- Newspapers or butcher paper to cover desks.
- Internet access: go to <https://www.youtube.com/watch?v=qTAamd5d4v8>

Teacher background info:

The development of pottery was an important turning point for early Indigenous peoples. Some of the earliest pottery in Florida is at least 4,000 years old. It was discovered in Orange Lake near Melbourne, Florida, and named "Orange" after the place where it was found. It is customary for archaeologists to name a type or style of artifact after the first place it is found.

The earliest pottery discovered in Florida is known as "fiber tempered" pottery. Early Indigenous peoples used fibers such as Spanish moss, palmetto Spanish bayonet and agave leaf to strengthen and hold together their clay. During the next 1,500 years, people developed "sand tempered" pottery. Sand from river beds or the beach was mixed with the clay. These pots were fired in hotter fires that burned longer. Consequently, the pottery was stronger and could now be used for cooking.

Procedure:

1. Cover desks with newspaper. Distribute a piece of clay, ~1/2 pound, to each student.
2. Play the video of a high school art teacher making a coil pot (You can slow the playback speed if his time lapse is too fast for the class).



3. Pots are started with a disc of clay as a bottom. Students use approximately 1/3 of the clay given to them to make the round disk for the bottom of the pot. Score (make tiny slashes) the edge of the upper surface with the toothpicks.
4. Roll out clay ropes and score on one surface. Coil the ropes along the edge of the disc, Make sure the scored surfaces touch one another. This will help stick the surface together and make the pot stronger. Build up the sides with more coils, scoring and adding them one at a time, and smoothing them into the previous layer.
5. While still slightly moist, designs can be added by punching a pattern of dots or scratching lines. Dry the pots in the shade. Rapid sun drying can produce cracks.
6. Be sure students put their names on the bottoms of their pots.

Activity: Trade And Economy

Objectives:

- Discover how early Indigenous peoples traded items with one another for resources.
- Develop understanding of basic economic concepts such as evaluating "need" versus "want," surplus, scarcity, and supply and demand to determine value.

Pre-preparation:

- Early in this unit, instruct students to collect natural materials from the schoolyard, home, the beach...anywhere early Indigenous peoples would have also found natural materials. *Students must make sure that they have permission to collect these items.*
- Using the information shared in the Historic Spanish Point video to spark ideas, have them collect items that might be useful or valuable to early Indigenous peoples.
- Students may leave the materials as-is, or use them to make items that would be important to early Indigenous peoples.

Background:

For settled communities, trading was the way people obtained goods or resources that they did not have. If one person or community had resources the other did not, the other would offer something as a trade. Ideally, both parties receive goods or materials they wanted or needed.

Procedure:

1. Separate the class into 4 groups representing different communities and have the students in each community combine their items to trade.
2. Students should discuss within their communities what kinds of goods they are hoping to get from another community, and why.



3. Have them decide which goods they will offer in trade and which they will keep. They should also decide which members will travel to other communities to conduct trade, and which will stay “home” to trade with other visitors.
4. Encourage students to rotate through the communities for _____ minutes, and try to bargain until they make favorable trades based on the wants and needs of their own community.
5. After the trading activity, reflect and discuss
 - Did you get what you wanted in a trade?
 - If not, why not?
 - Did the community receive (or hope to receive) goods that they *needed* for survival or goods they *wanted* for enhancing their lives?
 - Did your community have anything another community wanted?
 - If yes, how did that affect your community?
 - If no, how will the community address this? Have each community debate the issue among themselves and arrive at a group decision.

Unit Review and Critical Thinking Questions:

- Why did early Indigenous peoples settle in the area we now know as Historic Spanish Point campus?
- What advantages or disadvantages does a settled community have compared to a nomadic group?
- What is a mound?
- Why is the Archaic Shell Ring Midden at Historic Spanish Point horse-shoe shaped?
- Why do you think they located the high points where they did and not somewhere else on the site?
- Where do you think early Indigenous people got all the materials to make the mound?
- What does an archaeologist do?
- What is an artifact?
- Is an artifact a primary source for research?
- Compare and contrast present day tools and utensils with those of the early Indigenous peoples.
- Compare and contrast present day cooking methods with those of the early Indigenous peoples.
- Do you think everyone in the community did the same tasks or had the same roles, or were just a few people responsible for certain things? What advantages or disadvantages does this give a community?
- What will future archaeologists find out about our culture if they look in our landfills?
- How do archaeologists know where to dig?
- What are the squares called?
- How does an archaeologist know where to find information about early Indigenous peoples?
- Why is preservation of stratigraphy (layers) important to learning about early Indigenous peoples?
- What survives in the archaeological record?
- Why do people throw some things away while others become heirlooms?



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- What types of items do/do not survive in the archaeological record? How does the environment affect preservation (underwater, desert, bog, etc.)?
- How does this change the story of the past?
- Does looting affect the understanding of history?
- Could the presence (rather than absence) of an artifact hinder understanding of the past?
- Can the students think of a modern community or nation that has plentiful resources to trade or goods that are in demand? How does this affect them?
- Can students think of a nation or community that has few goods or resources to trade? How does this affect them?
- How does an active trade policy affect the lifeways of a community or nation?
- How does having a little or no trade affect the lifeways of a community or nation?



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