

Beyond Artifacts:

Teaching Archaeology in the Classroom



FLORIDA PUBLIC
ARCHAEOLOGY
NETWORK

A PROGRAM OF THE UNIVERSITY of WEST FLORIDA

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“To promote and facilitate the stewardship, public appreciation, and value of Florida's archaeological heritage through regional centers, partnerships, and community engagement.”



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What can FPAN do for teachers and educators?

Provide Archaeology Resources

- We have created this educator's resource book, *Beyond Artifacts: Teaching Archaeology in the Classroom* which has lesson plans and curricula as well as suggested published and internet sources for those interested in incorporating archaeology into their classroom. You may download the pdf from our FPAN Resources page (<http://www.flpublicarchaeology.org/resources>).
- The *Coquina Queries* project, funded in part by a Florida Department of State grant-in-aid, provides an education program based on regional coquina ruin sites and focuses on the unique role of this material in Florida history. You may also download this teacher's guide (<http://www.flpublicarchaeology.org/resources>).
- We can visit your classroom to present information on Florida's rich cultural past or conduct a hands-on activity with your students.
- We can provide subject support from professional terrestrial and maritime archaeologists.

Conduct Teacher Trainings

- We work with school districts to provide a variety of Teacher In-Services. Trainings can be developed for any time frame, core course, or specific subject matter.
- We can conduct *Project Archaeology* curriculum training. For more information on their material, please visit www.projectarchaeology.org.



Please feel free to contact your regional office for more information. Contact information can be found on the FPAN web site (<http://www.flpublicarchaeology.org>).



Northwest Region: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, and Gulf counties

North Central Region: Franklin, Liberty, Gadsden, Leon, Wakulla, Jefferson, Madison, Taylor, Lafayette, Dixie, Suwannee, Hamilton, Columbia, Union and Baker counties

Northeast Region: Clay, Duval, Flagler, Nassau, Putnam, St. Johns, and Volusia counties

Central Region: Gilchrist, Levy, Bradford, Alachua, Marion, Citrus, Hernando, Sumter, and Lake counties

East Central Region: Seminole, Orange, Osceola, Brevard, Indian River, Okeechobee, St. Lucie, and Martin counties

West Central Region: DeSoto, Hardee, Highlands, Hillsborough, Manatee, Pasco, Pinellas, Polk, and Sarasota counties

Southwest Region: Charlotte, Lee, Collier, Hendry and Glades counties

Southeast Region: Palm Beach, Broward, Miami Dade, and Monroe counties

GENERAL ARCHAEOLOGY

Activities

Resources

Cookie Excavation

Adapted from *Florida Museum of Natural History, Fossil Cookie Excavations*
submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central
Regional Center (2006 – present)

Recommended grade level: Any
Sunshine State Standards: MA.K.G.2.5, MA.4.G.5.3, SC.(K-8).N.1.3, SC.(K-8).N.1.4,
SC.(K-8).N.1.5, SC.4.N.1.6
Time required: 10 - 15 minutes (with grid 30 – 45 minutes)
Setting: classroom
Summary: students will experience excavation using a cookie and toothpick

Objectives

Students will demonstrate an understanding of the process of excavating artifacts.

Materials

For each student:

- 1 chocolate chip cookie
- 1 toothpick
- 1 small plate

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 under the ground, so he/she has to be very careful not to damage artifacts they cannot see while excavating artifacts at the surface.

Procedure

- Pass out the materials to each student.
- Tell the students that they are archaeologists and they have been asked to excavate their artifacts (the chocolate chips) from their archaeological site (the cookie) to the best of their ability by keeping their chips intact.
- After allowing enough time for students to excavate, stop the class and find out how many students were successful in excavating whole chips from their cookie.

Closure

Ask the students:

1. What problems did they encounter excavating their chips?
2. Was it easy to determine where the chips were in the cookie?
3. How many students excavated a chip only to discover that they sacrificed another one underneath it?

Teacher Tips

I have found that people fall into two groups when excavating their cookies – they either pick the chips out leaving a hole in their cookie or they destroy the cookie and leave the chips.

The level of complexity for this exercise greatly depends on the type of cookie being excavated. For younger groups, a M&M candy cookie works best – the candy pops right out of the cookie. Older students may enjoy the challenge of an extreme chocolate chip cookie, like Chips Ahoy Chocolate Chunk. No matter where you attempt to excavate a chip, you will find it surrounded by other chips and nearly impossible to keep them all whole.

You can extend this exercise to include gridding and mapping of the chips as they are excavated. Use the Cookie Grid on the next page or have the students sketch the cookie on a piece of graph paper and record each chip they excavate on their grid. If you use cookies like the Chips Ahoy with candy chips, there are four different colors that can be assigned artifacts categories.

For example, the yellow chips can represent pottery sherds, the blue chips can be stone tool flakes, the green chips can be food remains, and the red chips can be shells. They can answer questions relating to the concentration of artifacts in areas by color and how that might be interpreted. If you have an area with a lot of yellow, maybe that's where people were making pottery. If there are also green chips present, maybe that's where people were cooking and eating.

You may also want to try using a soft granola bar instead of a chocolate chip cookie. These are shaped more like an archaeological unit and have the students look for changes in soil color as well as artifacts. Please reference the Dirt Science activity (page 18) for more information on soil colors and an example of a Munsell page.

Cookie Excavation Grid

Cookie Excavation Site

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Grid Map of Excavation Site

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

1. Place your cookie in the middle of the Cookie Excavation Site grid (left side). Do not move your cookie from this spot.

2. Find the following coordinate pairs on your cookie:

Top: _____ Bottom: _____

Left side: _____ Right side: _____

3. Transfer these coordinate pairs to the Grid Map and sketch the perimeter of your cookie.

4. Plot chips as you excavate them on your Grid Map.

5. What problems did you encounter trying to excavate your chips?

6. Did you have to sacrifice any chips in order to keep one whole?

Granola Bar Mapping

Granola Excavation Site



Grid Map of Excavation Site

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

1. Place your granola bar in the middle of the Granola Excavation Site grid (left side).

2. Find the following coordinate pairs on your cookie:

NE corner: _____

NW corner: _____

SE corner: _____

SW corner: _____

3. Transfer these coordinate pairs to the Grid Map and sketch the perimeter of your bar.

4. Plot objects (such as chips) as you excavate them on your Grid Map.

5. What problems did you encounter trying to excavate your "test unit"?

6. What are your Munsell colors for the granola? _____ chips? _____
other? _____

7. Why do you think archaeologists map in different colored soil? Why are soil changes important?

Excavación en la galleta

Adaptado de *Excavando fósiles en una galleta*, Museo de Historia Natural de la Florida, sometido por Cassandra Rae Harper, coordinadora de alcance comunitario del Centro Regional del Oeste Central de FPAN (2006 – present)

Nivel o grado recomendado: cualquiera

Sunshine State Standards: MA.K.G.2.5, MA.4.G.5.3, SC.(K-8).N.1.3, SC.(K-8).N.1.4, SC.(K-8).N.1.5, SC.4.N.1.6

Tiempo requerido: 10-15 minutos

Contexto: Salón de clases

Resumen: Los estudiantes experimentaran una excavación utilizando una galleta y un palillo de dientes.

Objetivos

Proveer una oportunidad a los estudiantes para comprender el proceso de excavación de artefactos.

Materiales

Por cada estudiante:

- 1 galleta de chispas de chocolate
- 1 palillo de dientes
- 1 platito

Antecedentes

La excavación es un método que los arqueólogos usamos para extraer artefactos fuera de la tierra. El trabajo es muy difícil y tiene que ser detallado y orientado ya que los arqueólogos destruyen en este proceso precisamente eso que quieren estudiar — y si se comete un error, ¡no se puede remediar! También es imposible para el arqueólogo saber de antemano que exactamente existe bajo la tierra, así que el o ella tiene que ser muy cuidadosos en no dañar los artefactos que no se ven mientras se excavan los artefactos que si pueden ver.

Procedimiento

- Repartir los materiales para cada estudiante.
- Decir a los estudiantes que ellos son arqueólogos y que les han pedido excavar unos artefactos (chispas de chocolate) de un sitio arqueológico (sus galletas), pero tratando lo mejor que puedan de dejar las chispas intactas.
- Después de 10 minutos, detener la clase y verificar cuantos estudiantes fueron exitosos en excavar todas las chispas de su galleta.

Discusión

1. ¿Qué problemas ellos encuentran excavando sus galletas?
2. ¿Fue fácil determinar donde las chispas estuvieron en la galleta?
3. ¿Cuántos estudiantes excavaron una chispa de chocolate solo para descubrir que sacrificaron otra que estaba debajo en el proceso?

Consejos prácticos para los maestros

Se ha encontrado que los estudiantes caen en dos grupos cuando están excavando sus galletas — unos sacan las chispas de chocolate dejando un agujero y otros destruyen la galleta y dejan las chispas.

El nivel de complejidad de estos ejercicios depende principalmente del tipo de galleta que sea excavada. Para grupos de niños más jóvenes, una galleta de dulces de M&M es más recomendable — el dulce sale rápido de la galleta. Estudiantes más adultos pudieran disfrutar más el reto si se utilizase una galleta de chipas de chocolates extrema, tal como las “Chips Ahoy Chocolate Chunk”. No importa donde se intente excavar una galleta, siempre se van a encontrar rodeados de otras chipas y se le va hacer casi imposible mantenerlas todas completas.

Se puede extender este ejercicio para incluir coordenadas y mapas del lugar donde se encuentran las chispas de chocolate según se vaya excavando. Haga que el estudiante haga un boceto de la galleta en un pedazo de papel de gráfica, y que en el mismo registre cada chispa excavada en los cuadritos del papel. Estos pueden responder a preguntas relacionadas a la concentración de artefactos en ciertas áreas y como estas pueden ser interpretadas.

Peanut Butter and Jelly Archaeology

from *Expeditions into Ohio's Past: Teacher's Guide*

submitted by Sarah Miller, director of FPAN's Northeast Regional Center (2006 – present)

Recommended grade level: 3 – 5

Sunshine State Standards: LA.(2-5).4.2.1, LA.(3-5).1.7.5, LA.5.6.1.1, SS.4.A.2.1, SS.4.A.9.1, SS.5.A.1.2, SC.(4,5).N.1.5

Time required: 45 – 60 minutes

Setting: classroom

Summary: students will examine the principle of stratigraphy by building an edible archaeological site

Objectives

At the end of this activity, each student should be able to demonstrate how time is recorded in layers, define and demonstrate stratigraphy, and explain how stratigraphy can be destroyed through human intervention.

Materials

For each student:

- 3 slices of bread
- 3 tablespoons of jam or jelly
- 2 tablespoons of peanut butter
- raisins
- chocolate sprinkles
- candy pieces (something small like Nerds or colored sprinkles)
- 2 paper plates
- plastic knife
- plastic spoon
- large clear straw
- napkins

(see teacher tips for ingredient substitutions)

Background

Stratigraphy is defined as 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.

A habitation site is a place where people have lived. Prehistoric habitation sites may be marked by postholes, cooking pits, middens (trash pits), or artifacts.

Procedure

Tell the students that they are going to conduct an experiment in archaeology and then eat it. Pair the students and have each pair obtain a paper plate with the listed materials.

Use the following narrative to tell students what is occurring:

- Here we have a field somewhere in Florida (*lay down a slice of bread*).
- Along comes a flood and leaves behind a layer of mud (*spread the peanut butter*).
- Shortly after the flood, a group of Archaic people camp in the area and build a fire. Their fire leaves behind charcoal and rocks that crack from the heat (*have students slice raisins in half, arrange them in a circle on the sandwich, and fill in the circle with sprinkles*).
- The Archaic people depart and through time, a layer of dirt form over the campsite (*lay down another piece of bread*).
- Eventually a Woodland group comes to the same field. These people build shelters (*have students gently cut small indentations or holes in the last slice of bread. These represent the holes dug to hold posts for shelters*).
- These Woodland people made a lot of pottery, but some of the pottery got broken (*have students dig two small holes in the top of the bread – one on each side – and place broken candies in these holes*).
- The Woodland people leave the site and because it is so close to the river, the site floods (*students can spread jelly which may cause same redistribution of pottery, a situation that occurs on real sites*).
- Through time, other layers are laid down until the present and final layer of dirt covers the site (*students put on top layer of bread*).
- Today, an archaeologist suspects this field was a prehistoric habitation site and conducts random core samples and surveys (*have students push large straws randomly through their sandwich. If they find a sprinkle or hit something, they may have found a habitation site*).
- The archaeologist conducts a test excavation at the site (*students cut a square into the sandwich and remove layers, one by one. If they find something, they have found the habitation site*).
- From the test unit, students can see their layers. This is stratigraphy. Ask the students to identify the oldest layer. Which habitation is older? This is similar to what happens when archaeologists examine a site.

Closure

Ask the students if they could read their layers if they put the sandwich in a blender. Explain to the students that this is what happens when we disturb (plow, loot, or bulldoze) a habitation site. To fully excavate this site, students would have to remove each layer – one at a time. Would they have the sandwich then? Excavation is a destructive process.

For the final excavation, students may divide and eat their sandwich, either layer by layer or all at once. (Alternatively, if they eat it all at once, and find a pottery sherd before it is eaten, it may be considered salvage archaeology, or archaeology done in the face of

impending loss. If it gets in their mouth before they “discover” it, it is lost in the action of modern use.)

This lesson can mimic a reconnaissance survey by letting your fingers walk over the “site” looking for artifacts or depressions. Another possible extension is to correlate disturbance to a site by saying: what if we put the sandwich in a blender (or actually do so)? Mix the sandwich layers and artifacts together to show how different it would look if the site had been previously disturbed by construction.

Teacher Tips

The list of ingredients is only a suggestion. Substitutions can be made – chocolate chips for raisins, cake frosting for peanut butter and jelly, angel food cake or shortcake cups for bread. You may also want to try adding gummy worms just for fun!

To keep costs minimal, you may suggest that students bring their own ingredients.

Arqueología con Crema de Maní (Cacahuete) y Mermelada

Tomado de *Expediciones hacia el pasado de Ohio: Guía del maestro* sometido por Sarah Miller, directora del Centro Regional del Noreste de FPAN (2006 – present)

Nivel o grado recomendado: 3 – 5

Sunshine State Standards: LA.(2-5).4.2.1, LA.(3-5).1.7.5, LA.5.6.1.1, SS.4.A.2.1, SS.4.A.9.1, SS.5.A.1.2, SC.(4,5).N.1.5

Tiempo requerido: 45 – 60 minutos

Contexto: Salón de clases

Resumen: los estudiantes examinarán el principio de estratigrafía mediante la construcción de un sitio arqueológico comestible.

Objetivos

Al final de la actividad, cada estudiante debe ser capaz de demostrar como el tiempo es registrado en capas, definir y demostrar que es estratigrafía, y explicar como la estratigrafía puede ser destruida mediante la intervención humana.

Materiales

Por cada estudiante:

- 3 rebanadas de pan para emparedado
- 3 cucharadas de jalea o mermelada
- 2 cucharadas de crema de maní/cacahuete
- pasas
- grajeas (“sprinkles”) de chocolate
- pedazos rotos de bombones (se sugieren M&Ms o Nerds)
- 2 platos desechables
- 1 cuchillo de plástico
- 1 cuchara de plástico
- 1 sorbeto/pajilla transparente y largo
- servilletas

(Vea los consejos prácticos para el maestro para ingredientes sustitutos)

Antecedentes

La estratigrafía se define como la disposición de materiales en capas. Así como las capas son depositadas, las más viejas se encuentran usualmente en el fondo, mientras que las más nuevas se encuentran en la cima. Examinando los materiales encontrados en estas capas y las relaciones entre ellas, los arqueólogos puede determinar que artefactos es más viejo o más nuevo que los otros.

Un sitio habitacional es un sitio donde las personas han vivido anteriormente. Los sitios habitacionales prehistóricos pueden ser marcados por agujeros para postes, hoyos para cocinar, basureros, o artefactos.

Procedimiento

Diga a los estudiantes que van a hacer un experimento en arqueología y que después se lo van a comer. Disponga los estudiantes en parejas y haga que cada par obtenga un plato desechable con los materiales listados anteriormente.

Use la siguiente narrativa para decir a los estudiantes lo que ocurre:

- Aquí tenemos un campo en algún sitio de la Florida (*ponga una rebanada de pan*)
- Con el tiempo viene una inundación y deja una capa de fango (*unte crema de maní*)
- Poco después de la inundación, un grupo de personas Arcaicas acampan en el área y hacen una fogata. Ellos dejan abandonadas el carbón y las rocas que se quebraron con el calor (*haga que los estudiantes partan pass por la mitad, colocándolas en un círculo en el emparedado, llenando el círculo de grajeas*)
- Las personas del Arcaico se van y al pasar el tiempo, una capa de tierra se forma sobre el campamento (*ponga otra rebanada de pan*).
- Eventualmente, un grupo Woodland viene al mismo campo. Estas personas construyeron refugios (*haga que los estudiantes delicadamente corte pequeños agujeros o hendiduras en la última rebanada de pan. Estas representan los agujeros excavados para los postes de los refugios*).
- Los Woodland hicieron muchas cerámicas, pero alguna de estas se rompieron. (*Haga que los estudiantes hagan dos pequeños agujeros en la cima del pan - uno en cada lado - y pongan pedazos de dulces en esos agujeros*).
- Los Woodland dejaron el sitio y porque este estaba muy cerca del río, se inundo. (*los estudiantes pueden untar mermelada, lo que pude causar la redistribución de las cerámicas en una situación real*).
- A través del tiempo, otras capas se fueron acumulando hasta que la presente y última capa de tierra cubrió el sitio (*los estudiantes ponen en la ultima capa una rebanada de pan*).
- Hoy, un arqueólogo sospecha que ese campo fue un sitio habitacional prehistórico y hace sondeos e investigaciones de muestras de la corteza al azar (*haga que los estudiantes introduzcan las pajillas/sorbetos a través de sus emparedados al azar. Si encuentran alguna grajea o golpean algo, ellos habrán encontrado un sitio habitacional*).
- Los arqueólogo conducen una excavación de prueba en el sitio (*los estudiantes cortan un cuadrado en el emparedado, y remueven las capas una a una. Si encuentran algo, ellos habrán encontrado el sitio habitacional*).
- Mirando la “unidad de prueba”, los estudiantes podrán ver sus capas. A eso lo llamamos estratigrafía. Pregunte a los estudiantes si pueden identificar la capa más vieja. ¿Cuál de estas capas es la más vieja? Esto es similar a lo que sucede cuando los arqueólogos examinan el sitio.

Discusión

Pregunte a los estudiantes si ellos pudieran identificar las capas si pusieran el emparedado en una licuadora/batidora. Explique a los estudiantes que esto es lo que sucede cuando los sitios habitacionales son perturbados (saqueos, derribados con máquinas, o mediante arado). Para poder investigar el sitio, los estudiantes tuvieron que remover cada capa – una a la vez. ¿Tendrían entonces el emparedado? La excavación es un proceso destructivo.

Para la excavación final, los estudiantes pueden dividir y comer sus emparedados, capa a capa, o todo a la vez. (Alternativamente, si ellos se comiesen todo el emparedado a la vez, y consiguiesen los pedazos de “cerámica” antes de comérselos, se pudiera esto considera arqueología de salvamento, o arqueología que se hace en el momento en que un sitio enfrenta el peligro inminente de ser destruido. Si estos “artefactos” llegasen a su boca antes de ser “descubiertos”, estarán perdidos en la acción del uso moderno).

Esta lección puede imitar un sondeo de reconocimiento dejando que los dedos de los estudiantes caminen sobre el “sitio” buscando artefactos o depresiones. Otra posible extensión a esta actividad es correlacionar los disturbios en el sitio diciendo: ¿Que tal se ponemos el emparedado en una licuadora (o hacerlo de veras)? Mezcle las capas de emparedado y los “artefactos” para mostrar cuan diferente estos se verían si el sitio hubiese sido previamente perturbado por alguna construcción.

Consejos prácticos para los maestros

La lista de ingredientes es solo una sugerencia. Algunos substitutos pudieran ser- chispas de chocolate en lugar de pasas, glaseado de pastel/“frosting” de bizcocho en vez de crema de maní y mermelada, pastel de ángel (“angel food cake”) o tartas en lugar de pan. ¡Puede también añadir “gummy worms” para hacerlo divertido!

Para mantener los costos al mínimo, puede sugerir a los estudiantes que traigan sus propios ingredientes.

Archaeology Goes to the Movies

Submitted by Cassandra Rae Harper, Outreach Coordinator for FPAN's West Central Regional Center (2006 – present) and April J. Buffington, Outreach Assistant for FPAN's West Central Regional Center (2006 – 2009)

Recommended grade level: 5-12

SunshineStateStandards:LA.(K-8,910,1112).1.7.2,LA.(K-8,910,1112).1.7.5,
LA.(3,6-8) 4.3.1, SS.7.C.2.11, SS.912.A.1.5

Time required: 30-45 minutes

Setting: classroom or outside

Summary: students will demonstrate the differences between archaeology in the movies and “real life” archaeology

Objectives

To understand that archaeology portrayed in the movies *is* fictional by recreating scenes from the Indiana Jones movies and the Lara Croft movies and comparing them to a “real life” archaeology scene.

Materials

3 scrolls (samples are on the following pages and on the accompanying CD)

1 notebook

1 black marker

3-5 plastic bags (sandwich bags or larger)

(The following items are optional and can be substituted with what you have in the classroom)

Bamboo poles

2 Tiki Torches

Artifacts such as food items, jewelry (plastic, wood, etc. does not have to be expensive, beads, Golden Chimp!)

Lara Croft accessories (wig, belt)

Indiana Jones accessories (Fedora, jacket, whip)

Background

Archaeology has been portrayed in movies such as Indiana Jones as action-packed gun-slitting, science. Although archaeologists believe that their science is action packed, most of us do not even own a gun - let alone fight Nazis! The rewards of archaeology are immeasurable, but there is much work that goes into understanding our past. This activity gives students the opportunity to have a little action-packed fun while understanding that although movies are made to entertain not educate.

Procedure

- Set up your archaeological site. We use the bamboo poles when we are outside to set the boundaries of the site. The tiki torches are used to mark the entrance. The Golden Chimp is placed on a pedestal at the opposite of the entrance so as to make it the focal point. Other artifacts such as food offerings may be placed in front of the

Chimp. Jewelry may be used to decorate the bamboo poles. You may want to get the students involved by having them make the artifacts.

- Now that the scene is set, divide the class into three groups. Hand each group a scroll. The scrolls provided have our imaginary myth on them (feel free to create your own) and instructions as to how the group should act. For example if you are Indiana Jones, people in the group may be the “bad guys” or the rolling boulder and the Indiana Jones character should rush in, fight the bad guys, grab the chimp, and leave...narrowly escaping death!
- The groups should come up with a scene that will last about a minute. We recommend giving the students props such as a fedora or a braided wig!
- Give the students enough time to work their scene out (about 10-15 minutes) and then each group gets to perform their scene for the other groups. If possible, a video camera is used to simulate an actual movie scene. Also, we have found out that if the “Archaeologist” group goes first then the other groups will follow the techniques presented so Indiana Jones will actually start picking up all the artifacts and recording where he found them! We recommend starting with the Indiana Jones group followed by Lara Croft and then the Archaeologist group.

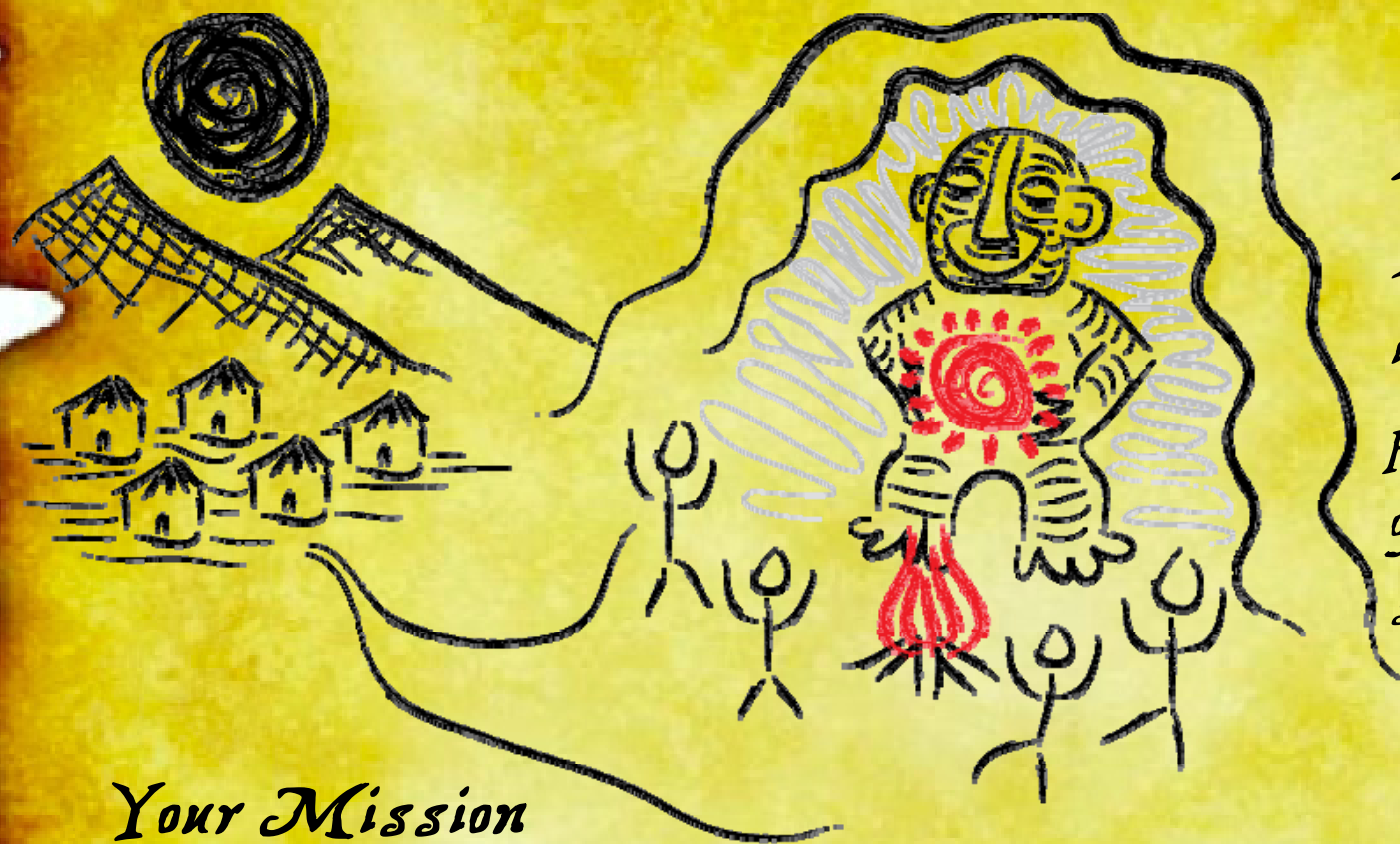
Closure

So what do the students get out of this? When we finish this activity we ask simple questions like, what is the difference between archaeology in the movies and real archaeology. Also discuss the techniques used in each of scenes. Indiana Jones and Lara Croft will run in and have a really cool fight scene but will simply grab the Golden Chimp and leave. Archaeologists will take their time and observe their surroundings. Although the Golden Chimp is important, it may not be able to tell about the people who were using the cave. Food remains will let us know what people were eating during that time. Jewelry offerings may show a sign of status or simply the fashion of that time. Also, artifacts are good but they tell us much more when we know what they were found with. The Golden Chimp is a nice artifact but it does not tell us anything. If we found it with food remains in front of it along with a fire pit and the rest of the cave was empty, it may tell us that it was a ceremonial site. No evidence of other activities relating to living, such as pottery, weapons, hunting implements, is a good sign that people were not using it for everyday activities.

Teacher Tips

We have created this scene in the fashion of Indiana Jones based on what we had at our finger tips. Feel free to use items in your classroom as artifacts and to change the story. You could even read a real story from mythology (or any culture) and base the scene on that. Many lesson plans could branch off of this one activity so feel free to make this as simplistic or involved as you may want.

Archaeology Goes to the Movies



The Legend of the Golden Chimp

In a remote part of Africa, there is a story of a Golden Chimp. It is said that when the sky turned to ash in the middle of the day, people fled to the Cave of the Golden Chimp. By dancing and giving offerings to the Chimp, the Chimp would bring back the light to the sky. He who possesses the Golden Chimp controls the sun.

Your Mission

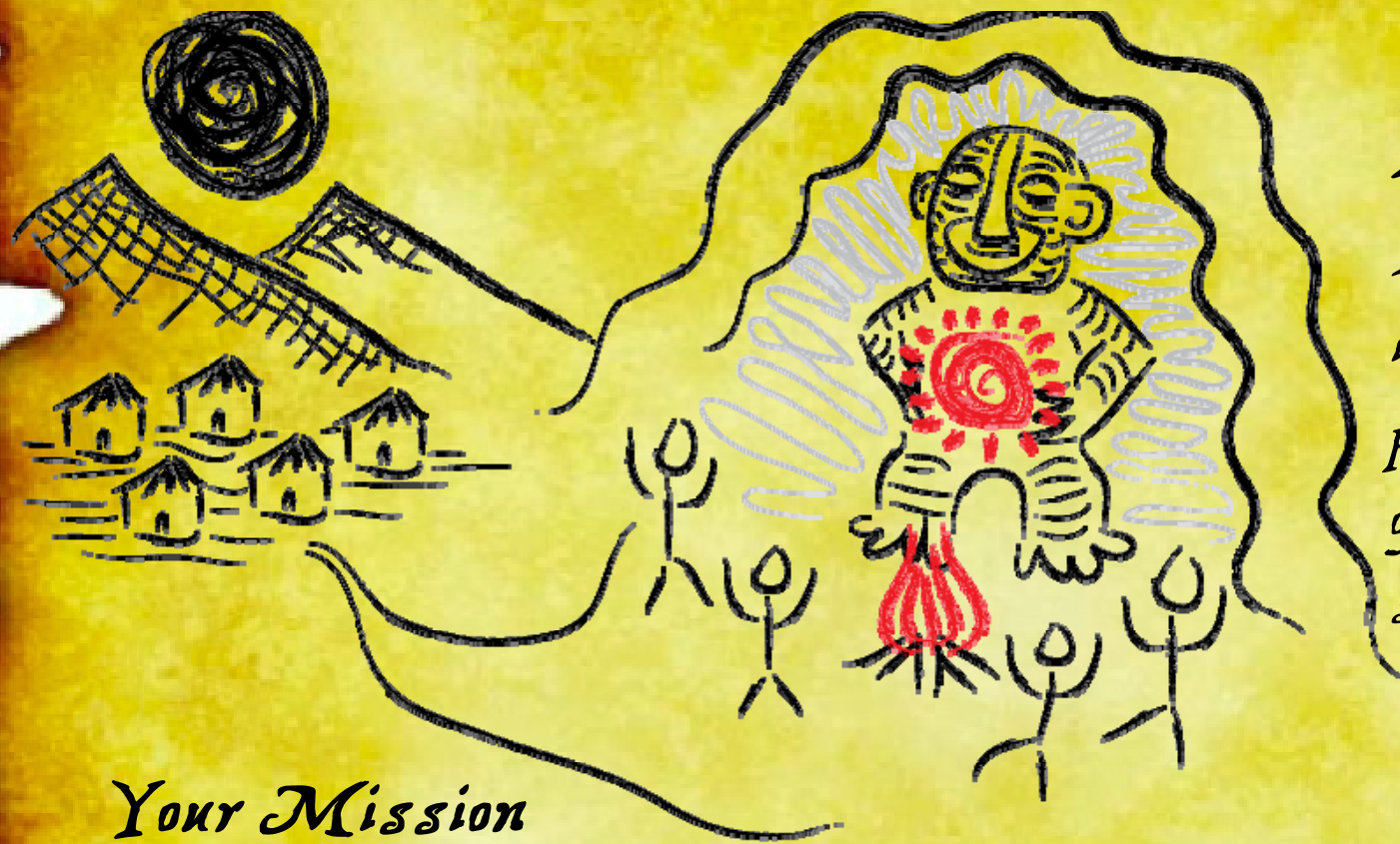
Your group represents Indiana Jones, professor and archaeologist from the 1940's. You have been contacted by the United States government to help them recover the Golden Chimp before the Nazis. Your research has led you to a cave in Africa, marked by two tiki torches.

In true Indiana Jones' style, you will retrieve the Golden Chimp. Be as creative with your story line as possible, remember Indiana Jones never simply walks into a place and picks up the artifact and leaves. Use members of your group to act as possible side kicks, traps, and bad guys.

Above all else- have fun! Your adventure awaits...



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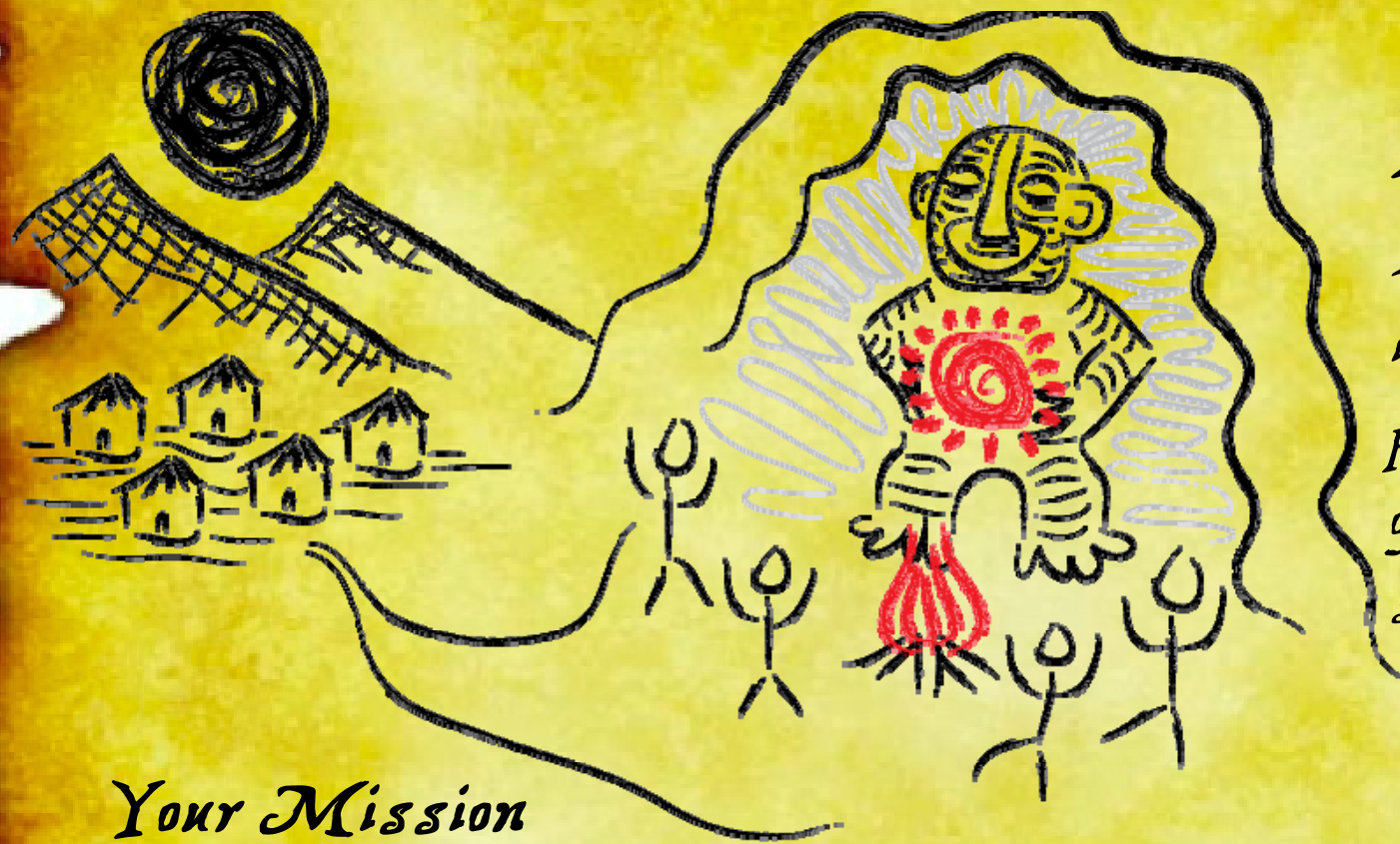
Your group represents Lara Croft, archaeologist from the 1980's. On the way home from a recent trip to Africa, you hear the story of the golden chimp from a military informant. The story recently surfaced as a plot to control solar energy by OPEC. Your informant has led you to a cave marked by two tiki torches.

In true Lara Croft fashion, you will retrieve the Golden Chimp. Be as creative with your story line as possible, remember Lara Croft never simply walks into a place and picks up the artifact and leaves. Use members of your group to act as possible side kicks, traps, and bad guys.

Above all else- have fun! Your adventure awaits...



Archaeology Goes to the Movies



The Legend of the Golden Chimp

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Your Mission

Your group represents actual archaeological investigation. Your research into early African culture has uncovered a story about the golden chimp. Further research has led you to a cave marked by two tiki torches.

As true archaeologists, you are not just interested in the golden chimp but all the artifacts and information surrounding the chimp. Document all observations. Bag all artifacts, making sure to write information regarding location on the bag. Creatively use members of your group as crew, other specialists, or equipment.

Above all else- have fun! Your adventure awaits...



Dirt Science

submitted by Irina Sorset, Outreach Coordinator (2009 – present), and Melissa Timo, Public Archaeology Assistant (2008 – 2011), of FPAN’s Northwest Regional Center

Recommended Grade Levels: 3-7

Sunshine State Standards: SC.K.N.1.1

Time Required: 15-30 minutes

Setting: Classroom

Objective

Students will understand the importance of soil in archaeology and how archaeologists distinguish between different types of soil.

Materials

- Elmer’s Glue
- 6 Plastic Petri Dishes
- 6 Different Shades of Dirt
- Dirt Science Activity Worksheets
- Copies of Munsell Page
- Pencils

Background

The field of archaeology is a destructive science. In order to maintain context, understanding how each piece of the puzzle relates and connects to its surroundings, archaeologists record everything they observe. Meticulous records are kept in the field detailing information about excavation techniques, artifacts, and soils. In order to identify the types of soils encountered during an excavation archaeologists use the Munsell Soil Color Chart. This chart is a small blue book which contains multiple pages of small paint chips with corresponding descriptions on the opposite page. Each page is representative of the typical types of soils found in different regions of the world. In addition to archaeologists, soil scientists and geologists also use Munsell charts.

Procedure

- Collect 6 different soil colors and fill a Petri dish to the top with each color. Use the Elmer’s glue to affix both halves of the Petri dish together and let dry.
- Show students one of the Petri dishes which contains a soil sample. Students can work in small groups of 2-4 or individually. Pass around the soil and have each student write down on a piece of paper what color they would call the soil. (If the soil is brown, you will probably get a variety of answers such as tan, brownish yellow, reddish brown, etc.)

- Once students have written down their answers, read aloud some of the different color names. The variety of color names illustrates how one color can be interpreted differently by many people. Imagine if someone in Australia or Brazil were shown the soil. How would they describe the color?
- Discuss with the class why it is important for scientists around the world to use the same soil color names and descriptions during their research. By having a uniform standard, anyone can turn to a Munsell page and see exactly the color being described. This uniformity helps with interpreting data, comparing research, and understanding the archaeological process.
- Explain how to use and read the Munsell soil chart and corresponding description page, called the Soil Color Name Diagram. For example the color 10YR 3/4 means the color is located;
 - on the 10YR “hue” page (upper right corner)
 - in “Value” column 3 (left side)
 - in “Chroma” rows 4 (bottom)
- The color description, located on the Soil Color Name Diagram, for 10YR 3/4 is called “dark yellowish brown.”
- Pass out the Dirt Science Activity Worksheet and have each student use the Munsell color page to identify the 6 different soils in the Petri dishes.

Closure

Go over the correct answers with the class. Discuss why it is important for archaeologists to use the Munsell book. Discuss why people call the same color by different names (culture, life experience, education, language, etc.). Emphasize the importance of soil in the field of archaeology, including its color, texture, and compactness.

Teacher Tips

Use a variety of soil colors for the Petri dishes. Make sure that the hues chosen are represented on the 10YR Munsell page (beach or sandbox sand, potting soil, and clay work well for this exercise). If you cannot find 6 different colors of soil, mix them together to create a new color. Natural soils are made up of many different colors. For example, a color can be described as primarily 10YR 4/3 Brown mottled (mixed) with of 10YR 6/4 Light Yellowish Brown. To help prevent the soil spilling, ask students not to shake the dishes or turn them upside down. With larger classes, make multiple sets of the 6 Petri dishes.

DIRT SCIENCE

Excavation (or controlled, careful digging) is one way archaeologists can learn about the past. Digging destroys archaeological sites, so archaeologists must record everything they see very carefully, including the soil. Each layer of soil, or stratum, can indicate a different period of time. Careful mapping and description of these strata can help add information to an area's timeline. To describe strata, archaeologists examine the soil's type and texture and use a Munsell chart to determine its color. Soil can be matched to a square on the Munsell chart to find the precise color to record.

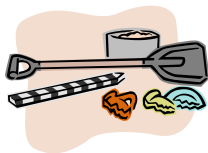


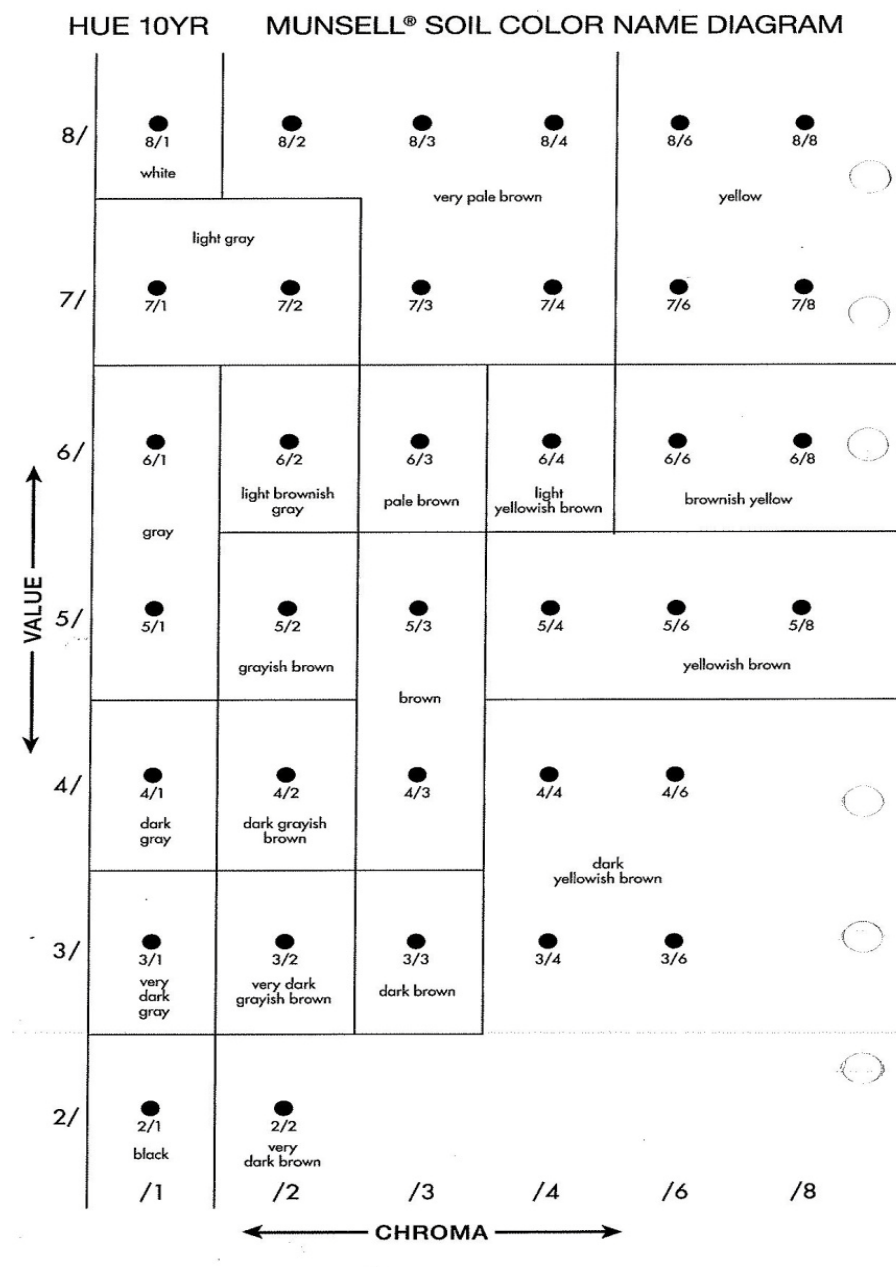
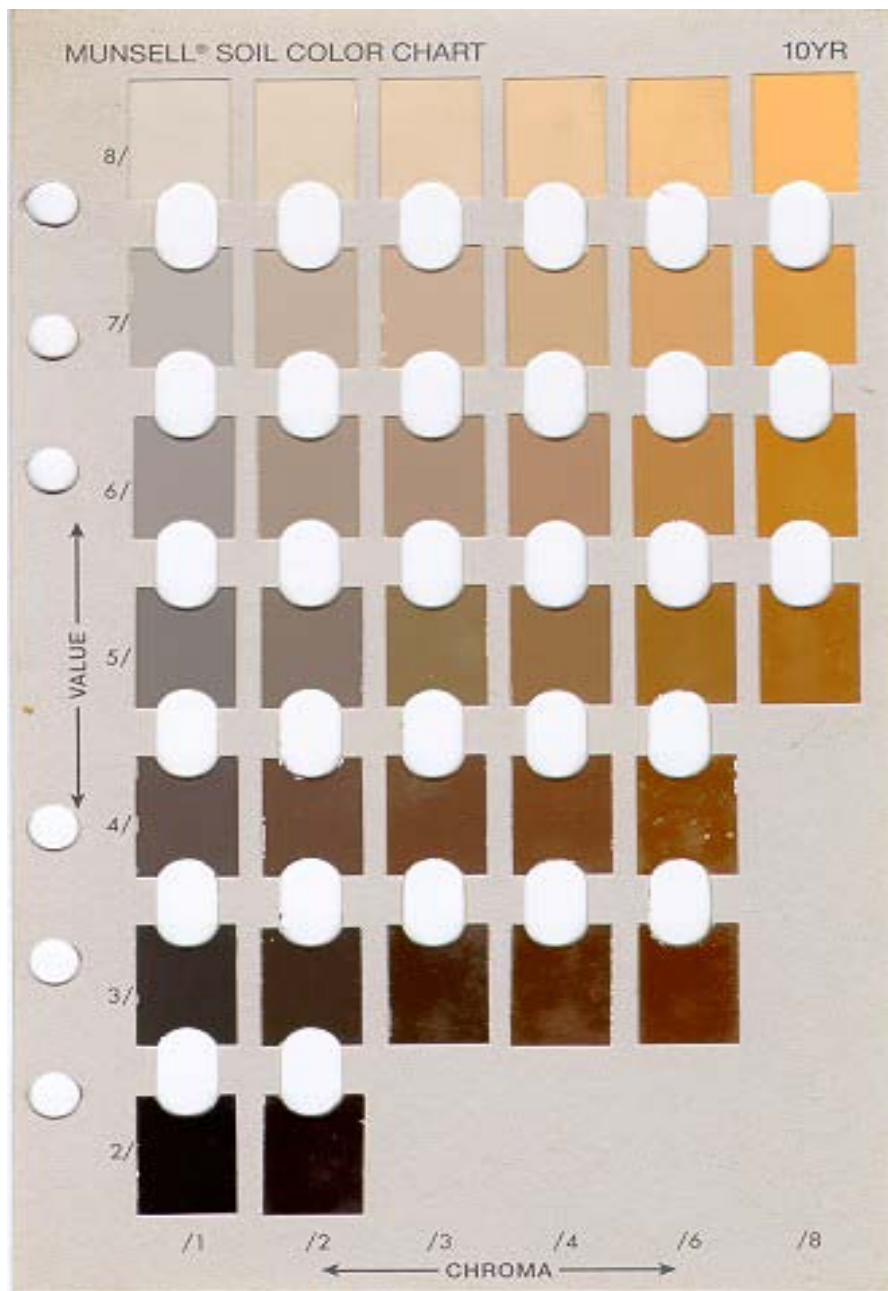
You can help!



Each Petri dish contains a type of soil that might be found in Florida. Help the archaeologists document the strata of their site by matching the soil color to the Munsell color chart and by describing the color of the soil in each dish. Record your findings down below!

Sample No.	Color			Description
	Hue	Value	Chroma	
Example	10YR	5	/ 8	Yellow brown Clay
1			/	
2			/	
3			/	
4			/	
5			/	
6			/	





Site Grid, Mapping, & Survey

submitted by Mary Furlong, Outreach Coordinator (2006 – 2009) of FPAN's Northwest Regional Center

Summary: In order to understand how archaeologists record data from sites, students create an excavation grid, measure and map artifacts, and learn about different survey techniques.

Objectives

Students will demonstrate an understanding of why and how archaeologists use grids by creating a grid over a mock site, then using scientific measurements to create accurate maps of artifacts recovered. Participants will also be able to discuss archaeological survey techniques, their accuracy, and usefulness.

Materials

- Measuring tapes
- Rulers
- Calculators
- Graph paper/pencils
- Rebar/stakes/pinflags to denote grid corners

Background

Archaeology is a destructive science, meaning that as an archaeologist excavates and removes data, he or she is actually destroying the site! In order to make sure no information is lost in the process, archaeologists make careful, detailed notes of everything they do and see. Square excavation grids help archaeologists maintain the context or provenience of everything recovered from the site they work on. Grids help archaeologists use scientific measurements to keep track of artifacts and features in their notes, in the maps they make, and the pictures they take.

Procedure

- To do this activity, salt your “site” with artifacts and features (“immovable” manmade objects like wells, foundations, or trashpits) before laying out the grid.
- Before students begin, discuss the importance of context and recording. Explain how grids are used by archaeologists to keep track of and understand context. Use the Pythagorean Theorem to lay out a grid across the “site.” Discuss how this grid can be tied into GPS coordinates and other near-by sites.

- Have students draw scale maps of units within the grid. Make sure they measure in exact dimensions and locations of artifacts or features. Discuss what extra information can be learned by knowing the exact location of the artifact/feature rather than just its presence/ absence.

Closure

Discuss difference sampling techniques and how archaeologists use these techniques to locate sites and establish their size. Allow students to surface collect the salted artifacts through a systematic survey. Is this sample bias? What was excluded/included?

Discuss predictive models for site location. Why would people pick one location over another (nearness to resources, seasonal movements, transportation, etc.)? How does the environment and climate affect these choices? How do economic and politics affect these choices?

Bag O' Artifacts

submitted by Mary Furlong, Outreach Coordinator (2006 – 2009) of FPAN's Northwest Regional Center

Setting: Classroom

Summary: A simple bag of artifacts (perhaps those that were used on your "site" in the *Site Grid, Mapping, and Survey* activity) can tell an archaeologist a lot about a site and the people who lived there.

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, AND/OR provide a statistical analysis (through graphs or charts) about a set of artifacts and explain how results can be manipulated, AND/OR provide written descriptive interpretation of artifacts based on a previous knowledge of history.

Materials

Artifacts- replicas, collections, junk –representing different time periods, technologies,
Bags or containers

Background

Only a very small percentage of an archaeologist's time is spent in the field, the rest is spent in the lab interpreting what was recovered. Sometimes features and artifact contexts cannot be understood until the whole picture is put together weeks or months after the last shovel is put away.

Archaeologists will look at material types, manufacture technology, decorations, etc. to establish the time period, culture, occupation, gender, age, economic status, etc. of the people who occupied the site.

However, even the artifacts can't tell archaeologists everything. Materials in the archaeological record do not always survive (weathering, decomposition, etc) or go missing (looting, bioturbation-movement by animals-, etc.). These missing puzzle pieces can change the way archaeologists portray a site's story.

This activity can be approached in a number of different angles depending on the relevant subject of study.

Procedure

- Divide the class into small groups.
- Give each group a bag of artifacts and allow them to have a few moments to study and discuss the contents.
- Below are three ways students can use critical thinking to interpret the artifacts in their bags.

Closure

Social Studies and Science: Discuss what survives in the archaeological record. Why are some items thrown away while others become heirlooms? What types of items do/do not survive in the archaeological record? How does the environment affect preservation (underwater, arid, bog, etc.)? How does this bias our knowledge of the past?

Social Studies and Math: Sort the artifacts into different categories (time, type, etc.). Discuss the chronology 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 statistic analysis. Make charts and graphs to show results. What kinds of questions can these statistics answers? How can the results be manipulated (ex. Adding/removing particular artifacts)?

Social Studies and Language Arts: Conduct classroom discussions or have students write interpretations about the artifacts included in the bag. Encourage students to describe the time period, ethnic group, gender, age, economic status, trade, occupation, etc. of the people who may have owned these items. Apply knowledge of history to make these interpretations.

Example: A bag of artifacts may include Native American ceramics, lead shot, deer and pig bones, glass beads, burnt corn cobs, and a glass projectile point. These artifacts indicate Native American presence after European contact. How do these artifacts show the blending of European and Native American cultures?

Teacher Tip

For added difficulty, add an artifact to the back that is a true outlier- for example: In a bag full of colonial artifacts, add in a Barbie doll or a Nintendo DS game. What does this strange artifact have to do with the rest? How did it come to be there? What does that say about the integrity of the site?

For a simpler exercise for younger students, try *What Our Artifacts Say About Us*.

What Our Artifacts Say About Us

submitted by Irina Sorset, Outreach Coordinator (2009 – present), and Melissa Timo, Public Archaeology Assistant (2010 – present), of FPAN’s Northwest Regional Center

Recommended Grade Levels: 2-5

Sunshine State Standards: SS.2.A.1.1, SS.2.E.1.1, SC.2.L.17.1, SC.2.N.1.3

Time Required: 1-2 Class Period(s)

Setting: Classroom

Objective

Students will use artifacts to discover how *things* can help create theories about people who lived in the past. Students will use their knowledge of science and history to identify how artifacts can help (or hinder) archaeologists’ understanding of the past.

Materials

Artifacts, Replicas, or Modern Junk

Background

Archaeologists do far more than just excavate. They must also analyze and interpret all the artifacts they recover in order to better answer questions about people in the past and the lives those people led. Poor preservation or destruction of archaeological sites and artifacts (including both natural and human processes) can change how scientists understand the past.

Procedure

- Collect an assortment of artifacts. These can be beads, buttons, children’s toys, nails, broken pieces of pottery, animal bones or teeth, or replicas of any sort. It is important to include items that indicate specific occupations, age groups, genders, ethnic groups, economic statuses, and/or technological advancements.
- Ask students (or small groups of students) to examine and identify the artifacts they were given. Have students create a “site history.” What kind of sites were these? What can be said about the people who left these things behind? What jobs did they have? Who lived on these sites? What resources or amenities were available to these people? How long did they live or work at these sites?
- After students are satisfied with their “site histories,” remove one or more artifacts or one of several similar artifacts (ex., remove the Matchbox car, but keep the doll part). How does this change the stories the students previously created? Discuss what survives in the archaeological record. Why are some items thrown away, while others are kept? Does the environment effect the preservation of artifacts? How does this change the story of the past? Does looting affect the understanding of history?

Closure

Conduct classroom discussion or have students and/or student groups write their “site’s” history. Encourage the students to identify the time period, age group, economic status, occupation, ethnic group, etc. of the people who owned or used these items. Have them think critically about why there are gaps in our knowledge of the past and what that can mean for those studying it.

For example: A group may receive a porcelain tea cup, a matchbox car, a modern travel mug, a plastic doll (or part of a doll), a hammer, a tool belt, and a piece of costume jewelry. These artifacts may suggest a middle or working class family with possibly two children. How can you tell this was a family? What kind of profession did someone in this household have? How does the appearance of the older style teacup alongside the more modern artifacts change the story? How does the story change if the teacup is removed? What happens to the picture of this family if the doll was removed?

Teacher Tip

Connect this activity with the *Stratigraphy Canvas* lesson. Have students connect the information they discovered about how archaeologists date sites and artifacts so they can properly interpret their occupation or use in the past. For older students, see the *Bag O’ Artifacts* lesson.

Site Formation and Stratigraphy

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006 – 2009)

Setting: Classroom

Summary: This activity uses a little math and mapping in order to explain the importance of an understanding of stratigraphy and site formation for archaeological study.

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.

Materials

- Old fish tank
- Different types of soils
- Artifacts (real, replicas, modern junk)

Background

Understanding how a site is created is essential for gaining information from the archaeological record. In addition, stratigraphy is an essential tool in relative dating.

Procedure

- Discuss the natural and man-made causes of site formation and destruction (erosion, deposition, storms, water, development, plowing, etc.)
- Use different soil types to create stratigraphic layers in the fish tank.
- Include artifacts and features.
- Explain the Law of Superposition and how stratigraphy is used to date sites and artifacts.
- Make scaled profile maps of the stratigraphy.
- Use volume calculations to determine how much soil is in an excavated unit (or fish tank).
- Use ratios to compare the amount of soil and artifacts excavated from different units, sites, or tanks.

Archaeology Olympics

submitted by Sarah Miller, Director of FPAN's Northeast Regional Center (2006 – present)

Time required: 15 minute review of tools; 20 minutes practice; 20 minute race; 5 minute wrap up
Setting: outside

Materials

- Color copy of a munsell color chart strips
- Pin flags
- Measuring sticks
- Long tape to measure accuracy of pacing
- Trowels
- Shovels
- Screens
- Buckets of dirt
- Sharpies
- Bags

Objectives

Participants will pragmatically interact with tools of the trade, acquire appreciation for the scientific measurements in archaeology, and experiment with field methods.

Background

Review tools in an archaeologists tool kit. Including, but not limited to: trowel, line level, string, nails, measuring sticks/tapes, Munsell color charts, pin flags, shovel, screen, sharpies, compass, bags, etc...

Procedure

- Demonstrate for students how these tools are used in the field.
 - Set up a 1 x 1 m unit, level a line for profiles, take a Munsell reading, pace off 5 meters, fill out an artifact bag, toss dirt and trowels.
 - Set up the competition between teams of applying these field methods to an Olympics type relay. Students will have to set up a unit in competitive time, put lines of the Munsell color chart strips, pace out a transect, toss dirt accurately into the screen.
- Pace off: mark off a starting flag, and students will have to pace off 5, 10, and 15 m using flags. Can be measured with a tape for accuracy and points taken off (or they have to re-do) until they get on the mark.
 - Unit set up: Students have to work together to put in 4 nails using two measuring sticks. Measure the 4 sides for accuracy- points off, or have them re-do.

- Line level set up: Students have to balance the bubble on a tight string with chaining pins. Easy one to check, just make sure string is tight and line level is level at various points along the string.
 - Dirt Toss: Students use a shovel to pitch dirt at a screen. Can be judged on accuracy, or throw until they get an accurate shovel full in.
 - Trowel Toss: There is often time when you're just standing around, waiting for rain to stop, waiting for a supervisor to come answer a question, or just breaks between activities. One thing for fun archaeologists do is toss their trowel into the ground with a flick of their wrist. First try to just stick the trowel into the ground, or if you get good try for accuracy.
 - Color Chart: take just one page of the Munsell color chart and color photo copy the page once for each team (if done in tandem). Putting individual chips in order is near impossible, but students can do it in strips. Laminate the strips for durability and put in a single envelope for them to order. Make sure you have the original page for the key.
 - Fill out and Artifact Bag: Have an example ready, but students need to fill out the front of a paper bag with site number, provenience, coordinates, date, initials, FS or whatever other information you feel pertinent. Students have to fill it out with their own info.
- Break the students into teams and let them practice. They generally find on their own there are some students more adapt to certain activities.
 - Begin the race. You can either time each team and let them perform separately if there is time, or have them do it in tandem.
 - I generally end the race on a trowel toss into a hoola-hoop. It has a definitive end, brings on great cheers, and can get really competitive if there are several teams trying to get their trowel to just stick into the ground.

Closure

1. There is a tremendous disjoint in archaeology education lessons between concepts and fieldwork. How do these skills apply to archaeology? How do the skills relate to concepts of context, professional set of skills, and dependency on field recordation?
2. What skills were you good at? What skills do you need to improve on?
3. Lots of jobs have times when you just need to be patient, and lets face it just stand around. Imagine you are out in the woods doing survey and have 15 minutes to wait for your supervisor. How could you creatively pass your time given the tools you have on you?
4. What other disciplines collect data in the field? How might you adapt Olympics to a different tool set?
5. Not every archaeologist is meant for fieldwork. What are the jobs for archaeologists in and out of the field? What type are you?

Archaeology and Pseudoscience

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006-2009)

Recommended Grade Levels: 6-12

Sunshine State Standards: LA.910.6.2.1, SC.(6-8, 912).N.1.4, SC.(8, 912).N.1.6, SC.(6-8, 912).N.2.1, SC.(6,8,912).N.2.2, SC.(6, 912).N.2.3, SC.912.N.2.5, SS.912.A.1.5

Time Required: 1-2 Class Periods

Location: Classroom

Objective

Students will learn to distinguish between science and pseudoscience using the scientific method.

Materials

Magazine, newspaper, or online articles about topics (i.e. Loch Ness Monster or Bermuda Triangle) from entertainment, news, fringe, and scientific sources

Scientific Resources

Junior Skeptic Magazine

http://www.skeptic.com/the_magazine/junior_skeptic.html

Frauds, Myths, & Mysteries: Science and Pseudoscience in Archaeology by

Kenneth L. Feder

Background

The scientific method is an essential tool used by archaeologists to gain a better and more accurate understanding of the past. However there are many people, who portray themselves as experts or scientists, who ignore the scientific method in order to perpetuate false, exaggerated, or outlandish views of the past. The pseudoscience perpetuated by these “experts” can be harmful because it often perpetuates racism and other biases, is tied to financial scams, and takes away public attention from true scientific discovery.

Procedure

- Review the steps of the scientific method in class. Remind students about the importance of testing hypotheses and replicating the results of those tests.
- Have students research various topics in archaeological pseudoscience (Atlantis, Aliens building the Pyramids, etc.).
- Tell students to select two articles about the same topic. They should pick one article that appears “scientific” and one that does not. Have students answer these questions for each article.
 - What is the researcher’s hypothesis?

- Did they test their hypothesis (conduct an experiment)? How? If not, could it be tested? How?
- Can the test be replicated? Was it?
- What were the researcher's conclusions? Do you agree with them?
- Next ask students to consider each source of information.
 - Who conducted the research featured in the article?
 - What are his/her credentials?
 - What are the researcher's feelings toward main stream scientists or scholars?
 - Who wrote or published the article? Is it a legitimate source of information? Does that affect the reader affect the reader's belief of the information? If so, how?
- Compare the answers for each question between the two articles. Does the research described in either article appear to more scientific than the other?
- Discuss the dangers of pseudoscience. For example, people may have given money to companies searching for Atlantis or consider that the idea that aliens built the Mayan pyramids infers that the Mayan people were not intelligent enough to do so.

Closure

After comparing articles, ask students to address the same subject using the scientific method. Instruct each student to form a hypothesis and develop a way to test it. For example, how could a student create an experiment to test for the existence of Atlantis?

Teacher Tip

Don't forget about Occam's Razor - pseudoscience is notorious for making many assumptions, while ignoring simpler explanations.

Archaeology & the Media

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006-2009)

Recommended Grade Levels: 6-12

Sunshine State Standards: LA.910.5.2.5, LA.1112.6.3.2, LA.(7,8).4.3.1SS.912.A.1.2, SS.8.A.1.4,

Time Required: 1-2 Class Periods

Location: Classroom

Summary: Students will analyze archaeology in the media to determine the difference between "good" archaeological practice and sensationalism.

Objective

Students will demonstrate an ability to differentiate "good" archaeological practice and sensationalism by using the scientific methods to analyze archaeological data as it is presented in the media.

Materials

Newspaper/ Magazine Articles about Archaeology

Video of an episode of "Digging for the Truth," "Deep Sea Detectives," or other similar program (see episode lists below)

Background

The media plays a huge role in the general public's perception of archaeology and the past. Major motion pictures (i.e., Indiana Jones), popular cable networks (i.e., Discovery Channel and History Channel), and even print media greatly affect our perception of archaeology. Archaeologists are often portrayed as great adventures, glorified treasure hunters, or the intellectual elite hiding secrets of the past from the public. In reality, archaeologists are regular people who actively engage in scientific study and research, paying just as much attention to plain ceramic bowls as they do to gold coins.

Procedure

- Bring in a collection of articles about a particular archaeological subject for students to read. Discuss the archaeological methods used to discover, excavate, analyze, interpret, and conserve archaeological materials and historical documents. The Civil War submarine *H.L. Hunley* is an excellent subject for this activity because a lot of scholarly and public material has been written about it. In addition, there is an article and activities associated with the *Hunley* in "History Beneath the Sea: Nautical Archaeology in the Classroom," which is included on the CD.
- Watch an episode of "Digging for the Truth" or "Deep Sea Detectives" in class or as a homework assignment. Each episode is about 45 minutes long. Past episodes of these shows are available on DVD or are downloadable on iTunes. See next page for a list of episodes. There is an episode of "Digging for the Truth" about the *H.L. Hunley*.

- Lead a discussion comparing the information reported in the various forms of media (articles, TV shows, etc.). Discuss how information varies between scholarly work and pieces intended for the general public. Be sure to discuss the importance of presenting the subject in an entertaining way. Are the scholarly works boring?

Closure

Instruct students to write a commercial advertising a show about archaeology. Tell them they must portray the archaeology in an interesting and factual way, but without being over dramatic or sensationalized.

Teacher Tip

In addition to the episodes themselves, the advertisements (especially commercials) for these episodes are often the most extreme examples of sensationalism. The hosts of these shows are often portrayed as being in life threatening situations, fringe theories are often given equal air time and legitimacy, and controversies are often created or exaggerated. Lead a class discussion about the advertising techniques for these shows. Do the shows live up to the advertising? Where does archaeological science and research fit into these advertisements? What do TV networks gain from sensationalizing their shows?

Lists of Episodes

“Digging for the Truth” Season One

1. Who Built [Egypt's Pyramids](#)?
2. [Pompeii](#) Secrets Revealed
3. Hunt for the Lost [Ark](#)
4. The [Holy Grail](#)
5. The [Iceman](#) Cometh
6. Quest for [King Solomon's](#) Gold
7. Passage to the [Maya](#) Underworld
8. The [Lost Tribe of Israel](#)
9. Secrets of the [Nazca Lines](#)
10. The Search for [El Dorado](#)
11. Giants of [Easter Island](#)
12. Mystery of the [Anasazi](#)
13. [Nefertiti](#): The Mummy Returns

Season Two

1. The Real [Temple of Doom](#)
2. [America's Pyramids](#)
3. [Stonehenge](#) Secrets Revealed
4. The [Vikings: Voyage to America](#)
5. [Roanoke](#): The Lost Colony
6. [Cleopatra](#): The Last [Pharaoh](#)

7. City of the Gods - [Teotihuacan](#)
8. The Real [Queen of Sheba](#)
9. [Troy](#): Of Gods and Warriors
10. [The Da Vinci Code](#): Bloodlines
11. The [Giants](#) of [Patagonia](#)
12. The Real Sin City: [Sodom and Gomorrah](#)
13. The Lost Cities of the [Amazon](#)

Season Three

1. [Atlantis](#): New Revelations 2-hour Special
2. Lost [Empire](#) Of [Genghis Khan](#)
3. [King Tut](#) Secrets Revealed
4. New [Maya](#) Revelations
5. [Rameses II](#): Visions of Greatness
6. [Machu Picchu](#)
7. Secrets of [Mummies](#)
8. Lost Treasures of [Petra](#)
9. [Stonehenge](#) of the Americas
10. Lost Treasures of the [Copper Scroll](#)
11. The [Aztecs](#)
12. Searching for [King David](#)

Season Four

1. [Mummies](#) of the Clouds
2. The [Hunley](#): New Revelations
3. [Kings](#) of the [Stone Age](#)
4. [Pirates](#): Terror in the Mediterranean
5. [God's Gold](#), Part 1
6. [God's Gold](#), Part 2
7. [Timbuktu](#)
8. [Angkor Wat](#): [Eighth Wonder of the World](#)

“Deep Sea Detectives” Season 1

Season 1, Episode 1: [Titanic: High Tech at Low Depth](#)

Original Air Date: 1 April 2003

Season 1, Episode 2: [Shipwrecks!: California](#)

Original Air Date: 1 April 2003

Season 1, Episode 3: [Shipwrecks!: Cape Cod](#)

Original Air Date: 15 April 2003

Season 1, Episode 4: [Shipwrecks!: Florida](#)

Original Air Date: 29 April 2003
Season 1, Episode 5: [Raise the Monitor!](#)
Original Air Date: 6 May 2003
Season 1, Episode 6: [USS Indianapolis Resurfaced](#)
Original Air Date: 13 May 2003
Season 1, Episode 7: [The Scharnhorst Mystery](#)
Original Air Date: 20 May 2003
Season 1, Episode 8: [Silent Service: The Captains of WWII](#)
Original Air Date: 1 July 2003
Season 1, Episode 9: [Silent Service: The Torpedoes of WWII](#)
Original Air Date: 8 July 2003
Season 1, Episode 10: [The Death of the Edmund Fitzgerald](#)
Original Air Date: 22 July 2003
Season 1, Episode 11: [The Ghost Ship of New England](#)
Original Air Date: 29 July 2003
Season 1, Episode 12: [The Hunt for the Derbyshire](#)
Original Air Date: 5 August 2003
Season 1, Episode 13: [Death on the Baltic](#)
Original Air Date: 12 August 2003
Season 1, Episode 14: [Skeleton in the Sand: The Montana](#)
Original Air Date: 2 September 2003
Season 1, Episode 15: [Death on Lake Huron](#)
Original Air Date: 9 September 2003
Season 1, Episode 16: [Slave Ship Uncovered!](#)
Original Air Date: 23 September 2003
Season 1, Episode 17: [Lost Treasure Ship Found!](#)
Original Air Date: 30 September 2003
Art treasures go down with a merchant vessel off the European coast in 1771.
Season 1, Episode 18: [The Rohna Disaster: WWII's Secret Tragedy](#)
Original Air Date: 2 October 2003
Season 1, Episode 19: [The Mysteries of Devil's Triangles](#)
Original Air Date: 9 October 2003
Season 1, Episode 20: [Gold Rush Disaster: The Frolic](#)
Original Air Date: 11 November 2003
Season 1, Episode 21: [Treasure Hunt: Search for the Atocha](#)
Original Air Date: 25 November 2003
Season 1, Episode 22: [B-29](#)
Original Air Date: 2 December 2003
Season 1, Episode 23: [Japanese Sub at Pearl Harbor](#)
Original Air Date: 7 December 2003
Season 1, Episode 24: [Andrea Doria: Tragedy at Sea](#)
Original Air Date: 9 December 2003
Season 1, Episode 25: [S-5: Doomed Sub](#)
Original Air Date: 23 December 2003
Season 1, Episode 26: [U-352: False Pride](#)

Original Air Date: 30 December 2003

Season 2

Season 2, Episode 1: [U-Boats in the Gulf!](#)

Original Air Date: 12 April 2004

Season 2, Episode 2: [Sinking on the St. Lawrence](#)

Original Air Date: 20 April 2004

Season 2, Episode 3: [Death by Human Torpedo](#)

Original Air Date: 27 April 2004

Season 2, Episode 4: [Graveyard of Ships](#)

Original Air Date: 4 May 2004

Season 2, Episode 5: [Death in the Pacific](#)

Original Air Date: 11 May 2004

Season 2, Episode 6: [Destroyer Down](#)

Original Air Date: 18 May 2004

Season 2, Episode 7: [The Lost Tanks of D-Day](#)

Original Air Date: 1 June 2004

Season 2, Episode 8: [Explosion at Sea](#)

Original Air Date: 5 July 2004

Season 2, Episode 9: [Secret Underwater Caves](#)

Original Air Date: 19 July 2004

Explorers find a cache of Mayan artifacts hidden deep within a Mexican cave.

Season 2, Episode 10: [D-Day Minesweeper](#)

Original Air Date: 26 July 2004

Season 2, Episode 11: [Time Bomb of the Deep](#)

Original Air Date: 30 August 2004

Season 2, Episode 12: [Underwater Train Wreck](#)

Original Air Date: 20 September 2004

Season 2, Episode 13: [Death in the Mediterranean](#)

Original Air Date: 27 September 2004

Season 2, Episode 14: [The Confederacy's Secret Weapon](#)

Original Air Date: 4 October 2004

Season 2, Episode 15: [I-I69: Pearl Harbor's Revenge](#)

Original Air Date: 11 October 2004

Season 2, Episode 16: [Mystery Sinking in Bermuda](#)

Original Air Date: 18 October 2004

Season 2, Episode 17: [Mystery U-boat of World War I](#)

Original Air Date: 25 October 2004

Season 2, Episode 18: [Tugboat Down!](#)

Original Air Date: 8 November 2004

Season 2, Episode 19: [Cruiser Under Siege](#)

Original Air Date: ????

Season 2, Episode 20: [Ship of Doom](#)

Original Air Date: 22 November 2004
Season 2, Episode 21: [Sinking by Sabotage](#)
Original Air Date: 29 November 2004

Season 3

Season 3, Episode 1: [Loch Ness: Great Monster Mystery](#)

Original Air Date: 25 April 2005

Season 3, Episode 2: [Forgotten Sub of WWII](#)

Original Air Date: 2 May 2005

Season 3, Episode 3: [D-Day Destroyer](#)

Original Air Date: 9 May 2005

Season 3, Episode 4: [Winter of Disaster](#)

Original Air Date: 16 May 2005

Season 3, Episode 5: [Mysterious Loss of the German Fleet](#)

Original Air Date: 23 May 2005

The scuttling of the Imperial German Navy's WWI battleships in Scapa Flow is investigated.

Season 3, Episode 6: [D-Day Troops: Lost at Sea](#)

Original Air Date: 6 June 2005

Season 3, Episode 7: [Another Atlantis?](#)

Original Air Date: 13 June 2005

Season 3, Episode 8: [More Secret Underwater Caves](#)

Original Air Date: 20 June 2005

Season 3, Episode 9: [U-Boat Mystery](#)

Original Air Date: 27 June 2005

Season 3, Episode 10: [Secret Allied Trap](#)

Original Air Date: 4 July 2005

Season 3, Episode 11: [Sub War](#)

Original Air Date: 11 July 2005

Season 3, Episode 12: [U.S.S. Perry](#)

Original Air Date: 18 July 2005

Season 3, Episode 13: [Damn the Torpedoes](#)

Original Air Date: 30 July 2005

Season 5

Season 5, Episode 1: [Pharaoh's Lost Treasure](#)

Original Air Date: 27 February 2006

Season 5, Episode 2: [Train Wreck in Lake Michigan](#)

Original Air Date: 6 March 2006

Season 5, Episode 3: [Mystery of the Channel Collision](#)

Original Air Date: 13 March 2006

Season 5, Episode 4: [Blackbeard's Mystery Ship](#)

Original Air Date: 20 March 2005

A focus on the infamous pirate Blackbeard and his flagship, the Queen Anne's Revenge.

Season 5, Episode 5: [Great Lakes Ghost Ship](#)

Original Air Date: 27 March 2006

Season 5, Episode 6: [Disaster of Napoleon's Fleet](#)

Original Air Date: 3 April 2006

Season 5, Episode 7: [Caught in a Killer Storm: Bedloe and Jackson](#)

Original Air Date: 17 April 2006

Season 5, Episode 8: [Captain's Last Stand](#)

Original Air Date: 24 April 2005

Resources on General Archaeology

Downloadable Guides and Activity Books:

Archaeology in the Classroom By Teachers for Teachers

Articles about teaching archaeology and activity guide published as an issue of Early Georgia by the Society for Georgia Archaeology

(http://thesga.org/wp-content/uploads/1992/03/sga_1992_arch_in_classroom.pdf)

Classroom Archaeology

Created by Nancy Hawkins for the Department of Archaeology in Louisiana and available through the Department of Education, Education Resources Information Center

(http://eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED393721&ERICExtSearch_SearchType_0=eric_accno&accno=ED393721)

Published Guides and Activity Books:

Intrigue of the Past: A Teacher's Activity Guide for 4th through 7th grades

This book is part of Project Archaeology (projectarchaeology.org) and an adapted version can be found online for North Carolina (rla.unc.edu/lessons).

Suggested Books:

Elementary School

Duke, Kate

1997 Archaeologists Dig for Clues. New York: HarperCollins Publishers.

McIntosh, Jane

2000 DK Eyewitness Books: Archeology. New York: Dorling Kindersley.

Panchyk, Richard

2001 Archaeology for Kids: Uncovering the Mysteries of Our Past: 25 activities. Chicago: Chicago Review Press, Inc.

Posner, Jack

1997 The Magic School Bus Shows and Tells: A Book about Archaeology. New York: Scholastic Inc.

Middle School

Bingham, Jane, Fiona Chandler, Gill Harvey, and Lisa Miles

2007 The Usborne Encyclopedia of the Ancient World: Internet Linked. London: Usborne Publishing Ltd.

Macaulay, David

1993 Motel of the Mysteries. Boston: Houghton Mifflin Company.

White, John R.

2005 Hands-On Archaeology: Real-Life Activities for Kids. Waco: Prufrock Press Inc.

High School/ Adult

Daniels, Steve and Nicolas David.

1982 The Archaeology Workbook. Philadelphia: University of Pennsylvania Press.

David, Nicolas and Jonathan Driver

1989 The Next Archaeology Workbook. Philadelphia: University of Pennsylvania Press.

Feder, Kenneth L.

2007 Linking to the Past: A Brief Introduction to Archaeology, 2nd Edition. New York: Oxford University Press.

Loubser, Johannes H.N.

2003 Archaeology: The Comic. AltaMira Press. Walnut Creek, CA.

Parker, Mari Pritchard and Elvio Angeloni

2009 Annual Editions Archaeology, 9th edition. Dubuque: McGraw Hill Contemporary Learning Series.

2007 Annual Editions Archaeology, 8th edition. Dubuque: McGraw Hill Contemporary

Thomas, David Hurst and Robert L. Kelly

2006 Archaeology, 4th edition. Florence: Wadsworth Publishing.

White, Nancy Marie

2008 Archaeology For Dummies. Indianapolis: Wiley Publishing, Inc.

Suggested Internet Sites:

National Park Service

(<http://www.cr.nps.gov/archeology/PUBLIC/teach.htm>)

This resource goes in depth to explain archaeology and archaeological methods in plain English, lists parks to visit, links to other educational programs especially the Southeast Archaeological Center, and has lesson plans

Society for American Archaeology (SAA)

(<http://www.saa.org/ForthePublic/Resources/EducationalResources/ForEducators/ArchaeologyforEducators/tabid/953/Default.aspx>)

It is extremely well done, and has tons of information for students, educators, and archaeologists – from single activities to entire events like *ArchaeologyLand!*. They also have a newsletter entitled *Archaeology and Public Education*, back issues are in pdf format for downloading (*most of this list's resource information is from this publication, although some of the information was outdated – still the articles and lesson plans were helpful*).

ArchNet

(<http://archnet.asu.edu>)

ArchNet is a virtual library of archaeological information. Searches can be done by subject or region.

PBS.com

(<http://www.pbs.org/teachersource>)

This website has over 3,000 lesson plans as well as video clips for all ages and grades.

Smithsonian Education

(http://smithsonianeducation.org/educators/lesson_plans/decoding_the_past/index.html)

Decoding the Past has lesson plans and activities to teach students from 3rd – 8th grade about the work of archaeologists. There are also many other subjects such as history, technology, and our voting system – all with well planned out lessons and activities.

PREHISTORIC ARCHAEOLOGY

Activities

Resources

Florida Unearthed

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: K – 3

Sunshine State Standards: MA.2.G.3.1, SC.(K-3).N.1.2, SC.(K-3).N.1.3, SC.3.N.1.5, SC.1.E.6.3, SS.(K-3).A.1.1, SS.2.A.2.1

Time required: 30 minutes

Setting: classroom

Summary: students will learn about Florida's prehistoric cultural periods

Objectives

Students will demonstrate an ability to critically examine and interpret objects from Florida's prehistoric time periods as well as recount the sequence of cultures.

Materials

- 1 *Florida Unearthed* board
- 5 small paper bags

Background

This exercise helps the students to learn the sequence of Florida's prehistoric cultures by emphasizing chronological order and differences in food and artifact types.

Procedure

- Remove items from the *Florida Unearthed* board.
- Put each representative cultural period into its own bag.
- Split the class into five groups.
- Explain to the class that they will be learning about artifacts from the *Florida Unearthed* board.
- Have the students look at their artifacts and identify them.
- Have the students tell the class about what their cultural time period was like by sharing what artifacts they had in their bag.
- Once the group has presented all their artifacts, they may put them back on the board.

Closure

Once the board has been completed, review the sequence of Florida's prehistory with the class. Have them tell you what changes occurred in pottery, point, and food types.

Teacher Tips

If you have the opportunity to use real artifacts or replicas for this project, take a picture of them for the board. That way the students can make a correlation between what they are holding in their hands and where it should be placed in Florida's chronology by sight.

Florida Unearthed Board Construction

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)



Materials

- 1 tri-fold presentation board
- 5 colors of tempera or acrylic paint
- 5 corresponding colors of craft foam
- velcro
- pictures or objects that represent different cultural time periods

Background

This exercise helps the students to learn the sequence of Florida's prehistoric cultures by emphasizing chronological order and differences in food and artifact types.

Procedure

- Divide presentation board into six areas.
- Paint five of the areas the colors you selected.
- As the strips are drying, paste pictures that represent each cultural period to foam of the same color.
- Cut around the foam to form a border of color for your “artifact.”
- Place the smooth half of the Velcro strip on the back side of your artifact.
- Place the fuzzier half on the board where your artifact will be displayed (make sure the board is dry).
- Repeat until all pieces are on the board in their appropriate strips.
- Title your strips, I used foam letters but you could paint the title on too.
- Add some grass at the top so the students will get a sense that we are talking about these objects being underground.

Teacher Tips

If you have the opportunity to use real artifacts or replicas for this project, take a picture of them for your board. That way the students can make a correlation between what they are holding in their hands and where it should be placed in Florida’s chronology by sight.

Atlatl Antics

adapted from *Poverty Point Expeditions*

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: 3 – 8

Sunshine State Standards: MA.3.S.7.1, MA.4.A.6.1, , MA.5.G.5.3, MA.6.S.6.1, MA.6.S.6.2, MA.7.A.1.6, MA.7.P.7.1, MA.8.S.3.2, SC.(3-8).N.1.3, SC (3,4).N.1.7,

Time required: 45 – 60 minutes dependent on group size

Setting: open field, approximately 50 meters long

Summary: students will use the scientific method in an experimental archaeology activity to gather and record data, analyze the results, and draw conclusions about the effect that lengthening the throwing arm has on distance a dart can be thrown with an atlatl.

Objectives

Each student will demonstrate the use of the scientific method and prepare interpretive results reflecting the relationship between distances a dart can be thrown by hand versus the distance a dart can be thrown using an atlatl. Students will also be able to relate the importance of technological adaptations for the understanding of prehistoric life.

Materials

Each group should have the following:

- 1 atlatl
- 1 dart
- 1 chart for measuring distance thrown by hand
- 1 chart for measuring distance thrown with an atlatl
- 1 clipboard
- 1 colored pencil

(To avoid confusion, it is suggested that the fletching on the darts and the colored pencils match and are a vivid color like red, blue, green, or orange.)

For the field:

- 8 wooden stakes marked in increments of 5 meters (5-40)
- Mallet
- Tape measure in meters

Background

Before bows and arrows, native hunters were using a devise called an atlatl. An atlatl is a stick with a hook on the end that was used to extend the reach if a hunter's arm for a more powerful, long distance shot at prey.

The dart lays on the atlatl with the back end of the dart (feathered end) fitting into the hook. The user would lightly pinch the dart with their thumb and pointer finger, the rest of their fingers wrapped around the atlatl. Using a motion similar to casting a rod and reel, the user will throw the dart, releasing the atlatl at just the right moment to follow through.

Atlatls varied in size, shape, and complexity. Some had bone hooks, mostly made of deer bone. There were various stones tied to the atlatl to provide extra force. We suggest using a simplified version for this exercise because it is more cost-effective and durable.

Procedure

- Mark an open field in increments of 5 meters, from 5 to 40.
- Divide group into three or four teams. Each team should be assigned a color – red, blue, green, orange. The colored pencils for the graphs and fletching on the darts should match their team’s color designation. This will make it easier for the students to know which dart is theirs – since they do not always go straight.
- Each team should get a clipboard with their color pencil and two charts – one to measure the distance the dart is thrown by hand and with an atlatl.
- After everyone has written their name on the chart, the first member of the team steps up to throw their dart by hand. The remaining members of the team need to stand back as far as possible so they are not accidentally injured.
- The team member throws their dart. There is no right or wrong method – just as long as it goes forward. Once the field is safe, the team member walks out to retrieve their dart – noting the approximate distance that it traveled.
- This distance is recorded on the chart.
- The next person steps up and this process repeats until everyone has had their turn.
- After all team members have thrown a dart by hand and recorded the distance, a quick demonstration of the atlatl is performed.
- It is suggested that you give the teams a practice round with the atlatl.
- After everyone has tried to use the atlatl at least once, get the teams back in order to throw for distance.
- The same sequence from steps 3 through 6 are repeated, until everyone has thrown a dart with the atlatl and recorded the distance on the chart.
- The teams then get to look at the finished charts and answer some observation questions.

Closure

Looking at the two charts, is there a difference in average distance that the dart flew when thrown by hand and thrown with an atlatl? What could account for this difference? (For those students who were not quite as successful as some “hunters,” they can be assured that using an atlatl is a skill.)

Would it have helped to have a weight tied to the atlatl? Why?

Teacher Tips

Safety first – these are weapons and should be treated with a certain amount of caution and respect. As long as you have an adult leading each team and they are in charge of the field, you should not have any injuries. Make sure that all team members not throwing stand back from the field. Do not let students run or play with the darts.

[illegible]

[illegible]

How to Make an Atlatl and a Dart

Submitted by April J. Buffington, Outreach Assistant for FPAN's West Central Regional Center (2006 – 2009)

Materials

- 1- 7/8" diameter by 36" length wooden dowel
- String or leather
- Bamboo or river cane
- Knitting needle
- Feathers
- Super glue
- Fishing weights

Atlatl Procedure

- First cut the wooden dowel in half. Each half can be one atlatl depending on the length preferred.
- Draw the shape of the hook at one end. If wanted marks can be made for where the string/leather will be placed for the finger holds (see below).



- Use a dremel or other cutting/carving tool to cut out the hook and smooth the top half of the dowel. How much wood cut away is determined by how much space between the tip of the hook and the rest of the atlatl is wanted. The lip created on the outside edges is not necessary but helpful for keeping the dart situated on the atlatl.



- Finally, shape the top to your own liking (some examples below) and glue the string/leather where the grooves were made. Size the holes large enough for most people to use. Also tying the string on the atlatl before gluing will help to retain the size wanted for the finger holes.



- Additional designs may be added before using a polyurethane coat to protect the wood from weather damage.



Dart Procedure

- Find a good size piece of bamboo or river cane that is strong. Burnt bamboo from a local craft shop works well.



- Get a metal knitting needle that will fit into the hollow of the bamboo and partially fill it with small round fishing weights. Clamp the end so that the weights don't fall out. The weights are to balance the dart.
- Put glue into the hollow of the bamboo and around the end of the needle and insert into the bamboo. Let the glue dry.



- Next, gather three feathers and cut them down to size (as these are for demonstration purposes the size is up to you).
- When the glue from the needle and bamboo have dried, glue the feathers on the opposite end, evenly spaced around the bamboo.



- Clean off excess glue and the dart is finished!



Mystery Cemetery

adapted from AIA's *Mystery Cemetery*

Submitted by Cassandra Rae Harper, Outreach Coordinator for FPAN's West Central Regional Center (2006 – present) and April J. Buffington, Outreach Assistant for FPAN's West Central Regional Center (2006 – 2009)

Recommended grade level: 6+

Time required: 4 class periods (on average)

Setting: classroom

Summary: students will develop critical thinking, observance, and inference skills as they interpret an “excavated” cemetery.

Objectives

Students will understand how archaeologists use critical thinking skills to develop an interpretation and understand archaeologists depend on context and patterns to form a hypothesis.

Materials

- 6 – 2' plastic skeletons
- 1 wide purple coffin
- 1 narrow green coffin
- 2 white coffins (1 wide/ 1 narrow)
- 1 large urn
- 1 small green urn
- 1 metal mesh cage
- 3 gold daggers
- 2 silver daggers
- 1 spear with chert point
- Letter blocks (2-K, 2-G, 1-I, 1-N)
- 1 gold disks
- 4 silver disks
- 1 white disk
- 4 gemstones
- 4 black stones (2 painted white)
- 1 blue stone
- 1 red stone
- 1 translucent wooden fish
- 1 colored wooden fish
- 1 shell
- 1 starfish
- Handful of popcorn kernels

Procedure

- First explain that they will be able to tell gender (male/ female) and status (high/low) by looking at these burials. There is no evidence in the skeletons, they are all plastic. You can mention that if they were real skeletons, they would give us a lot of information (sex, age, lifestyle, diet).
- Have the participants look for the “clue” word. Once they have found the word KING in the purple burial, explain that this is what a male of high status burial looks like.
- Have them compare the purple burial to the green – looking for one thing that is exactly the same (gems), a couple things that are similar (rocks and disks), and a few things that are totally different (pot, swords, extra limbs, way they are buried).
- Ask them what they think the green burial is – male or female, and if they think she is of high or low status.
- Have them compare the first white burial to the other two. Have them look for things that match (way they are buried, pot). Mention the rock – that is in a different location and different color.
- Ask what they think that burial could be – is she of high or low status?
- Have them then look at the last white burial and do the same thing.
- Tell them that there was once a stone wall separating the four burials from the other two. Even though they were buried differently and away from the rest of the group, they may have similar items so we can still tell gender and status.
- The netted burial has many male, high status markers and is missing a hand. This is usually a good place to talk about observation and inference. We can observe that his hands is missing, but can only infer why.
- The head in the pot has many markers that match the high status female. She also has fish, which is a high status male marker. You can talk about some ways that archaeologists can find out why she would have markers for both – other burials, learn more about this culture or similar cultures, living cultures, documentation, etc.

Closure

How can organizing and categorizing artifacts and attributes help or limit interpretation? How does categorizing help recreate gender and status definitions? How is interpretation affected by missing or insufficient information?



Burial 5



Burial 6

stone wall



Burial 4



Burial 3



Burial 2



Burial 1



N

Ancient Graffiti

adapted from *Intrigue of the Past*, Rock Art Two: Creating Your Own
submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional
Center (2006 – 2009)

Recommended Grade Levels: 4-8

Sunshine State Standards: SC.4.N.1.3, SC.5.N.1.5, SC.5.N.1.6, SC.6.N.1.4, SC.6.N.1.5,
SC.8.N.1.5, SC.4.L.17.4, SC.7.N.1.3, SS.5.A.2.3, LA.6.2.1.5, NG (pending)

VA.A.1.2.1, VA.B.1.2.3,

Time Required: 1-2 Class Periods

Location: Classroom/ Art Room

Summary: Students will create a graffiti panel to show how people expressed themselves in the past.

Objective

Students will demonstrate the value of graffiti, petroglyphs, and other similar expressions of art in the interpretation of people and cultures.

Materials

Roll of Butcher Paper or Bulletin Board Paper

Drawing Charcoal

Background

Wall paintings, rock art, and even graffiti are found at archaeological sites throughout the world. Pictographs and petroglyphs created by prehistoric Native Americans who lived in the western United States are frequently studied by archaeologists to interpret their meaning and use. Archaeologists use this type of rock art to understand the beliefs, religion, experiences, or stories of the people who created them. Graffiti created during historic times has been analyzed in the same way. For example, at *El Morro*, a large fort in San Juan, Puerto Rico, there is graffiti depicting ships adorning the walls of the brig. Historians and archaeologists are working to analyze these drawing to determine when and by whom they may have been drawn.

Procedure

- Show students different examples of rock art and graffiti. Explain the use of symbols in the different pieces of art. Ask the students what types of messages the artists are trying to depict. Do they draw or carve things they are familiar with or are they creating images from their imagination? Compare and contrast the rock art, historic graffiti, and modern graffiti. (See Attached)
- Tell the students to imagine they have been locked in a brig (prison) far away from home. As prisoners, the only way they can entertain themselves is to decorate the walls.
- As a class, compile a list of the things the students would miss most while they were in prison. What symbols or pictures could they draw to depict these things?

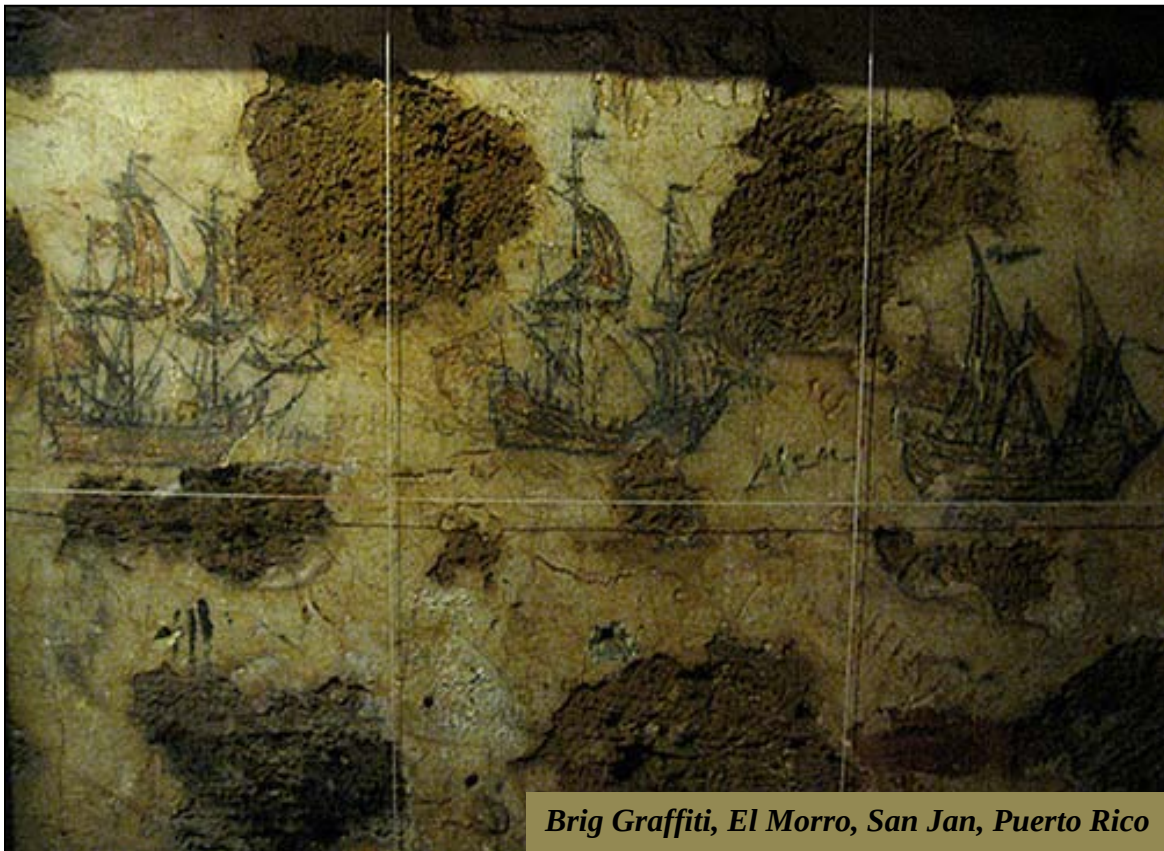
- Roll out a large sheet of butcher paper. Crumple it to give it a more rock-like texture.
- Give students drawing charcoal and have them draw their graffiti on the butcher paper. Encourage students to work together to tell stories with their drawings. The drawings do not have to form a single mural, but the symbols used should be consistent and the stories and drawings should be cohesive.

Closure

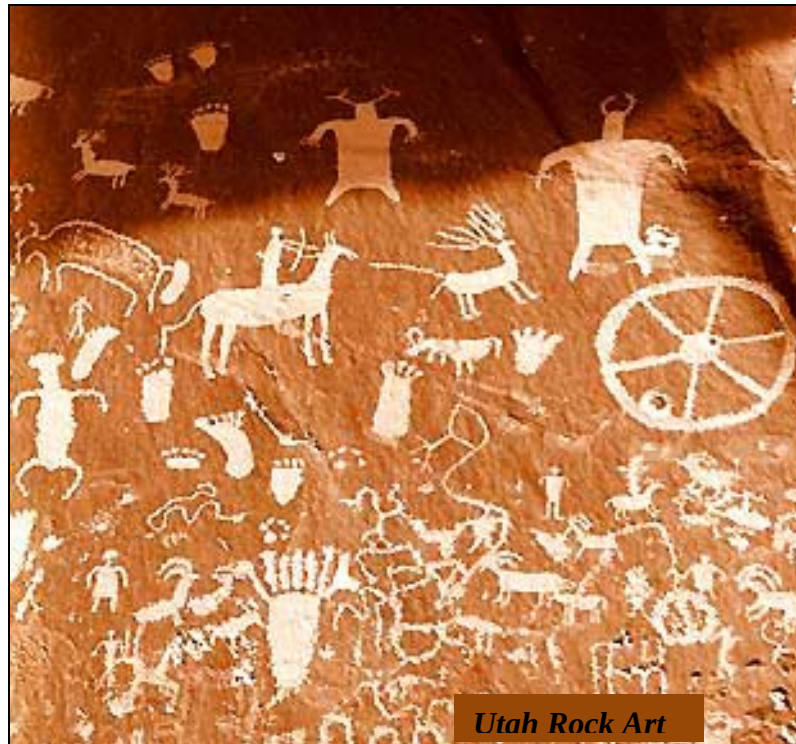
Have students review a graffiti panel created by another class. Do they understand the symbols, stories, and meanings of the other class' graffiti drawings? Is it easier or harder to interpret the graffiti created by their schoolmates than the historic graffiti or prehistoric rock art? How would people in the future interpret the student-made graffiti?

Teacher Tip

Ask students to consider how modern vandalism affects the graffiti and rock art of the past. Should ancient rock art and graffiti be protected? If so, how?



Brig Graffiti, El Morro, San Jan, Puerto Rico



Utah Rock Art



Pensacola, Florida's Graffiti Bridge

Resources on Prehistoric Florida

Suggested Books:

Elementary School

Weitzel, Kelley G.

2000 The Timucua Indians: A Native American Detective Story. Gainesville: University Press of Florida.

2002 Journeys with Florida's Indians. Gainesville: University Press of Florida.

High school/ Adult

Bense, Judith A.

1994 Archaeology of the Southeastern United States: Paleoindian to World War I. St. Louis: Academic Press.

Brown, Robin C.

1994 Florida's First People. Sarasota: Pineapple Press.

Milanich, Jerald T.

1994 Archaeology of Precolumbian Florida. Gainesville: University Press of Florida.

1998 Florida's Indians from Ancient Times to the Present. Gainesville: University Press of Florida.

Wiley, Gordon R.

1998 Archeology of the Florida Gulf Coast. Gainesville: University Press of Florida.

Suggested Internet Sites:

Florida Public Archaeology Network (FPAN)

(<http://www.flpublicarchaeology.org>)

Find out about how FPAN was created from the Coordinating Center or click on the map of Florida to learn about the individual centers and their regions.

Florida's Division of Historic Resources

(<http://www.flheritage.com>)

This link provides information on Florida's history and how it is being remembered and preserved. There are several links to very cool archaeological projects, and information on Archaeology Month events around the state.

HISTORIC ARCHAEOLOGY

Activities

Resources

Stone Silent: Unlocking Information from Graveyards

adapted from *Graveyard Archaeology*, in *Used Archaeology* and from *History Comes Alive in the Graveyard* from Colonial Williamsburg

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: 4th and up

Time required: 1 – 4 class periods, dependent on complexity

Setting: cemetery, classroom

Summary: Students will learn about a historical period in local history by visiting a cemetery and conducting a demographic study.

Objectives

Students will collect, record, and analyze demographic data from gravemarkers.

Materials

Either visit a local cemetery or collect pictures of gravestones
Gravestone Information sheet for each marker

Background

Archaeologists and historians can determine much about a culture by examining their burial grounds. In the United States, cemeteries exist in most cities with stone grave markers that display demographic information – birth date, date of death, marital status. These markers may also speak to social status or ethnicity; however the placement of the burials themselves (outside the iron gates or city limits) may be a bigger indication.

Periods in local history may also be reflected in grave markers. If many people died around the same time or there are mass graves, that might be an indication of disease. Morality issues, such as infant survival rates, are very much reflected in markers from the early 1900's. Military conflicts are also indicated by separate markers and symbols.

Procedure

- Introduce the cemetery location to the students. Discuss where the cemetery is placed in relation to city limits of that time period and current. Was it associated with any buildings then? If so, are they still standing and in use?
- Describe what life was like when the cemetery was first put into use. You may have students research the daily lives of specific people from a grave marker or just get a general idea of daily life.
- How long has this cemetery been in use? If it is still in use today, are people being buried in a new section or in older ones? Why might that be?
- Break the students into small groups and assign each group a section of the cemetery (this can be done in the classroom by giving each group pictures of tombstones).
- Have the students fill out Gravestone Information sheets for each of their markers.

- Once the sheets are filled out, return to the classroom and have each group analyze the information for their section:
- What is the time range for your section (oldest-youngest marker)?
- What is the average life span? Is there a group of markers that represents a shorter or longer life span than the rest?
- Are any of the markers from the same family?
- Can you tell if any of the markers highlight a certain cultural group? Military group?
- Can you tell if some of these people had more money than others? How?
- Can you tell what the occupation of these individuals might have been?
- After everyone has analyzed the data from their individual groups, have the class look at the sections together to see if any of these answers change.

Teacher Tips

You might want to have students translate the demographic information into bar charts and compare their findings with the general demographic information for that time period. Where these local people living the average life span for that time period? If not, what might have caused them to live longer or die younger than the national average? Were their family groups average size for that time? If there were ethnicities reflected in the cemetery, where else in the United States would you find that culture?

Graveyard Etiquette

If you are able to take your class to a cemetery, please contact the cemetery officials for permission and guidance prior to arriving.

Do remind students to be respectful of the cemetery and its grounds.

Do not let students touch or lean on markers.

Do encourage students to dress appropriately, with closed-toed shoes.

Do encourage children with allergies to inform their teacher and bring their medications. There will be bugs outside.

Make sure that bathroom breaks are taken care of before reaching the cemetery, as many do not have bathroom facilities.



GRAVESTONE INFORMATION

Full name of the deceased:

Birth date:

Date of death:

Age at death:

Husband/ Wife of:

Child of:

Other facts listed:

Copy the inscription and epitaph exactly as you see it:

Sketch the gravestone's shape and any motifs or decorative carvings:

Local Historical and Archaeological Research

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006 – 2009)

Recommended Grade Levels: 7-12

Summary: These four activities can be implemented separately or in conjunction as part of an introduction to local history research and its importance in archaeology.

Objectives

Through this activity, students will produce an analysis of the use of informant interviews in the study of the archaeological record AND/OR produce a written description of the benefits and pitfalls of primary documentation AND/OR provide an explanation of local and broad-scale events are interrelated using a timeline AND/OR write a report tracking an individual or family buried in a local historical cemetery in time using both historic documents and archeological evidence.

Materials

Pencils
Paper/notebook
Tape recorder
Local informants
Local history and archaeology research material- ex. UWF Special Collections, Public Library, Ancestry.com
Permission to visit a local historic cemetery

Background

Historical documents and other sources are often quite helpful in understanding the archaeological record.

Procedure

- Conduct an interview with a local informant. How do their accounts contribute to the archaeological record? (Ex. Someone who witnessed a boat sink, building get destroyed, etc.)
- Use primary historical documents including maps, photographs, letters, inventories, etc. to learn about the past. Consider the perspective of the document's author. Is it more/less biased than the archaeological record? What are the similarities/ differences between the historical and archaeological records? (Consider women, children, illegal activities, poor, different ethnic groups, etc.) Allow students to present their findings.
- Create a timeline of local history and archaeology and one of national/world history and archaeology. Use these timelines to understand how events occurring locally were affected by what was occurring in other parts of the country/world

- Visit a local cemetery, such as St. Michael's Cemetery in Pensacola, Florida, and research the lives of individuals located there. How can connections be made between these individuals and the rest of the community? Trace the life of one or more of these individuals/families (ex. Moreno, Bonifay, etc.) through the archaeological record (residence, workplace, final resting place).

Arcadia Sample Lesson: Invisible People

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006 – 2009)

Recommended Grade Levels: 9-12

Sunshine State Standards:, LA.(910,1112).5.2.1, LA.(910).6.2.1, LA.(910,1112).2.2.4, LA.910.5.2.5, SS.912.W.1.4, , SS.912.A.1.2, SS.912.W.1.3, SC.912.N.1.3, SC.912.N.1.6, SC.912.N.1.7

Time Required: 1-2 Class Periods

Setting: Classroom

Summary: Students will use archaeological and historical evidence to gather information about “Invisible People” in the past.

Objective

Students will demonstrate a proficiency in gleaning information from historical records and an ability to use critical thinking to examine the history of a site by writing a summary identifying biases and gaps in the recorded history of Arcadia Mill.

Materials

Primary and Secondary Sources about a Site or Time Period

Artifacts (or Archaeological Information) from that Site or Time Period

Background

Historical archaeology is often used to tell the story of disenfranchised people, who are often “invisible” in the historical documents. Only through using both historical documents and archaeological evidence can a more complete picture of the past be gained.

Procedure

- Have students research the Arcadia Mill site, focusing on the people involved with the site (i.e., owners, workers, families). Students should take detailed notes and should present their findings to the class.
- After students present information they have learned about the people involved with the Arcadia Mill site, discuss who is and is not represented. Whose names have/have not been recorded? Is the level of information available in the historical record equal for owners/workers, men/women, adults/children, and amongst different racial and ethnic groups?
- Discuss why some people are over/underrepresented. Does this create a bias in the historical record?
- Examine artifacts and other archaeological information from the Arcadia Mill site. Are the “invisible” or underrepresented groups visible in the archaeological record? What are the biases of the archaeological record?

Closure

Have students write a summary of the information they gathered from their historical and archaeological research. In their writing they should compare and contrast the information available in the historical and archaeological records and assert how the most complete picture of the past can be obtained.

Teacher Tip

Use this same procedure when talking about all different periods of the past. How is what we know biased by the historical record? How is it biased by the archaeological record? When learning about the past who are the people we focus the most attention on (i.e., presidents, generals, kings) and who do we often ignore (i.e., poor, children, “average joe”)? What will people of the future not know about TODAY because of these biases?

Arcadia Sample Lesson: Predictive Modeling & the Natural Environment

submitted by Mary Furlong, Outreach Coordinator of FPAN's Northwest Regional Center (2006 – 2009)

Recommended Grade Levels: 9-12

Sunshine State Standards: MA.912.S.2.1, SC.912.N.3.5, SC.912.E.7.8, SC.912.L.17.16, SC.912.L.17.18, SS.912.G.1.1, SS.912.A.1.4, SS.912.G.3.5, SS.912.A.2.7, SS.912.G.5.2, SS.912.G.5.6, SS.912.G.6.1, SS.912.G.6.3,

Time Required: 2 Class Periods

Setting: In Classroom after Touring Site

Summary: This activity explains the use of predictive models and allows students to create their own for finding other mill sites like Arcadia Mill.

Objective

After completing this activity students will be able to use information about local history and the natural environment to create their own model to predict the locations of archaeological sites.

Materials

Maps or Gazetteer of Northwest Florida

Historic Maps, Documents, or Secondary Sources referring to Water-Powered Mill Sites in NW Florida

Arcadia Mill Site Contact Information

www.historicpensacola.org/arcadia

5709 Mill Pond Lane, Milton, FL (850-626-3084)

Background

Often faced with limited time and funding, archaeologists must survey large areas of land when looking for sites. To focus their efforts, archaeologists use models based on conditions of the natural environment and historical accounts to predict where cultural resources may exist. Factors such as proximity to water and topography often indicate possible site location. In addition, historical documents (i.e., maps) often provide accounts describing the locations and layouts of sites.

Procedure

- Tour the boardwalk of the Arcadia Mill Site, paying special attention to the natural environment of the site (i.e., water, trees, topography, soils, rock outcrops).
- After the tour discuss how the natural environment influenced the founders of Arcadia to choose that location for their water-powered mills. What are the pros and cons of this site?

- Create a list of criteria for choosing the location of a water-powered mill (i.e., proximity to water, transportation, work force)
- Using modern maps of Northwest Florida select other possible locations for water-powered mill sites. Discuss how an archaeologist would design a survey to locate and access the maximum number of sites.
- Use criteria lists and maps to create a predictive model for locating sites.
- Compare the predictive model to information found in historical documents about locations of other water-powered mill sites. How did the model compare with the historical record?
- In addition to using the historical record, how else could archaeologist test their predictive model?
- What other types of sites (i.e. forts, shipwrecks, villages) could be found using predictive modeling? What criteria are needed for large/small settlements, agriculture, defense, trade, etc.?

Closure

Have students (in groups or as individuals) write a short report about how they followed the steps of the Scientific Method to create and test their predictive model. Different groups/students may have selected different criteria or locations for possible sites. Have the students present their models and discuss the differences and similarities between them.

Teacher Tip

This lesson can be as detailed or as simple as desired. After touring the site, one class period should be dedicated to understanding and creating the predictive model and another to testing it and drawing conclusions.

Resources on Historic Florida

Downloadable Guides and Activity Books:

Coquina Queries

Learn all about coquina through downloadable lesson plans and a hands-on kit developed through a grant for the Northeast Regional Center of FPAN in St. Augustine.

(<http://www.flpublicarchaeology.org/resources.php>)

Suggested Books:

Elementary School

Jumper, Betty Mae

1994 Legends of the Seminoles. Sarasota: Pineapple Press.

High school/ Adult

Bense, Judith A.

1999 Archaeology of Colonial Pensacola. Gainesville: University Press of Florida.

2003 Presidio Santa Maria de Galve: A Struggle for Survival in Colonial Spanish Pensacola. Gainesville: University Press of Florida.

Deetz, James

1977 In Small Things Forgotten: The Archaeology of Early American Life. New York: Anchor.

Suggested Internet Sites:

National Park Service

(<http://www.cr.nps.gov/archeology/PUBLIC/teach.htm>)

This resource goes in depth to explain archaeology and archaeological methods in plain English, lists parks to visit, links to other educational programs especially the Southeast Archaeological Center, and has lesson plans. There is also a section called Teaching with Historic Places

(<http://www.cr.nps.gov/nr/twhp>).

The War of the Rebellion: a Compilation of the Official Records of the Union and Confederate Armies

(<http://cdl.library.cornell.edu/moa/browse.monographs/waro.html>)

Primary documentation (reports and correspondence) from the Civil War, searchable by year and state.

Florida Memory Project

(<http://www.floridamemory.com>)

This link has archive photos, audio, and lesson plans on periods in Florida history.

Florida Then & Now

(<http://www.fcit.usf.edu/florida/lessons/lessons.htm>)

Produced by the Florida Center for Instructional Technology, College of Education, University of South Florida this web site has lesson plans geared to teach elementary students about Florida history, sites, and people. There are many links to primary documents as well.

UNDERWATER ARCHAEOLOGY

Activities

Resources

Shipwreck on a Tarp

adapted from Kate Thompson's Mock Shipwreck: An Exercise on Maritime Archaeology from *The Journal of Marine Education* (Vol. 21 (1), 2005, pg. 29—32)

Recommended grade level: Any

Subjects: Science, Social Studies, Physics, Math

Skills: Knowledge, application, analysis, evaluation, analysis, synthesis

Strategies: Observation, scientific inquiry, decision making

Time required: 45 to 50 minutes

Setting: classroom

Objectives

In their study of shipwrecks, the students will use a pre-designed shipwreck drawn onto a large tarp to:

1. Learn how to survey a shipwreck as a Marine/Nautical Archaeologist would do.
2. Employ critical thinking skills to discern the best survey strategies
3. Explain how Archaeologists understand and interpret human behavior from documenting boat structure and the location (context) of artifacts

Materials

Tarp/paper with outline of a Florida Underwater Preserve wreck drawn (Sharpies or painted)
pictures of wreck structure
pictures of wreck artifacts or replica artifacts
tape measures
grid
graph paper
pencils
rubber bands

(preserve maps and information can be found at <http://www.museumsinthesea.com>)

Background

The field of archaeology is a destructive science. In order to maintain context, understanding how each piece of the puzzle relates and connects to its surroundings, archaeologists record everything they observe. Meticulous records are kept in the field detailing information about excavation techniques, artifacts, and soils. In order to identify the types of soils encountered during an excavation archaeologists use the Munsell Soil Color Chart (see Dirt Science activity, page 18). In addition to archaeologists, soil scientists and geologists also use Munsell charts.

Procedure

- Define terms (mapping, trilateration, starboard, port, hull, bow, stern, mast, planking, design, centerline, and shipwreck) that will be used in this exercise.
- Lay out the shipwreck of one of the Underwater Preserves. Place pictures of structure and artifacts where they actually belong on the wreck or were found if known. If there are replica artifacts, can use those in place of pictures.
- Explain to students that because they will be “underwater” they will need to strategize how they are going to document their portion of the wreck before they go “underwater” and how are they going to communicate “underwater” while they are documenting the ship
- Demonstrate and explain Offset mapping and or Trilateration mapping
- Pass out survey tools to each team (tape measures, clipboards as their underwater writing media, pencils, or grids). Explain the step by step tasks the students must complete to survey/document their portion of the wreck. For younger students, provide some hints as to how to use the mapping items.
- Have students lay out the survey materials. Discuss the techniques of underwater survey and how to communicate underwater using hand signals and slates. (Optional: tell students “No talking” to simulate “being under water” while they are mapping and teach them underwater hand signals using underwater communication cue sheet)
- Have students set up their survey strategy. Go around the room and provide assistance or suggestions where necessary as they are documenting/mapping.
- When the students have finished their survey, have the students present, one at a time, their findings.

Closure

1. Have students compare their maps of the shipwreck. Discuss with students the ideas of the importance of documentation and context. Why is it important to know where artifacts come from? or why ship design is important Explain the importance of documentation and ship structure to our understanding of early seafaring activities that Archaeologists can only learn about these kinds of human activities from intact Archaeological sites, not ones that have been salvaged.
2. Ask them to compare survey strategies. When everyone is finished, ask each person or group why they surveyed the way they did. Which methods worked the best to document the shipwreck? What was the most difficult? Which was the easiest thing to do?
3. Ask students what is the next step in the process of documenting a shipwreck after survey? What should be done next (report on Archaeological work)? What data needs to go into the report? Where does the report go?

Build a Boat

adapted from K.C. Smith, Curator of Education at the Museum of Florida History and Mary Furlong, Outreach Coordinator (2206-2009) of FPAN's Northwest Regional Center
submitted by Irina Sorset, Outreach Coordinator (2009-present) of FPAN's Northwest Regional Center

Recommended grade level: Any

Time required: 30 - 45 minutes

Setting: classroom, outdoors, anywhere

Subjects: Science, Social Studies, Physics, Math

Sunshine State Standards: LA.(4-6).6.2.1, MA.912.C.5.8, SC.(K-912).N.1.1, SC.(K-912).N.1.5, SC.(2- 8,912).N.1.6, SC.(3,4,912).N.1.7, SC.(1,2).P.8.1 SS.912.W.1.4, SS.6.G.5.2S

Summary: Students will use intuitive learning to design vessels that will float, withstand turbulence, and bear weight

Objectives

This activity will provide students with an understanding of the process of designing an effective vessel to transport goods across water barriers. Students will:

1. Learn how to design a boat from only the materials the boat kits provided
2. Employ critical thinking skills to design a boat that will float, hold weight, and move
3. Explain how Archaeologists interpret boat construction from shipwreck cultural resources

Materials

Boat kit (1 gallon zip lock bag with 4 popsicle sticks, 4 straws, 4 Styrofoam egg crate cups or Dixie cups, 4 pipe cleaners, 2 pencils, 4 pieces of string 5" long , 4 rubber bands, and 4 sandwich size zip lock baggies)

Test Tank (A miniature "ocean" or tub to test run the boats. Tupperware or any other container that will hold water that is at least 6" deep and 18" long)

Cargo (small rocks, aquarium marbles, beans, etc.)

Background

Maritime trade by transporting goods across waterways and oceans is important because it has historically been the most important way goods, services, ideas, and cultural values were shared between different groups of people. The study of boat construction teaches Nautical Archaeologists about where boats came from, what was important to the boat builders, and how goods were transported.

Procedure

1. Begin the lesson with a discussion on different types of boats and their different purposes. (Raft, float, kayak, canoe, battleship, cruise ship, cargo ship, sail boat, etc.) How many students in the class have been on a boat? What types? Discuss different sizes, shapes, and purposes of boats.

2. Define basic terms (hull, bow, stern, starboard, port, and freeboard) used to describe parts of boats. Define additional terms (draft, sink, float, displacement, cargo, propulsion, design, weight load, swamp, capsized, and shipwreck) used in this activity.
3. Ask the students what are the three most important things that every boat must do. All boats must float, carry cargo, and have a means of propulsion.
4. Pass out a “Build a Boat” kit to each student or group. Students can work individually or as a team.
5. Explain the activity and directions to the students. Students are only allowed to use the items, including the gallon zip lock bag, to build their boats. They are allowed to modify any of the items, but they are not allowed to use any supplies outside of the kit including using parts from a neighbor’s kit or using tape, scissors, or glue! For younger students, provide some hints as to how to use the items.
6. Have students lay out and analyze kit materials. Discuss the physics of displacement in an effort to assist students to decide which materials they want to use to build their boats.
7. Before students embark on building their own boats, remind them that their boat must pass the three main tests:
 - Float Test- Does the boat float upright in water?
 - Cargo Test- Does the boat have a way to carry cargo? Each boat must be able to carry at least one piece of cargo, representing the captain of the vessel. Boats can have a maximum of four pieces of cargo. Ask each student what type of cargo their vessel is holding. (People, merchandise, animals, etc.)
 - Propulsion Test-How does the boat move? (Wind, engine, oars, etc.) Have the students demonstrate how their boat moves. For example, if the boat is wind powered, have the student blow on the sail; if the boat uses oars, have the students move the oars with their hands.
8. Have students build their boats. While they are building their boats, ask students to think of a name for their boats.
9. Go around the room and provide assistance or suggestions where necessary. Help younger students with tying string, etc.
10. When their boats are built, have the students come up one at a time or in groups to the test tank. Before testing their boats, ask each student:
 - The name of their boat
 - What type of boat it is?
 - What cargo is it carrying and how much cargo it is supposed to carry? (between 1 and 4)
 - How does it move?
11. Test each boat in the three main areas (float, cargo, and propulsion).

Closure

Discuss with students the ideas of displacement and design. When everyone is finished, ask each person or group why they built their boat the way they did. If their boat was not successful in all three tests, what modifications would they make next time. Ask them the difference between their boats and the boats of ancient mariners. Compare the different tools that are used today to build boats with those that would have been used in the past. Explain the importance of shipwrecks to our understanding of ancient boat building technologies and that

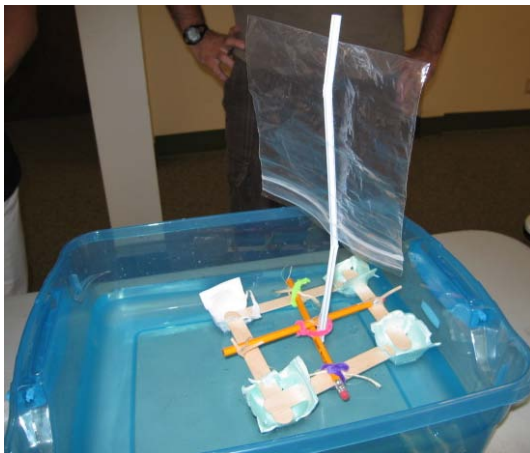
archaeologists can only learn about these kinds of human activities from intact archaeological sites and often times not from shipwrecks that have been salvaged.

Teacher Tips

For younger children, working in teams with an adult mentor works best. For older students, working alone or in teams independent of a mentor works well. Explain that there is no right or wrong way to build a boat with the materials and there are thousands of ways to use the boat kit materials to build a successful boat.

In order to cut costs, it is possible to get many of the materials for the “boat kits” for free from places like “Trash to Treasure” or request that students bring some of the materials from home. For example, a month before the activity is planned for the classroom, ask parents to save egg crates for this activity.

Example of boats for teacher use only. We have never seen the same boat built twice!



Terms

Aft – the rear of the ship

Fore or bow – the front of the ship

Port – left side of ship when you are facing the bow

Starboard – right side of ship when you are facing the bow

Anchor – heavy metal weight lowered to the sea bottom, used to hold a ship in place

Rigging – all the ropes, cables, & shrouds on a ship

Rudder – wooden device at rear of ship, reaches into water, used to steer it

Hold – storage area below the top deck

Deck – floor of the ship where people walk, mainly the one opened to the air

Keel – very bottom line of a ship running from fore to aft

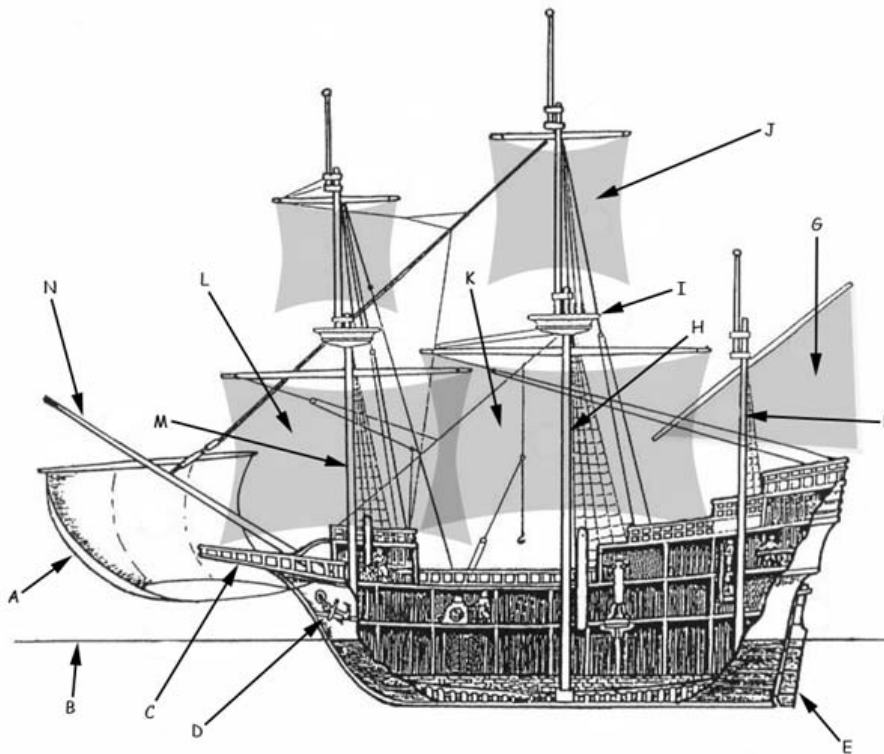
Masts – tall poles sticking up from ship, hold the yards, gaffs, sails, shrouds and ropes.

Shrouds – weblike rope assembly climbed by sailor to reach the tops of sails

Bowsprit – pole at front of ship that holds the bottom of the jibs

Mainsails – large rectangular sails below the topsails

Source: http://www.tamrootbeer.com/teacherstuff/ti_pdfs/hispaniola_parts_list_wrksht.pdf



- | | | | | | | |
|------------------|----------------|-------------|--------------|-------------|----------------|------------------|
| a) Bowsprit Sail | b) Waterline | c) Bowsprit | d) Anchor | e) Rudder | f) Mizzen Mast | g) Mizzen Sail |
| h) Main Mast | i) Crow's nest | j) Top Sail | k) Main Sail | l) Foresail | m) Foremast | n) Bowsprit Mast |

Source: <http://projects.cbe.ab.ca/glendale/showcase/oldworld-newworld/Renaissance/transportation/ships.html>

You Sunk My Battleship!!!

(and other musings under the sea)

submitted by Sarah Miller, Director of FPAN's Northeast Regional Center (2006 – present)

Recommended grade level: 4-5

Sunshine State Standards: LA.4.4.2.2, LA.5.4.2.5, MA.4.G.3.3, MA.4.G.5.3, SC.4.N.1.6, SC.5.P.13.1, SC.5.P.13.4, SS.4.A.1.1, SS.5.A.1.1, SS.5.G.4.2,

Time required: 3 hours or 3-1 hour sessions

Setting: classroom

Summary: students will learn about boats and Maritime archaeology by playing a version of Battleship and building their own vessel.

Objectives

By utilizing and mapping a variant of the Battleship game, students will demonstrate ability to: utilize Cartesian grid coordinates, identify terminology and techniques used for maritime resources and in underwater archaeology, experiment with physics concept of buoyancy and its application to shipwrecks.

Materials

Leap Through Time: Shipwreck, Backpack Books, NY, 2001.

Battleship games

Florida's Underwater Preserve information

(<http://www.museumsinthesea.com>)

Boat building kits: at least 1 for every 2 students (see Build a Boat, page 73)

Dive gear

Procedure

- Session 1: Read *Leap Through Time: Shipwreck* book to students. Discuss what happens to the material remains over time and draw special attention to the underwater excavation scene toward the end.
- Session 1: Using Battleship game students will first play a straightforward game of battleship using grid coordinates.
- Session 1: Archaeologist will talk about how terrestrial methods translate to working underwater. A dive kit will be introduced as the tools used by archaeologist. Describe the visibility in sea water and really describe how different a shipwreck really looks (scattered ballast, planks, some cannon, anchors) rather than whole ships beneath the surface. The different approaches to mapping will transition to the next phase of the lesson.
- Session 2: Using the battleship game, create a new outline of a boat or shipwreck. Students will map wreck sites using the battleship platform. Difficulties in

accuracy and communicating underwater will be discussed, as well as different approaches archaeologists take when doing their center lines.

- Session 3: Build a Boat activity (page 73): Archaeologists will talk about shipwreck narratives and patterns as ships sink. Forces of buoyancy and gravity are also at work. Students will be asked to construct a vessel with a partner and do a float test, as well as a buoyancy test (how many stones the vessel can hold until it sinks).

Closure

Ask the students to reflect on the following:

1. What are maritime resources?
2. How are underwater artifacts different from terrestrial artifacts?
3. How do the methods differ on land vs. on sea?
4. What tools are archaeologists using to recover their data?
5. What other disciplines do archaeologists draw from in collecting data.

Teacher Tips

Talk about shipwrecks as time capsules. Ask them about their experience with time capsules. How are archaeological sites like time capsules, and how are they different?

It has been said that to study shipwrecks is to study the world. Highlight for students the global community evident in shipwrecks. How global are our communities today? Where else might you find a mixing of so many cultures from around the world?

Resources on Florida Underwater Archaeology

Published Guides and Activity Books:

History Beneath The Sea: Nautical Archaeology in the Classroom

Edited by KC Smith and Amy Douglass

An education module from the SAA Public Education Committee that is designed for both educators and students: it includes background readings for both, as well as classroom activities and resources. Student readings are geared for the secondary level.

Suggested Books:

Middle School

Macaulay, David

1993 Motel of the Mysteries. Boston: Houghton Mifflin Company.

1995 Ship. Boston: Houghton Mifflin Company.

High School/ Adult

Delgado, James P.

1998 Encyclopedia of Underwater and Maritime Archaeology. New Haven: Yale University Press.

Smith, Sheli

2008 The Low-Tech Archaeological Survey Manual. Standard Copyright License.

(download available for \$10 - <http://www.lulu.com/product/paperback/the-low-tech-archaeological-survey-manual/3567590#detailsSection>)

Suggested Internet Sites:

Florida's Division of Historic Resources

The Museum in the Sea web site (<http://www.museumsinthesea.com>) has information and video of the ships in the Florida Underwater Archaeological Preserve System.

Museum of Underwater Archaeology

(<http://www.uri.edu/mua>)

This web site has a lot of information about underwater archaeology and also has a curriculum kit available for teachers.

CONCEPT REVIEW

Activities

Archaeology Jeopardy

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: any
Sunshine State Standards: LA Standard 6 Vocabulary Development
Time required: 1 class period
Setting: classroom
Summary: A review of archaeological terminology and concepts.

Objectives

Students will demonstrate knowledge of archaeology by playing a PowerPoint version of Jeopardy.

Materials

Archaeology Jeopardy PowerPoint presentation
(download from <http://www.flpublicarchaeology.org/resources>)

Background

Florida archaeology presentations can be enhanced through a variety of exercises that make the student review and reflect on the information presented. Specifically written to help Boy Scouts prepare for their Archaeology Merit Badge requirements, this exercise lets students demonstrate recently acquired knowledge of prehistoric Florida and archaeological concepts.

Procedure

- After presenting information regarding the prehistoric sequence of Florida and a brief overview of archaeological concepts, turn on the Archaeology Power Point presentation.
- Split the room into 5 even groups, and assign each group a number.
- Have Group #1 choose a category and value.
- Click on that square and read the answer out loud.
- Give the group 30 seconds to come up with the appropriate question.
- After 30 seconds or if the group does not have the correct question, you may let another group try to steal the points.
- Continue the game, calling on each group in numerical sequence, until all the squares have been answered.
- Keep a tally of points to see who wins the game.

Teacher Tips

This is just a fancy PowerPoint Presentation. As it was written for a specific purpose, you may want to consider tweaking some of the answers to reflect what is being learned in class. You can also create Double Jeopardy squares by changing the background color of an answer or adding an extra slide that says Double Jeopardy.

Archaeological Crossword Relay Race

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: 3 – 5

Sunshine State Standards: LA.(1-5).1.6.1, SS.(4,5).A.1.2, PE.(3-4).M.1.1,

Time required: 20 minutes

Setting: open field (can be used in a classroom setting, see *Teacher Tips*)

Summary: students will use knowledge of Florida prehistory gained from a presentation to complete a crossword puzzle

Objectives

Students will display an understanding of previously presented information of Florida's prehistory.

Materials

For each group:

- 1 clipboard

- 1 Archaeology Crossword Puzzle (page 82)

- 1 pencil

- 1 bag containing answers from the word bank on strips of paper (page 83)

Background

Florida archaeology presentations can be enhanced through a variety of exercises that make the student review and reflect on the information presented. This exercise requires the students to retain information about Florida's prehistoric cultural time periods.

Procedure

- Tell the students that they will need to pay close attention to your presentation because there will be a quiz later.
- Make sure that you emphasize each word included in the word bank as you are giving your presentation on Florida prehistory (an example of which can be found on the CD).
- Take the students outside and divide them into groups.
- Each group of students is given an Archaeology Crossword Puzzle on a clipboard and a pencil.
- Each adult is responsible for one group's bag of clues from the word bank (if you do not have enough adults, make sure the bags are marked for each group to avoid confusion).
- Have the students stand at the opposite end of an open field from teachers and volunteers.
- Instruct the students that they have to send a person to the adult with their word bank to obtain a word from the bag and take it back to their group.

- Once the group has placed the word in the appropriate space on the crossword puzzle, they may send someone else to get another word.
- This continues until one group completes the puzzle successfully.

Closure

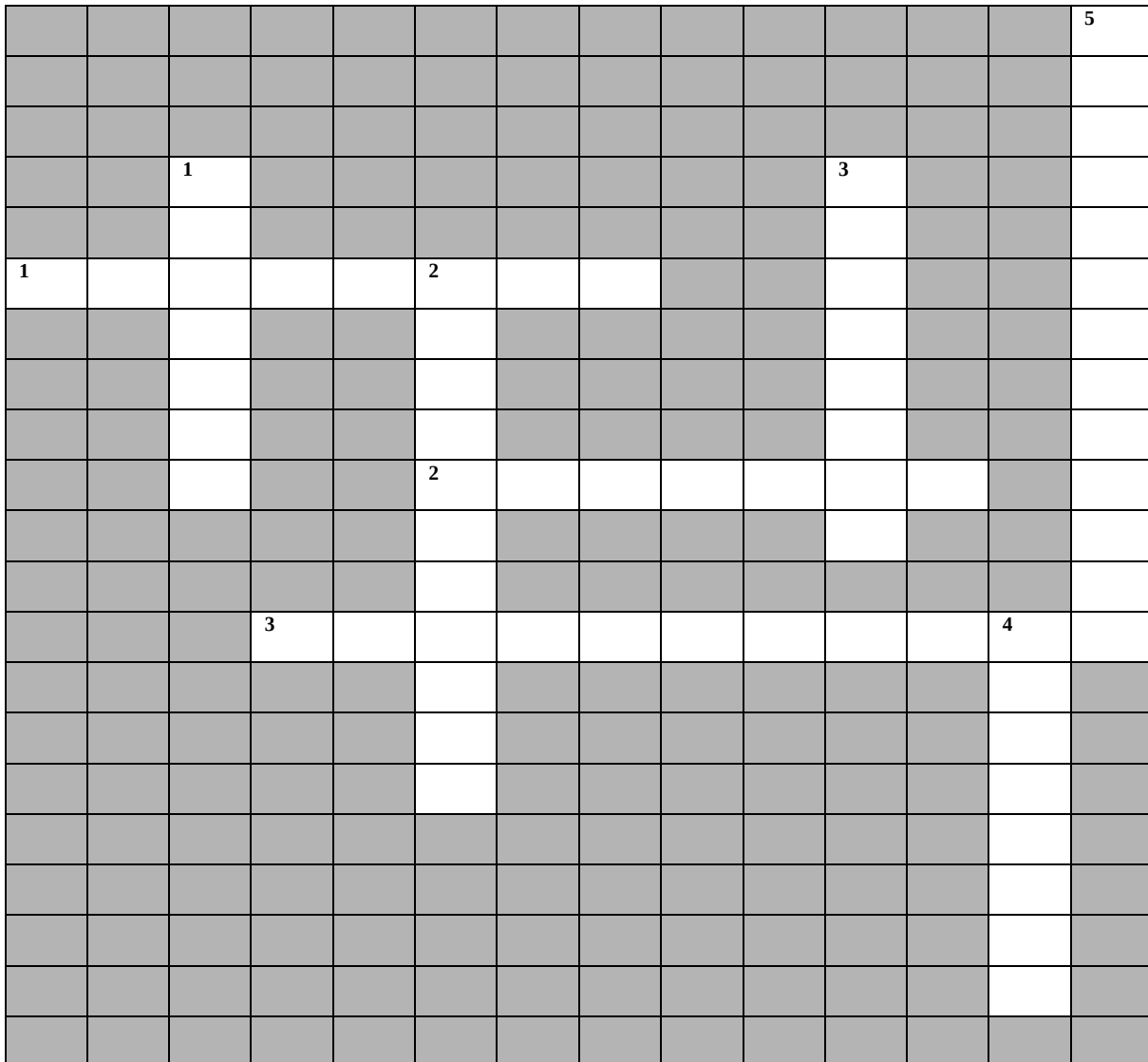
Did the groups have any trouble completing the puzzle or did they remember the topics from the presentation?

Teacher Tips

Although it is emphasized that the students listen to the presentation in order to complete the puzzle, the words are all of varying length and will fit into only one place. This puzzle is a great way to get students actively thinking about what they just learned as they burn off a little energy outside!

It is also possible to do this activity indoors, by breaking the class into groups and giving each group the whole bag containing the word bank. The first team to successfully complete their puzzle wins. You can also use the material as a printed crossword puzzle and have students work on the activity individually.

Archaeology Crossword Puzzle



Across

1. This culture had the most different styles of ceramics.
2. The first pottery was made during this cultural period.
3. This was the cultural period when Florida was twice its current size.

Down

1. What state's prehistory did we talk about today?
2. The study of people by looking at their stuff.
3. Glass beads are the signature for this cultural period.
4. Anything made by a person becomes a what?
5. Corn was a major crop during this cultural period.

Archaeology

Artifact

Woodland

Paleoindian

Archaic

Florida

Mississippian

Historic

What's Missing Sheet

submitted by Cassandra Rae Harper, Outreach Coordinator of FPAN's West Central Regional Center (2006 – present)

Recommended grade level: 3 – 8

Sunshine State Standards: SS.(3,4,6).A.1.1, SS.4.A.2.1, SS.5.A.2.2, SS.5.A.2.3, SS.8.A.1.7, SC.(3-4).N.1.2,

Time required: 30 minutes

Setting: classroom

Summary: students will complete a worksheet to analyze artifacts they see using the lessons they have learned about Florida prehistory

Objectives

Students will demonstrate an ability to critically examine and interpret artifacts made and used by Florida's prehistoric people.

Materials

For each student:

- 1 *What's Missing?* worksheet (page 86)
- 1 pencil

For the class:

- 1 *What's Missing?* prompt sheet (page 87)

Background

Florida archaeology presentations can be enhanced through a variety of exercises that make the student review and reflect on the information presented. This exercise requires the students to reflect on the nature of Florida's prehistoric artifacts. It is assumed that the students had an opportunity to learn about Florida prehistory and have seen artifacts from an outreach collection.

Procedure

- The class period after their Florida Prehistory presentation, show the PowerPoint slide for *What's Missing?*.
- Remind the students about some of the artifacts they saw yesterday.
- Distribute the *What's Missing?* worksheet and have the students fill it out while looking at the PowerPoint slide.

Closure

Review their answers to the worksheet as a class. Have several students share their pictures of whole artifacts they drew and their paragraphs comparing prehistoric artifacts to items from contemporary society.

Teacher Tips

While the students are completing these sheets, walk around the room and offer suggestions as needed. The point is to help them begin to correlate artifacts to people.

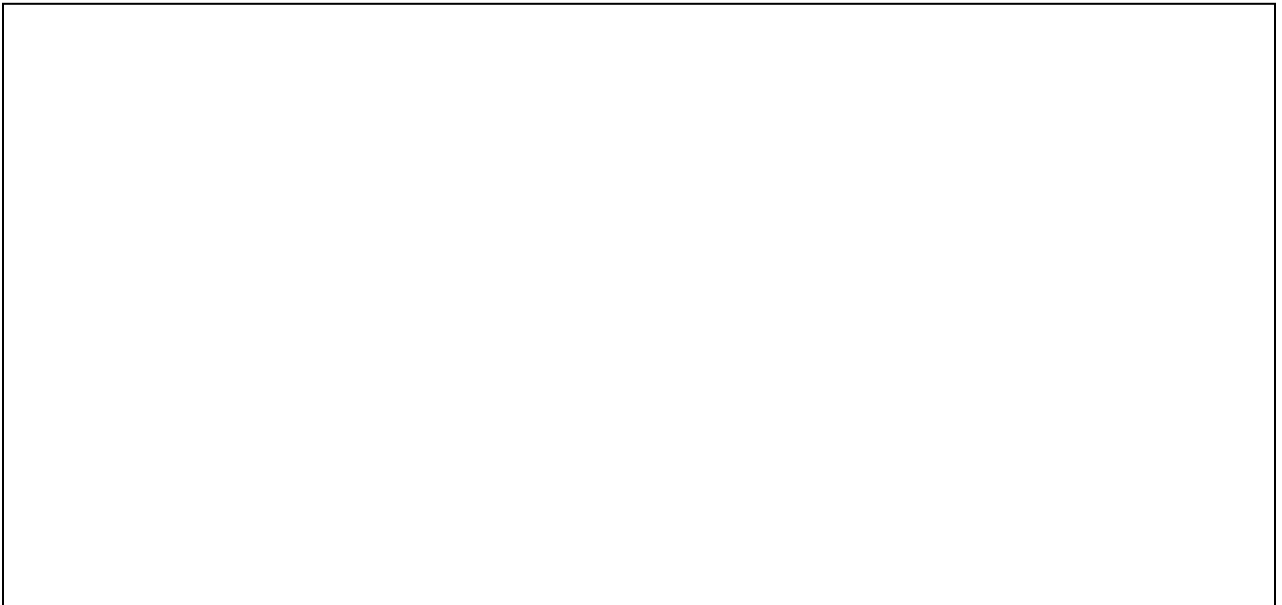
What's Missing?

Name:

Date:

Part 1: From the presentation on Florida's Prehistory, pick your favorite artifact and answer the questions below.

1. Name the raw material that the artifact was made from.
2. Was your artifact broken? How can you tell?
3. How do you think prehistoric people used this artifact?
4. In the space below, draw your perception of the complete artifact. Use dashed lines to show the missing portions:



Part II : Write a paragraph describing your artifact. Can you compare this artifact to anything people today use?

LEARNING ABOUT PREHISTORIC FLORIDA



30-23-00-20



0-250-A



230-200-W



30-23-00-20



Bead Timeline

Submitted Steve Archer, Director (2009-2010), and Matthew Schuld, Outreach Coordinator (2009-2010) of the FPAN's Southwest Regional Center

Recommended grade level: 2-5

Time required: 15-20 minutes

Summary: Teach students that nearly all knowledge about past cultures and civilizations in Florida is a result of archaeological research. Identify major periods of cultural change in Florida pre-history.

Objectives

Make participants aware that nearly all our knowledge about past cultures and civilizations in Florida is a result of archaeological research. Identify major periods of cultural change in Florida pre-history. Show the drastic difference between the time periods for which we have written records and the period we only have knowledge of due to the archaeological record.

Materials

String, Yarn, or Hemp

Scissors

Beads—Variety

Stone Bead – Paleoindian Period

Shell – Shell mounds constructed

Clay – Pottery

Copper – Copper traded into Florida

Glass – Arrival of Spanish

Red, White, and Blue – American Revolution

Misc – Child picks bead to represent today

Timeline Printout (page 90)

Background

Humans have lived in Florida for at least 12,000. Prior to the arrival of the European in Florida, no written records existed detailing the lives of Florida's prehistoric residents. Nearly all the knowledge we have of Florida's prehistoric peoples has been gained through archaeological investigation. Archaeologists can point to approximate points in the archaeological record which show social, cultural, or environmental changes. A timeline is one way to display these events visually in **chronological** order. **Timelines** are divided into equally measured segments which correspond with a specific period of time, such as one-inch equals 1000 years. One end of the timeline represents the oldest events and the other end represents the most recent events. Archaeologists can use timelines to see relationships between events and recognize patterns.

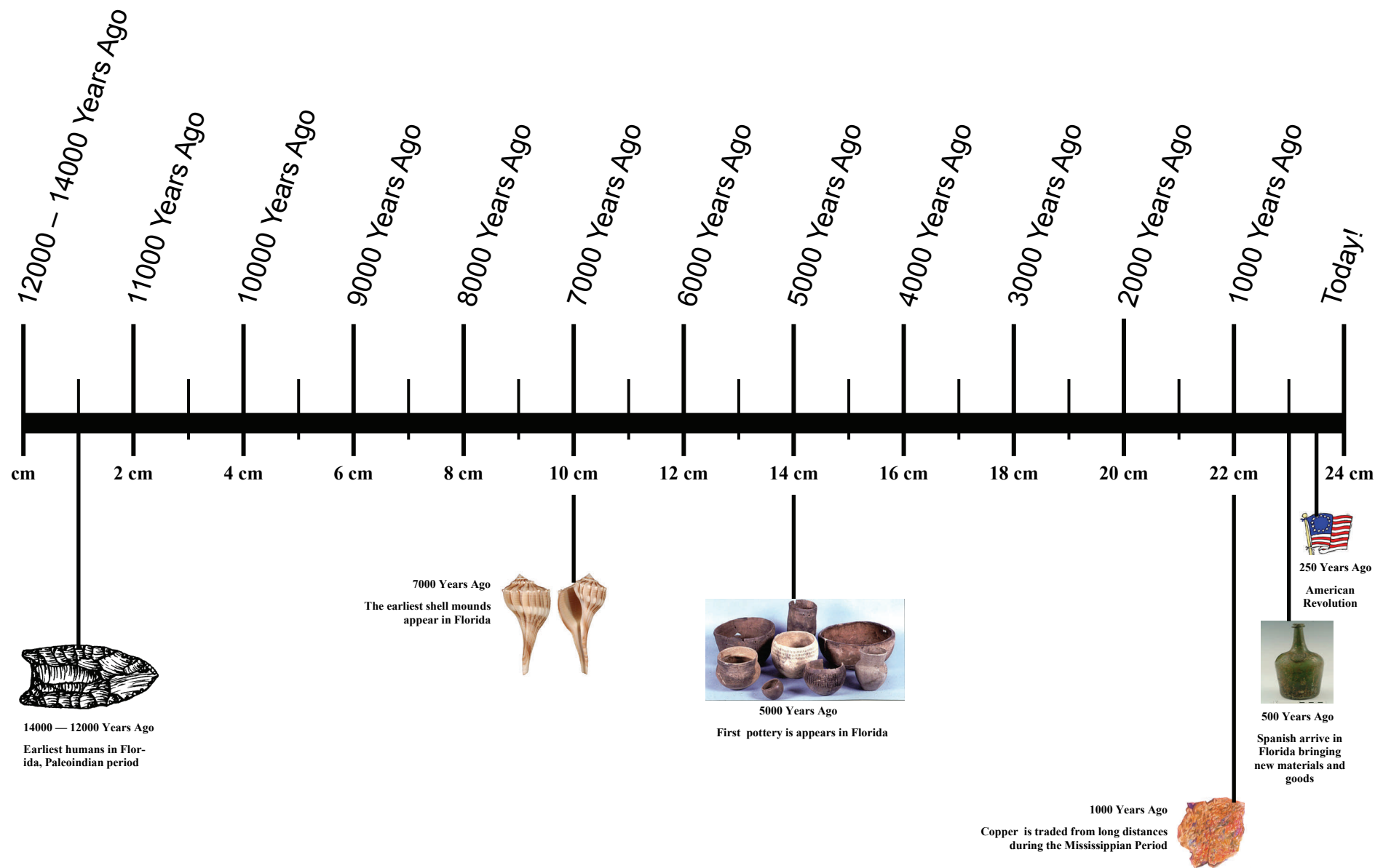
Procedure

Participants will place beads at particular points on a string. Each bead corresponds with a particular point in Florida's prehistory and history. The string will serve as the timeline, showing 12,000 years of Florida history.

- Using the Timeline Printout (below), cut a piece of string that is slightly longer than the entire timeline.
- Prepare several timeline strings by tying a knot at one end of the string. This point will serve as the beginning of human occupation in Florida.
- Explain to the participant that the string represents 12,000 years of Florida's prehistory, and that they will be placing beads at certain points on the string that represent changes in how humans lived.
- Tell the participant that the earliest evidence archaeologists have found of humans in Florida are 12,000 year old stone tools. We call these people paleoindians. To represent them on our timeline we will use a stone bead.
- Tie another knot after the bead so it stays in place.
- Have the participant line up their string with the timeline and ask them to tie a knot at the next point. For example, if the next point on the timeline is the first shell mounds built in Florida, have the participant tie a knot at the *7000 years ago* point.
- Have the participant place a shell on the string and then tie a knot after it.
- Repeat this for all points that should be represented on the timeline.
- Use at least two beads that represent the post-contact historical period, and be certain to allow participants to choose a bead that represents them in the present.

Closure

Once the bead timeline is completed ask the participant to compare how much of Florida's past we know about through archaeology. How much of Florida's past do we know about through written history? Ask participants to compare the time that Europeans have occupied Florida with the time Native Americans occupied Florida.



INTEGRATED

Multiple Class
Periods

Multiple Disciplines

Enriching Traditional Subjects Through the Teaching of Archaeology

Submitted by Kory Bennett, MA, RPA, science teacher at Memorial Middle School, Tampa

Recommended grade level: 6 – 12

Time required: dependent on activity

Summary: Through the teaching of archaeology many of the traditional secondary school subjects (e.g. math, science, language arts, and social studies) can be reiterated and enriched. This undertaking cannot be conducted haphazardly. When teaching archaeology, exact coordinated planning, open communication, and the contextualization of information presented are of the utmost importance to ensure a successful outcome.

Objective

This project is intended for an instructor teaching a unit of archaeology or an archaeology course. It is not recommended that teachers of various subjects pick and choose random activities for their students to carry out (*see Magnet Schools for exception*). Instead, it is important that students have an introduction to archaeology in order to understand how the terminology, concepts, methods and theories learned fit together within the context of current anthropological archaeology. This particular construct helps teachers of archaeology (on various grade levels) accentuate and enrich the students' educational experience. Through teaching archaeology, the Sunshine State Standards (SSS) for traditional subjects taught in school will be introduced or reiterated using examples from archaeological methods and theory.

Procedure

- Each core course is listed in the table below with archaeological-based teaching points, correlating Sunshine State Standards, suggestions of activities (all taken from the Downloadable Activity Guides – web addresses included in this packet), and information on where to find these resources. These few examples illustrate the variety of subject matters encompassed by archaeology. Please see the attached *Suggested Internet Sites* for more information and ideas.
- It is recommended that teachers of archaeology correlate his/her lesson plans with the topics being covered in other classes at the same time. Whether or not that is possible, it is the responsibility of the teacher to inform the students of the connections between concepts learned in archaeology class and those learned in other subjects. When teachers of subjects other than archaeology want to utilize the activities listed in the table below, they should coordinate with the archaeology teacher. If there is not an archaeology teacher, it is the responsibility of the interested instructor to provide an introduction to archaeology before conducting an activity. When students do not understand the basics of archaeology, the value of the activity diminishes.

- Teachers should begin by correlating activities from the table with their in-place curriculum. The activities below will help to illustrate and enrich the archaeological concepts being taught in class. As a consequence, the SSS of other academic subjects will be addressed naturally. The instructor should conduct background research in order to augment their presentation when introducing an activity. The more contextual information provided to the students the stronger the impact the activity will have. After conducting an in-class activity teachers should reflect upon the experience and make adjustments for the future according to their observations.

Magnet Schools

A magnet school using archaeology as an *attractor* may choose to integrate archaeology into every classroom. In this situation, teachers of each subject would relate lesson plans throughout the school year. Common curriculum must be coordinated with great precision, the goal being seamless introduction of information. In order to support effective coordination, a common focus should be implemented. A simulated site would be an ideal focus for a magnet school. This site could be archaeological or forensic in nature, with the focus being local, global, or virtual. This would allow teachers to talk about archaeology in their classrooms using a common archaeological context. Instead of presenting random activities, teachers can create lesson plans that build upon the students' common knowledge of archaeology.

For example, the art teacher may have the students draw, or even replicate artifacts that have been recovered from the simulated site. The science teachers may want to conduct experimental archaeology projects related to the site in order to illustrate the scientific method. Language Arts teachers may have students write journal entries about experiences on the simulated site. Math teachers can demonstrate a practical use of the Pythagorean Theorem while plotting test units at the site. All the while each instructor should coordinate these efforts with the archaeology teacher and course. The activities listed in the table below should be tailored to suit the objectives of each individual program. Classes should be encouraged to work together by having teachers instruct joint, extended classes. This project can also be augmented by guest speakers and/or field trips to an archaeology site or excavation.

An archaeology week could be planned for the entire grade level, so that each class activity builds towards the investigation or excavation of a simulated site. For this particular model teachers must stay in constant communication, lesson plans must be precisely coordinated and all students should be presented with a common introduction to archaeology. Without a strong common foundation and active communication between all involved parties this program would be subject to collapse.

Tips for Teachers

It is important to have high levels of participation with each activity. The structures presented by Spencer Kagan (1994) can be utilized with most of the activities listed below. This will promote a sense of responsibility in each student to participate and actively learn. Teachers should also remember to be creative. The activities below are only suggestions. By using those listed as guides, teachers can create activities that are modified to their situation. Teachers should also build a strong base of knowledge in archaeology. This will aid in assuaging anxiety when presenting the information and allow them to expand upon student questions and ideas during class instructions.

Core Courses	Teaching Points	Sample Sunshine State Standards	Activities	Resources
Math	gridding a site laying out units measurements artifact counts use of database lab procedures word problems	MA.912.S.1.2 MA.2.A.2.4 MA.5.G.5.3 MA.3.A.6.2	Graveyard Archaeology Stratigraphy and Chronology Playground Archaeology AtlAtl Antics ArchaeologyLand Lesson 7: Digging a Site	Archaeology in the Classroom, pg. 47 Classroom Archaeology, pg. 46 Expeditions into Ohio's Past, pg. 79 Poverty Point Expeditions, pg. 44 SAA's Archaeology for the Public Teaching Tools, pg. 22
Science	Experimental archaeology (recreate native lifeways) use scientific method science fair projects site distribution activity areas archaeological methods	Big Idea One Big Idea Two Big Idea Three Big Idea Four Big Idea Five Big Idea Six Big Idea Seven	Excavating a Wastebasket Site in a Bag Habitats of the Hopewell Poverty Point Cooking Balls What Out to Rot Lesson 11: Taphonomy	Archaeology in the Classroom, pg. 45 Classroom Archaeology, pg. 36 Expeditions into Ohio's Past, pg. 95 Poverty Point Expeditions, pg. 60 SAA's Teaching Archaeology Sampler Teaching Tools, pg. 34
Language Arts	journal writing metacognitive methods reflexive methodology article writing newspaper reporting research methods critical reading literature exploration human condition	LA.1.5.2.5 LA.2.6.2.1 LA.3.6.2.3 LA.(910,1112).2.1.1 LA.(8, 910).5.2.4 LA.7.6.2.1 LA.6.6.2.4	Archaeology Words Archaeology in the Library Fun With Words Bird Gods? Fox Man? Long Tail? Too Good to Myth! Imagine Life in Ancient Times Lesson 15: Protecting the Past	Archaeology in the Classroom, pg. 69 Classroom in Archaeology, pg. 60 Expedition into Ohio's Past, pg. 39 Poverty Point Expeditions, pg. 92 SAA's Education Station Teaching Tools, pg. 47
Reading	literature review comprehension testing	LA.1112.2.1.6 LA.(3-4,910).2.2.5	Newspaper Archaeology Special Techniques Sharing Ohio's Prehistory Artifacts All Over the Place Stewardship of Cultural Resources So You Want to be an Archaeologist?	Archaeology in the Classroom, pg. 46 Classroom Archaeology, pg. 55 (<i>El Nuevo Constante</i> booklet on Louisiana's Division of Archaeology website) Expeditions into Ohio's Past, pg. 29 Poverty Point Expeditions, pg. 97 SAA's Teaching Archaeology Sampler Teaching Tools, pg. 50

Core Courses	Teaching Points	Sunshine State Standards	Activities	Resources
Social Studies - Geography	Cultural anthropology local diachronic survey expand on global views time and space basic principles link materials with culture	SS.6.G.6.1 SS.6.G.2.1 SS.3.G.2.6: SS.912.H.3.1 SS.912.H.1.2	Trenchcoat Archaeology Prehistoric Culture Chart Locate Hopewell Culture Nat'l Park Topography Training Multidisciplinary Science: Avery Island Lesson 14: How Old Is It?	Archaeology in the Classroom, pg. 58 Classroom Archaeology, pg. 62 Expeditions into Ohio's Past, p.41 Poverty Point Expeditions, pg. 16 SAA's Teaching Archaeology Sampler Teaching Tools, pg. 43
Social Studies - History	research local background study simulated site diachronic studies common global problem	SS.5.A.2.3: SS.5.A.3.3 SS.912.A.1.3 SS.6.G.4.3	Sites and Threats Date Clues Comparing Timelines Prehistoric Pump Drill Artifact Interpretation Lesson 17: Georgia's Prehistoric Past	Archaeology in the Classroom, pg. 50 Classroom Archaeology, pg. 51 Expeditions into Ohio's Past, pg. 31 Poverty Point Expeditions, pg. 80 SAA's Education Station Teaching Tools, pg. 52
Visual Arts	artistic site interpretation museum presentation ceramic studies artifacts sketching Spatial conception	VA.A.1.3 VA.C.1.3 VA.D.1.3	Clay Pottery Making Pottery Reconstruction Why is the Past Important? Part One Wattle You Build Next? ArchaeologyLand Lesson 10: Making an Impression	Archaeology in the Classroom, pg. 70 Classroom Archaeology, pg. 53 Expeditions into Ohio's Past, pg. 47 Poverty Point Expeditions, pg. 40 SAA's Archaeology for the Public Teaching Tools, pg. 31
Computer Technology	Design web site Electronically link classes Databases Link students, Teachers, administrators, and parents	SC.H.3.3	Hunt the Ancestor Kids Dig Reed The Cave of Lascaux USS Monitor Center Florida Bureau of Archaeological Research	http://www.bbc.co.uk/history/archaeology/excavations_techniques/launch_gms_hunt_ancestor.shtml http://www.kidsdigreed.com/games.asp http://www.culture.gouv.fr/culture/arcnat/lascaux/en/ http://www.monitorcenter.org/ http://www.flheritage.com/archaeology/

Archaeological Site Math Worksheet

Date _____

Area being excavated _____

Recorder (s) _____

Total number of artifacts: _____

<u>Assemblage</u>	<u>#</u>	<u>% of total</u>	<u>description</u>
Undecorated ceramics	_____	_____	_____
Decorated ceramics	_____	_____	_____
Glass	_____	_____	_____
Window glass	_____	_____	_____
Square head nails	_____	_____	_____
Furniture nails	_____	_____	_____

On Monday we recovered 10 nails, Tuesday 9 nails, Wednesday 12 nails and Thursday 8 nails. Today we found 10 nails. What is the median number of nails found each day this week? What is the mean?

Define the following terms:

sherd:

artifact assemblage:

Using your knowledge of the site and the data presented above, what do you think the area being excavated was originally used for?

Name _____

Date _____

Experimental Archaeology Data Sheet

Science Worksheet

Observations made on the site:

Question or problem:

What background research should you conduct?

Hypothesis: **If** we use four different vessels types found on our site to carry water a distance of 500 meters, **then** the container with the narrow neck will be best suited for transporting water, **because** the narrow neck will allow the least amount of water to leak out of the container during transport.

Procedure (How to test the hypothesis):

What would you do during and after conducting the Procedure?

RESOURCES

Activity Guides and
Curricula

Downloadable Activity Guides and Curricula

1. Coquina Queries

Learn all about coquina through downloadable lesson plans and a hands-on kit developed through a grant for the Northeast Regional Center of FPAN in St. Augustine.

<http://www.flpublicarchaeology.org/resources.php>

2. Archaeology in the Classroom By Teachers for Teachers

Articles about teaching archaeology and activity guide published as an issue of *Early Georgia* by the Society for Georgia Archaeology

http://thesga.org/wp-content/uploads/1992/03/sga_1992_arch_in_classroom.pdf

3. Classroom Archaeology

Created by Nancy Hawkins for the Department of Archaeology in Louisiana and available through the Department of Education, Education Resources Information Center

http://eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED393721&ERICExtSearch_SearchType_0=eric_accno&accno=ED393721

4. Expeditions into Ohio's Past: Teacher's Guide

Compiled for Hopewell Culture National Historical Park, this curriculum is suggested for grades 3 – 5

<http://www.nps.gov/hocu/forteachers/curriculummaterials.htm>

5. Poverty Point Expeditions

Developed by Debbie Buco for elementary and middle school students to learn about Poverty Point State Commemorative Area, available through the Louisiana Division of Archaeology

http://www.crt.state.la.us/archaeology/activity_booklets.aspx

6. Rock River Valley: Pathway to the Past

Vermont Gas developed this educator's guide Franklin County 5th to 8th graders

http://www.vermontgas.com/about/educators_guide.html

7. SAA's Archaeology and Public Education Newsletter's Education Station Activities

Lesson plans developed by Society for American Archaeology (SAA) members and published in the Public Education Newsletter (also available in pdf form) (<http://www.saa.org/ForthePublic/Resources/EducationalResources/ForEducators/UsingArchaeologyContentandSkillsforClassroom/LessonPlansfromtheSocietyforAmericanArchaeo/tabid/990/Default.aspx>)

8. Teaching Tools: Georgia Prehistoric Archaeology Teacher Resource Kit

Funded through the Georgia Department of Transportation, this guide and handout teach the fundamentals of archaeology and Georgia prehistory guide (http://www.bartowdig.com/teacher_guide.pdf) and handouts (http://www.bartowdig.com/student_handouts.pdf)

9. Texas Archeology in the Classroom: A Unit for Teachers

A Texas Archeology Awareness Month Publication split into three sections: introductory material, activities, and resources (<http://www.thc.state.tx.us/archeology/aaresource.shtml>)

Published Activity Guides and Curricula

1. Digging and Discovery: Wisconsin Archaeology

Designed grades 4-8, this program has a teacher's guide with student materials and a reader (www.wisconsinhistory.org/teachers/lessons/elementary/digging.asp).

2. Frontiers in the Soil: The Archaeology of Georgia

This book and teacher's guide was updated by The Society for Georgia Archaeology in 2003 and can be purchased from www.cviog.uga.edu/store/item.php?item=9.

3. Intrigue of the Past: A Teacher's Activity Guide for 4th through 7th grades

This book is part of Project Archaeology (projectarchaeology.org) and an adapted version can be found online for North Carolina (rla.unc.edu/lessons).

4. Jump Back in Time: A Living History Resource

Carol Peterson immerses students in four time periods – Pioneer, Colonial America, Native American Culture, and Ancient Cultures – by developing 14-18 stations of activities (<http://www.teacherideaspress.com/catalog/LU0676.aspx>).

RESOURCES

Suggested Books

Suggested Books - by age (Florida-specific resource)

Elementary School

Bordessa, Kris

2006 Great Colonial America Projects You Can Build Yourself. White River Junction: Nomad Press.

Bruchac, Joseph with Michael J. Caduto

1997 Keepers of Life: Discovering Plants Through Native Stories and Earth Activities for Children. Golden: Fulcrum Publishing.

1994 Keepers of Life: Discovering Plants Through Native American Stories and Earth Activities for Children (Teacher's Edition). Golden: Fulcrum Publishing.

Casanova, Mary

2006 Jess. Middleton: Pleasant Company Publications.

Copeland, Peter F.

1987 American Sailing Ships Coloring Book. Mineola: Dover Publications, Inc.

1992a Exploration of North America Coloring Book. Mineola: Dover Publications, Inc.

1992b Shipwrecks and Sunken Treasures Coloring Book. Mineola: Dover Publications, Inc.

1995 Woodlands Indians Coloring Book. Mineola: Dover Publications, Inc.

1996 Southeast Indians Coloring Book. Mineola: Dover Publications, Inc.

Duke, Kate

1997 Archaeologists Dig for Clues. New York: HarperCollins Publishers.

Erickson, John R.

2004 Discovery at Flint Springs. New York: Penguin Books Ltd.

Guiberson, Brenda Z.

1998 Mummy Mysteries: Tales from North America. New York: Henry Holt and Company LLC.

Hobbs, Will

2002 Wild Man Island. New York: Harper Trophy.

Jumper, Betty Mae 

1994 Legends of the Seminoles. Sarasota: Pineapple Press.

LaPierre Yvette

1994 Native American Rock Art: Messages from the Past. New York: Thomasson-Grant and Lickle.

McIntosh, Jane

2000 DK Eyewitness Books: Archeology. New York: Dorling Kindersley.

Moss, Marissa

1999 The All-New Amelia. Middleton: Pleasant Company Publications.

Panchyk, Richard

2001 Archaeology for Kids: Uncovering the Mysteries of Our Past: 25 activities. Chicago: Chicago Review Press, Inc.

Posner, Jack

1997 The Magic School Bus Shows and Tells: A Book about Archaeology. New York: Scholastic Inc.

Weitzel, Kelley G. 

2000 The Timucua Indians: A Native American Detective Story. Gainesville: University Press of Florida.

2002 Journeys with Florida's Indians. Gainesville: University Press of Florida.

Middle School

Bingham, Jane, Fiona Chandler, Gill Harvey, and Lisa Miles

2007 The Usborne Encyclopedia of the Ancient World: Internet Linked. London: Usborne Publishing Ltd.

Hansen, Lynne

2001 Heritage of Horror: The Return. Amherst Junction: Hard Shell Word Factory. (teacher guide available upon request LynneHansen1@aol.com)

2004 Heritage of Horror: The Change. Amherst Junction: Hard Shell Word Factory. (teacher guide available upon request LynneHansen1@aol.com)

Hansen, Lynne and Sally Bosco

2004 AltDeath.com. Amherst Junction: Hard Shell Word Factory. (teacher guide available upon request LynneHansen1@aol.com)

Macaulay, David

1993 Motel of the Mysteries. Boston: Houghton Mifflin Company.

1995 Ship. Boston: Houghton Mifflin Company.

White, John R.

2005 Hands-On Archaeology: Real-Life Activities for Kids. Waco: Prufrock Press Inc.

High school/ Adult

Bense, Judith A. 

1994 Archaeology of the Southeastern United States: Paleoindian to World War I. St. Louis: Academic Press.

1999 Archaeology of Colonial Pensacola. Gainesville: University Press of Florida.

2003 Presidio Santa Maria de Galve: A Struggle for Survival in Colonial Spanish Pensacola. Gainesville: University Press of Florida.

Brown, Robin C. 

1994 Florida's First People. Sarasota: Pineapple Press.

Deetz, James

1977 In Small Things Forgotten: The Archaeology of Early American Life. New York: Anchor.

Daniels, Steve and Nicolas David.

1982 The Archaeology Workbook. Philadelphia: University of Pennsylvania Press.

David, Nicolas and Jonathan Driver

1989 The Next Archaeology Workbook. Philadelphia: University of Pennsylvania Press.

Delgado, James P.

1998 Encyclopedia of Underwater and Maritime Archaeology. New Haven: Yale University Press.

Feder, Kenneth L.

2007 Linking to the Past: A Brief Introduction to Archaeology, 2nd Edition. New York: Oxford University Press.

Hansen, Lynne

2005 Rave New World: an SAT Vocabulary Novel. New York: Spark Publishing.

2007 A Time for Witches. New York: Spark Publishing.

2007 Reckless Revolution. New York: Spark Publishing.

2007 Shades of Blue and Gray. New York: Spark Publishing.

Loubser, Johannes H.N.

2003 Archaeology: The Comic. AltaMira Press. Walnut Creek, CA.

Milanich, Jerald T. 

- 1994 Archaeology of Precolumbian Florida. Gainesville: University Press of Florida.
1998 Florida's Indians from Ancient Times to the Present. Gainesville: University Press of Florida.

Parker, Mari Pritchard and Elvio Angeloni

- 2009 Annual Editions Archaeology, 9th edition. Dubuque: McGraw Hill Contemporary Learning Series.
2007 Annual Editions Archaeology, 8th edition. Dubuque: McGraw Hill Contemporary Learning Series.

Salzman, Philip Carl and Patricia Rice

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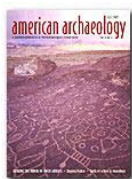
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RESOURCES

Suggested
Magazines

Suggested Magazines



American Archaeology by The Archaeological Conservancy
www.americanarchaeology.com/aamagazine.html



Archaeology, Archaeological Institute of America
www.archaeology.org



Calliope, Cobblestone Publishing for grades 5-10
www.cobblestonepub.com/magazine/CAL/



Cobblestone, Cobblestone Publishing for grades 4-9
www.cobblestonepub.com/magazine/COB



Dig, Cobblestone Publishing for grades 4-9
www.cobblestonepub.com/magazine/DIG



Faces, Cobblestone Publishing, grades 4-9
www.cobblestonepub.com/magazine/FAC



Past Horizons, online magazine
www.pasthorizons.com/magazine

RESOURCES

Suggested
Internet Sites

Suggested Internet Sites (Florida-specific resource)

Government

National Park Service

(<http://www.cr.nps.gov/archeology/PUBLIC/teach.htm>)

This resource goes in depth to explain archaeology and archaeological methods in plain English, lists parks to visit, links to other educational programs especially the Southeast Archaeological Center, and has lesson plans. There is also a section called Teaching with Historic Places (<http://www.cr.nps.gov/nr/twhp>).

The War of the Rebellion: a Compilation of the Official Records of the Union and Confederate Armies

(<http://cdl.library.cornell.edu/moa/browse.monographs/waro.html>)

Primary documentation (reports and correspondence) from the Civil War, searchable by year and state.

Florida Public Archaeology Network (FPAN)

(<http://www.flpublicarchaeology.org>)

Find out about how FPAN was created from the Coordinating Center or click on the map of Florida to learn about the individual centers and their regions.

Florida's Division of Historic Resources

(<http://www.flheritage.com>)

This link provides information on Florida's history and how it is being remembered and preserved. There are several links to very cool archaeological projects, and information on Archaeology Month events around the state. The Museum in the Sea web site (<http://www.museumsinthesea.com>) has information and video of the ships in the Florida Underwater Archaeological Preserve System.

Florida Memory Project

(<http://www.floridamemory.com>)

This link has archive photos, audio, and lesson plans on periods in Florida history.

Arkansas Archeological Survey

(<http://www.uark.edu/campus-resources/archinfo/resources.html>)

One of the models used to form the Florida Public Archaeology Network, this site offers education resources such as downloadable teacher resources and handouts – much of which is easily adaptable to teach Florida's past. Several handouts relate to archaeological concepts.

Louisiana Division of Archaeology

(http://www.crt.state.la.us/archaeology/activity_booklets.aspx)

You will find downloadable lesson plans, activities, and overheads on this website. You can order publications from the Louisiana Division of Archaeology that they will mail you for free.

Archaeological Societies

Florida Anthropological Society



(<http://www.fasweb.org>)

The Florida Anthropological Society is a very active community of professionals, advocationals, and interested people who share a passion for Florida's past. They hold an annual meeting in May and publish *The Florida Anthropologist*, which is included with membership – the best way to keep up with what research is happening in Florida.

Archaeological Institute of America (AIA)

(<http://www.archaeological.org/education>)

The Education Division of AIA was formed in 2004 and will provide resources, lesson plans, and commentaries on popular movies relevant to archaeology. We are especially fond of the Mystery Cemetery Project (<http://www.archaeological.org/education/lessons/cemetery>).

Society for American Archaeology (SAA)

(<http://www.saa.org/ForthePublic/Resources/EducationalResources/ForEducators/ArchaeologyforEducators/tabid/953/Default.aspx>)

It is extremely well done, and has tons of information for students, educators, and archaeologists – from single activities to entire events like *ArchaeologyLand!*. They also have a newsletter entitled *Archaeology and Public Education*, back issues are in pdf format for downloading (*most of this list's resource information is from this publication, although some of the information was outdated – still the articles and lesson plans were helpful*).

Society for Georgia Archaeology

(<http://www.thesga.org>)

Even though this is not a Florida-based organization, we share a lot of commonalities regarding the archaeological record. They have two publications of particular interest – *Used Archaeology* and *Frontiers in the Soil*. They also have a link on their homepage to purchase a copy of *Frontiers in the Soil*, a book and teacher's guide for use in a classroom setting (\$24 for both). Along with detailed information and cartoon illustrations, it also provides activities that reinforce archaeological concepts.

Educational Programs

Coquina Queries



(<http://www.fpannortheast.org/coquinaqueries>)

Learn all about coquina through downloadable lesson plans and a hands-on kit developed through a grant for the Northeast Regional Center of FPAN in St. Augustine.

Florida Then & Now



(<http://www.fcit.usf.edu/florida/lessons/lessons.htm>)

Produced by the Florida Center for Instructional Technology, College of Education, University of South Florida this web site has lesson plans geared to teach elementary students about Florida history, sites, and people. There are many links to primary documents as well.

Anthropology in the News

(<http://anthropology.tamu.edu/news.htm>)

Texas A&M's Department of Anthropology keeps a web page that has links to current stories involving anthropology or archaeology. These links lead to full version articles available online, however some of the sites do ask the user to register.

ArchNet

(<http://archnet.asu.edu>)

ArchNet is a virtual library of archaeological information. Searches can be done by subject or region.

El Camino lesson plans from the SRI Foundation

(<http://www.srifoundation.org/library.html>)

The Grand Adventure is a downloadable program that teaches about New Mexico from Spanish exploration to present. They are available in English or Spanish.

PBS.com

(<http://www.pbs.org/teachersource>)

This website has over 3,000 lesson plans as well as video clips for all ages and grades.

SAFE – Saving Antiquities for Everyone

(<http://www.savingantiquities.org/index.php>)

Saving Antiquities for Everyone is a non-profit organization dedicated to preserving cultural heritage worldwide.

Teaching With Documents

(<http://www.archives.gov/education/lessons>)

This site from the National Archives has lesson plans that focus on collecting information from primary sources.

Museums

Florida Museum of Natural History

(<http://www.flmnh.ufl.edu>)

Located in Gainesville, this museum has permanent exhibits on fossils, prehistoric peoples, and butterflies to name a few. It also has traveling exhibits and exhibits online. Be sure to check out the Inquiry Boxes (http://www.flmnh.ufl.edu/education/inquiry_boxes.htm) even if you are not able to rent the boxes, the lesson plans are downloadable!

Historic Pensacola Village & T.T. Wentworth, Jr. – Florida State Museum

(<http://www.historicpensacola.org>)

These properties are managed by West Florida Historic Preservation Incorporated, a non-profit institution, community service and direct support organization of the University of West Florida. Historic Pensacola Village consists of twenty properties in the Pensacola National Register Historic District. Ten of these properties are interpreted facilities that are open to the public.

Mission San Luis

(<http://www.missionsanluis.org>)

Mission San Luis is a reconstructed Spanish mission which depicts the Apalachee and Spanish missionary community of the 1500s. Their website has teacher resource information as well as a plethora of artifact pictures.

Museum of Florida History

(<http://www.flheritage.com/museum>)

Located in Tallahassee, this museum hosts exhibits like the *Seminole People of Florida: Survival and Success* which will open in mid-November and run through May 2008. They also have educational programs on their website.

Museum of London

(<http://www.museumoflondon.org.uk/English/Learning/Teachers/Resources>)

Museum of London has online resources such as games, activities, and curriculum for teachers.

Smithsonian Education

(http://smithsonianeducation.org/educators/lesson_plans/decoding_the_past/index.html)

Decoding the Past has lesson plans and activities to teach students from 3rd – 8th grade about the work of archaeologists. There are also many other subjects such as history, technology, and our voting system – all with well planned out lessons and activities.

Southeast Missouri Regional Museum

(<http://www.semo.edu/museum/resources/index.htm>)

This website has many great ideas for classroom activities divided by cultural periods. The lesson on Pottery-making Methods under the Woodland period is particularly recommended.

RESOURCES

Archaeology
Education
Resources

Archaeology Education Resources

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