THE WOODLAND INDIAN MOUND BUILDERS

LESSON PLANS

PART 3: EXTENDED ACTIVITY PLANS

THE LESSON PLANS ARE SPONSORED BY THE FARMINGTON HISTORICAL SOCIETY

The Woodland Indian Mound Builders

Lesson Plans

ABOUT THE LESSONS

Designed to be used by teachers to help students understand and appreciate the culture and history of the Woodland Indians.

Teacher-created and teacher-friendly with engaging, hands-on activities

Helpful instructional videos for both the educator and the students

Standards based (CCSS & WI Academic Standards)

Fourth grade centered (appropriate for grades 3-8)

Includes curricular areas of reading, writing, science, art and social studies

Farmington Historical Society
https://farmingtonhistorical.org

Please direct inquiries to
farmingtonhistory017@gmail.com

More than 2000 years ago, Woodland Indians gathered in the area of the Lizard Mound State Park and built a number of effigy mounds and earthworks. These early Wisconsin Native Americans were part of a larger group called the Eastern Woodland Indians. They inhabited an area ranging from the Atlantic Coast to the Mississippi River, and from the Great Lakes to the Gulf of Mexico.

Lesson plans were created with a focus on the group of Woodland Indians that lived in and adapted to the environment and climate of Wisconsin.

Plans are all connected and subdivided into 3 parts.

They are free to download at:
https://farmingtonhistorical.org/curriculum.html

PART 1 – THE WOODLAND INDIANS

The *Woodland Indians Lesson Plan* explores the everyday life and culture of the Woodland Indians, their food, shelter, clothing, and their mound building. The activities of this plan feature reading non-fiction content, applying comprehension and writing skills, building vocabulary, and relating Woodland Indian lives to their own lives.

PART 2 – THE MOUNDS OF LIZARD MOUND STATE PARK

The *Mounds of the Lizard Mound State Park Lesson Plan* digs into the mounds built by the Woodland Indians. Although much remains a mystery about these earthworks, this lesson plan focuses on what we know about the *what, who, why, how, and where* they were built. The activities in this plan cover reading and comprehending nonfiction content, building vocabulary, learning about mound construction, thinking critically, writing persuasively, and developing an appreciation and respect for an ancient site.

PART 3 – EXTENDED ACTIVITY PLANS

Extended Activity Plans expand the learning and understanding of **The Woodland Indian Mound Builders** lesson plans. The activities include: creating art by making a coiled clay pot, applying math concepts with collecting and recording mound data, and exploring the science of archeology by observing, recording and reconstructing artifacts. Reading and comprehending nonfiction text are also built into the extended activities.

*The lesson plans are sponsored by the **Farmington Historical Society** and were created by Ellen Kesting. They are free to download.*

*We hope you find the lesson plans useful, and that they inspire a visit to the **Lizard Mound State Park**.*

Table of Contents

Collecting and Recording Mound Shape Data

*Notes: Collecting mound data would naturally follow **The Mounds of Lizard Mound State Park Lesson Plan**. The activity, **Bar Graph Activity Using Mound Shape Tally Charts** would continue to organize and then interpret the collected mound data.*

Strand: mathematics, science, social studies

Grade Level: grade 4

Objectives:

CCS for 4th grade: SS.Hist1.a.i, SS.Hist2.c.i, SS.Hist4.a.i, SS.Hist1.b.i, SS.Hist3.a.i, SS.Hist4.c.i
CCS for 1st and 2nd grades: 1MD.c.4, 2MD.d.10
Wisconsin Academic Standards (grades 3-5): SCI.SEP2.3-5, SCI.SEP3.3-5, SCI.SEP4.3-5, SCI.SEP5.3-5, SCI.SEP6.3-5, SCI.6.b.3-5, SCI.SEP8.3-5

Students will:

- collect, record, represent and organize data from the mound shapes
- create a tally chart
- strengthen map skills
- make observations about the mound shapes
- draw conclusions about the mound shapes

Materials:

- paper
- pencil
- crayons or markers
- ruler
- Lizard Mound State Park map
- graph paper (optional)

Resources:

Note: All student printables can be found at the end of this activity.

- Lizard Mound State Park map, *page 6*
- https://youtu.be/6L2ch1esFGA?si=aOXCnbSmr6cT4UEU Tally Charts-Corbettmath (2:18 minutes)
- Graph paper, *page 7*

Note: The map of Wisconsin's Lizard Mound State Park was used to determine the number of mounds used in some lesson plan activities.

Vocabulary:

- *data* - a collection of facts, such as numbers, words, measurements or observations
- *tally mark* - mark used to record counting
- *tally chart* - a table recording tally marks representing data
- *conical mound* - mound shape with rounded top
- *linear mound* - mound shaped like a sausage
- *effigy mound* - mound shaped like an animal

Procedure:

1. Teacher Preparation: print map of Lizard Mound State Park, *page 6*. Preview tally chart video, https://youtu.be/6L2ch1esFGA?si=aOXCnbSmr6cT4UEU. The mound tally chart with correct shape data is shown on *page 5*.

2. Say: *We have been learning about the Woodland Indians and the mounds that they built in the Lizard Mound State Park. Archeological scientists collect and record data to gain understanding by making comparisons and then coming to conclusions. Data is often a collection of facts, of numbers or words. You, too, can be a scientist, collecting and recording data! You will collect data about the mound shapes in the Lizard Mound State Park. But first, we will talk about all the different mound shapes found in the park.* Hand out copies of the map.

   Mound shape discussion:
   - *How would you describe these shapes?*
   - *What did you notice about them?*
   - *Do these shapes remind you of anything?*
   - *What names were given to the ones shaped like a sausage? Why?*
   - *What names were given to the ones with rounded shapes? Why?*
   - *Which shapes have animal names? (*birds, panthers, lizard*) Why do you think that they were given animal names? These kinds of mounds are called effigy mounds.*
   - *What names would you give the mound shapes?*
   - *How many different shapes did you find on the map? (*5)
   - Point out to the children that these names were given to the mounds by those who studied them, not by the mound builders.

3. Say: *You can see that there are more of some shapes and less of others. You are going to collect data to find out about the numbers of the different shapes. A good way to keep data organized is to use a tally chart. We will watch a short video that shows you how to make a tally chart.*

   Watch the video that gives a good explanation of how to make a tally chart https://youtu.be/6L2ch1esFGA?si=aOXCnbSmr6cT4UEU Say: *The video suggests a way to prevent counting a mound more than once. (*Mark off the mound on the map when it has been tallied on the chart).

4. Some students will be able to independently apply the video's explanation and make their own mound shape tally chart. They could make their chart with or without the printed graph paper. Students should use the park map to find and record the mound shapes data using tallies and numbers. Say: *Remember, you are collecting and recording this data so that you can make comparisons and conclusions about the mound shapes. You should give your tally chart a title that describes your chart.*

5. For the students that need more guidance, adapt the video's explanation, or use the following steps:

   - Demonstrate how to draw a simple tally chart using the model shown in this lesson plan. Students could draw the lines with or without graph paper.
   - They should make five horizontal rows.
   - Draw vertical lines for the three columns (one for the mound shape name, one for tallies, and one for the number count of the tallies). Make sure they leave room for the title of their tally chart. Remind them to cross off or check off shapes as they count mounds on their map to help keep their counts straight.
   - Label the first column and the five rows with the mound shape names.
   - Marking tallies: Tell students that they will make one tally mark for each mound shape next to its name on the chart. One tally mark looks like this **I**, two look like this **II**, etc. Every fourth tally, a diagonal mark should go across the four tallies as the fifth mark. Say: *All this information being collected is called data. We will be using this data to make comparisons and come to some conclusions.*
   - Using the Lizard Mound State Park map, the children will record the mound shape data onto their tally chart with names, tallies and numbers. They will write the count number in the last column.
   - Monitor and allow self-correction.
   - Create a title and add it to the tally chart to show what information they are collecting.

6. Students should save their tally chart data for a bar graph activity.

7. Detailed Interpretation of the data occurs in the procedures of the following **Analyzing Mound Data Using a Bar Graph Activity.** Putting the data into a bar graph provides opportunities to analyze, compare, and draw conclusions. The activity also includes the printable **What I Learned from My Bar Graph** with questions to guide their interpretations.

Sources:

Articles and images may no longer be available in the exact locations we have cited here because of web changes made in the normal course of doing business. For this reason, we have also included the website address of the entity providing the image or article.

Teachervision https://www.teachervision.com
https://www.teachervision.com/search/tally+charts

Storyboard That https://www.storyboardthat.com
https://www.storyboardthat.com/search/tally%20charts

https://www.storyboardthat.com/teacher-guide/teaching-tally-charts

https://www.storyboardthat.com/storyboards/anna-warfield/how-to-make-a-tally-chart

A Maths Dictionary for Kids http://amathsdictionaryforkids.com
http://www.amathsdictionaryforkids.com/qr/t/tally.html

The School Run https://www.theschoolrun.com
https://www.theschoolrun.com/what-is-vertical

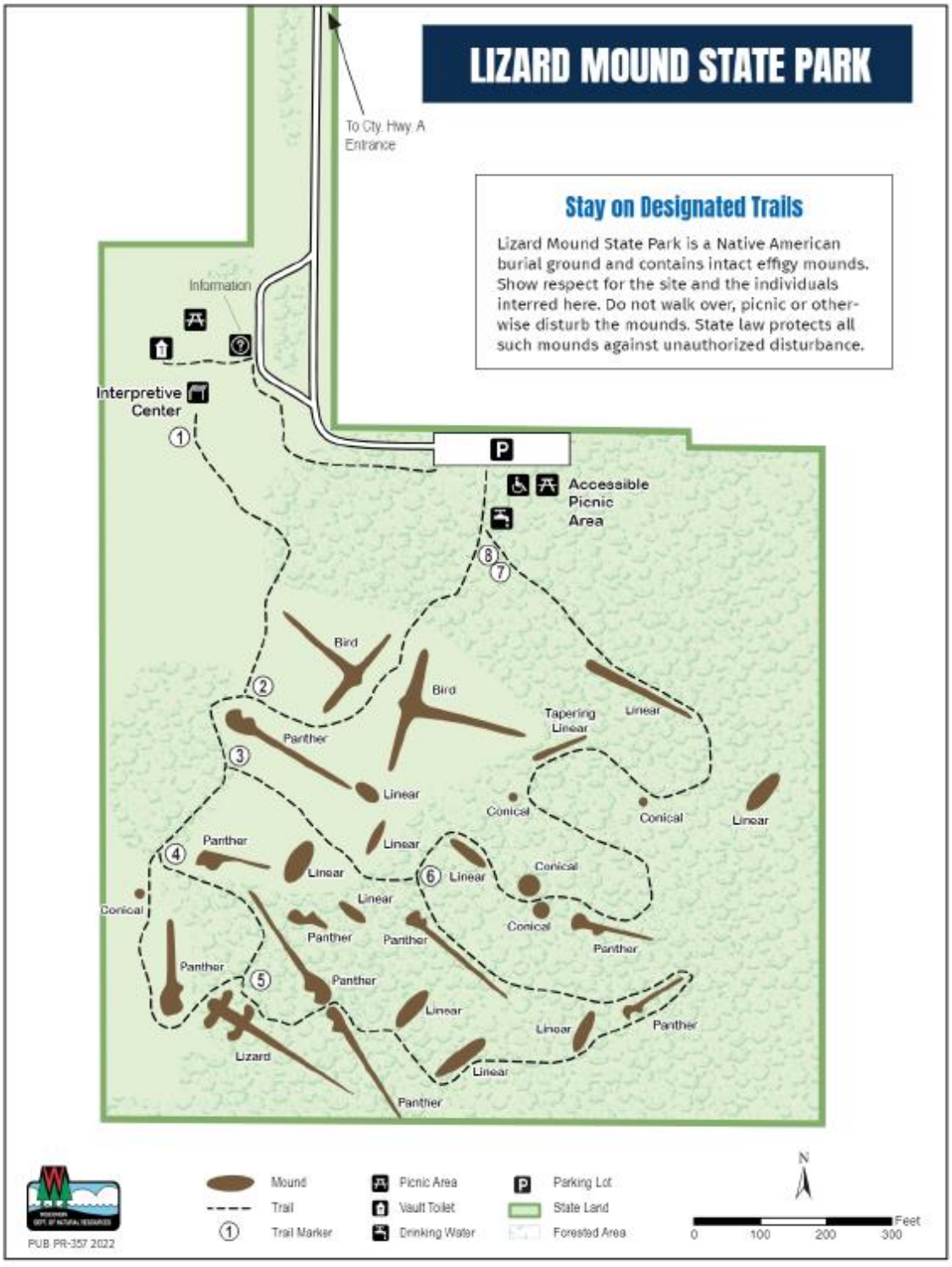
Tally Chart Example

Mound Shape	Tally	Frequency
lizard		
panther		
bird		
conical		
linear		

Lizard Mound State Park Mound Shapes Tally Chart

Mound Shape	Tally	Frequency
lizard	𝍸	1
panther	𝍸 𝍸	9
bird	𝍸	2
conical	𝍸	5
linear	𝍸 𝍸	10

Lizard Mound State Park Map



Analyzing Mound Data Using a Bar Graph

*Note: The bar graph will use the data previously recorded on the student's Mound Shape Tally Chart from the **Collecting and Recording Mound Shape Data** activity.*

Strand: mathematics, science, social studies

Grade Level: grade 4

Location: classroom

Objectives:

CCS for 4th grade: SS.Hist1a.i, SS.Hist2.c.i SS.Hist4.a.i, SS.Hist1.b.i
CCS for 2nd & 3rd grade: 2MD.D.10, 3.MD.B.3
Wisconsin Academic Standards (grades 3-5): SCI.SEP2.3-5, SCI.SEP3.3-5, SCI.SEP4.3-5, SCI.SEP5.3-5, SCI.SEP6.3-5, SCI.6.B.3-5

Students will:

- create a bar graph
- organize and interpret collected data on a bar graph
- learn bar graph mathematical terms
- measure quantities on a bar graph
- analyze data
- make comparisons
- arrive at conclusions
- review the mound shapes in Lizard Mound State Park

Material:

- graph paper
- pencil
- crayons or markers
- ruler

Resources:

*Note: Student tally charts previously created in the **Collecting and Recording Mound Shape Data** activity are the base of this activity.*

- https://www.youtube.com/watch?v=tuyWs5u-JSw hand2mind Creating Bar Graphs Math Lesson 7-minute video demonstrating the basics of making a bar graph
- graph paper, *page 7*
- **What I Learned from My Bar Graph** worksheet printable, *page 12*
- **What I learned from My Bar Graph** answers**,** *page 13*
- completed mound shape bar graph example for the teacher, *page 11*
- Lizard Mound State Park Map, *page 6*

Note: The map of Wisconsin's Lizard Mound State Park was used to determine the number of mounds used in some lesson plan activities.

Vocabulary:

- *bar graph* - a way of using bars to show quantities or numbers so that they can easily be compared
- *data* - a collection of facts such as numbers, words, measurements, or observations
- *y-axis* - vertical line on a bar graph
- *x-axis* - horizontal line on a bar graph
- *linear mound* – mound that is shaped like a sausage
- *conical mound* - mound that is shaped with a rounded top

Note*: Teacher could use the included completed bar graph, page 11, to model how to make a bar graph for the students or watch and use the student-friendly video, https://www.youtube.com/watch?v=tuyWs5u-JSw ,* hand2mind Creating Bar Graphs Math Lesson *with students. This video could be broken down in steps. Watch It and Pause It. Repeat. The minutes for each paused step are listed in the procedure:*

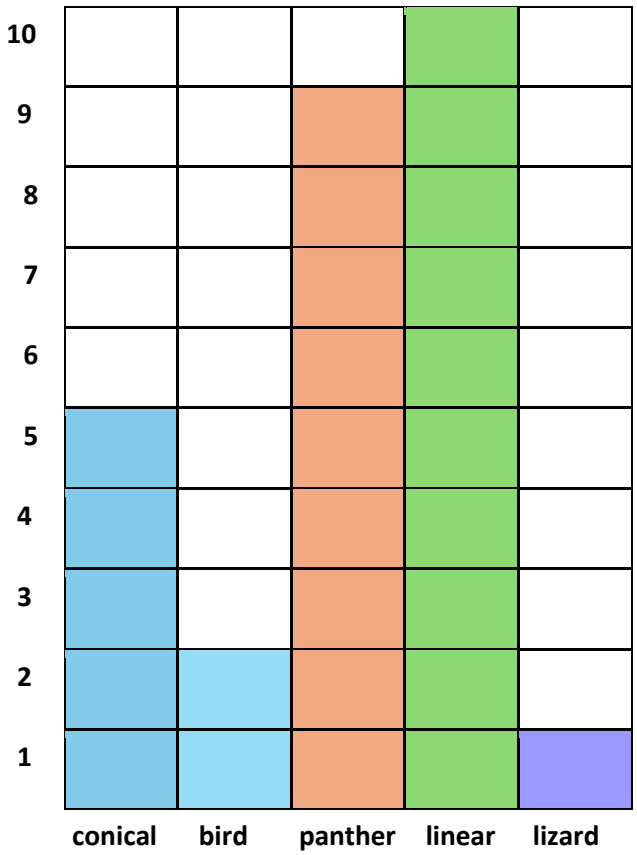
Procedure:

Note: There is a visual bar graph for teacher at the end of this activity.

1. **Teacher Preparation:**
   - print graph paper, *page 7* and **What I Learned from My Bar Graph** worksheet, *page 12*
   - preview bar graph video *https://www.youtube.com/watch?v=tuyWs5u-JSw*
   - preview the minute steps or chapters of the video
   - preview answers for the worksheet, *page 13* and completed bar graph, *page 11*
   - prepare student created tally data charts for distribution
2. Say: *Real-life scientists use charts and graphs as a way to organize, compare, and understand data that they have collected. You will be doing the same! You have already collected mound shape data and recorded it on a tally chart. Today we will make a bar graph using your tally charts.*

3. Distribute their completed Mound Shape Tally Charts. Review how they had been made and what they measure. Students should keep their charts handy when viewing the video.
4. Tell them that they will learn or review how to make a bar graph by watching a video, https://www.youtube.com/watch?v=tuyWs5u-JSw hand2mind Creating Bar Graphs Math Lesson.
5. Watch entire video with class (about 7 minutes)
6. Then rewatch and follow the *Watch It, Pause It,* minute sections or chapters of the video. Directions, information and questions follow each paused minute section.
    i. **0-3:00** overview and introduction of a bar graph: what it is, measures, its parts and graph vocabulary. Say: *How is your mound shape data different from the data demonstrated in this part of the video* (i.e., measures, new terms, parts)? *How can your mound data be used in the same way? What do you think would be a good title for your bar graph?*
    ii. **3:02-3:53** describes and defines x-axis and y-axis lines on a bar graph. Say: *What data from your mound shape tally chart would be represented with the x-axis and the y-axis lines on your bar graph?*
    iii. **3:54-5:48** steps of creating the bar graph: video teacher demonstrates a bar graph using class elections, shows how to apply tally data into a bar graph. Say: *What were his categories? What was he measuring? What are your categories? What will you be measuring on your graph? What might be a good title?*
    iv. ***5:48 – End of video*** connects the relationship of tally charts and bar graphs
7. Say: *You are now going to make your own bar graph using your mound shape tally chart.* Some children will be able to independently construct their own graph. For others, the steps below could be done or followed.
    b. Hand out graph paper, tell children to take out their rulers
    c. Using their own tally charts, ask children how many y-axis (10) and x-axis (5) lines will be on their graph.
    d. Draw x-axis and y-axis lines on their graph paper using their rulers.
    e. Label the x-axis lines with the names of their mounds (along the bottom of the graph)
    f. Label the y-axis lines with the mound measurements. (along the left side of the graph)
    g. Shade or color vertical bars to represent the total number for each mound shape.
    h. Add a title.
8. When the graphs are completed, Say: *Like scientists, we too will analyze our bar graphs. What did you learn from your bar graph?* Encourage students to express and share their own comparisons and conclusions as they analyze their graphs.
9. Hand out the **What I Learned from My Bar Graph** sheet to be completed. It includes questions that help them think about, interpret and analyze their organized data.

Bar Graph Example:



Sources:

Articles and images may no longer be available in the exact locations we have cited here because of web changes made in the normal course of doing business.

https://www.youtube.com/watch?v=tuyWs5u-JSw Hand2mind Creating Bar Graphs Math Lesson

Lizard Mound State Park Map. Wisconsin Department of Natural Resources, https://dnr.wisconsin.gov/topic/parks/lizardmound/maps. Retrieved 2024.

What I Learned from My Bar Graph

1. What is the most common mound shape in the park? _____

2. Which shape is the least common? _____

3. What is the number difference between the conical mound and the linear shapes? _____

   Write a math sentence showing this. _____

4. How many more linear shapes are there than the bird shapes? _____

   Write a math sentence showing this. _____

5. Why do you think there is only one lizard shape?

_____

_____

6. What surprised you the most?

_____

_____

7. How could this graph help you?

_____

_____

8. What is the most important thing that you learned from your bar graph?

_____

_____

What I Learned from My Bar Graph ANSWERS

1. What is the most common mound shape in the park? **linear mound**

2. Which shape is the least common? **lizard mound**

3. What is the number difference between the conical mound and the linear shapes? **5**

   Write a math sentence showing this. **10-5=5**

4. How many more linear shapes are there than the bird shapes? **8**

   Write a math sentence showing this. **10-2=8**

5. Why do you think there is only one lizard shape?

_____

_____

6. What surprised you the most?

_____

_____

7. How could this graph help you?

_____

_____

8. What is the most important thing that you learned from your bar graph?

_____

_____

Making Coiled Clay Pots

The Woodland Indians used coils of clay to make their pottery

Note: There are two parts to this activity: part one-students read and learn how the Woodland Indians made pottery; part two-students make a coiled clay pot.

Strand: art, science, social studies, history, language arts

Grade Level: grade 4

Objectives:

CCS for 4th grade: RI.4.4, RI.4.5, RI.4.7, RI.4.9, RI.4.10
Wisconsin Academic Standards (grades 3-5): A.A.Cn.4.i, A.A.Cn.6.i, A.A.Cr.4.i, A.A.R.6.i, SS.BH4.a.i

Students will:

- Explore and acquire ancient Woodland Indian pottery-making techniques
- gain appreciation for the Woodland Indian potter skills
- explain the function and importance of pottery in Woodland Indian culture
- learn new vocabulary
- read for information
- practice sequencing skills
- use techniques of art to create a coiled clay pot
- connect Woodland Indian history to an art activity
- understand that people from different times and places have made art and designs for a variety of reasons

Materials:

- modeling clay or play-dough
- sticks, toothpicks or tools for decorating pots
- scissors
- glue
- paper
- damp paper towels
- water

Resources:

- **How They Did It** reading for information printable, *page 19*
- **Important things to Remember About Woodland Indian Potters** sequencing printable activity and answer sheet, *pages 20* and *21*
- **Making a Simple Clay Coil Pot – Teaching Clay to Elementary Students, Part 1**, 12-minute video, https://www.youtube.com/watch?v=62-7qHckMMM
- **Teaching Clay to Elementary Students, Part 2**, 2-minute video, https://www.youtube.com/watch?v=ffh5_VNe1tY smoothing clay coils
- **Play Clay Recipe,** *page 18*

Vocabulary:

- *archeologist* - a scientist who studies things that people have made, used and left behind
- *clay* - fine pieces of soil that are pliable when wet and can be hardened with air and heat
- *coils of clay* - clay rolled into snake-like shapes
- *firing* - applying heat to harden clay
- *pottery* - container or pot made with hardened clay
- *shard* - a piece of broken pottery

Part 1: Studying Woodland Indian Pottery

Procedure:

1. Teacher Preparation: Print **How They Did It,** *page 19*. Print **Important Things to Remember About Woodland Indian Potters,** *page 20* and preview answers, *page 21*. *Note: If you wish to use a digital file instead of a printout, provide* **How They Did** *in a digital format that can be given to the students.*
2. Say: *The Woodland Indians made their own tools from bones, trees, and earth materials. They also made their own pots for cooking, eating, storing, and carrying things. Today we are going to learn how they made their pots out of clay. What is pottery?* (containers made from clay and then hardened). *You probably have pottery in your home. The ancient Woodland people used a basic pottery-making process that is similar to what is done today. Archeologists who study the Woodland people and their mounds have found pottery shards* (broken pieces of pottery) *at mound sites and their camps.*
3. Say: *You will read about the steps that the ancient Native Americans took to create their pottery.*
4. Distribute the **How They Did It** information sheet or provide instructions for accessing the digital text. Assign reading independently, with a partner, or as a whole group.
5. Distribute **Important Things to Remember About Woodland Indian Potters**. Students will sequence the steps by cutting and gluing the steps correctly on a piece of paper or by numbering them in the correct order directly on the sheet.

Part 2: Making a Coiled Pot

Note: *If cost is an issue, use the play clay recipe, page 18. If using modeling clay, it might be necessary to moisten your hands and keep this type of clay covered with a damp towel to keep it from drying out.*

Teacher Preparation:

1. Prepare the modeling clay or play clay (recipe for play clay is on *page 18*) moist paper towels and water source.
2. Gather scratching tools for decorating, preview the two videos to learn the process of making a clay coiled pot. *(see video links, below)*

   Note: The videos demonstrate how to make a simple clay coiled pot. They are easy to understand for both teacher and students. If a teacher is not familiar with making a clay coiled pot, watch the videos together and break it down into steps. Watch It, Pause It, Make It. Repeat. The minutes for each step are listed below for both videos.

   Video - Making a Simple Clay Coil Pot - Teaching Clay to Elementary Students (Episode 8 - Part 1) https://www.youtube.com/watch?v=62-7qHckMMM describes how to make, wrap and smear the clay coils into a pot.

   0-1:49 making the coils
   1:49-3:19 making bottom of pot
   3:19-5:48 building 3 coiled sides on the pot bottom and beginning the smearing. Then, skip to minute **8:26**.
   Note: students should be directed to choose the smoothing coils style like the Woodland Indian potters.
   8:26-11:17 smearing
   Note: Direct students to choose the decorating style that emulates only the Woodland Indian pot.

   Video - Teaching Clay to Elementary Students *(*Episode 8 - Part 2)
   https://www.youtube.com/watch?v=ffh5_VNe1tY continues smearing process
   0-1:55 expands smearing process and how to fix possible problems

Students Make the Coiled Pot:

1. Review how the Woodland Indians made pottery as learned in the **How They Did It.**
2. Say: *We are going make a coiled clay pot. We will be doing many of the same steps that the Woodland people did so many years ago. However, today, you will not have to dig out your own clay near a creek or harden your pot with a fire. Your pot will also not be as big as most of the Woodland Indian pots.*
3. Hand out clay, water source, moist paper towels.
4. If using the videos, tell the children that we will watch and follow a teacher's instructions on a video, together. Students might first watch the videos without pausing (about 15 minutes). Then watch it again, using the Watch, Pause, Make steps.
5. Make, build and smear the coils into a pot.
6. Remind children that they had learned how the ancient Woodland Indians decorated their pots. *Note: referring to text from **How They did It,** step, 6: "The Woodland Indian potter would usually add patterns or designs to the outside of the pot. Some pottery was decorated by using a*

stick or fingernail to cut lines or designs into the wet clay". Show students the picture of Woodland Indian pots in the ***How They Did It****.*

Note: *Optional background information for an interested teacher and/or student.*

The Mississippi Archeological Center, at the University-LaCrosse adds to Woodland Indian pottery decoration study with: "The decoration on pottery changes through time just like the shape of projectile points. Archaeologists can use the type of temper and designs on pots to help tell their age. The oldest pottery has incised lines, made with a stick or a fingernail. Later pottery often has fine decoration made with a stick wrapped with a cord and pressed into the clay, or a stick carved with notches to make a dentate pattern. The latest Woodland pottery has elaborate sets of cords, perhaps woven, pressed into the clay."
https://www.uwlax.edu/mvac/pre-european-people/woodland-tradition/pottery/#:~:text=Woodland%20pots%20have%20straight%20sides,pressed%20into%20the%20wet%20clay

7. Distribute sticks, toothpicks or tools for decorating pots.
8. Students decorate their pots.
9. Set aside the pots to dry.

Sources:

Articles and images may no longer be available in the exact locations we have cited here because of web changes made in the normal course of doing business. For this reason, we have also included the website address of the entity providing the image or article.

National Park Service https://nps.gov
https://www.nps.gov/teachers/classrooms/pottery-making.htm

Illinois State Museum https://www.illinoisstatemuseum.org/
https://www.museum.state.il.us/muslink/pdfs/pna_pottery.pdf

Friends of the Mead/McMillan Wildlife Areas
https://www.meadwildlife.org/page/woodland-indians

The University of North Carolina at Chapel Hill
https://worldview.unc.edu/wp-content/uploads/sites/433/2022/05/Haugh_Lesson_Pottery_Final.pdf

Mississippi Valley Archeology Center at University of Wisconsin-LaCrosse
https://www.uwlax.edu/mvac/pre-european-people/woodland-tradition/woodland-tradition-overview/
https://www.uwlax.edu/mvac/pre-european-people/
https://www.uwlax.edu/mvac/pre-european-people/native-technologies/pottery/

Easy Drawings and Sketches www.easy-drawings-and-sketches.com
https://www.easy-drawings-and-sketches.com/images/how-to-draw-flames07.jpg

Play Clay Recipe

*This recipe produces a soft and cooperative clay for about **2** clay pots. The recipe has a fairly long drying time, but the pots will dry eventually. If stored in an airtight container, the dough will last for 2 to 4 weeks.*

Ingredients:
1 cup flour
1 cup water
1/2 cup salt
1 tsp. vegetable oil
1/2 tsp. cream of tartar

Directions:
Step 1. Mix all ingredients together in a saucepan and cook over medium heat until the mixture holds together (keep stirring or it will stick to the bottom of the pan).
Step 2. When the clay is cool enough to touch, it can be kneaded on a floured board.

How They Did It

Archeologists have learned that the Woodland people made their own tools and created pots for cooking and eating. They used a *coil method* to make their *pottery*. Read the following steps and learn how they did it.

Step 1
The Woodland Indians *dug* clay from the ground, which can be found in many different areas, but was often found along a creek or in a wet area.

Step 2
The clay was *pounded* to remove any lumps.

Step 3
Then the clay was *mixed* with water to feel like play-dough. Crushed rock, sand or ground up clam shells were *added* to the clay to keep it from shrinking or cracking when the clay was *fired* or dried. Now, the clay was ready to be made into a pot.

Step 4
The Woodland Indian potter would make the bottom or base of the pot with long *coils* or ropes of clay. Other coils were then added onto the base to build up the sides of the pot.

Step 5
After the pot was *shaped,* the potter would smooth the inside and outside surfaces with his or her fingers or with a piece of shell or stone. Smoothing or smearing the coils of the pot helped hold the pot together.

Step 6
The potter would usually *add patterns* or designs to the outside of the pot. Some pottery was decorated by using a stick or fingernail to cut lines or designs into the wet clay.

Step 7
The pot was allowed to *dry*, and the last step was placing it in a *fire*. Burning bark or wood was placed around the pot, which was left in the hot fire until the clay became hard.

Important Things to Remember About Woodland Indian Potters

The following steps of making Woodland pottery are all mixed up. Cut the strips on the dotted lines. Paste the steps in the right order on a piece of paper.

……

The base of the pot was often made with coils.

……

The Woodland Indians smoothed the inside and outside of the coils
on the pot to help it hold together.

……

Clay was found in wet areas and then dug up for making pottery.

……

The potters added more coils to the base and built up the sides of the pot.

……

The Mound-builders added water to the clay to make it more workable.

……

Designs were put into the wet pot with fingernails or a stick.

……

The completed pot was set out to dry and then put in a fire to harden it.

……

To make the pots stronger, crushed rock, sand or ground up
clam shells were added to the clay.

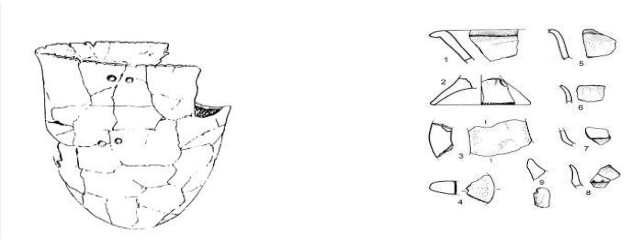
……

Important Things to Remember About Woodland Indian Potters
ANSWERS

1. Clay was found in wet areas and then dug up for making pottery.
2. The mound builders added water to the clay to make it more workable.
3. To make the pots stronger, crushed rock, sand or ground up clam shells were added to the clay.
4. The base of the pot was often made with coils.
5. The potters added more coils to the base and built up the sides of the pot.
6. The Woodland Indians smoothed the inside and outside of the coils on the pot to help it hold together.
7. The ancient Native Americans scratched decorations into the wet pot with fingernails or a stick.
8. The completed pot was set out to dry and then put in a fire to harden it.

Archeologists Discover and Reconstruct Pottery Artifacts

Shards of pottery have been found near the Lizard Mound State Park



Strand: science (archeology), social studies, language arts

Grade Level: grade 4

Location: classroom

Objectives

CCS for 4th grade: RI.4.4, RI.4.5, RI.4.7, RI.4.9, RI.4.10,
Wisconsin Academic Standards (grades 3-5): SS.Hist2.c.i, SS.Hist3.b.i, SS.Hist4.a.i, SS.Hist1.a.i, SS.Hist2.c.i, SS.Hist4.a.i, SS.Hist4.c.i, SCI.ETS2, SCI.ETS3, SCI.SEP4.3-5, SCI.SEP6.a.3-5, SCI.6.b.3-5, SCI.SEP8.3-5

Students will:

- learn terms listed in vocabulary
- discover why and how archaeologists reconstruct pottery artifacts
- read and comprehend nonfiction content
- explore how archeologists work
- reconstruct broken clay pot shards
- use sorting skills
- use problem solving skills
- use fine motor skills
- gain a deeper understanding of the Woodland Indian culture

Materials:

small or medium sized clay flowerpots or saucers (terra cotta clay pots work well) broken into pieces
paper bags
white glue (i.e., Elmer's)
rolls of masking tape
newspaper
scissors

Vocabulary:

- *archeology* - a science which tries to understand what people of the past were like and how they lived
- *artifacts* - things that were made, used and left behind by humans
- *site* - a special area where archeologists dig to find artifacts
- *archeologists* - scientists who study things that people have made, used, and left behind
- *shards* - broken pieces of pottery

Resources:

- https://www.youtube.com/watch?v=CSwCYm9qC6c video (about 25 minutes), produced by ***National Science Foundation,*** children participate in an archeological dig camp
- **Digging into Archeology** reading information student printable, *page 29*
- **Important Things to Remember** crossword puzzle, *page 30* and answers, *page 31*
- **Pottery Mending Tips** printable, *page 28*
- https://www.youtube.com/watch?v=ZT4pghwORXI 2 ½ minute video of archeologist restoring a pot using glue and tape

Procedures:

Note: This plan has two parts.

- *Part 1: students read and respond to informational content about archeologists.*
- *Part 2: students watch a video where an archeologist reconstructs an artifact. Students will reconstruct a flower clay pot, "artifact."*

Part 1 What Archeologists Do

Procedure

1. Teacher preparation: preview video https://www.youtube.com/watch?v=CSwCYm9qC6c. Print **Digging into Archeology,** *page 29* and **Important Things to Remember** crossword, *page 30* and preview answers, *page 31*.

   Note: *The National Science Foundation video is child-friendly. It will give the students a good idea of what archeologists do at a site. They will also hear archeological vocabulary in the context of a real Utah dig camp for children, who are excavating pottery shards. Watching the 28-minute video is highly recommended. You may want to cut the introductory part; start viewing at minute 3:15.*
2. Ask children what they know about archeology and archeologists.
3. Say: *You will learn what some archeologists do when we watch a video of children participating in an archeological dig.*
4. Point out to students, that they should listen for the words that have been posted: *archeology, artifacts, shards,* and *archeologists.* Watch video.

https://www.youtube.com/watch?v=CSwCYm9qC6c .

5. Have children respond to the video. Say: *What do you think? What did you learn about the terms, archeology, artifacts, shards, and archeologist?*
6. Say: *You will read and learn more about these words when you read* **Digging into Archeology**. Distribute the printed information sheet or instruct the students on how to find the digital version. Assign reading independently, with partners or as a group.
7. Assign children (individual, partner or group) to complete the crossword puzzle, **Important Things to Remember**. Go over their work together.

Part 2 Reconstructing Pottery Activity

Teacher preparation:

1. preview video: https://www.youtube.com/watch?v=ZT4pghwORXI
2. print **Letter to Parents,** *page 27*, if students are bringing old clay pots
3. print **Pottery Mending Tips,** *page 28*
4. gather rolls of masking tape for each pot/saucer, scissors, white glue (like Elmer's), paper bags and newspapers.
5. students OR teacher bring old clay flowerpots or saucers to school

If teacher gathers the pots: Gather medium or small sized old clay flowerpots or saucers, enough for individuals or partners. Reconstructing a clay pot saucer might be easier and faster than a pot. Pottery should be broken and each pot/saucer put into a separate paper bag ahead of time. When breaking the pots, some of the pieces will be too tiny for the children to glue together; remove those pieces. Archeologists often work with missing pieces too. Cutting up small pieces of tape ahead of the gluing is helpful.

If students gather the pots: Show students a medium or small sized clay flowerpot and/or saucer. Assign them to bring similar pots/saucers to school. Tell them that you will be sending a letter home about the flowerpots. Before reconstruction, teacher breaks each pot/saucer and puts them in separate paper bags.

Procedure

1. Tell children that they will watch a real archeologist reconstruct pottery from shards on a short video. https://www.youtube.com/watch?v=ZT4pghwORXI

2. Before handing out the materials, Say: *Imagine you were given some shards that were found at an archeological site. And imagine that you have a chance to reconstruct a pot just like the archaeologist. Today we are going to reconstruct some clay pieces called shards into a pot like the archeologist did in the video. Our "artifact" shards will be from old, broken, clay flowerpots, but we will do much of the same reconstructing process as the one we saw in the video.*

3. Hand out **Pottery Mending Tips.** Discuss each strategy with students.
4. Give each child, partner, or group the paper bags with the pottery shards, a roll of masking tape, white glue (i.e., Elmer's), newspaper, and a scissors. Caution students that some of the broken shards may be sharp and to use care when handling them.
5. Direct students to carefully spread their shards on their newspaper. Say: *Just like archeologists often have missing pieces, you too, might have that same problem*.
6. Tell them to cut or tear pieces of masking tape before assembling their pot/saucer.
7. Suggest sorting the pieces into top and bottom pieces if they are working with a clay pot.
8. Say: *It is important to start the reconstruction at the bottom (the part that would sit on the table).*
9. If they are reconstructing a terra cotta saucer, tell them that sorting flat pieces and curved pieces might be helpful.
10. Say: *You will be using both the glue and masking tape to mend the shards. Be sure to keep the masking tape on the pot to hold shards together until the glue dries. This is what the archeologist did in the video.*
11. Say: *The archeologist in the video did some finishing touches on his reconstructed pot. His pot will be displayed in a museum. Ours will not, so we won't do the carving and brushing.*
12. Allow their work to dry.
13. Students share with each other any problems they had during the reconstruction. Say: *What did you find that worked well while mending your pot? How do you think some of your problems might be like an archeologist who is reconstructing ancient pottery artifacts and shards?*

Sources:

Articles and images may no longer be available in the exact locations we have cited here because of web changes made in the normal course of doing business. For this reason, we have also included the website address of the entity providing the image or article.

The University of North Carolina at Chapel Hill School of Education
https://archaeology.sites.unc.edu/

https://rla.unc.edu/lessons/PDF/L208.pdf

Simon Fraser University - Museum of Archeology and Ethnology https://www.sfu.ca/
https://www.sfu.ca/archaeology/museum/exhibits/virtual-exhibits/doing-archaeology-in-the-classroom--a-sandbox-dig.html

Ancient North Carolinians https://ancientnc.web.unc.edu/
https://ancientnc.web.unc.edu/exhibits/first-peoples/the-pottery-makers/

UNC Worldview https://worldview.unc.edu/
https://worldview.unc.edu/wp-content/uploads/sites/433/2022/05/Haugh_Lesson_Pottery_Final.pdf

https://worldview.unc.edu/lesson-plan/american-indian-pottery-of-north-carolina-past-and-present/

Big Ideas for Little Scholars https://bigideas4littlescholars.com/

https://bigideas4littlescholars.com/think-like-an-archaeologist-kid-created-artifacts-and-a-mini-excavation/

American Museum of Natural History https://www.amnh.org/
https://www.amnh.org/explore/ology/archaeology/piecing-it-all-together2

Museum of Ontario Archaeology
https://www.youtube.com/watch?v=_Mb_paCfaVA

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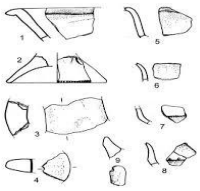
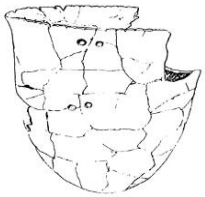
Dear Parents,

In science and social studies, we are studying how archeologists excavate and examine artifacts. Archeologists have found Woodland Indian pottery artifacts in Wisconsin. Our class will soon experience reconstructing an "artifact" just like some archeologists do in their work. Our "artifacts" will be clay flowerpots or saucers. Here is how you can help:

> Please send a clay flowerpot or saucer with your child to school by_____. The pot/saucer should be small or medium sized. Send a few extra ones along, if you have them. The pots or saucers will be broken into pieces at school.

You may be interested in how some archeologists reconstruct an artifact that they had found. You can watch this process here: https://www.youtube.com/watch?v=ZT4pghwORXI





Thank you for helping us with our science and social studies project.

Pottery Mending Tips

- ✓ You might want to sort the pieces/shards into groups of top, sides, and bottom pieces if reconstructing a pot. If reconstructing a terra cotta saucer, you might want to sort the pieces into flat or curved parts.
- ✓ You should cut or tear small pieces of tape to have them ready before starting the assembling.
- ✓ If you are reconstructing a pot you should start at the bottom (the part that would sit on the table) and then build up and around.
- ✓ Put glue on one puzzle piece at a time as you find shards that fit together.
- ✓ Put glue both on the puzzle piece and on the missing part of the pot.
- ✓ Gently wiggle the piece in place until it fits nicely.
- ✓ Put some tape over these shards to hold it together while it dries.
- ✓ Wipe off excess glue.

Digging into Archeology

1

*Archeologists a*re scientists who study things that people have made, used and left behind. Archeologists try to understand what people of the past were like and how they lived. This kind of science is called archeology.

6

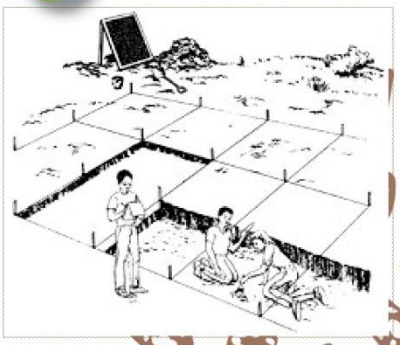
Archeology isn't just about digging outdoors at a site. Archeologists spend much of their time indoors, in labs taking a closer look at the artifacts that they found at a site. A lot of information can be learned by archeologists by gluing or mending the broken pieces or shards back together. This mending will help archeologists understand the shape and size of a pot. It may also give clues if the pot was used for eating, cooking or storing things.

The things that people have made, used and left behind that are found by archeologists are called *artifacts*.

2

Artifacts are found when digging in a special area called a *site*.

3



5

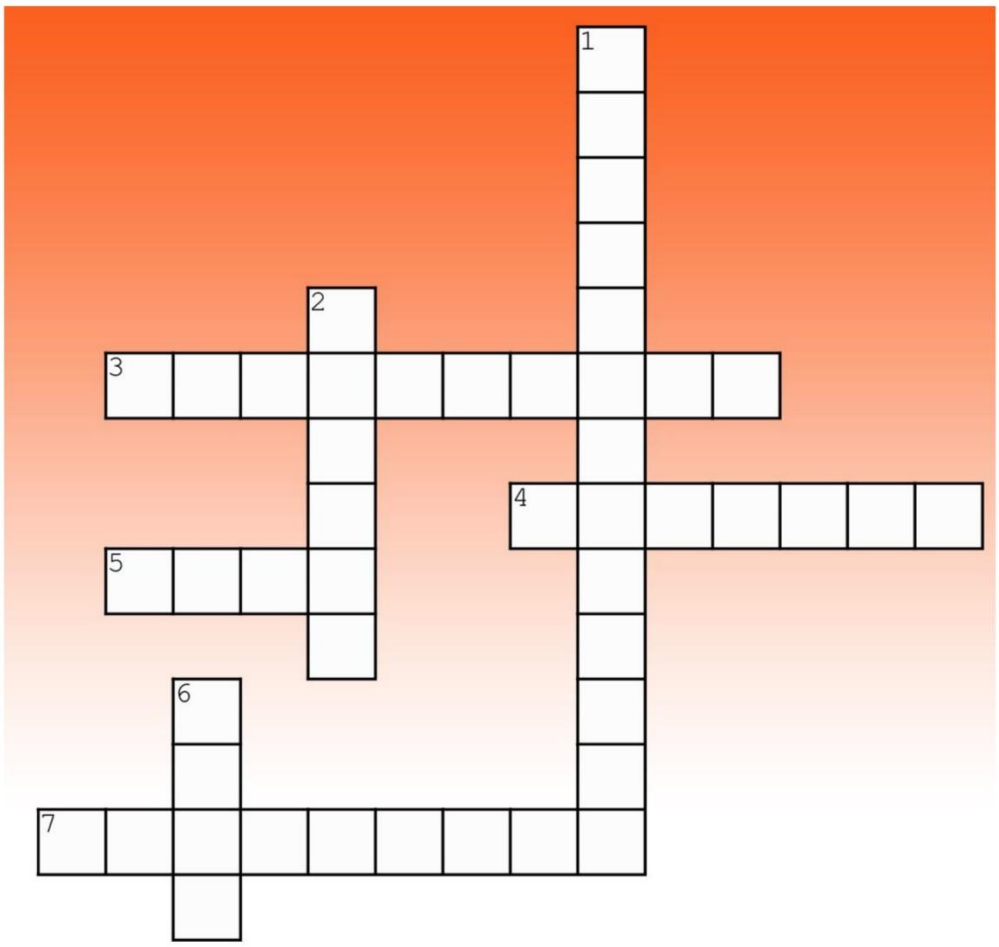
Shards are important because they can often tell how old a site is. Archeologists can use the type of clay and designs on the pottery shards to help figure out how old the pottery itself is. Different styles of pottery artifacts can also help archeologists learn about the different cultures and groups among Native Americans.

4

Pottery are containers or pots made from clay. Broken pieces of pottery are called shards. Shards of pottery have been found in or near Lizard Mound Park. These were left behind by the Woodland Indians.

Important Things to Remember Crossword

Complete the Crossword!



Across

3. What kind of science studies things that people have made, used, and left behind?
4. What are pots made from clay called?
5. What do scientists often do with the broken pottery pieces they find?
7. What do scientists call the things that they find which were made by people a long time ago?

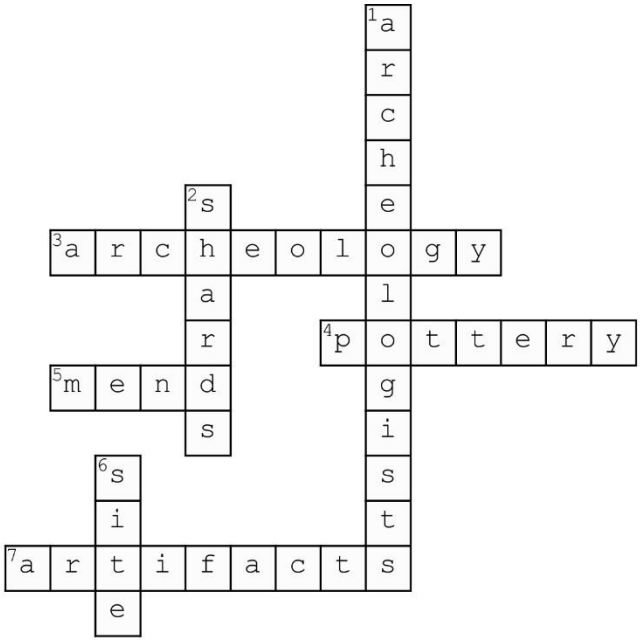
Down

1. What are scientists who study archeology called?
2. What are broken pieces of pottery called?
6. What is the area called where scientists dig for artifacts?

What is one problem a scientist might have when mending a pot?

_____

Important Things to Remember Crossword Answers



Created with TheTeachersCorner.net Crossword Puzzle Generator

Across

3. What kind of science studies things that people have made, used, and left behind? (**archeology**)
4. What are pots made from clay called? (**pottery**)
5. What do scientists often do with the found pottery shards? (**mend**)
7. What do scientists call the things that they find which were made by people a long time ago? (**artifacts**)

Down

1. What are scientists who study archeology called? (**archeologists**)
2. What are broken pieces of pottery called? (**shards**)
6. What is the area called where scientists dig for artifacts? (**site**)

Thinking Like an Archeologist

Archeologists use observational skills to study things left behind by the Mound Builders

Strand: science (archeology), social studies

Grade Level: grade 4

Location: classroom

Objectives:

CCS for 4th grade: RI.4.7
Wisconsin Academic Standards (grades 3-5): SS.Hist1.a.i, SS.Hist3.a.i, SS.BH2.a.4-5, SS.Hist3.b.i, SS.Hist4.a.i, SS.Hist4.c.i, SS.Hist1.b.i, SS.Hist4.a.i, SS.Hist4.c.i, K-2-ETS.1-1, SCI.ETS.AK-2, SCI,ETS1.BK-2, SCI.ETS1.B, 4-ESS3-11, 4-ESS2-2, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, SCI.SEP3.3-5, SCI.SEP4.3-5, SCI.SEP6.a.3-5, SCI.SEP6.b.3-5,
SCI.SEP8.b.3-5

Students will:

- discover how archeologists find artifacts
- explore how archeologists use found objects to study the past
- observe attributes of their "artifact"
- draw conclusions based on observations
- build new vocabulary

Materials:

- unfamiliar objects for an observational study
- plastic or paper bags to contain the unfamiliar objects
- envelopes for explanations of the unfamiliar objects

Vocabulary:

- *archeology* - a science which tries to understand what people of the past were like and how they lived
- *artifacts* - things that were made**,** used and left behind by humans
- *site* - a special area where archeologists dig to find artifacts
- *archeologists* - scientists who study things that people have made, used, and left behind
- *shards* - broken pieces of pottery

Resources:.

- **Observations of My Artifact** printable, *page 38*
- Prepared letter for parents, *page 39*
- https://s-media-cache-ak0.pinimg.com/originals/a8/f1/f0/a8f1f0fdeaf5eaafc4d54825e89a1485.jpg The picture of pottery shards is also included at the end of this activity, *page 37*
- https://www.youtube.com/watch?v=CSwCYm9qC6c 28-minute video of children participating at an archeological site, produced by the National Science Foundation,

*Note: This video was also used in the **Archeologists Discover and Reconstruct Pottery Artifacts** activity.*

Note: There are two parts to this activity:
Part one: Students will study how archeologists discover and observe artifacts to learn about the past.
Part two: Students will examine unknown items in an attempt to figure out what they are.

Part 1 Archeologists Find Artifacts

Teacher Preparation:

- Preview 28-minute video https://www.youtube.com/watch?v=CSwCYm9qC6c archeological camp for children.
- Preview image of pottery shards, *page 37*. This image can also be seen at: https://s-media-cache-ak0.pinimg.com/originals/a8/f1/f0/a8f1f0fdeaf5eaafc4d54825e89a1485.jpg

Procedure:

1. Tell students that they will watch children, just like them, discover artifacts while participating in an archeological camp in Utah. Watch video. https://www.youtube.com/watch?v=CSwCYm9qC6c Then review the terms listed in **Vocabulary**.
2. Show picture of pottery *shards.* https://s-media-cache-ak0.pinimg.com/originals/a8/f1/f0/a8f1f0fdeaf5eaafc4d54825e89a1485.jpg or on page 37

   Say*: This is a picture of some pottery shards found at a site. Sometimes archeologists find things at a site and they are not sure what they are. They might wonder who used them or how they were used.*

3. Say: *An archeologist would then study and carefully observe the shards.*
4. While pointing out various shards in the picture*,* Say*: What did you notice about these shards? What kind of questions do you think an archeologist might have about the artifacts?*
5. Say: *An archeologist might ask these questions. (post the questions)*

   - *How thick is it?*
   - *How big is it?*
   - *What is it made from?*

- o *What are those designs on the outside of this one?*
- o *Why is there soot on that one?*
- o *Why are there scrape marks inside of one?*

6. Say: *By answering questions like these, archeologists have often been able to figure out the way many of the pots were used. Let's try to answer these questions and see if we can figure out how the pot might have been used.* Here are some conclusions that archeologists made with their observations of these pottery shards.
   - A pot that had been used for cooking usually shows soot on the outside where it had been set in the fire.
   - Scrape marks are often inside where food had been stirred.
   - The designs on the shards might show which group of Native Americans had made it or when they were made.
7. Say*: Sometimes there are not enough clues for archeologists to come to a solid conclusion. Sometimes artifacts remain a mystery.*

Part 2 Thinking Like an Archeologist Activity

Note: The unfamiliar items ("artifacts") for this activity could be brought to school by the teacher or by the students. The activity could be done individually, working with a partner, or in a group. This would determine the number of collected "artifacts."

Teacher Preparation:

- Print **Observations of My Artifact,** *page 38***.** Print **letter to parents,** *page 39* if students are bringing the "artifacts"

  If Teacher brings artifacts: Bring small unfamiliar objects to school. These objects should be items whose function or identification is not immediately apparent, such as a strange kitchen implement or some other tool, or part of a toy, game, or a container. Junk drawers, desk drawers, or toy chests might have items that would work for this activity. However, the objects shouldn't be impossibly obscure. It is okay if an item has been broken off of a larger object, as long as there are no sharp edges. Place each item in a bag. Written explanations of what the items actually represent should be put in sealed envelopes inside the bags. Prepare an extra one for a demonstration and several more for those who did not bring an object.

  If Students bring artifacts: A letter has been prepared for the parents explaining the "what and how" items to bring to school. Instruct students to bring to school a small unfamiliar object from their home. Tell them that this object should be an item whose function or identification is not immediately apparent, such as a strange kitchen implement or some other tool, or part of a toy, game, or a container. Suggest that junk drawers, desk drawers, or toy chests in their homes might have an item that would work for this activity. However, the object shouldn't be impossibly obscure. It is okay if the item has been broken off of a larger object, as long as there

are no sharp edges. The student should place this item in a bag. An explanation of what the item actually represents should also be placed in a sealed envelope inside the bag.
Be sure to emphasize to the students to keep their artifacts a secret!

Procedure:

1. Tell students that today we are going to think like *archeologists* (*scientists who study things that people have made, used, and left behind*). We will pretend that we have found an artifact (*things that were made, used and left behind by humans)* while digging at a make-believe site in our back yard.
2. Model the activity using teacher's "artifact": Say*: This is the artifact that I found at my pretend site (special area where archeologists dig to find artifacts*). *Help me make some observations about my artifact. What do you think? What do you notice about this artifact?*
3. Before handing out the artifacts brought from home, tell students that they are now going to think about some objects just like archeologists. Tell them to pretend that they found these artifacts while digging at their sites.
4. Distribute the **Observations of My Artifact** activity sheet. Say*: Use the sheet to help you think like an archeologist. Archeologists record their observations. You too, will record your observations as you complete this worksheet.*
5. After completing their worksheets ask students to share their observations and conclusions about their artifacts with the class.
6. The sealed envelopes can at this time be opened and shared with the individuals, groups or the whole class. Did they draw the right conclusions? If so, why? If not, why not?
7. Say: *Sometimes archeologists have trouble coming to conclusions, too. Sometimes an artifact remains a mystery.*

Sources:

Articles and images may no longer be available in the exact locations we have cited here because of web changes made in the normal course of doing business. For this reason, we have also included the website address of the entity providing the image or article.

https://s-media-cache-ak0.pinimg.com/originals/a8/f1/f0/a8f1f0fdeaf5eaafc4d54825e89a1485.jpg
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https://worldview.unc.edu/wp-content/uploads/sites/433/2022/05/Haugh_Pottery_worksheet_Final.pdf

Observations of My Artifact

1. What does it look like?

2. What color is it?

3. What's it made of?

4. Does it look complete? Or broken?

5. Does it look worn?

6. Has it been fixed or mended?

7. Is it made by hand or by machine?

8. Is it decorated? If so, how was it decorated?

9. Is there writing on the object? If so, what?

My conclusion:

How might this artifact have been used?

Dear Parents,

In science we are going to look at archaeologists who learn about the past by observing unknown artifacts they have found. Our class will also experience this process by making observations of unfamiliar objects brought into the classroom. Please help us gather some unfamiliar objects for our study. Here's how:

1. Help your child find a small, unfamiliar object whose function or identity is not immediately apparent. It could be an unusual kitchen implement, or some tool, or part of a game, or container. Your junk drawer, desk drawer, tool box, or toy chest would be a good place to look. An item broken off of some larger object would be fine, as long as there are no sharp edges. Although the object should be unfamiliar to most, it shouldn't be too obscure. After making observations, they will attempt to come to a conclusion about how the object might have been used.
2. Have an explanation written of what your item is, or how it was used and put the explanation in a sealed envelope with your child's name on it. It is important to tell your child *not* to share the object's identity with their classmates until after the activity.
3. Send the object and the sealed envelope to school in a paper or plastic bag.
4. Please have the bags brought to school by_____.

Thank you for helping us with this learning project,