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Lesson Summary: The YSI Ohlone Indians program offers a chance for students to engage in in-depth study of the local Native American groups. In the long program, classes will be split up into small groups. Each group will be led by one YSI instructor, who will rotate their students through a long hike and three shorter stations. On the hike, groups explore the environment the Ohlone lived in, learning to identify numerous natural resources in addition to hazards such as poison oak. At the stations, children go through the steps of acorn preparation and learn about natural food sources, discuss and demonstrate the use of handmade tools, instruments, and games, and learn about plant fibers such as tule and the role they played in Ohlone village life. All students will be able to take home a fiber rope or bracelet. Throughout the program, an emphasis is placed on both the Ohlone peoples’ relationship with their environment and on how students can learn about previous cultures in our world today.

Vocabulary: Below are words and concepts that relate to the Ohlone Indians program.

**Acorns:** the nut of the oak tree; a staple crop for the Ohlone peoples

**Artifacts:** tools, weapons, ornaments, or other discovered objects that come from an earlier culture

**Decoy:** a fake creature or other lure used to draw animals into a trap

**Descendants:** the offspring of an individual or group of people, often many generations removed

**Leaching:** the process of filtering a chemical out of something by pouring liquid through it

**Obsidian:** a black rock used in making arrowheads; volcanic glass

**Ohlone:** also known as the Costanoan, are a Native American people of the central and northern California coast

**Sandstone:** a rough sedimentary rock used for grinding food

**Shaman:** A tribal leader who acted as the spiritual leader and medicine man or woman

**Shells:** the hard covering of many invertebrates used for necklaces, containers, and currency

**Sinew:** the fibrous tissue of an animal that joins muscle and bones

**Soaproot:** a plant native to California with tough fibers used to craft brushes

**Sweatlodge:** a stone heated, dome-shaped hut, used for ceremonial steam baths

**Tannins:** toxins found in certain plants that cause a bitter taste and indigestion

**Tule:** a type of sedge grass found in water that was used to make houses, boats, and tools

Definitions based on [www.dictionary.reference.com](http://www.dictionary.reference.com)
Fill in the crossword using the words below to practice your Ohlone vocabulary!

**Across**

1. A plant native to California with tough fibers used to craft brushes.

4. Toxins found in certain plants that cause a bitter taste and can cause stomach upset if too much is eaten.

9. A special house used by the Ohlone men to prepare spiritually and mentally for hunting and other important work.

12. The process of filtering a chemical out of something by pouring water through it.

13. A tribal leader who acted as the spiritual leader and medicine man or woman.

14. The fibers that join muscles to bones in an animal that were dried and used as string.

**Down**

1. A rough sedimentary rock used for grinding food.

2. The groups of people native to the Bay Area.

3. A type of sedge found in water around our area that was used by the Ohlone to make houses, boats, and tools.

5. A black rock used in making arrowheads; volcanic glass.

6. Tools, weapons, or other objects that may be found left behind by the Ohlone or other past cultures.

7. The children or children’s children of a family or group of people.

8. A fake creature or other lure used to draw animals in to an area to be trapped or killed.

10. The hard covering of many sea animals that was used for necklaces, containers, and strings of trade beads.

11. The nut of the oak tree; a staple crop for the Ohlone peoples.

Definitions based on [www.dictionary.reference.com](http://www.dictionary.reference.com)
Across
1. A plant native to California with tough fibers used to craft brushes (soaproot).
4. Toxins found in certain plants that cause a bitter taste and can cause stomach upset if too much is eaten (tannins).
9. A special house used by the Ohlone men to prepare spiritually and mentally for hunting and other important work (sweatlodge).
12. The process of filtering a chemical out of something by pouring water through it (leaching).
13. A tribal leader who acted as the spiritual leader and medicine man or woman (shaman).
14. The fibers that join muscles to bones in an animal that were dried and used as string (sinew).

Down
1. A rough sedimentary rock used for grinding food (sandstone).
2. The groups of people native to the Bay Area (Ohlone).
3. A type of sedge found in water around our area that was used by the Ohlone to make houses, boats, and tools (tule).
5. A black rock used in making arrowheads; volcanic glass (obsidian).
6. Tools, weapons, or other objects that may be found left behind by the Ohlone or other past cultures (artifacts).
7. The children or children’s children of a family or group of people (descendants).
8. A fake creature or other lure used to draw animals into animals in to an area to be trapped or killed (decoy).
10. The hard covering of many sea animals that was used for necklaces, containers, and strings of trade beads (shells).
11. The nut of the oak tree; a staple crop for the Ohlone peoples (acorn).

Definitions based on www.dictionary.reference.com
Language Arts Word Search
Ohlone Indians

Circle the vocabulary in the word search below. Can you find all our Ohlone words?

Word Bank

<table>
<thead>
<tr>
<th>ACORNS</th>
<th>OBSIDIAN</th>
<th>SINEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTIFACTS</td>
<td>OHLONE</td>
<td>SOAPROOT</td>
</tr>
<tr>
<td>DECOY</td>
<td>SANDSTONE</td>
<td>SWEATLODGE</td>
</tr>
<tr>
<td>DESCENDANTS</td>
<td>SHAMAN</td>
<td>TANNINS</td>
</tr>
<tr>
<td>LEACHING</td>
<td>SHELLS</td>
<td>TULE</td>
</tr>
</tbody>
</table>
Answer Key
Language Arts Word Search
Ohlone Indians

Word Bank

ACORNS    OBSIDIAN    SINEW
ARTIFACTS  OHLONE    SOAPROOT
DECOY     SANDSTONE   SWEATLODGE
DESCENDANTS   SHAMAN   TANNINS
LEACHING    SHELLS      TULE
Ohlone Indians (Long Program):
Extension Activities

The extension activities listed below are from RAFT (Resource Area For Teaching). RAFT educational content is available online (www.raftbayarea.org) at no cost and is aligned to California Science Standards and Next Generation Science Standards. Below is a selection of post-visit activities from RAFT to build on student learning about Native Americans, their crafts, and the world they lived in.

**RAFT Idea Gaming Sticks - RAFT Bay Area**
**Grades Covered:** K through 8  
**Subjects Covered:** Math, Social Studies  
**Curriculum topics:** Addition, Probability, American and California History, Game  
North American inhabitants have played dice games for hundreds (if not thousands) of years…
http://www.raftbayarea.org/ideas/Gaming%20Sticks.pdf

**RAFT Idea Mathematical Dreamcatchers – RAFT Bay Area**
**Grades Covered:** 1 through 5  
**Subjects Covered:** Math, Social Studies, Art  
**Curriculum topics:** Circles, Geometric Shapes, Patterns & Relationships, Native American Culture, Artistic Exploration  
Combine traditional Native American culture and modern mathematical concepts to explore geometric shapes and patterns!
http://www.raftbayarea.org/ideas/Mathematical%20Dream%20Catchers.pdf

**RAFT Idea Great Impressions – RAFT Bay Area**
**Grades Covered:** pre-K through 12  
**Subjects Covered:** Life Science, Earth/Space Science  
**Curriculum topics:** Fossils  
Children are fascinated by fossils. This activity allows them to create their own fossil and to make a casting of it - just like a paleontologist.
http://www.raftbayarea.org/ideas/Great%20Impressions.pdf

**RAFT Idea File Folder Weaving – RAFT Bay Area**
**Grades Covered:** K through 8  
**Subjects Covered:** Math, Social Studies  
**Curriculum topics:** Patterns, Symmetry, Traditional Culture  
Like so many traditional tasks, weaving can be much more difficult and challenging than many people realize…
http://www.raftbayarea.org/ideas/File%20Folder%20Weaving.pdf

All information was used with the permission of RAFT.
Our Ohlone Indians program will contribute to students’ ability to meet the California History-Social Science and Science Content Standards, Common Core, and Next Generation Science Standards listed on the following pages.

California History-Social Science Content Standards Sixth Grade:
6.1: Students describe what is known through archaeological studies of the early physical and cultural development of humankind from the Paleolithic era to the agricultural revolution.
- 6.1-1: Describe the hunter-gatherer societies, including the development of tools and the use of fire.
- 6.1-2: Identify the locations of human communities that populated the major regions of the world and describe how humans adapted to a variety of environments.
- 6.1-3: Discuss the climatic changes and human modifications of the physical environment that gave rise to the domestication of plants and animals and new sources of clothing and shelter.

California Science Content Standards:
Resources: 6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:
- c. Students know the natural origin of materials used to make common objects.

Investigation and Experimentation: 7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
- g. Interpret events by sequence and time from natural phenomena (e.g., the relative age of rocks and intrusions).
- h. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hill slope).

Excerpted from CA State Standards  http://www.cde.ca.gov/

Common Core Sixth Grade:
Speaking and Listening Standards: Students will…
1. Engage effectively in a range of collaborative discussions with diverse partners on grade 6 topics, texts, and issues, building on each others’ ideas and expressing their own clearly.
   a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.

c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.

d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.


Next Generation Science Standards Sixth Grade:

Matter and Energy in Organisms and Ecosystems

- **MS-LS2-1**: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

  a. **Science and Engineering Practices**:

     i. **Analyzing and Interpreting Data**: Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.

     ii. Analyze and interpret data to provide evidence for phenomena. (MS-LS2-1)

  b. **Disciplinary core ideas**:

     i. **LS2.A: Interdependent Relationships in Ecosystems**: Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. (MS-LS2-1)

     ii. In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. (MS-LS2-1)

     iii. Growth of organisms and population increases are limited by access to resources. (MS-LS2-1)

  c. **Crosscutting Concepts**

     i. **Cause and Effect**: Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-LS2-1)