



SCIENCE

First Geologist: Oregon Tribes Made Tools from Rocks

ESSENTIAL UNDERSTANDINGS

- **Since Time Immemorial**
- **Lifeways**

LEARNING OUTCOMES

The student will

- understand that Oregon Tribes made tools from rocks since time immemorial,
- identify that different rocks have different properties that make them useful for different tools, and
- recognize that tribal toolmaking knowledge was an important part of daily life.

Overview

In this lesson, first grade students learn how Oregon Tribes have always used rocks to make important tools for their daily lives. Students see examples of tribal stone tools and discover that different rocks were chosen for different purposes. Through hands-on exploration, students understand that tribal people were skilled toolmakers who knew exactly which rocks worked best for each job.

Background for Teachers

Oregon Tribes developed sophisticated knowledge of stone tool technology over thousands of years. Different Tribes across Oregon used locally available materials as well as traded stones to create essential tools for hunting, food processing, woodworking and daily tasks. Key stone materials used by Oregon Tribes include



- **Obsidian:** Volcanic glass from Cascade Mountains, prized for extremely sharp edges.
- **Chert:** Fine-grained rock that could be precisely shaped.
- **Basalt:** Hard volcanic rock used for grinding and heavy-duty tools.
- **Quartzite:** Durable stone for scrapers and cutting tools.

Various arrowheads and spear points found in Oregon demonstrate the skill and precision of Tribal toolmakers. Tools were not just functional but represented deep knowledge passed down through generations.

This lesson connects to the Essential Understanding, Since Time Immemorial by showing continuous tribal presence and knowledge and to Lifeways by demonstrating how stone tools were integral to daily tribal life and culture. Some key ideas students learn in this lesson include

- Rocks have different properties that make them useful for different jobs.
- Oregon Tribes were skilled at making tools from rocks.
- Tribal people chose specific rocks for specific tools.
- Stone tools were important for tribal daily life.

ESSENTIAL QUESTIONS

- How did Oregon Tribes make tools from rocks?
- Why did tribal people choose different rocks for different tools?
- What tools did Oregon Tribes make from rocks?

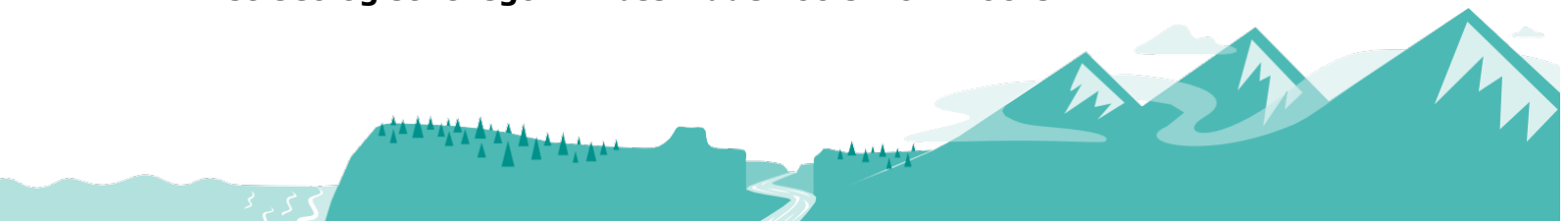
REQUIRED TIME

- 30 minutes

STANDARDS

Oregon Science Standards:

- **K-2-ETS1-1:** Ask questions, make observations, and gather information about a situation people want to change
- **K-2-ETS1-2:** Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function
- **1-PS4-4:** Use tools and materials to design and build a device that uses light or sound to solve the problem



Considerations for Teachers

Practices

While teaching this lesson, the following principles can help guide your decision-making and engagement with students:

- Focus on the skill and knowledge of tribal toolmakers.
- Emphasize that stone tool making was an important part of tribal lifeways.
- Show respect for tribal knowledge and craftsmanship.
- Use hands-on activities to help students understand rock properties.
- Connect to students' experiences with tools they use today.

Assessment

During this lesson, observe students' ability to

- Identify different types of tribal stone tools.
- Explain why different rocks were chosen for different tools.
- Show respect for tribal knowledge and skills.
- Make connections between rock properties and tool functions.

Success Criteria

Students will be able to

- Name two types of tools Oregon Tribes made from rocks.
- Explain that some rocks are better for certain jobs than others.
- Show that Native people were skilled toolmakers

KEY WORDS and IDEAS

- **Tools:** Objects made to help people do work.
- **Arrowhead:** Sharp stone point used for hunting.
- **Sharp:** Having a thin edge that can cut.
- **Smooth:** Having an even surface.
- **Hard:** Difficult to break or scratch.

MATERIALS

What materials are needed for students to engage in this activity?

- Slide Deck
- Rock samples
- Student self-assessment



For the following activities, use the slide deck to support your implementation.

Lesson Activities (30 Minutes Total)

Opening (5 minutes)

Step 1:

Tool Talk: Show students a modern tool or an image (hammer, scissors, etc.). Ask students: "What is this tool used for? What is it made of?"

Then say to students, "Today we're going to learn about tools that Oregon Tribes made from rocks. Native people in Oregon have been making rock tools since time immemorial—that means for a very, very long time." (Option to define Tribe and discuss the 9 Federally Recognized Tribes in Oregon).

Main Activity (20 minutes)

Step 1:

Rock Properties Exploration. Give students pairs of different rock samples (smooth river rock, rough sandstone, sharp-edged obsidian replica made from safe material, etc.).

Have students:

- Feel each rock and describe it (smooth, rough, hard, sharp).
- Think about what kind of tool each rock might be good for.
- Share their ideas with a partner.

Step 2:

Guide a discussion. Ask students questions such as, "Which rock would be best for cutting? Which would be best for grinding? Why do you think Native people chose different rocks for different jobs?"

Read the information about different Tribes' use of stones together as a class (see handout).

Show slides of tribal stone tools while explaining each one.

- Slide 2: Arrowheads and Points. Say, "This type of arrowhead is made by Oregon Tribes. They put these sharp stone points on arrows for hunting. Look how sharp and carefully made it is! Notice how different the original obsidian rock looks."
- Slide 3: Chisels. Say, "These tools were used to clean animal hides and scrape bark. Native people chose rocks that had good edges for scraping."
- Slide 4: Axe head. Say, "This type of axe head was used in many ways like chopping trees to build houses, making dugout canoes, and splitting wood to make fires."

Closing (5 minutes)

Step 1:

Tool Matching Game. Show pictures of tribal tools and different rocks. Have students match which rock would be best for each tool.

Step 2:

Reflection. Say to students, "Oregon Tribes were very smart about rocks and tools. They knew exactly which rocks to use for each job. Their knowledge helped them make the tools they needed for their daily lives."

Extension Activity (10 minutes)

Step 1:

Rock Sorting Activity. Students sort rocks by properties (color, texture, size, hardness) and discuss which rocks might be good for different types of tools. Encourage students to think like toolmakers: "If I needed to make a cutting tool, which rock would I choose? Why?"

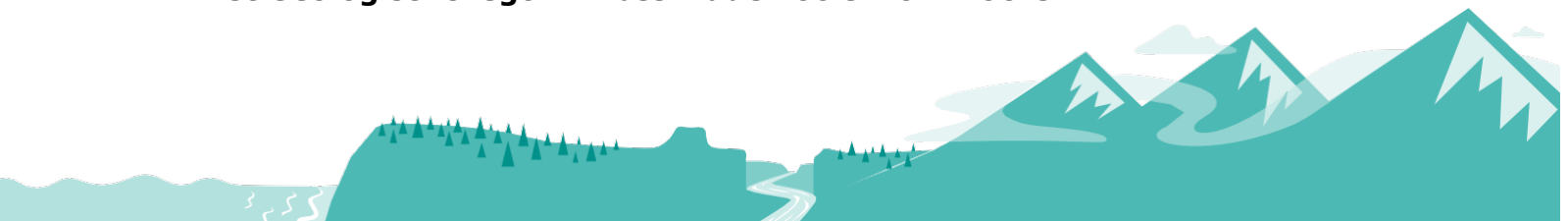
- Materials: Collection of local rocks of different types, sorting trays or circles



Additional Resources

4th grade science lesson, [Oregon Department of Education](#), [Oregon's First Geologists](#)

1st grade ELA & Social Sciences lesson, [Confederated Tribes of Siletz Indians](#), [Dee-ni Animals](#)



Handout: Reading

Nine Tribes live in Oregon. They all used rocks to make tools.

They traded rocks with each other. They taught their kids how to find rocks and make them into tools. This rock knowledge is called geology. Native Americans were the first geologists in this land. In fact, the tribes in Oregon still make and use some of these tools.

Each Tribe knew about the rocks where they live. Here are some examples:

The Coquille people live by the ocean. They knew blue-gray rocks from the beach make the best tools for carving big canoes.

The Burns Paiute people live in the desert. They found special stones to clean animal skins for clothes.

The Warm Springs people live near mountains. They found shiny black glass rocks called obsidian. Obsidian makes the sharpest arrows.

Many Tribes used hard river rocks to make bowls. They also made hammers to smash nuts and plants into flour.

Hard rocks were also used to make digging tools to get roots to eat.

Tribes also knew which rocks make the best fishing weights. These helped them catch salmon and lamprey in rivers.



Oregon's Tribes taught their rock knowledge to their children and grandchildren. This knowledge helped them continue their lifeways.



Student Self-Assessment

Name:

Directions: Read aloud the lesson Success Criteria in the first column to students. Have them indicate if they were able to meet the criteria by marking it on the handout, with hand gestures, or by sharing aloud. Then ask students to explain why they chose “not yet” or “yes” to a peer.

Success Criteria “Can I...”	Not Yet	Yes
		
name two types of tools Oregon Tribes made from rocks?		
explain that some rocks are better for certain jobs than others?		



show that Native people were skilled toolmakers?		
--	--	--

