



Grade Level: 1  
Subject: Math

# Traditional Plankhouses

## ESSENTIAL UNDERSTANDINGS

- Time Immemorial
- History
- Lifeways

## LEARNING OUTCOMES

- Student will be able to identify 2D shapes based on their attributes.
- Student will be able to draw 2D shapes.
- Student will be able to explain what a plankhouse is.

## CULTURALLY RESPONSIVE PRACTICES

- Higher level thinking: creating
- Preserving and honoring cultural history
- Student talk, working together and individually

## ASSESSMENT

Students will be assessed on their proficient completion of their Plankhouse Drawing Activity Sheet.

## Overview

In this lesson, students will learn about traditional housing used by The Confederated Tribes of Grand Ronde, while recognizing the type of shapes that are used to build a plankhouse.

## MATERIALS

- Cutouts of 2D shapes: triangles, squares, rectangles and circles
- Container to pull shapes from
- [Photo of Grand Ronde Plankhouse](#)
- [Plankhouse Drawing Activity Sheet](#)
- [Grand Ronde Plankhouse Video](#)

## LOGISTICS

- Where does this activity take place?  
**Classroom**
- How are the students organized?

**Whole Class**      Teams: 3-5

Pairs                      **Individually**

## TIME REQUIRED

**30-45 minutes**

## STANDARDS

### Oregon Common Core State Standards: Math

#### **1.GM.A Reason with shapes and their attributes.**

- **1.GM.A.1** Distinguish between defining attributes versus non-defining attributes for a wide variety of shapes. Build and draw shapes to possess defining attributes.
- **1.GM.A.2** Compose common two-dimensional shapes or three-dimensional shapes to create a composite shape, and create additional new shapes from composite shapes.

### Oregon Social Science Academic Standards

**Geography 1.8** Give examples of local natural resources and describe how people use them.

## Background for Teachers

\*Teachers should review [Plankhouse Read Aloud](#) prior to teaching the lesson\*

“The immense communal houses of the Northwest Coast kept the damp chill of a temperate rainforest at bay, but also provided ample space for dramatic & religious performance, work, storage, and hosting huge potlatches and feasts. Large villages might contain 80 houses, each holding as many as 100 residents. The indigenous people of the Pacific Northwest constructed their plank homes from red cedar trees (*Thuja plicata*), with rare use of yellow cedar, spruce or hemlock up North. Houses were often 40-60 feet square. The primary frame of plank houses consisted of cedar logs: usually 8 posts peg-joined to 4-6 roof beams. A lighter framework of poles (approx. 3 inches in diameter) was tied with cedar-bark to the wall posts & rafter beams. The house was then covered in 4 in thick planks of cedar that could be harvested from live trees via wedging. While wall planks were tied, or slotted between poles, roof shingle planks were often simply weighed down with logs & rocks, facilitating removal and reuse in summer clan harvesting camp locations. The house frames were left intact until the next season when the people returned and reattached their traveling planks and reconstructed their home. Wall planks could be aligned vertically (Kwakwaka'wakw/ Nuxalk/ Tlingit/ Haida / Tsimshian) or horizontally (Nuu-Chah-Nulth).”

-<https://naxnox.weebly.com/plank-houses.html>

### **Websites:**

[Grand Ronde celebrates achaf-hammi's 10th birthday -- Smoke Signals](#)

[You Belong To The Plankhouse. The Plankhouse Belongs To You - OPB.](#)

## VOCABULARY

- **Plankhouse**- a traditional Native American house made of cedar planks usually from western red cedar trees.
- **Triangle**- a figure with three straight sides and three angles.
- **Circle**- a closed round shape with no corners or angles.
- **Quadrilateral**- a four-sided figure.
- **Square**- a four sided shape that has four equal sides and four right angles.

## Preparation

Teachers will need to prepare for this lesson by cutting out shapes, such as squares, circles and triangles and place them into a bag before the lesson. Students will also need to have background knowledge about 2D shapes and their attributes. The teacher can also put rectangles into the bag and ask students to identify the shape as a quadrilateral and say how they know.

## Opening

To begin the lesson, have students practice identifying 2D shapes by pulling some out of a bag and calling on students to identify the shape and say how they know that is true.

- An example would be if the teacher pulled out a square the student would say the name of the shape and then explain they know its a square because it has four sides or that it has four angles.

## Activity

1. Once students have warmed up and identified shapes, explain to students that they will now use their knowledge about shapes to draw a plankhouse.
2. Ask students if they know what a plankhouse is.
3. Explain to students that a plankhouse is a traditional home that Native Americans in Oregon lived in before settlers had arrived.
4. Show students some photos of a plankhouse. A photo of the plankhouse at Grand Ronde are included in the lesson plan.
5. Ask students if they see any shapes that help make the plankhouse. Students might recognize that the door is a circle and that there is also another door that is a quadrilateral or a rectangle. Help guide students to find the shapes on the plankhouse.
6. Once students have identified the shapes on the plankhouse give each student the drawing activity sheet and explain to them that they will be using the shapes to draw their own plankhouse.

## Closure

To close the lesson, show students the video - Grand Ronde celebrates achaf-hammi's 10th birthday -- Smoke Signals: <https://youtu.be/gSB2GOWZpKM>

Discuss with students where this is in relation to where they are right now.

## Differentiation

- Teachers can guide the entire activity in a whole-group setting if better suited for students.
- Teachers can choose to show students the “Photo of GR Plankhouse for Teachers” to help students better identify which shapes are used in the building of a plankhouse.
- Teachers can read the “Plankhouse Read Aloud” used for background knowledge to the entire class.

## Extension

- After students have completed their Plankhouse Drawing, challenge them to draw their own home using the same shapes. What are some of the same shapes that are used? Which shapes are different?

## Notes/Other

Jan Michael Looking Wolf’s or Grand Ronde Canoe Family audio tracks can be played as background music while students are working. These audio tracks can be found on Spotify or Apple Music.

Jan Michael Looking Wolf: [Spotify](#) and [Apple Music](#)

Grand Ronde Canoe Family: [Spotify](#) and [Apple Music](#)

## Appendix

- Photo of Grand Ronde Plankhouse for Students:  
<https://drive.google.com/file/d/1vokhSU-aGi1lmOikuQDUBOUdezOc9EkK/view?usp=sharing>
- Photo of Grand Ronde Plankhouse for Teachers:  
<https://drive.google.com/file/d/1urITPXBGF5wFwEyTYfSdbr2SkEBA7E7J/view?usp=sharing>
- Plankhouse Drawing Activity Sheet:  
<https://drive.google.com/file/d/1E-Zc26Ular127cZqrODQlqvPqBueXYK8/view?usp=sharing>
- Grand Ronde Plankhouse Video: <https://youtu.be/gSB2GOWZpKM>
- Plankhouse Read Aloud (for Teacher Background Knowledge):  
<https://drive.google.com/file/d/1DYtPHjOLfP7Ldl79kHbwMICHLpjC0cvO/view?usp=sharing>