

Connections to the Ocean

Formative Assessment Probe

Which communities are connected to the ocean?

Oregon is located on the West Coast of the United States. Which communities in Oregon are connected to the ocean? Check all that apply:

- | | |
|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Waldport | <input type="checkbox"/> Salem |
| <input type="checkbox"/> Portland | <input type="checkbox"/> Medford |
| <input type="checkbox"/> Bend | <input type="checkbox"/> Eugene |
| <input type="checkbox"/> Coos Bay | <input type="checkbox"/> Burns |
| <input type="checkbox"/> Pendleton | <input type="checkbox"/> Astoria |
| <input type="checkbox"/> The Dalles | <input type="checkbox"/> Baker City |



Explain the “rule” or reasoning that you used to decide whether a community is connected to the ocean.

Ocean Connections – Teacher Notes

Purpose – The purpose of this assessment probe is to elicit students’ ideas about how communities are connected to the ocean. It specifically probes to find out if students recognize that inland communities are connected to the ocean through watersheds and the water cycle.

Related Concepts – watershed, water cycle, geography

Explanation – The best response is that all communities are connected to the ocean. Physical connections include watersheds, weather systems, and transportation routes. For example, runoff from a parking lot in Eugene drains into the Willamette River, which drains into the Columbia River, which drains into the ocean. Evaporation of water over the ocean brings rain on land. Students can travel from inland to the coast by car or train.

There are also economic and social connections between communities and the ocean. For example, Oregonians consume seafood and vacation at the beach.

Curricular and Instructional Considerations

Elementary Students – At this level, students are learning basic map-reading skills and are able to identify direction, land vs. water, borders and place names. They likely know that the Pacific Ocean makes up the western border of the state. However, students may assume that only communities that are situated on the coast are in close enough proximity to be considered connected to the ocean.

Further, their explanations may reveal they are thinking about connections as being only physical and geographical in nature, or that connections are in only one direction.

Middle School Students – Middle school students generally have more experience reading maps and may have more familiarity with the concept of watersheds and the water cycle. In addition to selecting coastal communities, they may also identify that towns situated on major rivers or highways are connected to the ocean. The scale of the map does not show all rivers and roads, however, so they will have to infer the presence of smaller waterways and have an understanding of Oregon topography and weather patterns to select all communities based on river connections alone.

Middle school students may expand the definition of “connection” beyond the physical and geographic connections and include economic and social connections between communities and the ocean.

High School Students – While students may have learned about map reading, watersheds and the water cycle in earlier grades, this prompt can help clear up any misconceptions related to ocean connections. Consider using a map of lesser detail to probe their conceptual understandings, or having students list all the possible connections they can think of and sharing their ideas with others.

Alternatives: Instead of asking about communities within Oregon, ask about states within the U.S., or countries around in the world.