

Wayfinding

Navigating Using Environmental Clues



Lesson in Glance

Students will participate in activities to learn how environmental clues can be used to navigate.

Objectives

Students will be able to:

- Describe environmental clues used by the Hokule'a to navigate.
- Navigate their own neighborhood using environmental clues.
- Write riddles about navigational clues.

Background Information

Polynesian navigators depended on the sun, moon, stars, waves and birds to help them figure out where they were trying to go. Many hours were spent just observing and evaluating the seas and sky. Listed below are some of the clues the navigators used.

- The sun rises in the east and sets in the west.
- Land birds fly out to sea during the day to catch fish. They return to land to rest in the evening. By following the direction the birds fly in the evening you can aim toward land.
- Winds affect speed and direction. Navigators must know when winds will blow from specific directions to enable them to sail where they wish to go.
- Stars can be used to determine direction. Most stars rise in the east and set in the west.
- Certain clouds form only over land. Certain colors and shapes may indicate where land is. The light green underside of a cloud could indicate that land is close by. High clouds build up over land.
- Ocean swells are usually powered by prevailing winds and can be used to determine direction.
- Changes in the pitch and roll of the canoe were an indication that the canoe was changing direction.



- Turbulence in swells or small waves coming from a particular direction told the navigator that land was near. When swells come in contact with land they are reflected back out to sea.
- Other signs of land would be driftwood, seaweed, animal life, rubbish.
- Deep water is usually blue and a greenish-color of water indicate reefs and shallow water.

Every environment has different clues, which can help define directions and places. Have your students do some very careful observing and see what they can learn about clues in their own environment.

Materials Needed

- Paper and pencils

Student Activities

1. Searching for Clues

Have students brainstorm ideas of clues that the navigators on the canoe might use to help them figure out which direction to go and how to know if they are approaching land. Once they have come up with a list, share the ideas listed above. Encourage students to do some creative writing about the navigating clues, riddles, cartoons, short stories, or poems.

2. Navigating Your Neighborhood

- Students are to pick a place in their community that they would like to get to. List where you are starting (Point A) and where you want to end up (Point B).
- Have the students go outside and observe the environment. What is out there that they might use to guide them? What are the clues that might indicate north, south, east and west? List these clues on your paper. Remember that navigators used things besides the stars. Brainstorm other clues you might use.
- Begin your journey at starting "Point A", write out directions, using only environmental clues to get you from "Point A" to "Point B".
- Trade your directions with and classmate and try to follow their environmental clues.

