

# Walk and Swim Like a Pinniped

## OBJECTIVE

Students will use their bodies to learn the difference in how seals and fur seals walk and swim by moving themselves.

## TIME REQUIRED

10 minutes

## BACKGROUND

Fur seals and harbor seals are mammals, marine mammals, and pinnipeds. But fur seals are otariids (eared seals) and harbor seals are phocids (true seals). The characteristics of each group are covered in Activity 1.2 (Mammals, Marine Mammals, and Pinnipeds) but you can review them here:

### True seal (phocid):

- No external ear flap (just a hole where the ear is)
- Pulls itself on stomach when on land, using its foreflippers
- Propels itself through water with hind flippers (front flippers are used to steer)

### Eared seal (otariid):

- Has external ear flap
- Walks on all four flippers on land
- Swims with front flippers

The shape of the pinniped's body affects the way it moves on land and in the water.

A harbor seal (true seal) has a torpedo-shaped body. Its hind flippers are behind the body (not rotated underneath it) so it cannot stand on all four flippers but instead rests on its stomach when it is on land. A harbor seal uses its hind flippers to propel itself through the water.

A fur seal (eared seal) is able to stand up on four limbs on land. Its flippers are larger and the hind flippers rotate forward under its body. In the water, a fur seal uses its large front flippers to "fly" through the water, pulling its body through the water.

## MATERIALS

- Picture of fur seal (standing on land) or a stuffed fur seal toy
- Picture of harbor seal (on land) or a stuffed harbor seal toy

## PROCEDURE

### Walk Like a Seal

- Show students the pictures of the fur seal and harbor seal, and ask them to describe the differences between the two pinnipeds. Ask them to describe differences in the shape of the body, head, and flippers, and the size of the flippers, and the difference in how the pinnipeds are when they are on land (fur seal is "standing up," harbor seal is "lying down").
- Describe how fur seals can walk on all four flippers, while harbor seals crawl more on their tummies. Tell students that they are going to find out how seals move on land.
- Have students move from one end of the room to the other. In smaller groups or with younger students, you can have the students move in a big circle
- Demonstrate how fur seals move on land (have students walk on hands and knees). Ask the students to go across the room walking like a fur seal.
- Demonstrate how harbor seals move on land (have students lie on their stomach and pull themselves forward with their arms). Ask the students to go across the room moving like a harbor seal.
- You can make a game of this, by saying "harbor seal" or "fur seal" and having them show you how the animals move on land.

### Swim Like a Seal

- Show the students the pictures of the fur seal and harbor seal again, and ask them how they think each pinniped swims underwater. Emphasize that the body shape, and the size of the flippers, might give them clues to how they swim.
  - ◆ Describe how fur seals use their large foreflippers to "fly" through the water – they pull their body through the water. You can relate this motion to students swimming with their arms underwater. Describe how harbor seals use their hindflippers to propel themselves underwater – they move their hindflippers from side to side to push the body through the water, and use their foreflippers to steer.
  - ◆ Demonstrate how fur seals swim underwater (have students walk while using their arms to flap). Ask students to go across the room swimming like a fur seal.

- ◆ Demonstrate how harbor seals swim underwater (here, we have students hold their hands by their sides and take shuffling steps with their feet to show that harbor seals swim with their hind flippers). Ask students to go across the room swimming like a harbor seal.
- You can make a game of this, by saying “harbor seal” or “fur seal” and having them show you how the animals swim underwater.

## DISCUSSION

At the end of this activity, gather students around and ask why they think the pinnipeds have different ways of moving on land and underwater.

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The way a pinniped moves on land or underwater depends on the pinniped’s body shape. Fur seals have larger foreflippers and can rotate the hindflippers under the body to walk on all fours. True seals have small foreflippers and cannot rotate the hindflippers under the body.

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Older students can look up facts about pinniped swimming speed on the Internet.

## EXTEND AND EXPLORE

Watch video clips of seals swimming.

- On TeacherTube: [http://www.teachertube.com/viewVideo.php?video\\_id=290725](http://www.teachertube.com/viewVideo.php?video_id=290725)
- On YouTube: <http://youtu.be/JR2o56tGtuY>
- On Vimeo: <http://vimeo.com/63205204>