

Design a Sea Lion

OBJECTIVES

Students investigate sea lion adaptations and create a sketch that illustrates a sea lion's body parts and adaptations.



MATERIALS

- drawing paper
- pens or pencils
- Design a Sea Lion* funsheet on page 15
- reference materials—such as books, periodicals, and the Internet—about sea lions

A sea lion resting in the water often holds one or more of its long flippers up in the air. Warm-blooded animals lose heat more slowly in air than in water, and this behavior helps a sea lion conserve body heat.



ACTION

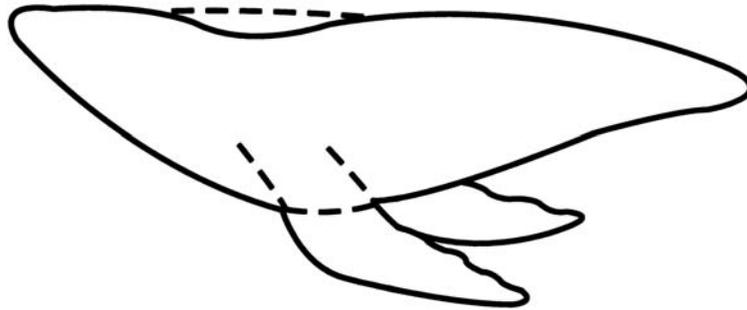
1. As a class, brainstorm challenges that humans would face if we were put in the middle of the ocean. How would we stay warm, see in the water or in bright sunlight, or find food?
2. With these challenges in mind, discuss the adaptations sea lions have to survive in the sea.
 - ◆ pointed teeth to capture prey
 - ◆ vibrissae (whiskers) to explore surroundings and detect prey
 - ◆ a mucous tear to protect their eyes from sea water and sunlight
 - ◆ blubber for insulation, streamlining, and a reserve energy source
 - ◆ fur as a body covering
 - ◆ pectoral flippers for swimming and walking on land
 - ◆ hind flippers for steering in the water and walking on land
3. Distribute *Design a Sea Lion* funsheet, pencil and paper. Students read the directions and sketch a sea lion. They label the sea lion's body parts.
4. Discuss how an animal's physical adaptations help define its repertoire of behavior. Students consult reference materials such as books, journals, and the Internet to investigate sea lion survival behaviors. Invite them to sketch some of the following:
 - ◆ holding one or more flippers out of the water
 - ◆ hauling out (climbing or jumping out of the water onto land)
 - ◆ diving
 - ◆ catching prey
 - ◆ avoiding a predator
 - ◆ vocalizing

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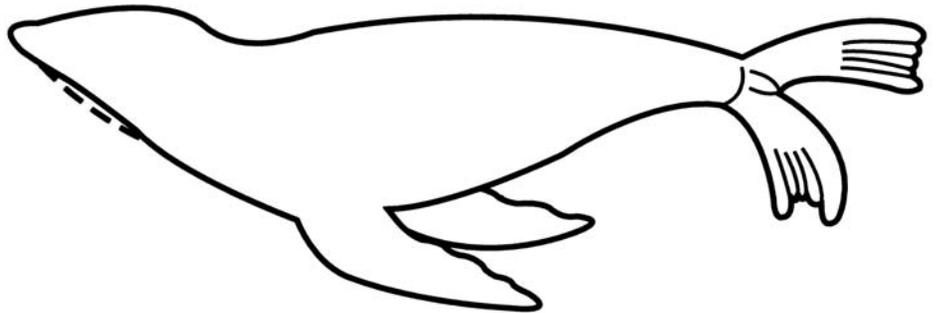
Draw the torpedolike shape of a sea lion. Blubber helps streamline the sea lion's body. A streamlined shape produces less resistance and helps a sea lion conserve its energy as it swims.



Add the pectoral (front) flippers. They are broad, furless, and very strong. A sea lion uses its pectoral flippers to swim in the water and to walk on land.



Draw the hind flippers. Like the front flippers, each has five toes or digits similar to those in our hands and feet. Hind flippers help a sea lion walk on land. Add a small tail.



Add eyes, which are large; whiskers, which are sensitive; ear flaps, and a nose. Sea lions can open and close their nostrils.

