



## SEYMOUR CENTER AT LONG MARINE LABORATORY

### “Why is Science Important?” (Green Pod) Chaperone Facilitated Activities (Kindergarten - Grade 4)

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**Marine scientists don’t just wonder about the world—they test things to settle their curiosity. They gather samples, run tests on them, conduct experiments, and search for answers to their questions. Let’s explore how scientists test their ideas...**

#### Testing pinniped senses

- 1. Read to your students:** Seals and sea lions are part of a family of marine mammals called pinnipeds. Just like humans, pinnipeds rely on their senses of sight, smell, taste, touch, and sound to survive. Since these animals spend part of their lives on land and part of their lives in the ocean, their senses are specially adapted for survival in both environments. Scientists study pinniped senses to learn more about how these animals see, smell, taste, touch, and hear in their environments.
2. Let the children lift the flaps that correspond to Rocky the sea lion’s senses. Ask your group the following questions and let them search for the answers under the different flaps. The text underneath each flap might be too advanced for very young children to read. If this is the case, let the kids lift the flaps and the chaperone can read the text they find underneath. The kids can also take turns listening to seal and sea lion sounds through the black telephone-like devices.
  - A. **Sight** – Why is sight so important to sea lions? (*Helps them identify predators, rivals, pups, and mates.*) How does a sea lion’s eye change as it dives deep underwater? (*Slit-shaped pupils open wider to collect the maximum amount of available light.*) What clue does the width of a pinniped’s pupil give about the animal’s behavior? (*Deeper divers such as elephant seals have wider pupils so that they can see better in darker conditions.*)
  - B. **Touch** – What special structure do pinnipeds use to feel? (*Whiskers.*) What can sea lions feel using this structure? (*They can detect the size, shape, and surface structure of an object, and sense turbulence in the water.*)
  - C. **Smell** – How is a sense of smell useful to sea lions? (*It is a way for them to identify other individuals – predators, mates, or pups.*) Why can’t sea lions smell underwater? (*Their nostrils close.*)
  - D. **Taste** – How might a sea lion’s ability to taste help it navigate? (*It can detect differences in the salinity (saltiness) of water.*) What type of flavor are sea lions unable to taste? (*Sweet.*)
  - E. **Hearing** – Why is hearing so important to sea lions? (*It is the best long-range sense because sound travels well over long distances.*) How is a sea lion’s underwater hearing ability different from humans? (*Sea lions can detect the direction of sound underwater.*) Why might man-made noises in the ocean be harmful to sea lions? (*Man-made noises might interfere with biologically important ones like pup calls and the sounds of approaching predators.*)