

GRADE

- 4th Grade

STATE STANDARDS

- 4-LS1-2

MATERIALS

- Clipboards
- Pencils
- Worksheet

Animal Senses

Introduction: Students identify how animals use their senses to gather information.

Goal: Students will practice their observation and critical thinking skills as they explore how different animals use their senses to find food, stay safe, and survive in their environments.

Instructions: Give each student a worksheet and encourage them to talk with zoo staff and observe the animals, information signs, and habitats to figure out which senses the animal relies on most. Students should use clues such as eye placement, ear size, whiskers, or behaviors to identify how the animal receives information about its surroundings. Students will:

1. Observe the animal to find clues on which of the senses it most relies on, then write it.
2. Write what the animal uses that sense for.

Background Information: Animals rely on their senses to gather information about their environment. The five main senses are sight, hearing, smell, taste, and touch. Different animals use their senses in different ways depending on their needs and habitat. Some animals rely heavily on their sight to locate food or watch for predators. Animals like owls have very sensitive hearing that allows them to locate prey even in the dark. Many animals rely on their sense of smell. Mammals such as bears or wolves have strong noses that help them find food from long distances. Certain animals have developed special adaptations that improve their senses. These sensory structures send information to the brain, which processes the signals and helps the animal respond in ways that support survival.

Conservation Message: Animals depend on their senses to survive in their environments. Light pollution, ecosystem destruction, and human noise can make it harder for animals to see, hear, or smell important signals around them. For example, loud noises can interfere with animals that rely on hearing, and light pollution can affect birds who use the stars (natural light) to migrate. We can help protect animals by keeping environments clean, reducing noise pollution, turning lights off at night, and protecting natural ecosystems. When we care for animal ecosystems, we help animals continue using their senses to survive and thrive.

Answer Key (example):

- Giraffes rely most on their eyesight for protection and to find food. They have a wide-angled view which allows them to see almost 360 degrees around them, helping in detecting predators. They can also see in color, which helps locate food.
- Red Pandas rely most on their sense of smell (olfaction). They use scent marks to communicate with other red pandas, locate potential mates, and to find food.
- California Sea Lions rely most on their sense of touch through their whiskers (vibrissae). These sensitive organs are used to hunt and navigate in dark, murky waters through subtle vibrations and movement.
- Cownose Rays rely most on electroreception to locate prey hidden beneath the sand on the ocean floor. They have specialized sensors on their snouts called ampullae of Lorenzini to detect electric fields produced by buried clams, crabs, and shellfish.

Name



Directions

Observe the animals, read information signs, and talk with zoo staff to determine what each animals' most relied on sense is. Write the senses and what they use them for.

Giraffe

Most Relied on sense:

What the sense is used for:

Red Panda

Most Relied on sense:

What the sense is used for:

Sea Lion

Most Relied on sense:

What the sense is used for:

Cownose Ray

Most Relied on sense:

What the sense is used for:
