

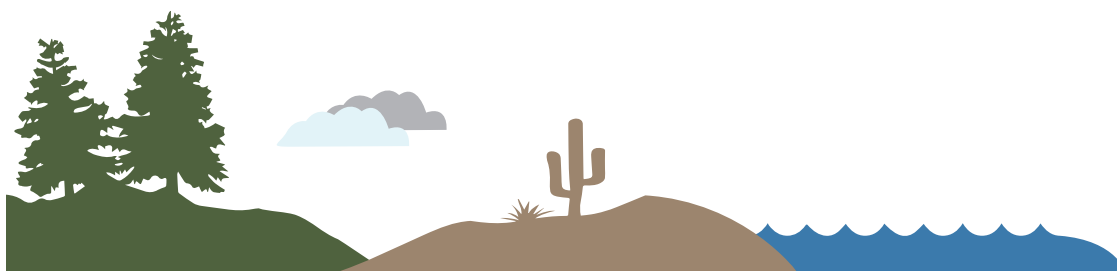
OREGON'S AMAZING ANIMALS

ACTIVITY GUIDE

Animals live in diverse habitats, like oceans, forests, and mountains. To survive and thrive, they need a healthy environment that includes a wide variety of other living things.



**MUSEUM
OF NATURAL
AND CULTURAL
HISTORY**



Home Sweet Home

Create a habitat diorama for two different animals.

What you need:

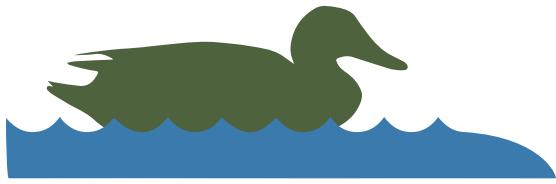
- 2 Toy animals
- 2 Animal cards
- Shoeboxes or other containers
- Variety of craft and recyclable materials
- Scissors, tape, or glue
- Pens, crayons, or paint

What to do:

1. A **habitat** is a place where an animal lives—its home environment. Do all animals live in the same kind of habitat?
2. Research your animals. Think about what they need in their habitat. What do they eat? How do they stay safe? What other plants and animals would live near them?
3. Use a shoebox or other container to create a habitat diorama for each animal. Include things an animal needs to survive, such as food, water, and shelter.

Get creative! Lots of items can be used to create a habitat diorama.



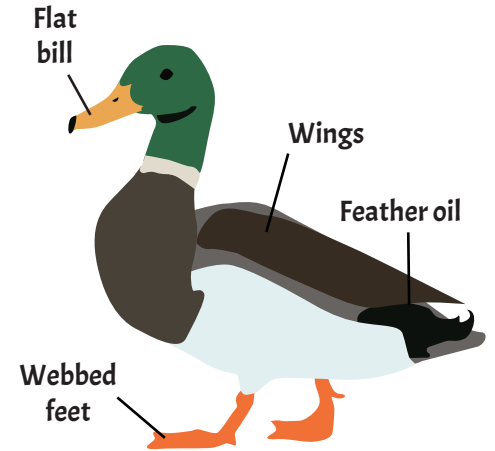


Duck Detective

Animal species change and adapt to their environment to improve their chance of survival. How are ducks adapted to live in a wet environment?

What you'll need:

- Feather
- Pipette
- 3 Cotton balls
- Cooking oil
- 4 Cups
- 2 Rubber bands
- Plastic bag
- Water
- Clear container
- Paper and pencil
- Ice cubes



Ducks live in places with water, like ponds, rivers, lakes, or wetlands.



Water Off a Duck's Back

Ducks feathers are adapted to keep them dry and help them float.

1. Examine the feather. What parts of the feather could help a duck stay dry?
2. Notice how the smooth parts of the feather connect to make a barrier that keeps water out. Gently pull some of the pieces apart. Then stroke the feather to make them “zip up” again.
3. Use the pipette to put drops of water on the feather. What happens?
4. Use the pipette to put drops of water on a cotton ball. What happens?
5. Place a cotton ball in a clear container of water. What happens?

If its feathers become water-logged like the cotton ball, a duck may get too heavy to float. Explore the special way that ducks waterproof their feathers.

6. Empty the oil packet into a cup. Dip a dry cotton ball in the oil, making sure all sides are covered. Place this cotton ball in the water. What happens?
7. Try putting drops of water into the cup of oil. What do you observe?

What's happening? Oil repels—or pushes away—water. And because oil is less dense than water, it floats. Ducks spread a waxy oil on their feathers from a special oil gland at the base of their tail. The waxy oil forms a waterproof coating to keep its feathers dry. However, other types of oil—like the oil used in cars—can be very dangerous to a duck. If feathers get soaked in bad oils, they can no longer do their job to keep the duck warm and dry.



Warm and Cozy

The soft, fluffy part of a feather provides insulation—a layer that helps a duck stay warm. Can you find that part of the feather? Insulation works by keeping heat in, like when you wear a coat, or by keeping heat out, like when you put cold drinks in a cooler on a hot day.

1. Find two materials to use as insulation, such as napkins, foil, towel, cotton balls, sock, or a warm hat.
2. Using three cups, place an ice cube (all about the same size) in each cup. You can also fill the cups $\frac{1}{2}$ full of water and freeze overnight.
3. Cover one cup with one insulation material, and a second cup with a different insulation material. If needed, use rubber bands to secure the materials. Leave one cup uncovered.
4. Place the cups in a warm, but not hot, location like your kitchen counter.
5. Check the cups every 15 minutes to observe the ice. Record your results each time, until one cup of ice melts all the way. What did you observe? Did ice melt at different rates? Did one material work better to insulate the ice and keep the heat out?
6. Try repeating this investigation using different materials.



Webbed Wonders

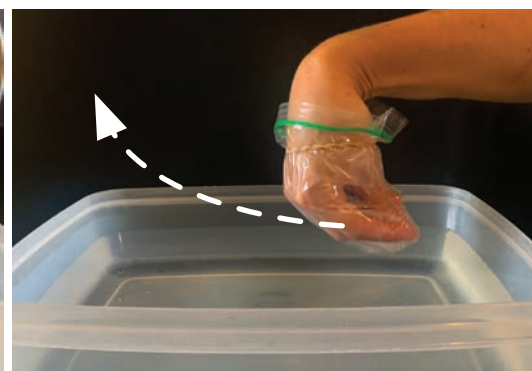
How do a duck's feet help it swim? Fill a sink or large container with water and give it a try.



1. Use the plastic bag and rubber band to make your hand into a webbed foot.



2. Spread fingers wide and "paddle" through the water from front to back.



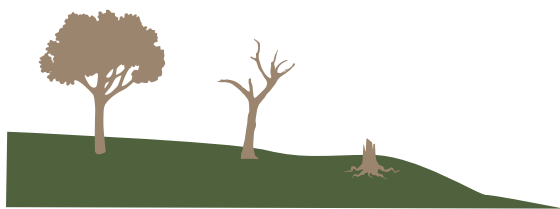
3. Squeeze fingers together and move your hand forward. Can you feel the difference?

What's happening? Ducks spread their webbed feet wide to push against the water when paddling. They make their feet smaller when pulling them forward, so there is less water resistance. Ducks' webbed feet are an adaptation that helps them move through water.

Why do ducks waddle?

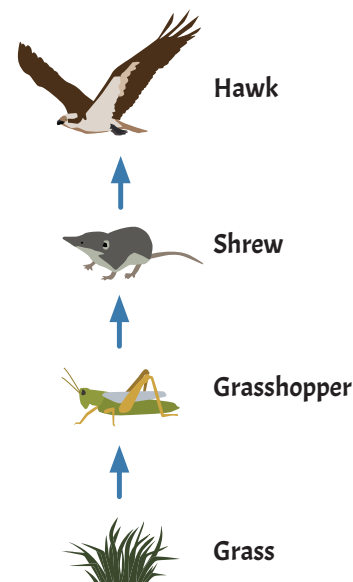
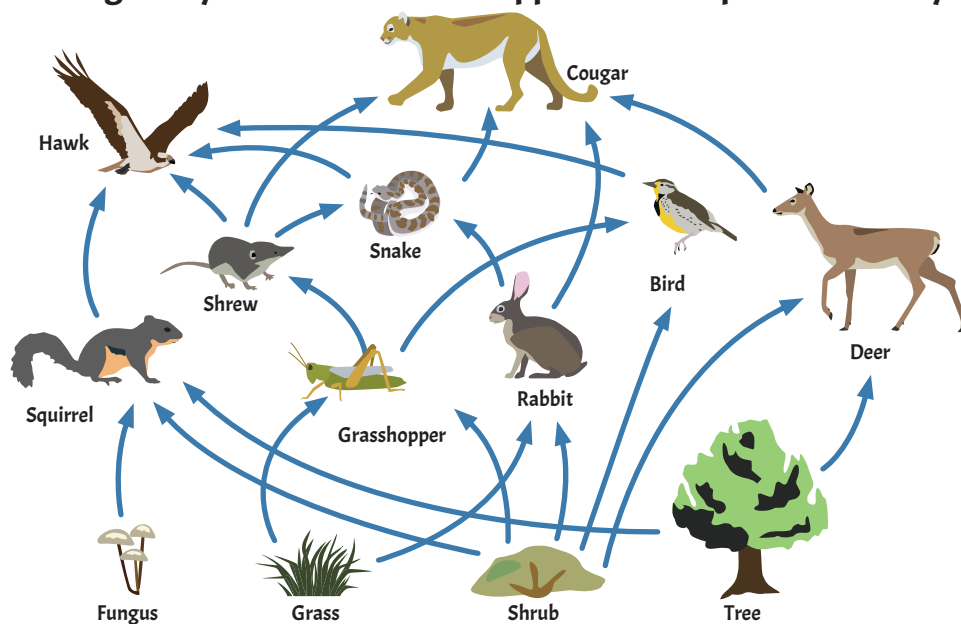
Ducks legs are placed far back on their body for better paddling in the water. This, plus their large webbed feet, make them waddle when they walk.





Ecosystem Dominoes

In an ecosystem, all living things are connected and each species plays a role in making the system work. What happens when a part of an ecosystem is removed?



A **food web** shows the transfer of energy, or food, through an ecosystem.

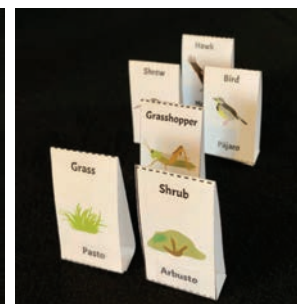
A **food chain** is just one path of energy.

What you'll need:

- Ecosystem domino sheet
- Scissors
- Tape



Make a domino food chain!

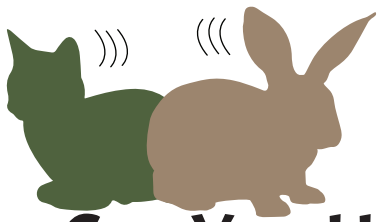


Try adding more parts of the food web.

What to do:

1. Cut out and fold each domino. Overlap bottom tabs and tape. Can it stand up?
2. Using the food web diagram, pick out dominoes that make a single food chain. Set them up in a line and tip over the first domino. What happens?
3. Set them up again. Remove one domino from the chain before knocking them down. What happens? Try removing a different domino. Did it change how many dominoes fell down?
4. How many different food chains can you make with the dominoes?

What's Happening? Each animal depends on other animals or plants to survive. If one species is missing, then another animal may not get enough food. What do you think would happen in the ecosystem if the predator at the end of the chain was missing?

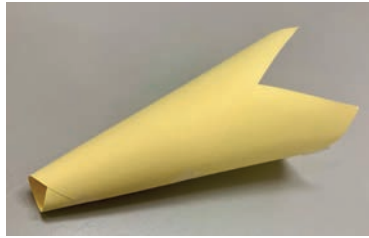
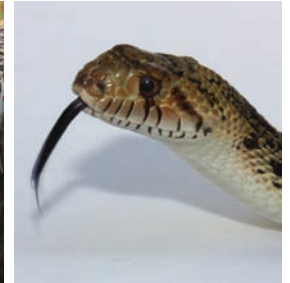
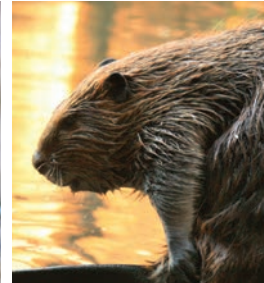
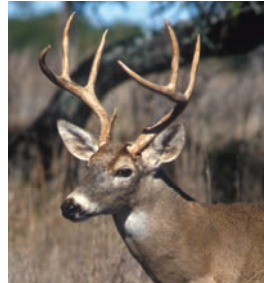


Can You Hear Me?

What do you notice about the ears of these Oregon animals?

What you'll need:

- Sheet of heavy paper
- String or yarn (3-4 ft)
- Tape
- Metal spoon or coat hanger
- Variety of craft materials (optional)



Catching Sound

Many animals with exceptional hearing, like deer or rabbits, have large outer ears that help “catch” more sounds in the environment. This adaptation can help them survive when hunted by predators.

1. Roll a heavy piece of paper into a funnel, leaving a one-inch hole at the end. Tape it in place.
2. Hold the small end next to your ear and point the big end towards different sounds. Move your head around slowly. Can you “catch” the sounds?
3. Turn on music at a low volume or ask someone to crumple paper across the room. Take a walk outside and listen to traffic, the wind, or bird sounds. Does the funnel ear change how you hear?

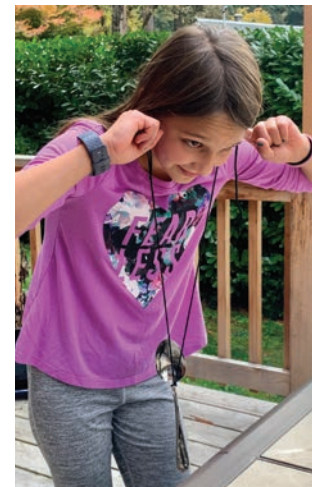


4. Design your own ears using craft and recyclable materials you have at home. Try making ears with different shapes, like a tube, a tall rabbit ear, or an even a bigger funnel. How do the ears change your hearing?

Feeling Sound

Some animals feel sounds. For example, snakes do not have ears, but they do feel sound waves, or vibrations, through their jawbones. Try feeling sound waves through a piece of string.

1. Tie the spoon to the middle of the string.
2. Wrap the ends of the string around each index finger. Press your fingers gently against the small flap at the front of each ear, so that your ears are plugged.
3. Lean forward and swing the spoon against a hard surface. What do you hear?
4. Try this again on a different surface or with a different object tied to the string. What do you notice?





KEEP ON EXPLORING!

There are over 8.7 million species of animals in the world!

Keep the animal fun going with one of these activities or do some more exploring on your own.

Biodiversity Scavenger Hunt. A healthy environment needs biodiversity, or lots of different plants and animals. Use the Biodiversity Scavenger Hunt page to explore the variety of life that exists near you—both outside and inside!

Critter Camouflage. Some animals use **camouflage**—matching their color, shape, or texture to their surroundings—to protect themselves from predators. Color the animals on the Critter Camouflage page to match your environment. Cut them out and place them around the room in plain sight, but where they blend into the background. Challenge someone to find as many critters as they can in 1 minute.

Master of Disguise! An octopus can change the color and texture of its skin to quickly blend into the environment and hide from predators.



Imagine an Animal. Dream up a new kind of animal species and draw or make a model of it. What is the animal called? What does it eat? Where does it live? What other living things would live there? How is your animal adapted for its environment? You can also build your new animal a habitat diorama.

Explore New Places. Search online or check out a book from the library to discover more about animals living in an environment far away from Oregon, such as the Sahara Desert or the Arctic tundra.



You Can Make a Difference!

Animals need a clean, safe, and healthy environment. You can help!

- Make spaces that are friendly to living things in your yard or neighborhood. Try adding more plants, putting out bird feeders, or picking up trash.
- Conserve natural resources, like water and energy. Take shorter showers, turn off the water while you brush your teeth, and turn off the lights when you leave a room.



Stay Connected. Stay Curious.

Learn more and find additional activities on the museum's website.

mnch.uoregon.edu