

Adaptation Investigation



Objective: Have you ever wondered why some plants grow here and some don't? Why is Walla Walla famous for its onions and not coconuts? In this activity, learn about some of the **adaptations** plants have made to grow and survive in their habitats. Then, interview your own plant to discover its adaptations.

Background: There is a reason some plants (and other organisms) can survive in some habitats and climates and others can't. Over a long, long period of time, plants slowly changed to survive in their environments. Plants compete with others for space. They grow spines to keep from being eaten, they grow tiny leaves to conserve water, or grow giant leaves to collect sunshine. Some have developed amazing methods of seed dispersal such as clinging to animal fur or parachuting away. Others have developed tendrils for gripping so they can climb upward toward the sun.

Materials:

- Ruler or measuring tape (optional)
- Pencil

Activity:

1. Learn about some examples of plant adaptations. Decide which habitat is best for each plant.
2. Complete an adaptation scavenger hunt. Look for plants that have the adaptations listed.

What's an Adaptation?

An adaptation is a trait that helps an organism survive in its environment. Which habitat do you think each plant grows best in? Think about weather, how much water each plant needs, and other factors.



Prickly pear cactus

This cactus has thick leaves that hold onto water. It has sharp spines to protect its water-filled leaves from thirsty predators.



Coconut

This is a large palm tree that can survive in salty water. Its fruit, the coconut, drops from the tree and floats in the ocean until it finds a place to germinate.



Water lily

Its leaves are wide and flat and float on the surface of the water. The roots go all the way down into the soil underwater.



Venus fly trap

This is a carnivorous plant that likes wet conditions. Has specialized leaves that detect, trap, and eat insect prey. These plants eat insects to make up for the lack of nutrients in the soil.



Prickly Russian thistle

Also called tumbleweed, when this plant matures and dries out, it breaks off and tumbles in the wind to disperse its seeds.



Ponderosa pine

This pine tree grows tall so it can reach sunlight better. It has deep roots to collect water below the dry surface of the soil. Its thick bark helps protect it against wildfire.

Which plants grow best in a dry habitat?

Which plants grow best around lots of water?

Which plant would survive best if it was exposed to fire? Why?

Which plant grows best in a windy habitat?

Which plant(s) would you find on a tropical island?

Which plants have defensive adaptations? These adaptations protect the plants from predators or the environment.

Adaptation Scavenger Hunt

Find plants that have the adaptations described below. You can look for plants in your yard, at a park, or even inside if you have houseplants. Describe the plants by drawing or writing about them.

1. Find a plant that has developed tiny leaves to help conserve water.
2. Find a plant with thorns or spines to keep it from being eaten.
3. Find a plant with a bright flower to attract pollinators.
4. Find a plant that climbs up another plant or a fence to reach the sun.
5. Find a plant that is covered with tiny hairs to help keep it from drying out.
6. Find a plant that can grow with very little soil.
7. Find a plant with giant leaves to collect sunshine.