

Plant Survival & Adaptation

Plants have adaptations to help them survive, or live and grow, in different areas. Adaptations are special features that allow a plant or animal to live in a particular place or habitat. These adaptations might make it very difficult for the plant to survive in a different place. This explains why certain plants are found in one area, but not in another. For example, you wouldn't see a cactus living in the Arctic. Nor would you see lots of really tall trees living in grasslands.

Plants need sunlight, heat, and water to grow. But what happens if they have too much or too little of the things they need to survive?

If a plant has too much rain, it can "drown" or be pulled out of the soil and swept away. If the plant doesn't have enough water, it will wither and die. A plant will also wither and die with too much heat! If it is too cold, a plant may be killed by the frost.



Plant Survival Quick Check

1. What are good conditions for a tulip to grow?

2. How has a cactus adapted to be able to live in a desert climate?

3. A farmer's tomatoes begin to sprout. Then an unusually cold night caused frost. What would happen to the tomatoes?

4. True or False Plants need the right amount of water, sunlight, and heat to survive.
5. True or False Adaptations are special features that allow a plant to live in a particular place.

Plants & Life on Earth

Plants help the environment (and us!) in many different ways:

Plants make food

Did you know that you eat parts of plants everyday? When you eat a carrot, potato, or radish you are eating a root. Do you like to eat celery or asparagus? These are stems. Spinach, kale, and lettuce are leaves. When you eat broccoli or cauliflower you are eating a flower! Bananas, kiwis, and apples are all fruit from plants. Corn, peas, and beans are examples of seeds.



Plants make oxygen

One of the materials that plants produce as they make food is oxygen gas. This oxygen gas, which is an important part of the air, is the gas that plants and animals must have in order to stay alive. All of the oxygen available for living organisms comes from plants.

Plants provide habitats for animals

Plants are the primary habitat for thousands of other organisms. Animals live in, on, or under plants. Plants provide shelter and safety for animals. Plants also provide a place for animals to find other food. As a habitat, plants alter the climate. Plants provide shade, help moderate the temperature, and protect animals from the wind.

Plants & Life on Earth

Plants help make and preserve soil

In the forest and the prairie, the roots of plants help hold the soil together. This reduces erosion and helps conserve the soil. Plants also help make soil. Soil is made up of lots of particles of rocks which are broken down into very small pieces. When plants die, their decomposed remains are added to the soil. This helps to make the soil rich with nutrients.

Plants provide useful products for people

Many plants are important sources of products that people use, including food, fibers (for cloth), and medicines. Plants also help provide some of our energy needs. In some parts of the world, wood is the primary fuel used by people to cook their meals and heat their homes. Many of the other types of fuel we use today, such as coal, natural gas, and gasoline, were made from plants that lived millions of years ago.



Plants beautify

Plants, because of their beauty, are important elements of our human world. When we build houses and other buildings, we never think the job is done until we have planted trees, shrubs, and flowers to make what we have built much nicer.

Plants & Life on Earth Quick Check

1. What is an example of each type of plant part we can eat?

- a) seed _____
- b) root _____
- c) stem _____
- d) flower _____
- e) fruit _____

2. Give at least two reasons that animals depend on plants.

3. Write a paragraph describing 4 ways that humans use or depend on plants.
