Parts of a Plant

Outdoor Classroom Field Journal Activity Lesson Plans & Resources

Online Lesson Plans & Resources: https://www.alabamawildlife.org/oc-activity-parts-of-a-plant/

Students will explore the outdoor classroom to investigate the internal and external structures of different plants and collect evidence as to how those structures function to support survival, growth, behavior and reproduction.

STEP 1: Engage through Discussion

The background information and questions below can be used to help introduce the topic, engage the students, and build a foundation to discuss the topic:

Background Information (online as a Word Doc or PDF)

The internal and external structures of plants serve specific functions and they work together as part of a system to support survival, growth, behavior, and/or reproduction:

Roots: Just like us, plants need to take in water and nutrients (food) to stay alive. Of course, plants don't have mouths to eat and drink, so they draw nutrients and moisture in through their roots. Tiny root hairs stick out of some roots, helping in the absorption. Because roots have the ability to spread throughout the soil, they anchor the plant to the ground. This prevents the plant from getting whisked away when the wind blows or the rain water runs. The roots also store food for the plant for future use. Sometimes we eat these roots such as a carrot.

Stem: The stem is the stalk or trunk of a plant. Like the roots, stems also help the plant survive. They act as the plant's plumbing system, conducting water and nutrients from the roots and leaves to other plant parts. Stems can be **herbaceous** like the bendable stem of a daisy or **woody** like the trunk of an oak tree. The stem or trunk provides support for the branches and leaves in heavy winds and rain. Inside the stem are tiny tubes/capillaries called xylem and phloem. **Xylem** transports water from the roots to the rest of the plant, while **phloem** transport sugars and other minerals from the leaves to other parts of the plant.

Leaves: Most plants' food is made in their leaves. Leaves are designed to capture sunlight which the plant uses to make food through a process called photosynthesis. In addition, leaves take in carbon dioxide that the plant needs to survive, and then they release oxygen into the environment.

Flowers: Flowers are the reproductive part of most plants. Flowers contain pollen on the stamen or “male parts” of the flowers, and tiny eggs called ovules in the pistil or “female part” of the flowers. The color, smell and nectar of the flowers attract bees, butterflies and other pollinators that help spread the pollen from one flower to the ovules of another flower. After pollination of the flower and fertilization of the ovule, the ovule develops into a fruit. The fruit provides a covering for seeds that can be fleshy like an apple or hard like a nut. The seeds contain the genetic information to create new plants.

Thorns & Other Adaptations: In addition to the internal and external structures in a plant, plants also survive throughout time by adapting. For instance, think about a plant that is in the forest. If deer or other herbivores like eating this plant, then the plant might have limited growth or be unable to reproduce. However, if this plant developed thorns then the plant has a greater chance of survival to grow and reproduce. Plants have a wide variety of adaptations to help them survive.