



Parts of a Plant: Outdoor Classroom Field Journal Activity

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

Example Discussion Questions & Answers (online as an Interactive PowerPoint or PDF)

Q: What do plants need to survive? What do they need to grow and reproduce?

A: *Just like us, they need food, water, air, and sunlight. Plant food can be found in the soil as minerals and nutrients. Water can be provided by rain fall or by us. Air is made of the gases that are all around us but we cannot see. Sunlight comes to us from the sun, and it provides the energy plants need to grow.*

Q: How do plants get food? Do they go to the store?

A: *No, plants can actually produce (or make) their own food using a process called photosynthesis. Plants store energy from sunlight in their leaves, and the cells inside their leaves convert the energy into sugar (food) using water from the soil and carbon dioxide from the air. The leaves release oxygen into the air.*

Q: How do plants get the water from the soil?

A: *The roots of a plant grow under the ground and absorb water and minerals.*

Q: What are other ways that roots help plants?

A: *They provide an anchor or support system in the soil to keep the plants from washing away or blowing over. They also help store plant sugars (food) that are made through photosynthesis.*

Q: How does the water get from the roots to the rest of the plant?

A: *Vascular tubes/capillaries (like straws) in the trunk, stems and roots called xylem help transport the water. As water evaporates from the leaves other water molecules are pulled up through the tubes, causing the roots to absorb more water.*

Q: How is the food transported to the rest of the plant?

A: *Vascular tubes/capillaries (like straws) in the trunk, stems and roots called phloem help transport the food produced from photosynthesis in the leaves to other parts of a plant such as the roots and stems. The phloem carries important sugars and minerals. Sap within the phloem simply travels by diffusion between cells and works its way from leaves down to the roots with help from gravity.*

Q: How are xylem and phloem different?

A: *Xylem carries water UP from the roots, while phloem transports sugars and minerals DOWN from the leaves to the rest of the plant. (Mnemonic tool to help you remember: xYlem goes "high" & phlOem flows "low")*

Q: What is the purpose of a plant's flower?

A: *A plant produces a flower to help it reproduce and create new "baby" plants. Plants require a male and female of the same species to reproduce. The male and female parts of a plant are found in its flower. The male part is called the stamen while the female part is called the pistil.*

Q: Do all flowers have a stamen and a pistil?

A: *Some flowers have both, but some only have a stamen and other may only have a pistil.*

Q: How do the stamen and pistil help a plant to reproduce?

A: *(1) The stamen (male part) produces pollen—the yellow, sticky powder in the center of the flower. (2) Then the pollen is transferred to the pistil (female part) where it fertilizes the tiny eggs called ovules. (3) Each ovule develops into a seed that contains a tiny plant called an embryo which can grow into a new plant when soil moisture and temperature are good for germination.*

Q: How does the pollen get from the stamen to the pistil?

A: *Plants use the colors, smells and nectar in their flowers to attract animals like bees, butterflies, and other insects to transfer pollen from plant to plant and flower to flower. This process is called pollination. These animals that help move the pollen are called pollinators.*

Q: Why do all plants have similar internal and external structures like the roots, stem, leaves, and flowers?

A: *They exist to assist the plants so that they can survive, grow, and reproduce.*

Q: Where can we observe different types of plants in our outdoor classroom?

A: *We can look for wildflowers, trees, grasses and bushes in the gardens and habitat areas.*

