Just Be Leaf

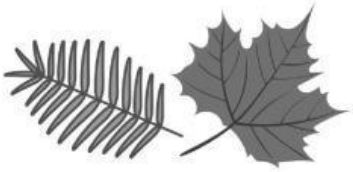
Green plants make food in their leaves using sunshine, carbon dioxide from the air, and water from the soil. Plants use those ingredients to make sugar during a process called photosynthesis. In addition to being food factories, leaves store food and water. Leaves come in different sizes and shapes depending on the climate and environment where the plants are growing. Some desert plants have hairy leaves or leaves with a waxy coating. Both of these adaptations stop water loss in a place with little water. Thorns protect a cactus from being eaten. Rainforest leaves have special tips that allow extra water to drip off. Other plants have leaf tendrils like threads that coil around objects and will enable the vine to climb up toward the sunshine. Plants that grow in cold climates have leaves shaped like needles. These long, thin leaves resist the wind and are better able to handle ice and snow. Needles also stop coniferous trees like pines and firs from being eaten by animals and insects. Forest trees have broad leaves to capture as much sun as possible during warm weather. All deciduous trees like elms and oaks drop their leaves as the weather gets colder. New leaves will grow in the spring.

1) Green leaves are compared to food factories because ---

A) the leaves store water
B) the leaves store food
C) the leaves make sugar
D) the leaves have a waxy coating

2) Which word from the text helps the reader understand the meaning of the word *tendrils*?

A) thorns
B) tips
C) threads
D) needles



3) How is a cactus like a pine tree?

A) Both have broad leaves designed to absorb large amounts of sunlight.
B) Both plants lose leaves in the fall.
C) Both plants grow in hot, dry places.
D) Both have sharp leaves that help prevent the plant from being eaten.

4) Which sentence best expresses the main idea of the paragraph?

A) Food is made in the leaves of green plants.
B) Leaf adaptations are determined by the place the plant is growing.
C) Leaves are mostly pointy or wide.
D) Leaves make and store food and water.

LIVEWORKSHEETS

Roots That Suit

Plants use roots for support and to absorb water and minerals from the soil. Roots are special adaptations that help a plant live and grow in a certain place. There are different kinds of roots. A taproot is one single, large root. Fibrous roots are several thinner roots all about the same size. Aerial roots are spongy roots that grow in the air instead of the soil and absorb moisture. Storage roots hold large amounts of sugar and starch. Prop roots develop on the stem above the ground and grow down into the soil. These provide extra support for the growing plant. Deserts are often hot and dry. The saguaro cactus has a taproot and fibrous roots. The fibrous roots near the surface of the soil pick up as much water as possible from any light rainfall. Tropical rainforests are hot and wet. The heavy rain causes poor soil quality. Because mangrove trees grow in muddy soil, roots grow from their trunks downward to anchor the trees. Some rainforest orchids live off other plants. They have aerial roots to absorb minerals from their host plants and water from the air. Temperate forests have four changing seasons. Plants like carrots, onions, and potatoes store food in their roots over the winter so they will have enough energy to sprout again in the spring.

1) Roots do all of the following jobs except ---

A) pick up water
B) give support
C) provide energy
D) store food

2) Which of the following definitions matches the word *light* as it is used in the text?

A) gentle or delicate
B) not dark
C) not heavy
D) low in amount



3) Why do mangrove trees grow prop roots?

A) They need extra support in wet soil.
B) Prop roots allow them to store more sugar and starch.
C) Their trunks are not strong enough to hold the trees up alone.
D) Rainforest soil is always dry.

4) According to information in the next, which of the following statements is true?

A) Most plants have a combination of two types of roots.
B) The type of roots a plant has depends on the plant's environment.
C) Aerial roots absorb more water than fibrous roots.
D) The changing seasons are the main influence on root adaptations.

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