

Lesson 1: What are plants' characteristics?

Vocabulary

photosynthesis the process in which plants make their own food

chlorophyll green material in plants that captures energy from sunlight for photosynthesis

Plant Cells

How is a giant redwood tree like a small dandelion? Both organisms belong to the plant kingdom. Both organisms are multi-celled. This means they are made of many cells.

All plants are made of cells. Cells are grouped together to make tissues and organs. Some cells make food. Each plant has special parts that absorb water and nutrients from the soil. These special parts use the energy from sunlight to change water and nutrients into food for the plant.

How Plants Make Food

All plants need sunlight and water. They also need carbon dioxide from the air and nutrients from the soil. They use these things to make food. The food they make is sugar. The process of making sugar is called **photosynthesis**.

Photosynthesis begins when a plant's roots take in water and nutrients from the soil. The water and nutrients travel through tubes in the plant's stem to its leaves. Then the plant uses energy from the Sun to change these things into sugar. This sugar is carried to other plant parts by the tubes in the stem. Extra sugar is stored in the stems, roots, and leaves. Oxygen and water are made during photosynthesis too. They are waste products. The plant passes these waste products into the air through openings in its leaves.

Chloroplasts

Photosynthesis happens in the chloroplasts of leaf cells. Chloroplasts have **chlorophyll** in them. Chlorophyll is what makes plants green. Chlorophyll also captures energy from sunlight. The plant uses this energy to make food.

Plant Habitats


Plants grow in many places. They have special adaptations that help them live. For example, water lilies grow at the bottom of ponds. Their stems reach up through the top of the water. Water lilies have large leaves that float on the water. These leaves trap energy from sunlight. This energy is used during photosynthesis.

Lesson 1 Checkpoint

1. What is a multi-celled organism?

2. Name three characteristics of plants.

3. In what part of the plant cell does photosynthesis occur?

4.  **Draw Conclusions** Most plant parts that are green contain chlorophyll. What might you conclude about a plant part that is not green?
