

PLANT STRUCTURE AND FUNCTION

Overview

Plants are living organisms made up of cells. Plants need sunlight and water to live and grow healthy.

Many plants, but **not** all plants, produce flowers, which make fruit and seeds in order for the plant to reproduce.

*Lesson Checkpoint:
What does a plant need in order to survive?*

Parts of a Plant

A plant has different parts that are all important in keeping the plant alive and healthy.

Roots:

- ✓ A plant's roots are the part of the plant that grows underground.
- ✓ The roots absorb water and nutrients from the soil.
- ✓ The roots anchor the plant in the soil.
- ✓ The roots make food for the plant.
- ✓ Roots of some plants grow in water.



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There are two different types of root systems:

- A **fibrous root system** has many roots that grow in many different directions. Those many roots absorb water and nutrients from the soil.

- Plants that have a **taproot system** have only **one large main root** growing from the plant's stem.



Lesson Checkpoint:

Wh

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Stem:

- ✓ The main root is the taproot.
- ✓ Plant stems reach sunlight and grow healthy.

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and grow

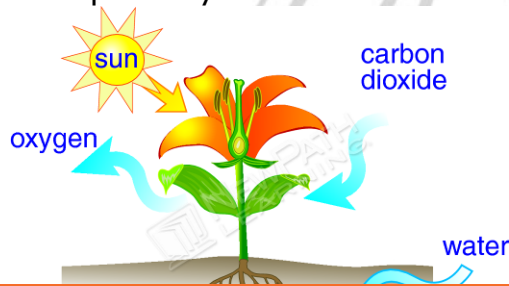


Leaves:

We know that plants make their own food, but where does this food making happen in a plant? It happens in the **LEAVES** of a plant!

- ✓ First of all, plants need sunlight in order to make their own food. The leaves of most plants are flat so that they are able to capture as much sunlight as possible.

- ✓ Every plant leaf contains **chlorophyll**, which is the **green material** that gives plants their green color. **Chlorophyll** captures sunlight which is needed by the plant to make its own food.
- ✓ The process of plants making their own food is called **photosynthesis**. The food made through the process of photosynthesis in plants is sugar. Two important ingredients needed for photosynthesis are carbon dioxide and water. Plants use the energy from the sun to change **water and carbon dioxide** into **food** for the plant. **Oxygen and water** are the **waste** products of photosynthesis.

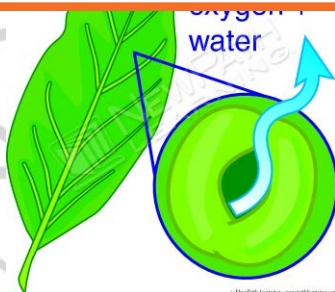


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- ✓ Oxygen under

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- ✓ The process of water leaving a plant through the tiny openings, stomata, under each leaf is called **transpiration**.
- ✓ In order for a plant to get energy from the food it has made and stored, one more process needs to occur: **respiration**. Respiration is the process of a plant taking in oxygen at night and using it to get energy from the food it has stored.

Lesson Checkpoint: What is transpiration?