

Science Unit Chapter 3

Return this study guide with a parent's signature for bonus points. _____

The process by which leaves give off water is **transpiration**.

A **tuber** is a swollen underground stem.

Taproots are deep roots that have tiny hairs to absorb water and nutrients.

Germinate means to sprout and begin to grow.

Carbon dioxide is a gas breathed out by animals.

Spores are tiny cells from which some plants germinate.

Nutrients are substances that all living things need to grow.

Fibrous roots are long shallow roots.

Dormancy is a state of lower activity during cold seasons.

Photosynthesis is the process by which plants make their own food.

The part of the flower that makes pollen is the **Stamen**.

The part of a flower that collects pollen is the **pistil**.

The term for the process that joins a cut stem of one plant to a slice in the stem of another plant is **grafting**.

Spores grow in **capsules**.

Fibrous roots are many roots of the same size. They grow long but not deep. An example of a plant with fibrous roots is grass.

Order for the life cycle of flowering plants:

1. For the seed of a flowering plant to begin to grow, it needs warmth, water, and air.
2. The seed sprouts and becomes a seedling.
3. Animals such as birds and bees feed on its nectar, which helps the plant prepare more seeds.

Photosynthesis Process

Sunlight is trapped by a leaf's **chlorophyll**.

The leaves give off **oxygen**.

The **roots** take in water.

Water and **carbon dioxide** in the leaves combine to make **sugar**.

Plant Adaptations

Cacti have roots that grow near the surface to help them obtain water.

Vines have stems that can cling to other objects in order to reach sunlight.

Leaves of a water lily have roots that allow them to absorb nutrients from the mud.

Short answer

Q. Since photo means “light” and synthesis means “putting together,” how does the word photosynthesis describe the process by which a plant makes its own food?

A. Plants use light energy to put together carbon dioxide, and water to make their own food.

Q. Why do big trees have a great many leaves instead of just a few very large leaves?

A. Having many small leaves allows the tree to absorb more light at all different times of the day.

Q. Why are plants with active traps found in areas that have poor soil?

A. The poor soils that these plants grow in do not provide the plants with the nutrients they need. So they must get nutrients in other ways.