

Name _____ Date _____

Photosynthesis

Photosynthesis is a process unique to the plant world. *Photo* means "light" and *synthesis* means "putting together." *Photosynthesis*, therefore, means "putting together with light." Through this process, plants are able to make their own food. Use the terms in the word box to complete each sentence.

photosynthesis
heterotrophs
chloroplasts
autotrophs

oxygen
carbon dioxide
glucose

carbohydrates
sunlight
cellulose

water
chlorophyll
leaves

- 1 Water, carbon dioxide, and _____ are the three ingredients needed for photosynthesis to occur.
- 2 Through photosynthesis, plants convert these ingredients into _____, a food used by the plant.
- 3 _____ is the material in green plant cells that traps energy from the sun.
- 4 The plant takes in a gas called _____ from the air.
- 5 Chlorophyll is found in the _____, structures within the cell where photosynthesis will take place.
- 6 _____ is a material the plant takes up through its roots and stems.
- 7 During photosynthesis, _____ is a waste product released by the plant into the air.
- 8 Plants produce more glucose than they need. The excess glucose is stored by the plant as _____ or starches.
- 9 Plants also change glucose into _____, the structural material used in their cell walls.
- 10 While chlorophyll is found in most aboveground parts of green plants, most photosynthesis takes place in a plant's _____.
- 11 In many regions, there is not enough sunlight or water during winter for _____ to occur.
- 12 Most plants are also called _____ because they are able to produce their own food.
- 13 Most animals are called _____ because they obtain energy from other plants or animals.

A Typical Plant Cell

Plant cells have basic structures in common, even though plant cells are as varied as the plants themselves. Each individual plant cell is partly self-sufficient, carrying on processes contained within the cell membrane. A plant cell differs from an animal cell because it contains chloroplasts and has a cell wall made of cellulose. Use the terms in the word box to label the diagram.

cytoplasm	chloroplast	vacuole
endoplasmic reticulum	ribosomes	nucleus
mitochondrion	cell wall	cell membrane

