

Bell Ringer

How do plants get their food?

What is the name of the process that allows plants to obtain cellular energy?

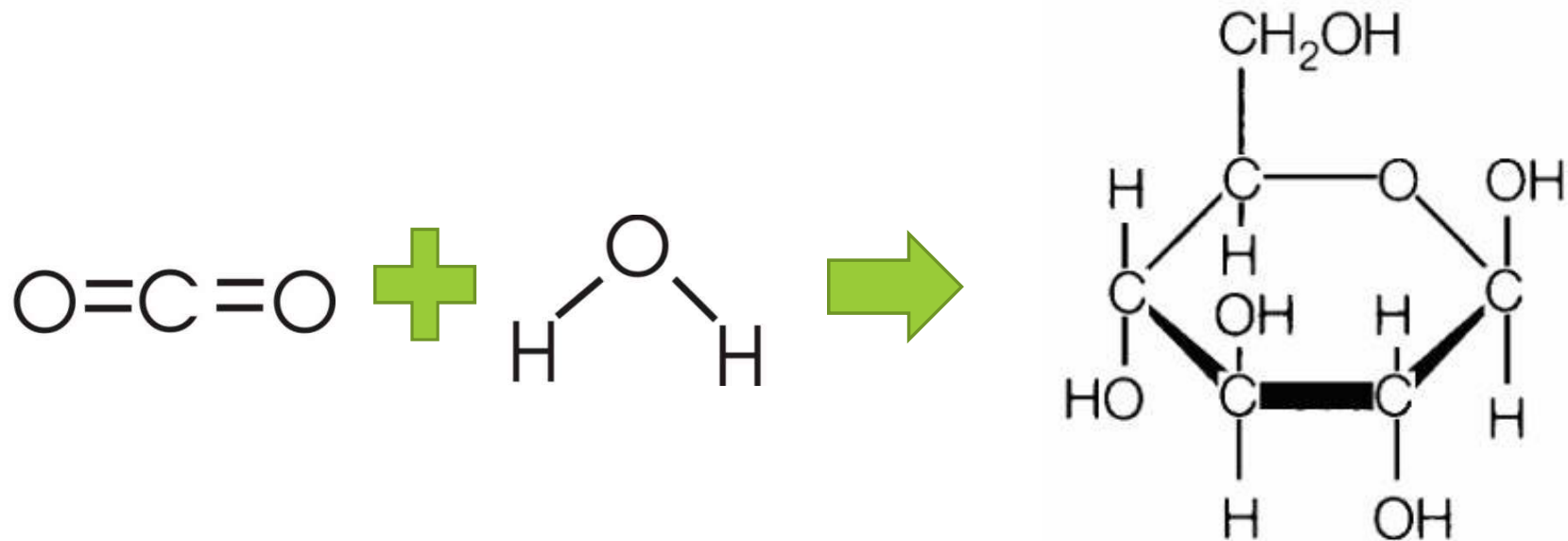


A photograph of a tea plantation. The foreground shows several tea bushes with vibrant green, serrated leaves. A single stem with three leaves and a bud is in sharp focus. The background is a soft-focus field of tea bushes under bright, warm sunlight, creating a glowing effect in the upper right corner.

Photosynthesis

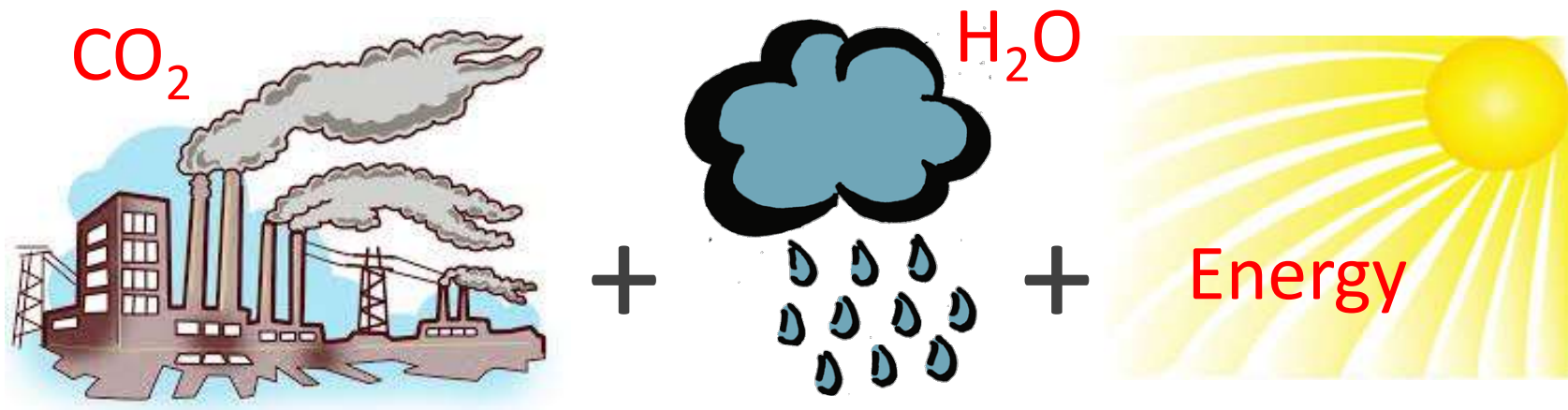
What is it?

The process of using energy from sunlight to create sugars from carbon dioxide and water.



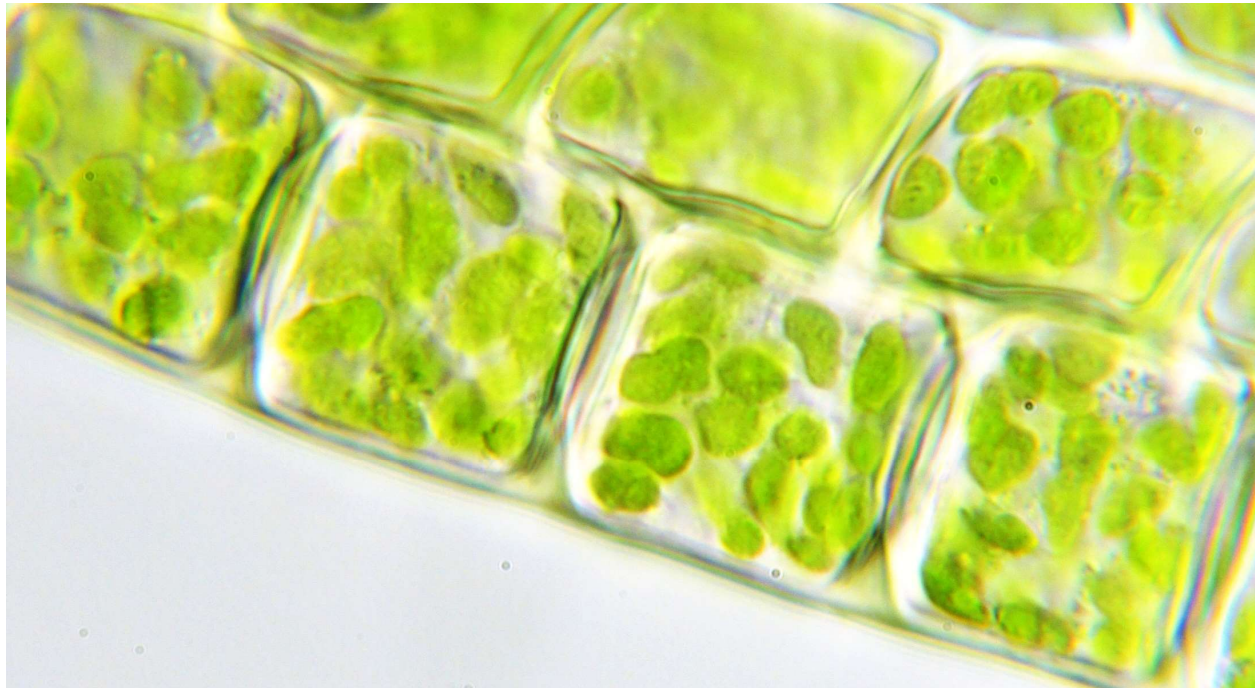
Reactants

Photosynthesis starts with **carbon dioxide, water and energy** (sunlight).



Tools

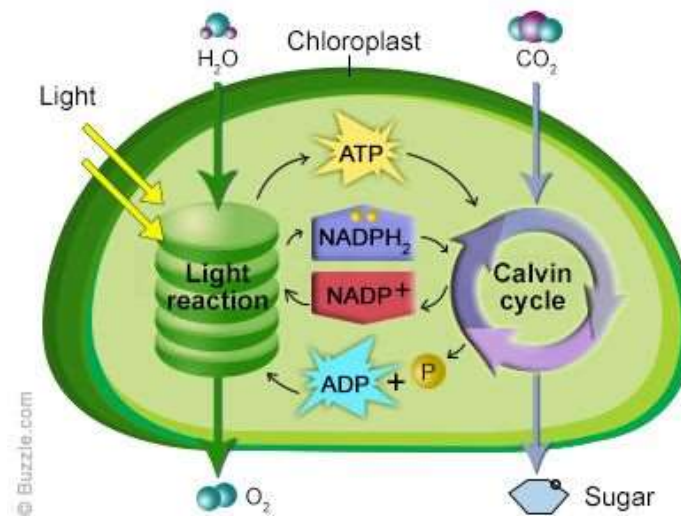
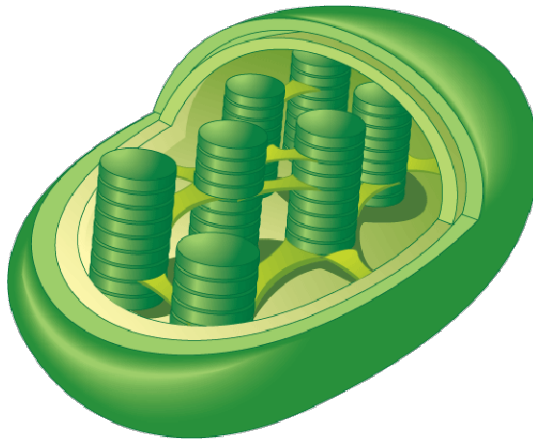
Chlorophyll = green pigment that absorbs light energy



Tools

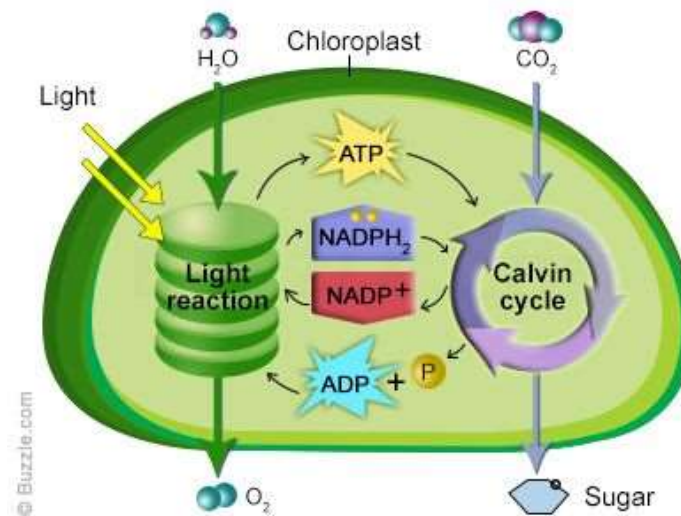
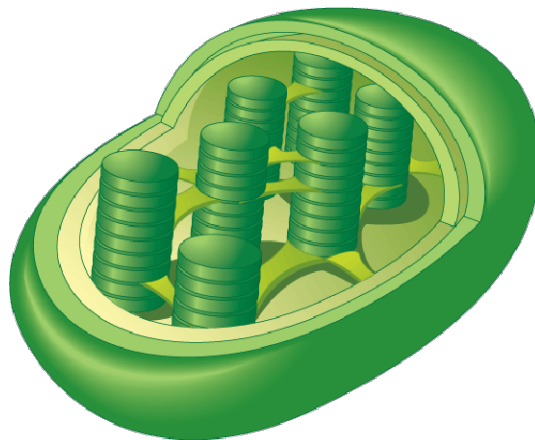
Chlorophyll = green pigment that absorbs light energy

Enzymes in the chloroplasts complete a series of reactions to combine CO_2 and H_2O .



Tools

The chemical reactions in each step transfer energy from sunlight to sugar (glucose) using the **high surface area** of the chloroplast

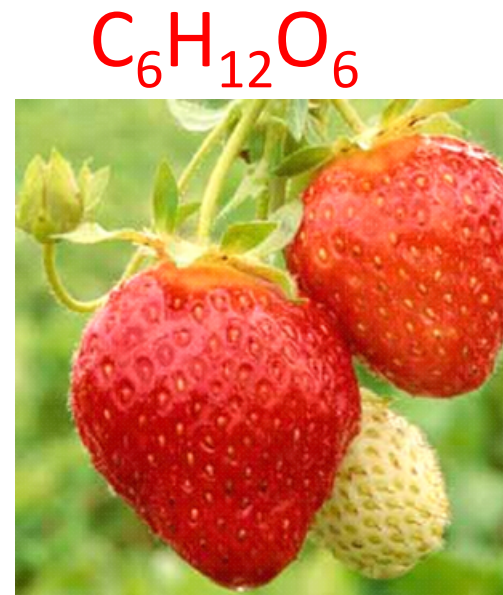


Products

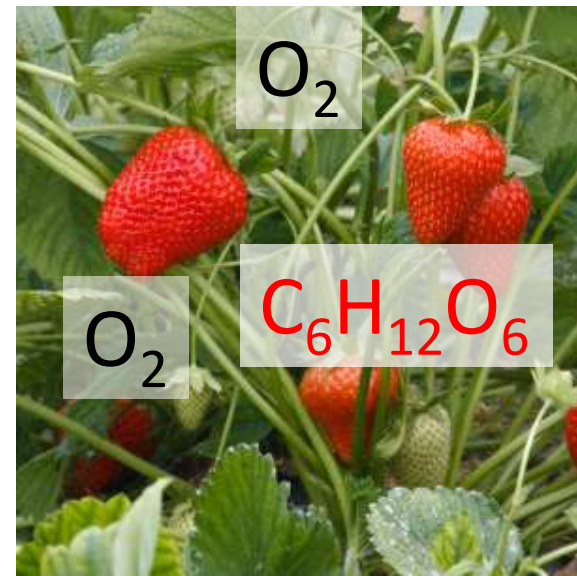
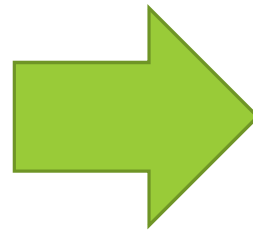
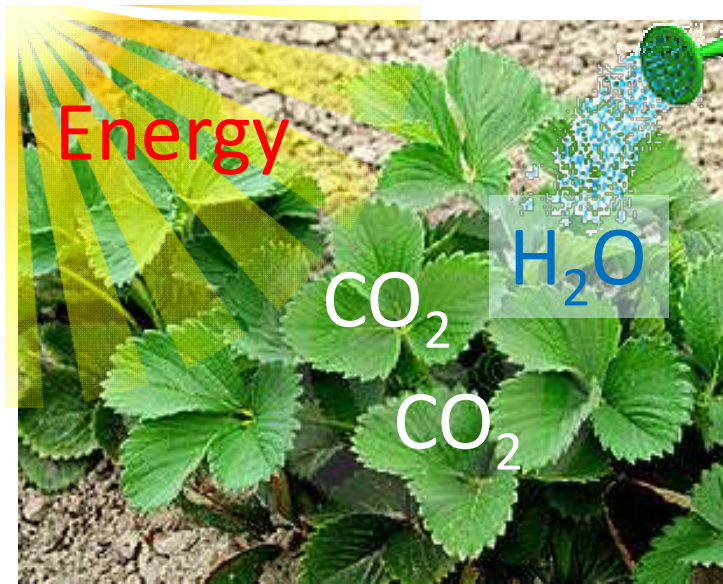
Photosynthesis produces **oxygen and sugar**
(glucose)



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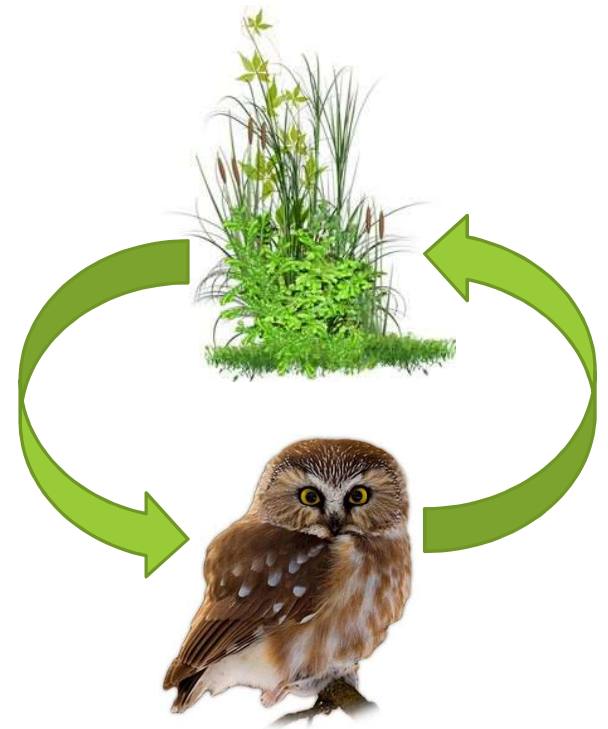
Review



Photosynthesis & Respiration Cycle

Demonstrate how photosynthesis and respiration can be a cycle.

Use pictures, arrows and labels to show the inputs and outputs of each reaction and how they create a cycle.



EXIT TASK

How do photosynthesis and respiration create a cycle?

