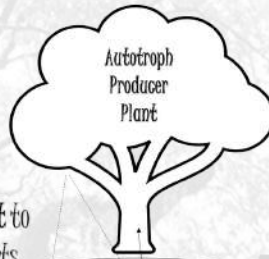




[Blank box for title]

the process by which green plants and some other organisms use sunlight to synthesize foods from carbon dioxide and water. Photosynthesis in plants generally involves the green pigment [Blank box] and generates oxygen as a byproduct.

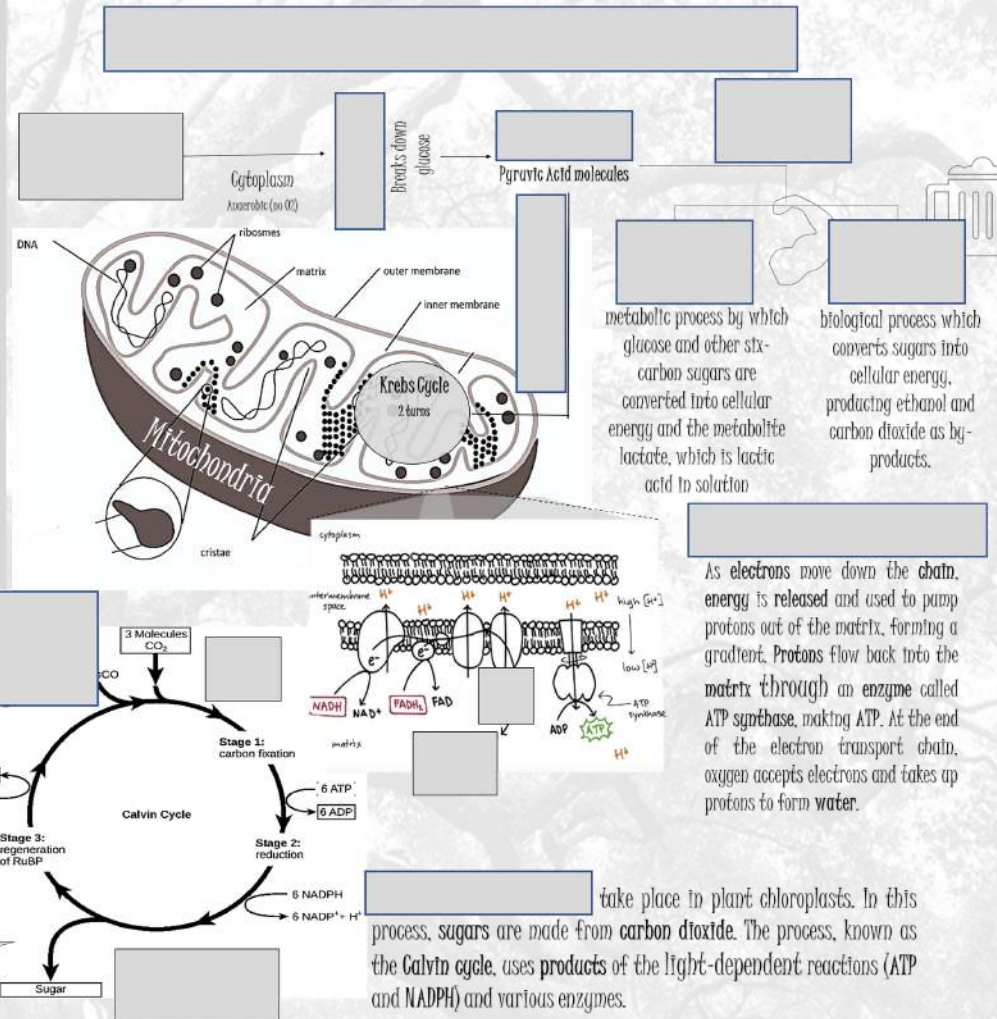
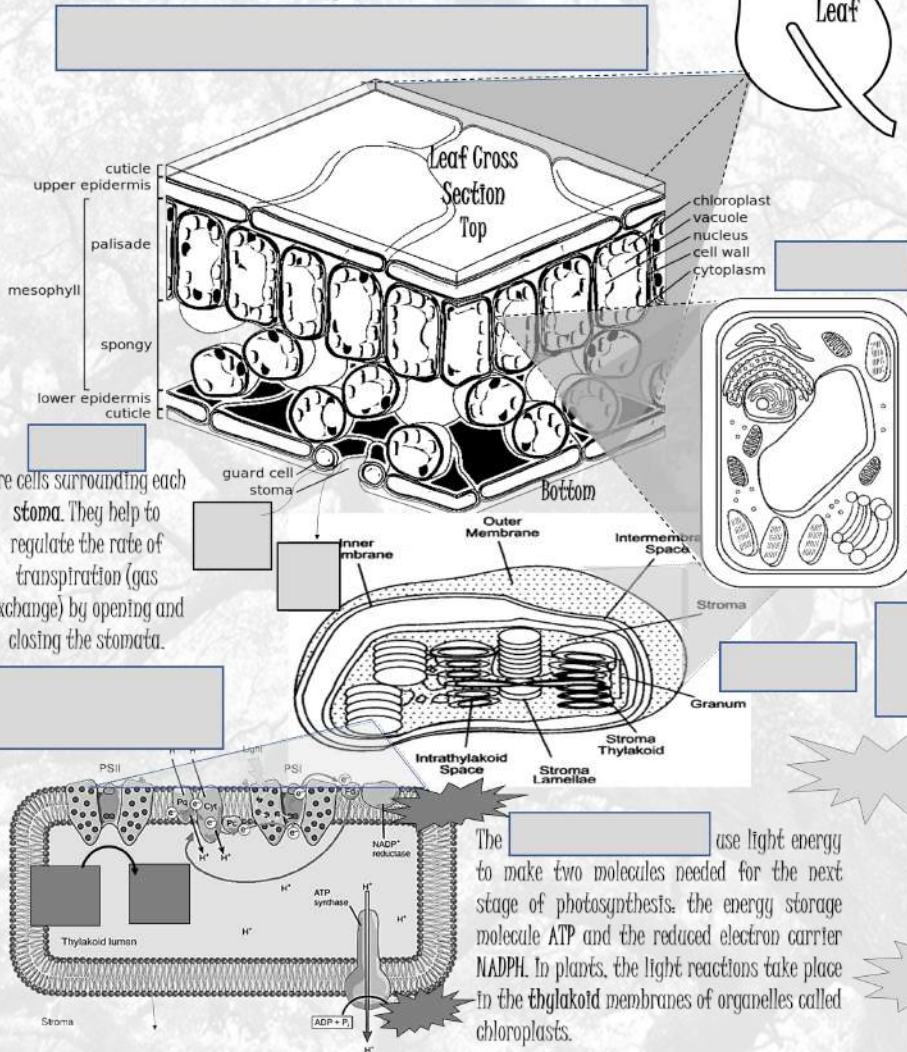


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Cellular respiration is a set of metabolic reactions and processes that take place in the mitochondria of cells of organisms to convert biochemical energy from nutrients into adenosine triphosphate (ATP), and then release waste products.

The relationship between Photosynthesis and Cellular Respiration - The reactants of one are the products of the other



## Photosynthesis

Chlorophyll



Guard Cell

Plant Cell

Chloroplast

$\text{CO}_2$

$\text{O}_2$

Light Dependent  
Reaction  
(Thylakoid)

$\text{H}_2\text{O}$

$\text{O}_2$

NADPH

ATP

NADPH

ATP

## Cellular Respiration

Heterotroph



$\text{C}_6\text{H}_{12}\text{O}_6$   
Glucose

$\text{C}_6\text{H}_{12}\text{O}_6$

2 - Pyruvate

Light Independent  
Reaction  
"Dark" / Calvin Cycle  
(Stroma)

Glycolysis

Anaerobic  
Respiration  
(no  $\text{O}_2$ )

Lactic Acid  
Fermentation

Alcohol  
Fermentation

Aerobic  
Respiration

Electron Transport Chain

$\text{H}_2\text{O}$

$\text{O}_2$

$\text{CO}_2$

Light Dependent Reaction

Light Independent Reaction