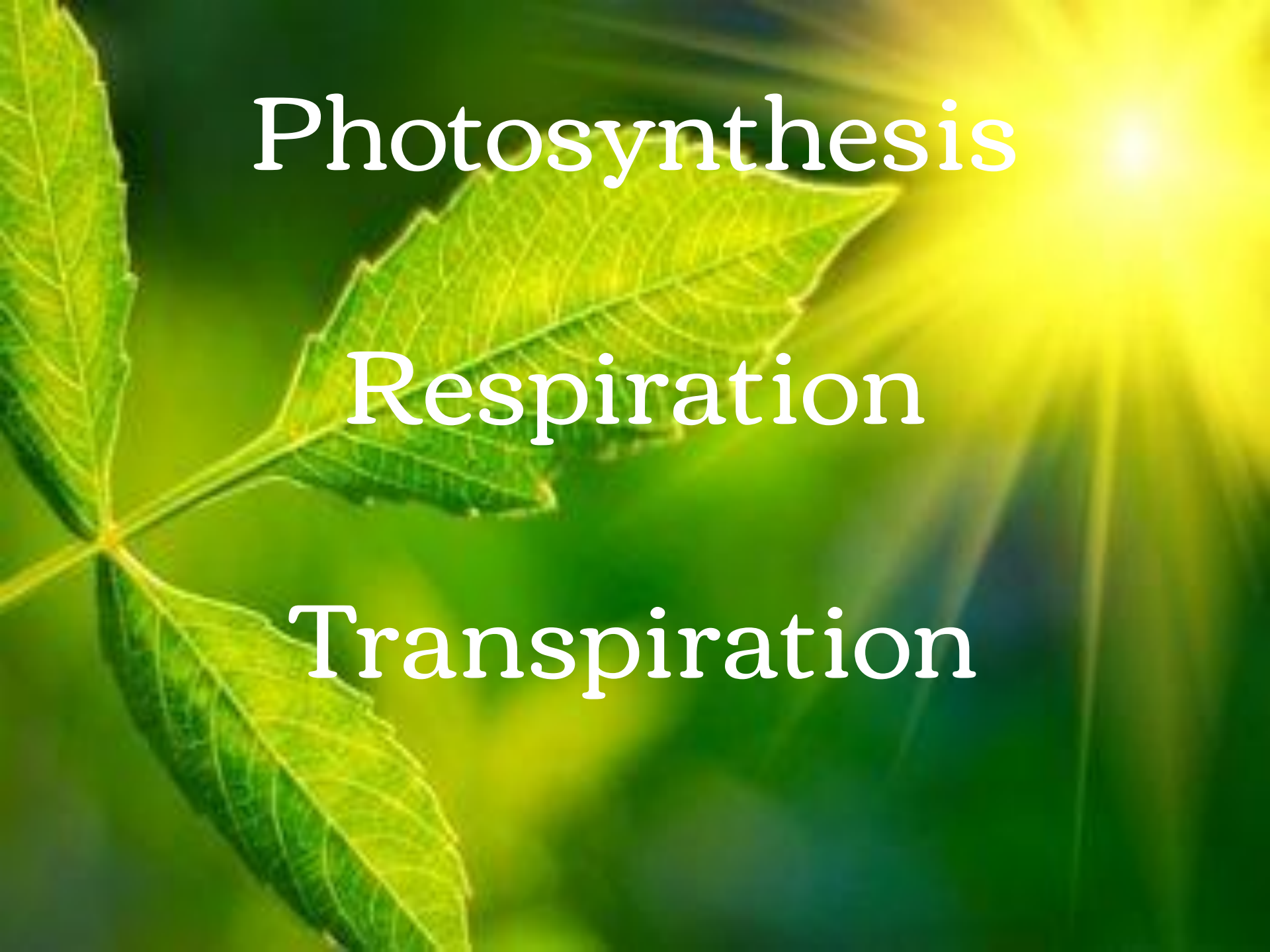
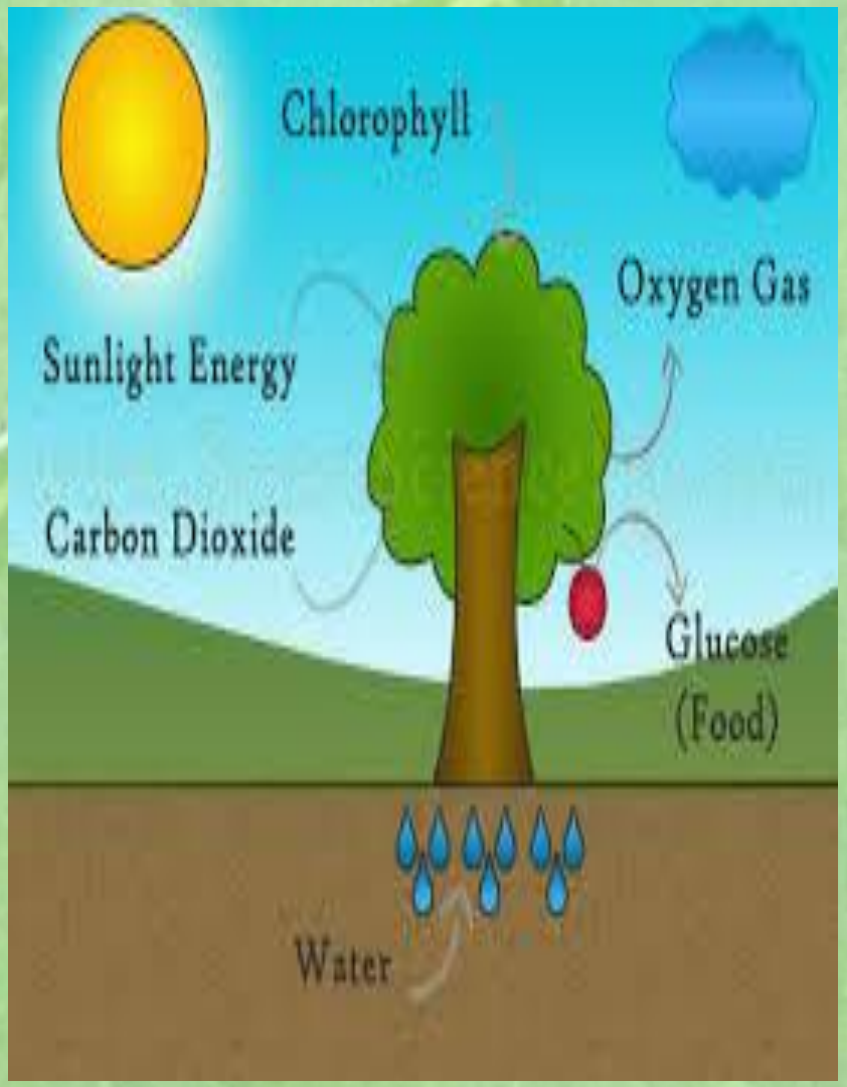

Photosynthesis
Respiration
Transpiration

What is Photosynthesis?

Photosynthesis is the process by which plants turn **water, sunlight** and **carbon dioxide** into **oxygen** and food, a simple sugar called **glucose**.



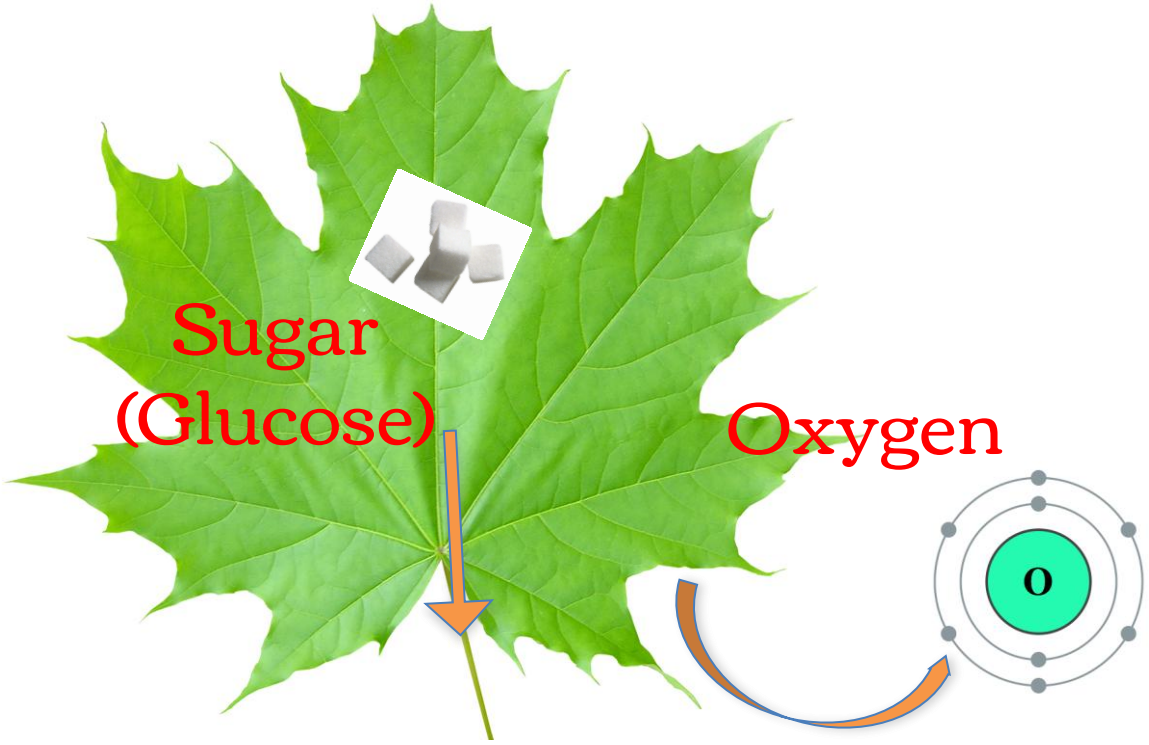
Raw Materials needed for Photosynthesis

Sunlight (Energy)

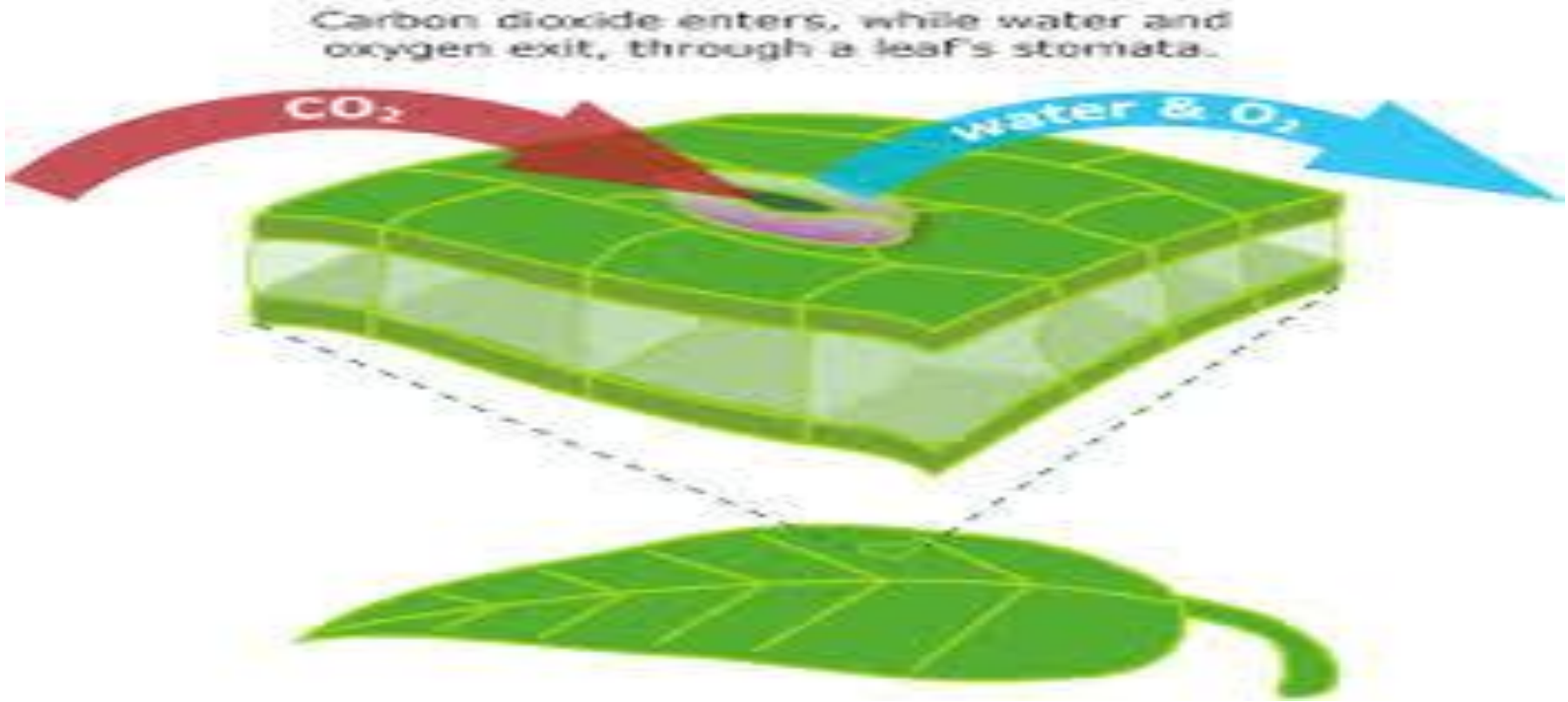
Carbon Dioxide

Water

Products of Photosynthesis



Carbon dioxide is taken in through ***pores*** in the leaf, called ***stomata*** and oxygen exits into the air through the stomata.



Where does photosynthesis occur?

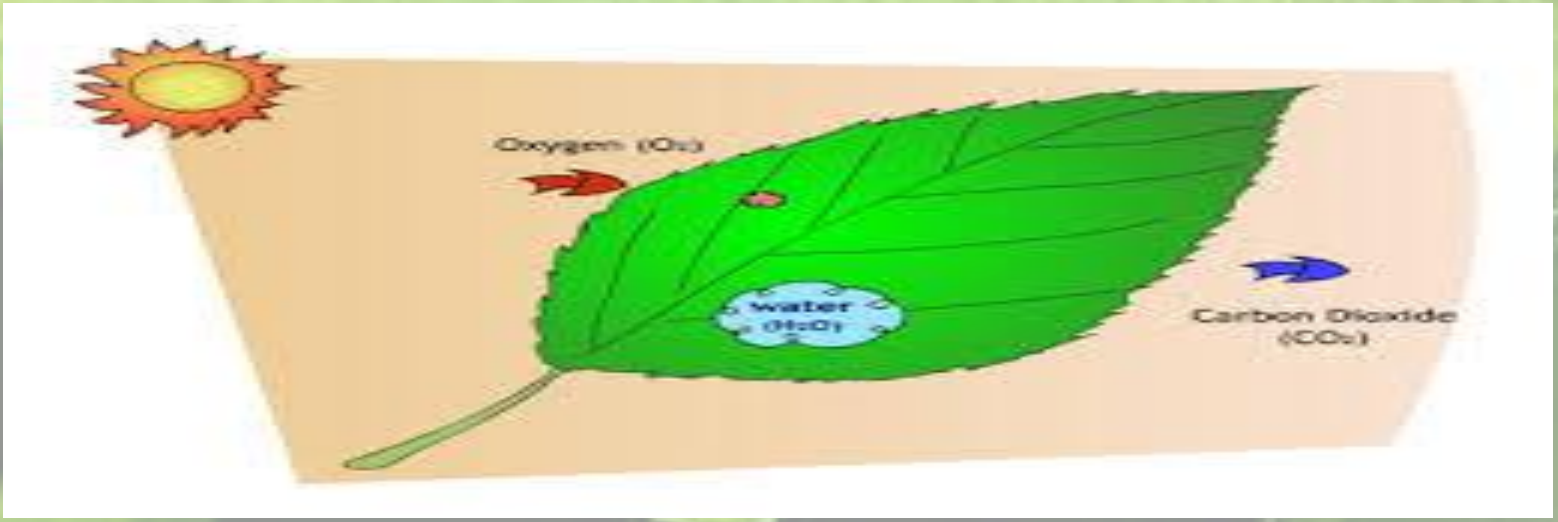
The **chloroplasts**, in the cells of the leaf, contain **chlorophyll**, a green pigment that absorbs light energy from the sun.

What is Respiration?

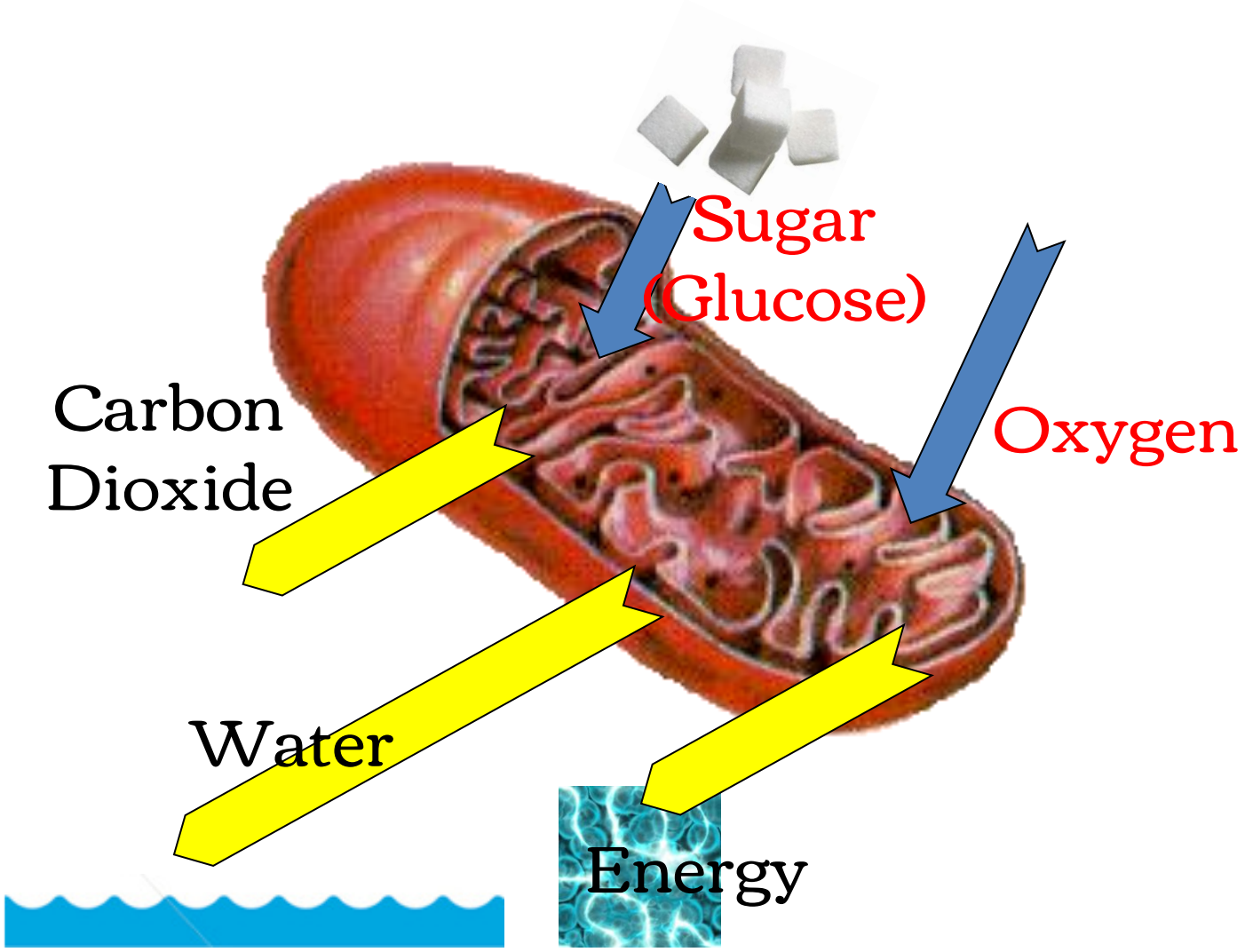
Respiration is the process by which

plants break down the sugar, in the cells, to get energy to grow and repair.

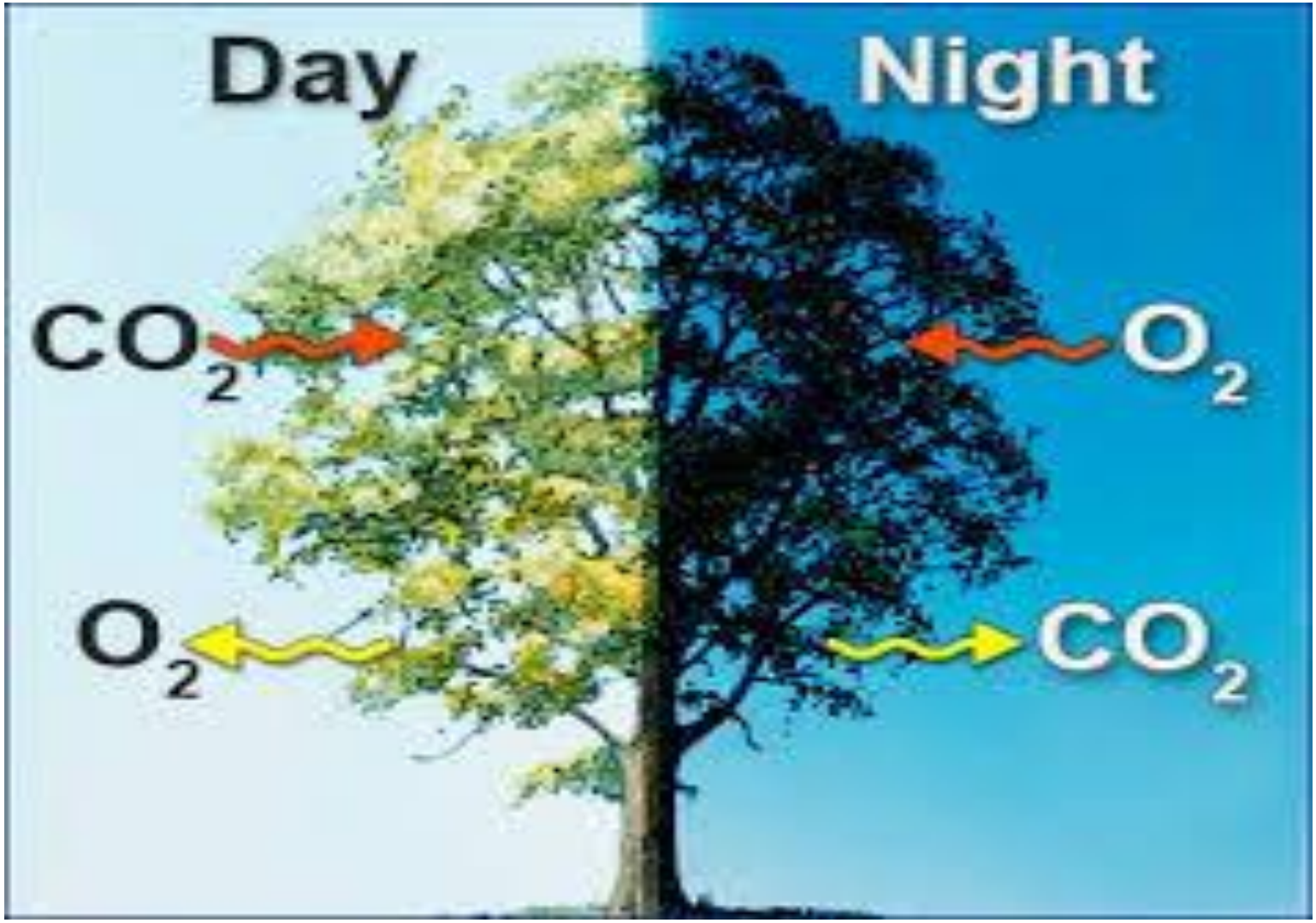
Glucose + Oxygen ---> Carbon dioxide, Water,



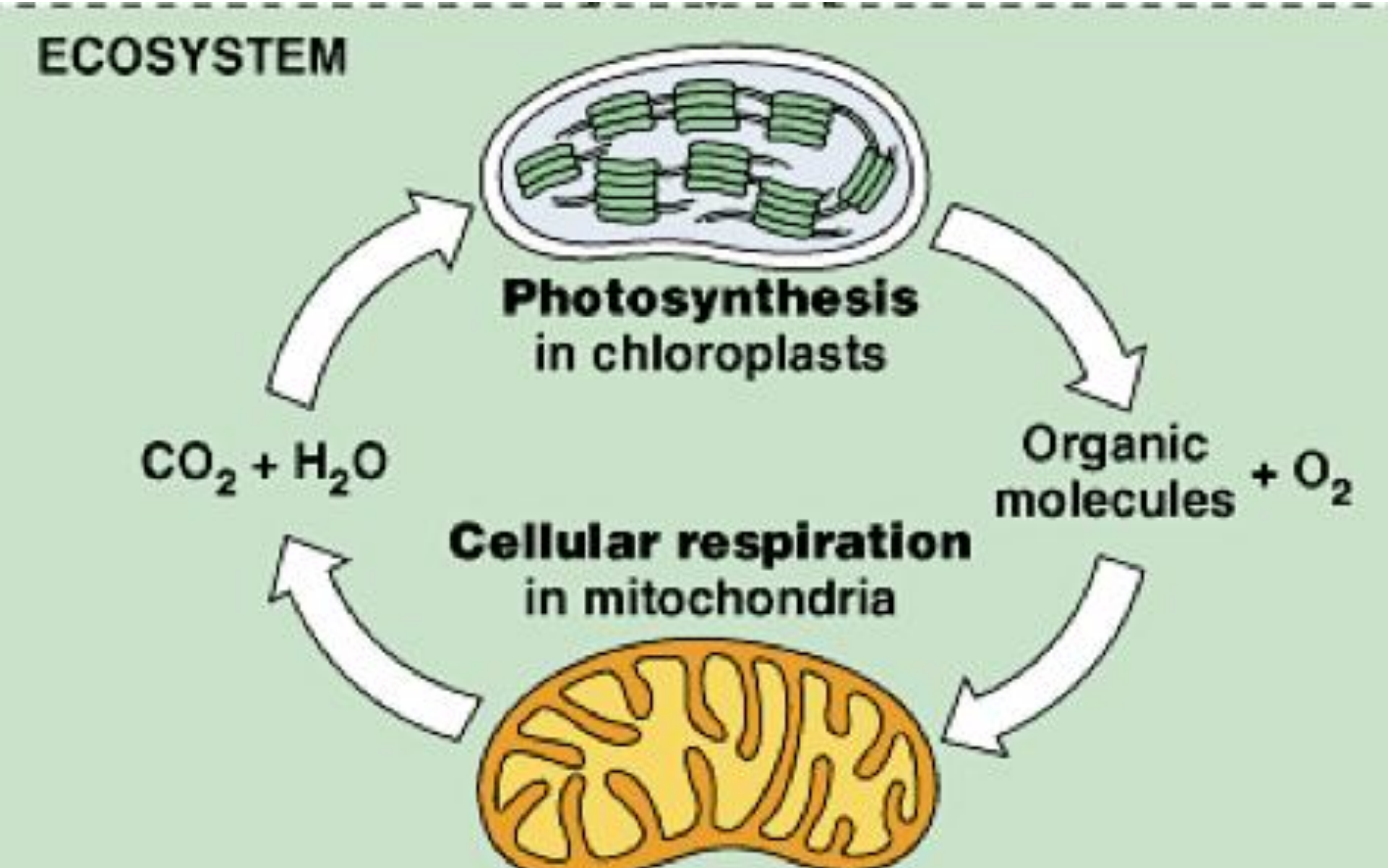
Plant Respiration



Photosynthesis & Respiration



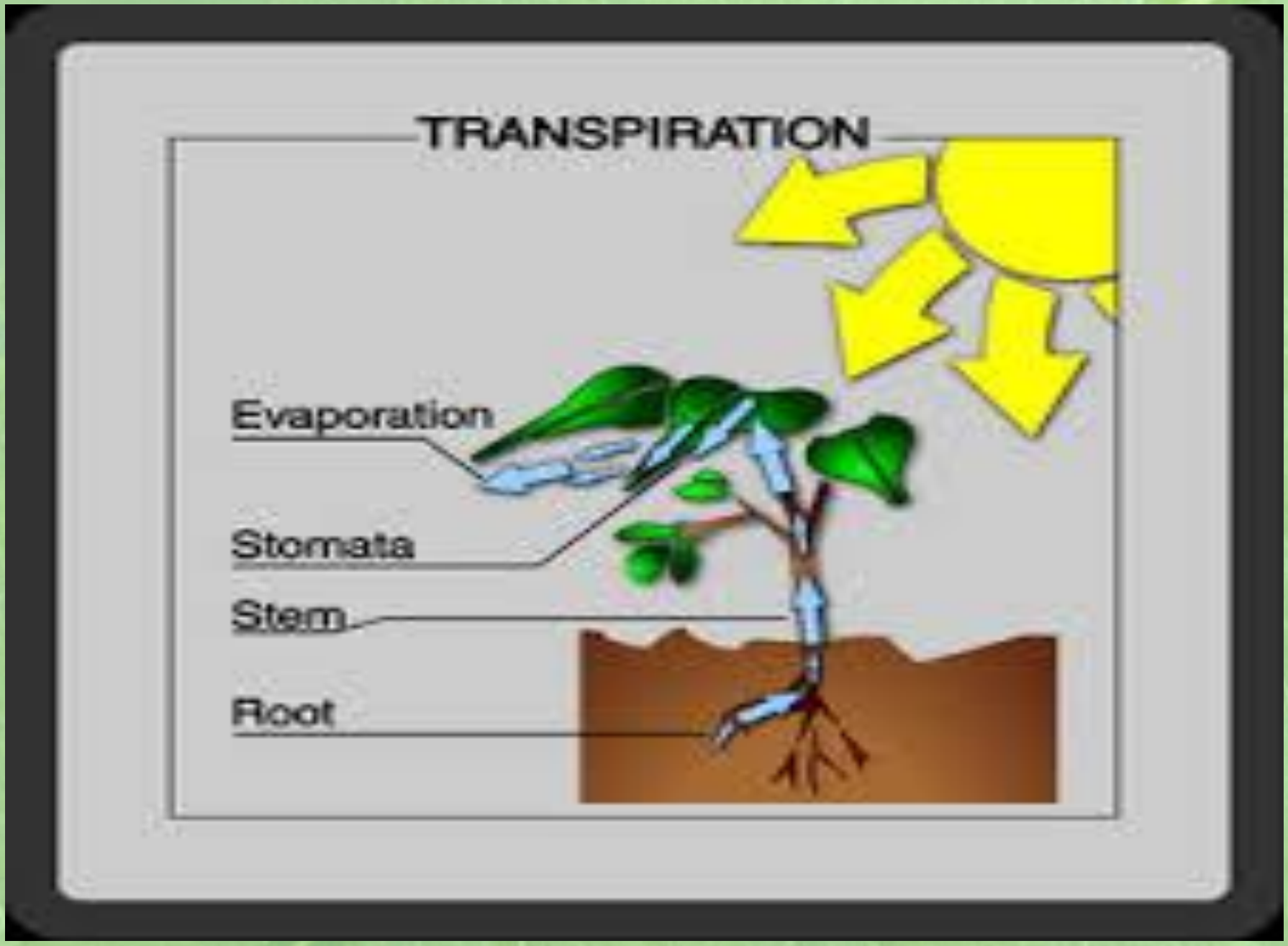
It's a cycle ~ at the cellular level!



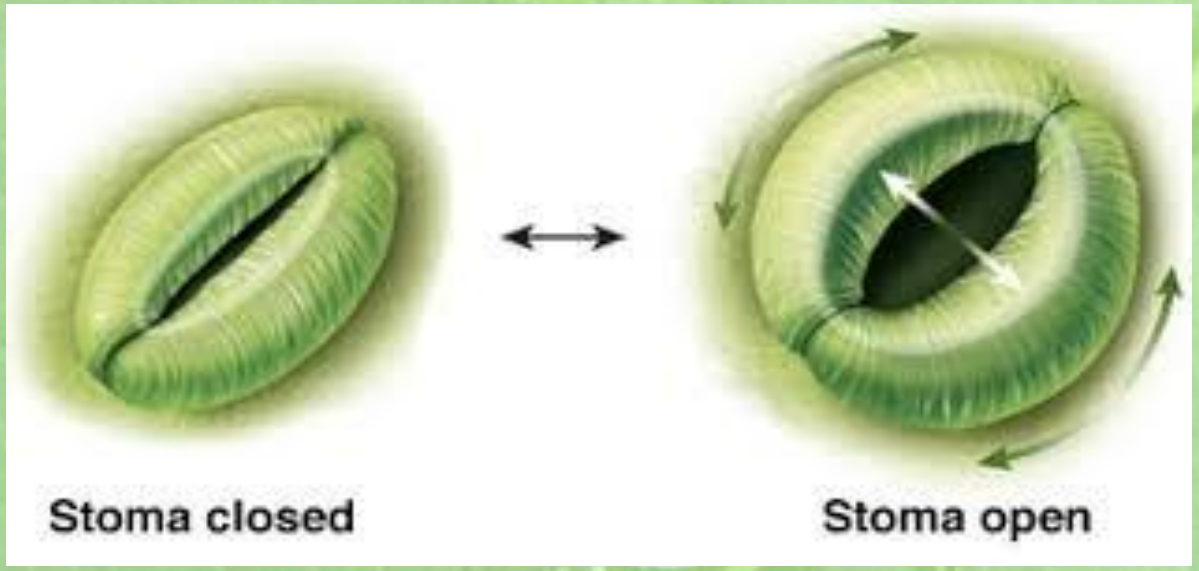
Transpiration

When plants lose water through the stomata in the leaves.

Plants need to store water in their cells, so they control water loss to stay alive.


TRANSPIRATION
Evaporation
Stomata
Stem
Root

How do plants control transpiration?



Guard cells, open and close the stomata to control water loss. When closed, water cannot escape the leaf.