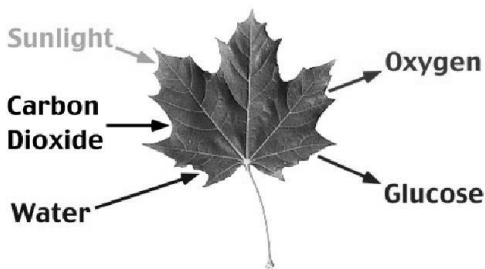
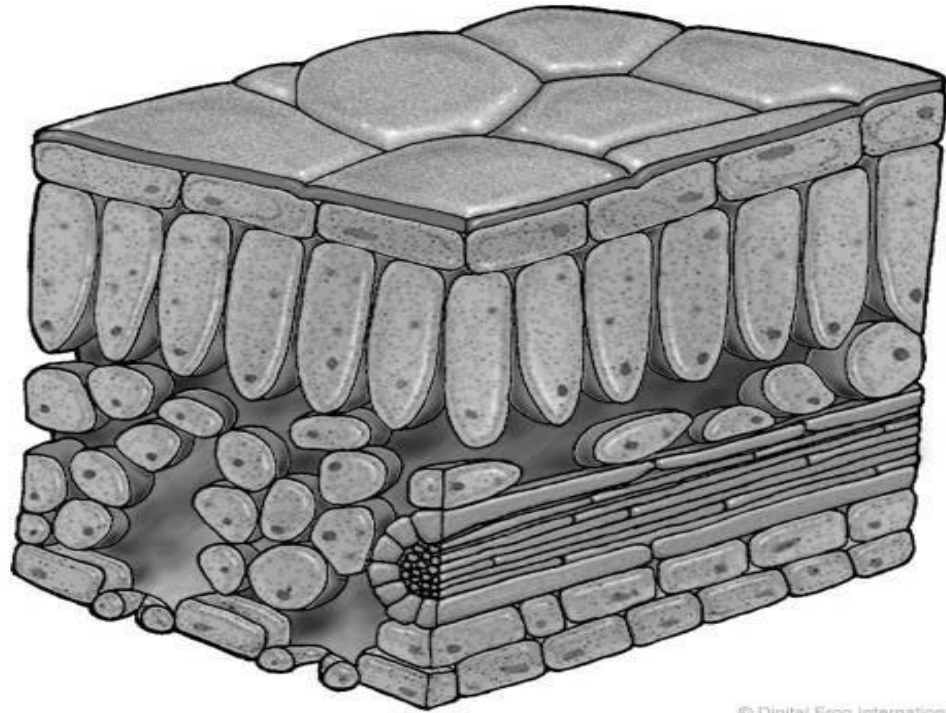


## Plant Processes

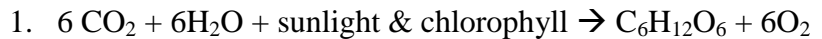
- I. Gas Exchange for photosynthesis and respiration
  - A. Takes place in roots stems and leaves
    1. Leaves – CO<sub>2</sub> gets in through the stoma and O<sub>2</sub> exits through the stoma
    2. Water vapor escapes through the stoma (transpiration)
- II. Photosynthesis



- A. Pigments needed for photosynthesis

1. Chlorophyll
2. carotenoids – give leaves their fall colors

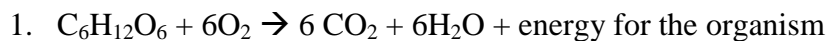
- B. Photosynthesis is a food making process



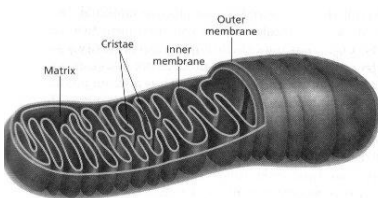
- C. Photosynthesis is the process that makes food for almost all living things

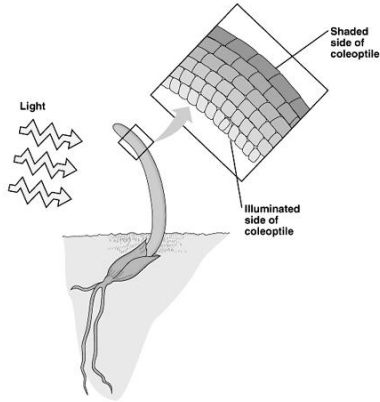
- III. Respiration – food using process

- A. Occurs in mitochondria of Eukaryotes

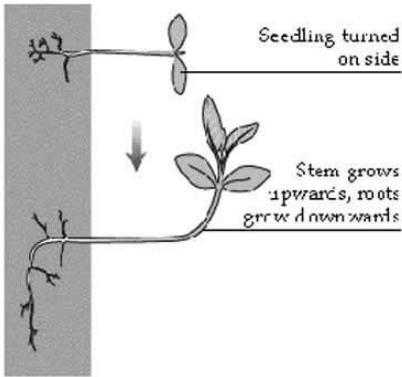


- B. Occurs in all cell of all organisms (even plants)





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#### IV. Plant Responses

- A. Tropism – a plant response to a stimulus (A growth process)
  1. Thigmotropism – Sensitive to the touch (causes growth movement)
  2. Phototropism – Sensitive to light (light causes growth movement)
  3. Gravitropism (geotropism)– Sensitive to gravity (gravity causes growth movement)
    - a. Positive – grows toward
    - b. Negative - - grows away from
- B. Plant Hormones – what causes plant responses
  1. Auxins cause positive phototropism
  2. Ethylene gas -  $C_2H_4$  causes fruit to ripen
- C. Photoperiods - plant response to the changes to the amount of light
  1. Short day plants
  2. Long day plants
  3. Day neutral plants
- V. Transgenic Crops - A plant that has been genetically altered