

Transport System for Plants

To all my students... this notes is meant to make your life easy when comes to understanding the transport system for plants.

What would we be studying in this chapter would be

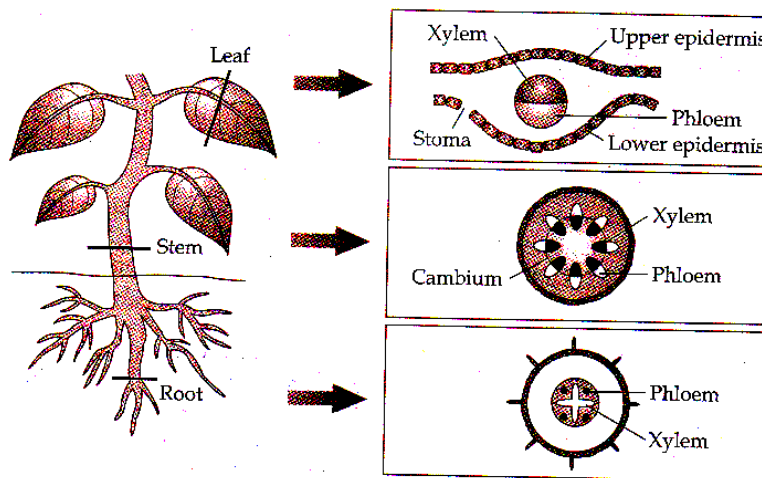
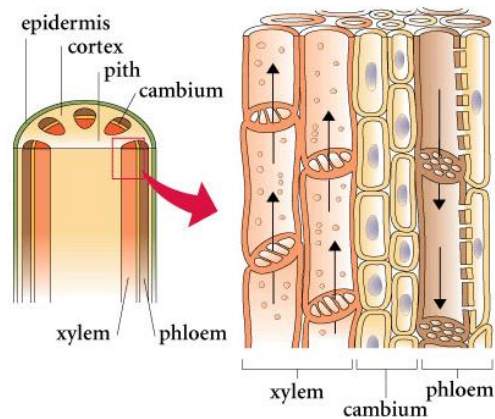
- What is Xylem? What are their role in plants
- What is Phloem? What are their role in plants
- What is Transpiration?
- What affects the rate of transpiration
- What is wilting?
- How does plants wilts?
- What is stoma?

Xylem

The role of **xylem carries water and minerals from the roots to the leaves**

Phloem

The role of **phloem carries dissolves part of sugar from leaves to all parts of plants**



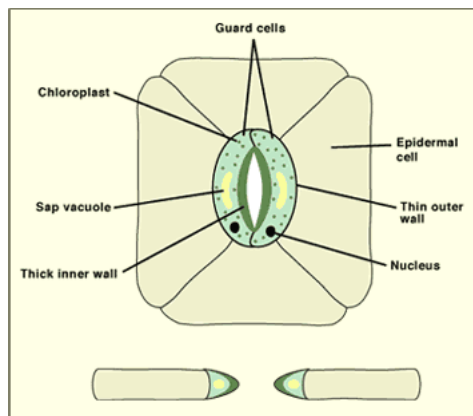
Transpiration

It is a process when **water is loss by evaporation** from the leaves of a plant

Rate of Transpiration is affected by

- Temperature of surrounding**- At high temperature the water evaporates faster
- Light Intensity** - When there is light, this will stimulate the stomata to open larger.
- Movement of air**- Water vapor is blown away when the wind is strong
- Humidity**- When the day is humid, there are more water vapor in the air thus reducing the evaporation process

Stomata



When the stoma is open

- When stoma is open photosynthesis takes place
- Guard cells becomes **turgid and curved outwards**
- Extra water enters the guard cells and excess water will escape to environment
- Causes evaporation of water through leaf

When stoma is close

- Guard cells become less curve
- Photosynthesis cannot takes place
- Rate of evaporation will be slower

Wilting

- Water plays a vital role to enables the plants to be turgid.
- Wilting refers to loss of cell turgidity
- Plants wilts due to several reasons
 - Drought
 - Loss amount of water faster than rate of absorption
 - Fungi and infection of bacteria