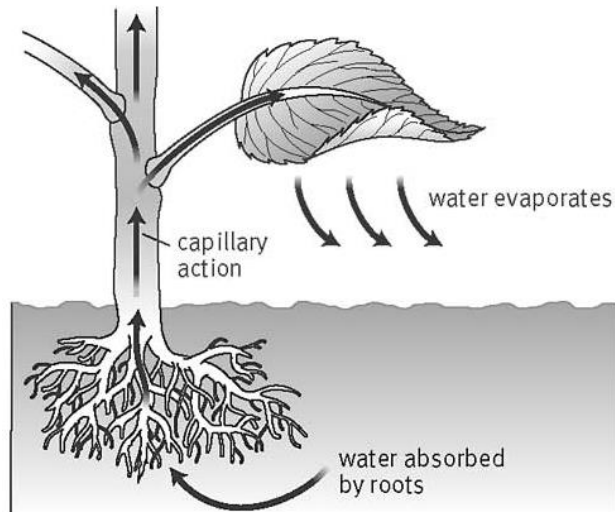


Transport System in Plants

Transpiration of Plants



Transpiration is a process where water is absorbed by the roots and pulls to the surface of the leaves to be evaporated. The water absorbed due to capillary action. This process is called transpiration.

Transpirasi merupakan satu proses dimana nutrient dan air disedut ke permukaan daun . Proses resapan berlaku dari akar ke permukaan daun

Why is water needed for plants? / **Keperluan Air bagi tumbuhan**

1. Plants need water to maintain the turgidity of the plants. Without water the turgidity will fall and leaves will begin to wilt. **Tumbuhan memerlukan air untuk mengekalkan kesegahan**
2. Water also helps to carry minerals **Mengangkut bahan mineral**
3. To cool down the plants **Mengurangkan suhu persekitaran**

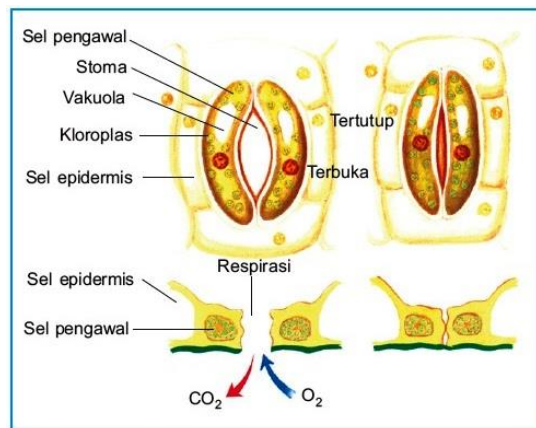
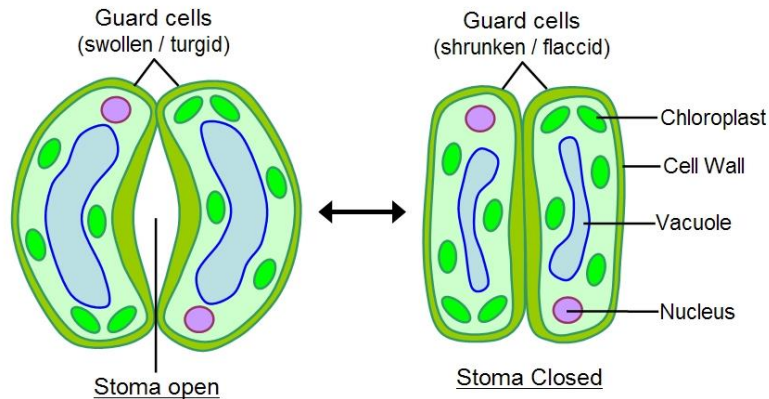
Factors affecting transpiration

1. Temperature/ **Suhu**
2. Light Intensity/ **keamatan cahaya**
3. Wind/ **angin**
4. Humidity/ **kelembapan udara**

Stomata

Stomata

- **Stomata** (sing. **stoma**) = pores in a leaf, mostly on the undersurface
- Each pore is surrounded by a pair of **guard cells**
- Guard cells can change shape to open or close the stoma



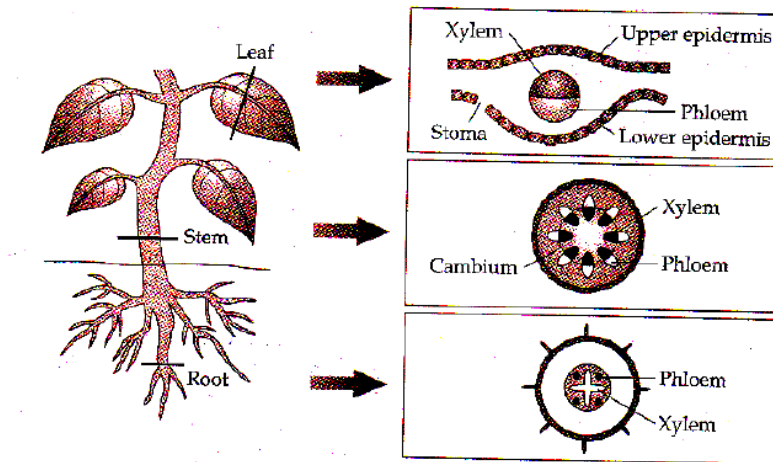
Sumber: Dunia Tumbuhan, Tira Pustaka

Stoma is guard by two guard cells. **Stoma dikawal oleh dua sel pengawal**

Factors influence the opening of stomata **Factor yang mempengaruhi saiz stomata**

1. Carbon dioxide / **Gas karbon dioksida**
2. Light / **Cahaya**
3. Water / **Air**
4. Humidity / **Kelembapan udara**
5. Temperature / **Suhu persekitarab**

Xylem and Phloem

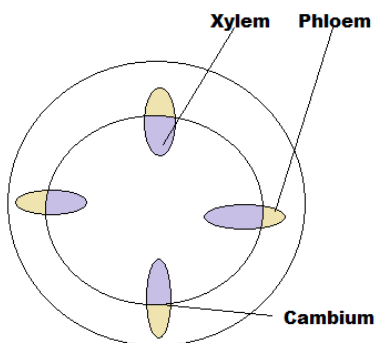


Xylem: **Xilem**

Helps to move water and minerals from the soil. **Mengangkut air dan mineral dari tanah**

Phloem: **Floem**

Transport glucose to other parts of the plants/ **Mengangkut glukos ke kawasan pokok yang lain**



Stem of the plants