

Transport Systems

TRANSPORT IN PLANTS

Plants have a system that transports water and dissolved minerals as well as food manufactured in the leaves. Plants have two vessels that transport substances. The xylem carries water and dissolved minerals. These are hollow vessels that have been lignified so that they do not collapse. Water and dissolved minerals come up from the root by a number of processes:

1.

Cohesion and adhesion: water particles have a tendency to stick to each other and to the walls of the vessels.

2.

Transpiration pull: transpiration is the removal of water from the leaves of the plants. To replenish the water loss via the leaves, water is drawn in from the root up through the stem into the leaves.

3.

Capillarity: Phloem tubes carry manufactured food from the leaves to the root to be stored. These contain sieve tubes as well as companion cells which are associated with each sieve tube.

STRUCTURE OF A STEM

