

How a tree works



Lightning - the energy of lightening causes nitrogen and water to form ammonia and nitrates which travel to the ground in rain water.



Solar Energy - light energy from the sun (sunlight) is the fuel of photosynthesis.

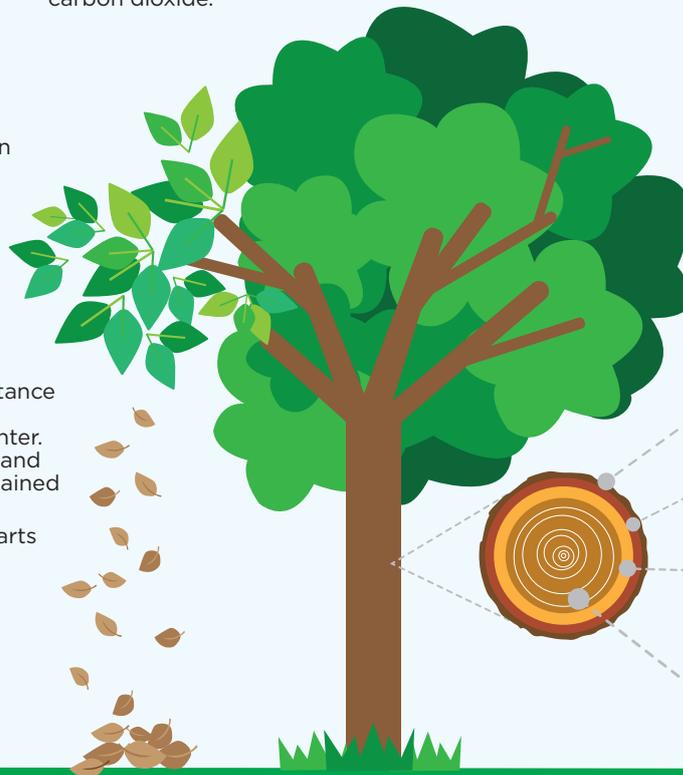


Rain - water is used to dissolve and transport minerals from the soil into the plant.

Leaves - the food factories where light, water and carbon dioxide are made into plant food by a process called photosynthesis.

Leaf fall - reduces wind resistance and transpiration (water loss through the leaves) in the winter. Leaves decay on the ground and return the minerals they contained to the soil.

Flowers - the reproductive parts of the plant, which often use colour or scent to encourage insects to them.



Branches - support leaves in the best position to catch light energy from the sun.

Trunk - supports branches and transports plant food down to the roots and minerals up to the crown (top of the tree).

Bark - the outer 'skin' which protects against sun, rain, fungi and animals.

Cambium - the very thin layer which makes a new layer of sapwood each year.

Sapwood - has many tiny tubes, which carry water and minerals (sap) from the roots to all parts of the tree and plant food from the leaves to the rest of the tree.

Heartwood - gives strength to the stem and is used to store waste products.

Mineral salts - potassium, phosphorus, magnesium and trace elements are taken from the soil.

Feeding Roots - these search for and gather moisture and nutrients from the soil.

Tap root - holds the plant firmly in the ground and exploits deeper water supplies.