



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

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

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

Lightning - supply of nitrogen from the air into rain water.

Air - carbon dioxide is taken into the leaves and oxygen is released through photosynthesis, when there is light. In the dark, green plants take in oxygen and release carbon dioxide.

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

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

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

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

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

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

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

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.

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

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

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

How a Tree Works



Forestry Commission