

Key Vocabulary	
Root	part of a plant which usually anchors a plant to the ground and absorbs water carrying nutrients.
Stem	part of a plant which supports a plant as well as transports water to leaves and sugar to storage areas in the plant.
Leaf	part of a plant responsible for photosynthesis and removal of water vapour.
Flower	reproductive part of a plant which makes and disperses seeds
Pollination	the transfer of pollen to a stigma, ovule, flower or plant for seed production.
Seed dispersal	the movement or transport of seeds away from the parent plant.
Stamen	male fertilising organ of a flower, consisting of a pollen covered anther held up by a filament.
Filament	a thin fibre, found holding up anthers.
Anther	the part of the stamen that contains pollen
Petal	modified leaves (often coloured) designed to attract animals to the flower to cause pollination
Carpel	female fertilising organ consisting of stigma, style and ovary.
Stigma	the tip of the carpel, often sticky to help capture pollen.
Style	long slender stalk connecting the stigma to the ovary.
Ovary	portion of the carpel that contains ovules (eggs) which are fertilised by pollen. Seeds are stored in the ovary ready for dispersal.
Ovule	a female cell which once fertilised by pollen is transformed into a seed.
Photosynthesis	the process where plants use sunlight, carbon dioxide and water to generate sugar (for energy).

Different leaves



Horse Chestnut, Oak, Sycamore, Holly, Birch, Ivy

Different plants have leaves suited to the environment the plant grows in.

- Summer leaves are usually wide and flat.
- Winter leaves are usually waxy and small.

Cacti have needles as leaves, which are designed to protect the water stored inside the stem.

Different flowers



There are many different types of **flower**. They look very different from each other, but they all contain the **stamen** and **carpel**, with **petals** which are usually brightly coloured.

Seed dispersal



Some **seeds** are attached to a parachute which helps them get carried away from the parent plant in the wind.



When a flower is **pollinated**, the **ova** turn into seeds. Sometimes, the **ovary** swells up and becomes a fruit. Animals eat the fruit and excrete the seeds. Fruits are sweet because sugar is stored to help the seeds germinate as well as making animals want to eat them up.




These parachutes can be different shapes and sizes, to help the seed travel the best distance from the parent plant.

Some **seeds** are covered in small hooks so that when an animal brushes past, the seeds cling to the fur (or clothes) and the seeds get moved from the parent plant.

Transportation of water

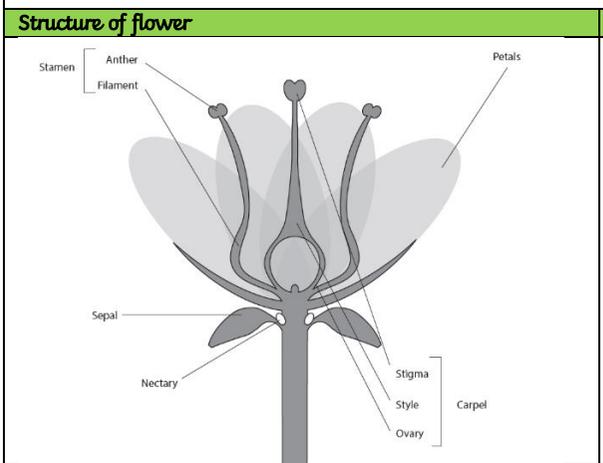


The roots absorb water from the soil, which is then transported up the plant via tubes inside the **stem** called 'xylem'.



Animals get lots of fibre from eating **stems** of some plants. Pandas eat lots of bamboo – leaves and stems

Celery is used in some salads. The part of the celery plant that we eat is the crunchy, juicy **stem**. Why might the stem be juicy?

Structure of plant



Flower: this is the part where seeds are made.

Leaves: catch sunlight and use this to make food.

Stem: holds the plant upright and supports the leaves. It contains tubes (capillaries) that allow water to travel from the roots to the rest of the plant.

Roots: help to anchor the plant to the soil. They also take up water and nutrients.

What plants need to stay healthy



Plants can germinate in some very unexpected places. Many people believe that all plants need soil to germinate. As you can see this is not true.

Germinating seeds need to find light and something to anchor to near a water source. However, to *grow healthily*, the young plants need more than these two things:



- Water
- Light
- Air
- Space
- Minerals and nutrients

- ❖ If plants don't have enough water or light they cannot undergo **photosynthesis**.
- ❖ Without enough space plants cannot get enough water or light for **photosynthesis**.
- ❖ Without enough minerals or nutrients, plants cannot grow or repair.

Quiz

Quiz	
Question 1	Question 2
What are the usual functions of the roots of a plant? A. To attract animals to pollinate the flower B. To transport water to the leaves and flower C. To absorb water carrying minerals and nutrients and anchor the plant D. To absorb light for photosynthesis and excrete water vapour	What is the job of a leaf? A. To attract animals to pollinate the flower B. To transport water to the leaves and flower C. To absorb water carrying minerals and nutrients and anchor the plant D. To absorb light for photosynthesis and excrete water vapour
Question 3	Question 4
Which of the following is not a part of the carpel? A. Stamen B. Style C. Ovary D. Stigma	Which of the following do seeds need to germinate? A. Air and space B. Light and water C. Light and air D. Space and minerals
Question 5	Question 6
Which process happens inside the leaves to produce food for the plant? A. Transpiration B. Photosynthesis C. Absorption D. Pollination	Why are petals colourful? A. To attract animals to pollinate the flower B. To transport water to the leaves and flower C. To absorb water carrying minerals and nutrients and anchor the plant D. To absorb light for photosynthesis and excrete water vapour
Question 7	Question 8
The xylem is found in which part of the plant? A. Roots B. Leaves C. Flower D. Stem	Why are fruits often so juicy? A. They contain lots of seeds B. They contain lots of water C. They contain lots of sugar D. They contain lots of pollen