



The Plant Detective

Student

1

What the different parts of a plant do?

In this picture you can see the four main parts of a plant: the **flowerhead**, the **stem**, the **leaves**, and the **roots**.

**2**

Plants make food in their leaves. To make food plants need **sunlight**, **water** and a gas called **carbon dioxide** which they get from the air. This process is called **photosynthesis**. During photosynthesis the plant produces the gas oxygen.

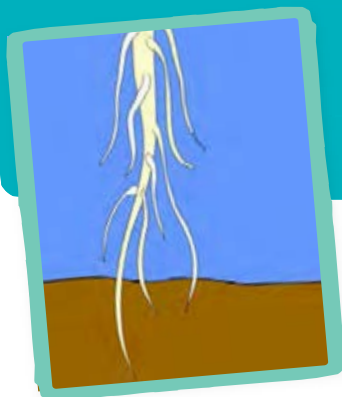
Leaves are usually green because they contain a chemical pigment (or dye) called **chlorophyll**. Chlorophyll can absorb (or soak up) sunlight. Leaves also take in the gas carbon dioxide from the air around them through tiny holes called **stomata**.

**3**

These are the **roots**. Roots take up **water** and **nutrients** from the soil.

They also spread out in the soil and anchor the plant in one place.

Some plants store food in their roots. This helps them to produce new roots and shoots. These root 'stores' have names like tap root, tubers, corms and bulbs.



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4

The **stem** supports the flower and the leaves, holding them up to the sunlight. Water travels from the roots through the stem to all the other parts of the plant.



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Some plants have special ways of protecting themselves from being eaten by animals. Thistles and roses have thorns on their stems. Many plants have developed special features to help them survive in their own particular home or habitat. These special features also help plants to compete with other species for water, sunlight and air.



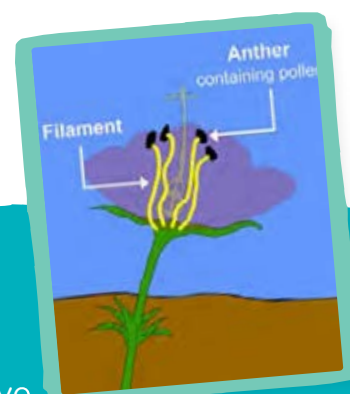
6

This is what the flower centre looks like.



7

The plant's reproductive structures are here. The male part is the **stamen** – it is made up of an anther and a filament, and looks a bit like a lollipop. The anther contains pollen.



8

This is the female part of the flower, called the **carpel**. It is made up of a stigma, a style and an ovary. When 'male' pollen lands on the 'female' stigma pollination occurs. Sometime later a seed is produced.



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Petals are usually brightly coloured and often scented. Bright colours and scent help to attract insects.

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When insects feed on the nectar they are 'dusted' with **pollen** which they carry to the next flower they visit.

**11**

When seeds are dispersed (or moved away) from their parent plant they can start to **germinate** and grow, but only if water and air are present.

