Year 3, Topic 4, Switched on Science

How does your garden grow?

Did you know?

- The tallest tree in the world is the giant redwood. Some can measure over 110m. That's taller than St Paul's Cathedral in London!

Did you know?

- The most expensive spice in the world is saffron, which comes from the crocus flower. Sometimes this really has been worth more than its weight in gold!

Did you know?

- The fastest growing plant is bamboo.
- It can grow up to 90cm in a single day!

Let’s think like scientists!

- What do all plants have in common?
- Why don’t cacti have big leaves like oak trees?
- Why don’t big trees fall over easily?

In this topic, you will:

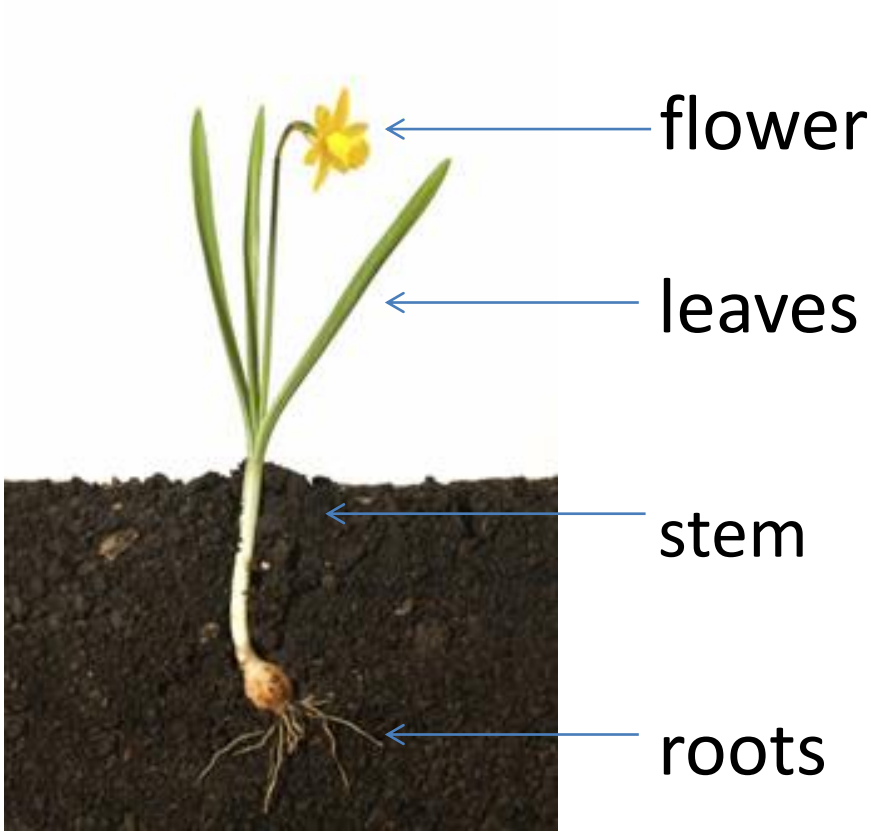
- learn the main parts of a flowering plant
- investigate the jobs of each part of a flowering plant
- learn about water transportation in plants
- learn about what plants need to grow
- learn about why plants have flowers

Key vocabulary

- Stem
- Roots
- Seeds
- Nutrients
- Soil
- Plant
- Water transportation
- Capillary
- Flower
- Leaves

Plant parts

- The main parts of a flowering plant are:



- What is the job of each part?

Plant part jobs

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.

Water transportation

- How could you get water to a person sitting at the top of this tall tree?
- How many different methods can you think of?

Water transportation: capillaries

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

- If you look closely at a leaf you can see the tubes. In a leaf they are called veins.

What do plants need?

- What do you think a plant needs to stay healthy?

What do plants need?

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

Leaves

- What do leaves do?
- Why do plants have them?
- Why are they usually so wide and flat?

Can you guess what trees these leaves come from?

Horse Chestnut

Oak

Sycamore

Holly

Birch

Ivy

- Plants can grow in some strange places.
- Could you set up some experiments to investigate what conditions plants like the best?

Flowers can look quite different

Flowers: key words

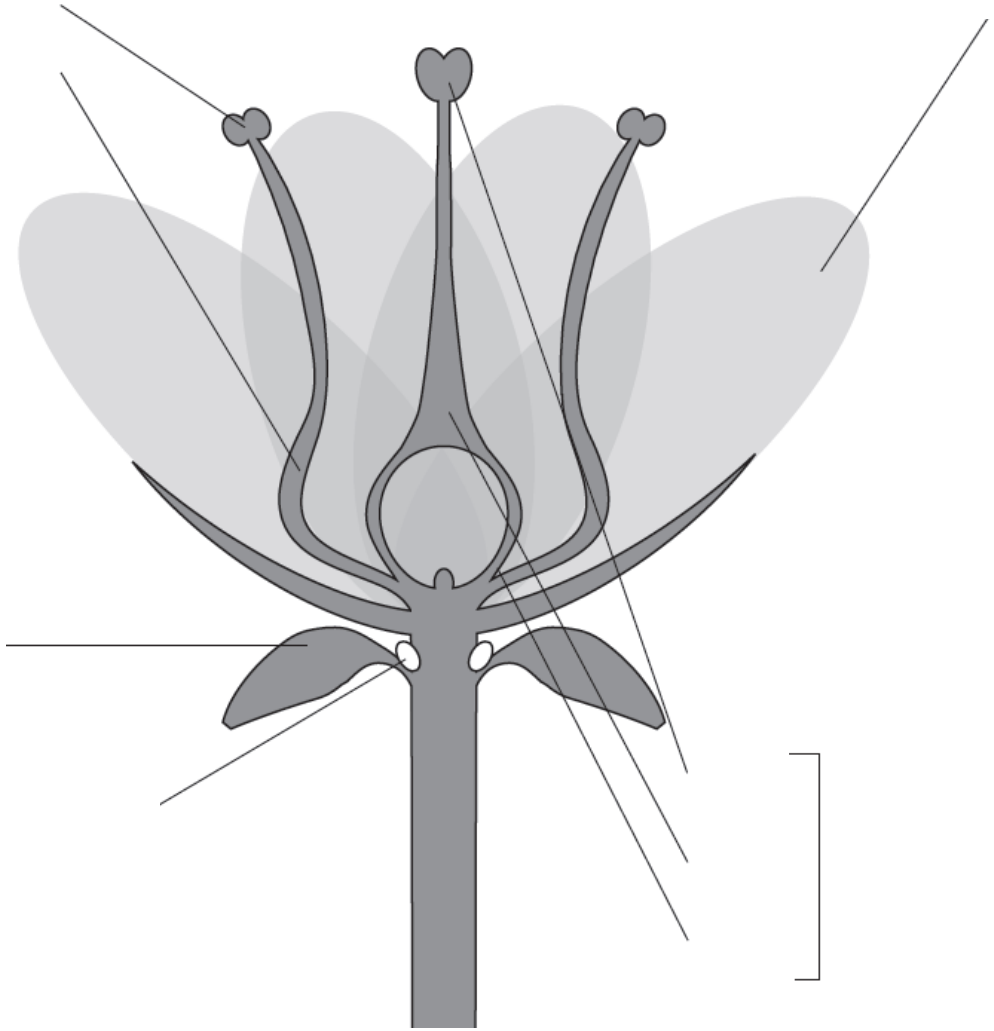
- Pollen
- Pollination
- Ovary
- Sepals
- Stamen
- Carpel
- Stigma
- Style
- Ovule
- Petal

Flowers

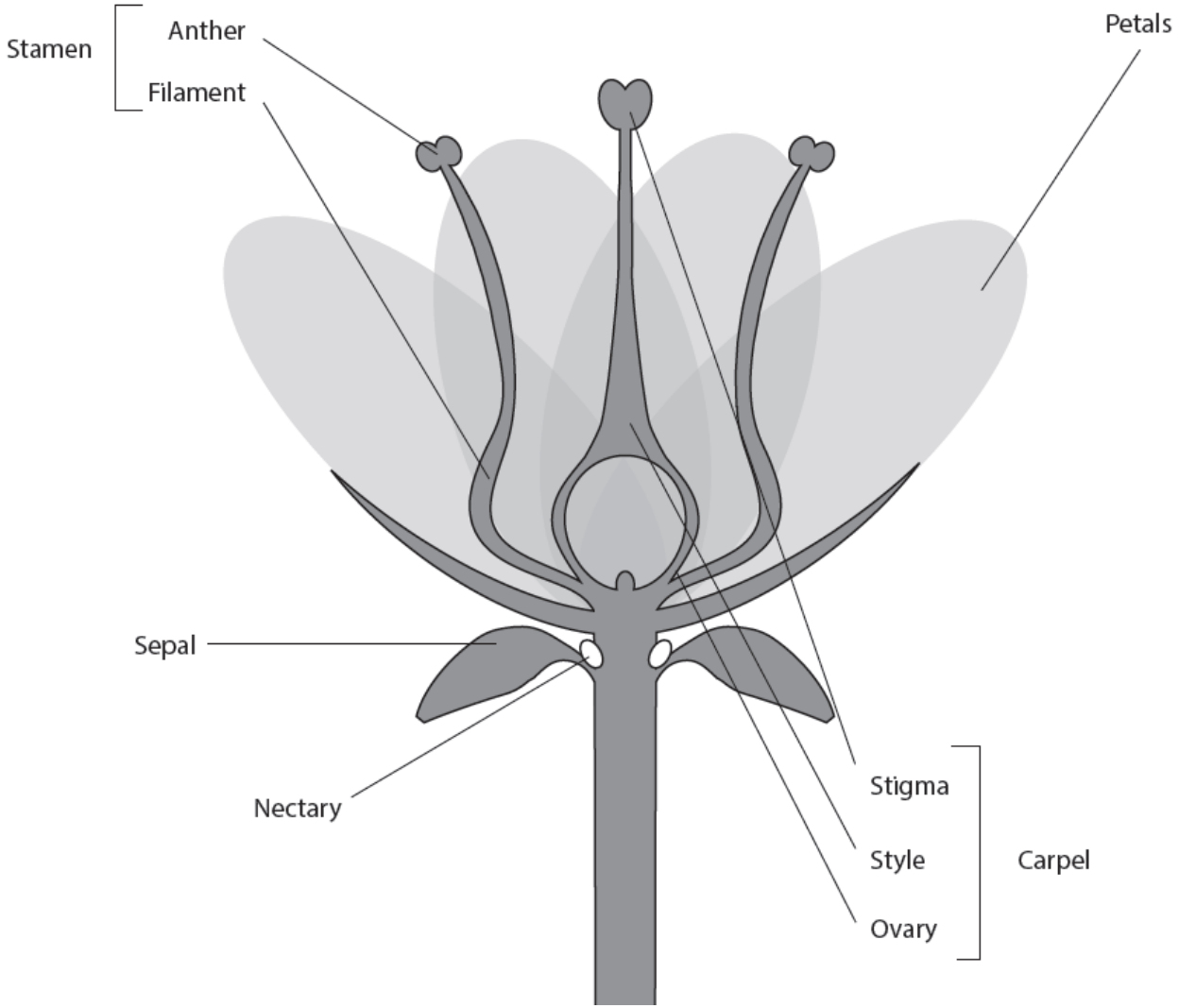
- Why are some flowers so brightly coloured?

Can you name the different parts of a flower?

Can you name the different parts of a flower?



Can you name the different parts of a flower?



Pollen

- Male parts of flowers produce pollen.
- Female parts produce ova (eggs).
- To make a new plant, one pollen has to join up with one ova.
- The pollen has to get from one flower to another flower.
- Some flowers use insects to do this. Some use the wind to carry the pollen instead.

- Some plants use bees or other insects to carry their pollen to other flowers.

Making seeds

- When a flower is pollinated, the ova turn into seeds.
- The ovary swells up and becomes a fruit.
- Apples, cucumbers, peppers and tomatoes are all fruits. Cut them open and you can see the seeds.

Seed spreading

- Why do you think some seeds are packaged inside fruits?
- How might this help the seeds move to another area to grow?

Seed spreading

- Have you seen sycamore seeds?
- Describe how they fall.
- How do you think this shape helps the tree to spread its seeds over a wide area?

Dandelion clocks

- Every little “parachute” on a dandelion clock has a seed attached.
- What happens when the wind blows?
- Why?