

Year 3, Topic 4, Switched on Science



**SWITCHED ON**  
**Science**

Second Edition

How does your garden grow?

# In this topic, you will:

- learn the main parts of a flowering plant
- investigate the job 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

- capillary
- flower
- leaves
- nutrients
- plant
- roots
- seeds
- soil
- stem
- water transportation

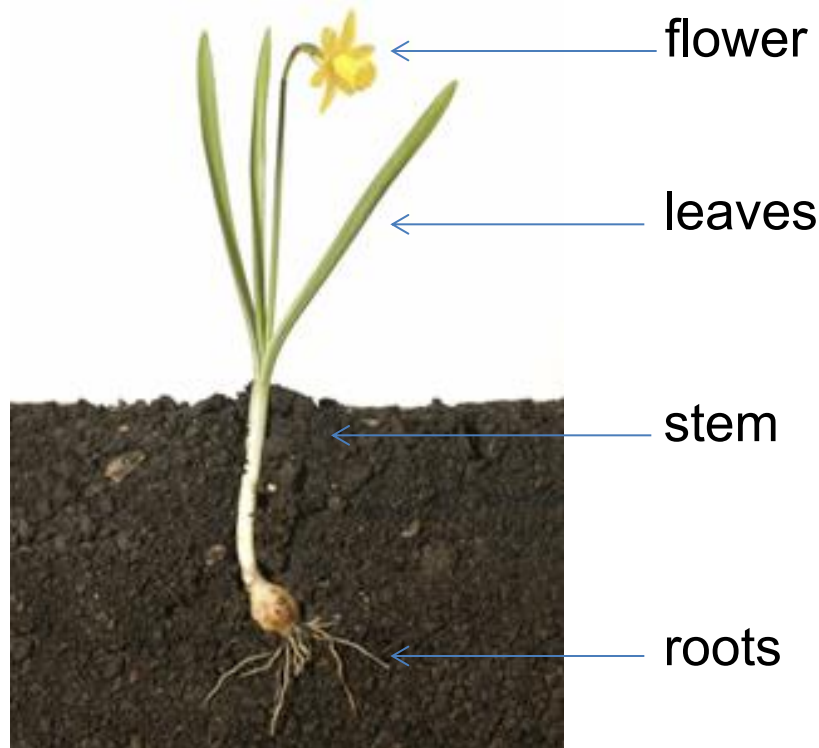


## Did you know?

- The smelliest flower in the world is the titan arum. It smells like rotting meat.
- The oldest plant seed that has ever been grown was 32,000 years old. It was found deep in the ice in Siberia.
- 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.
- The largest seed ever comes from a coco de mer palm tree. It's nearly 20 kg – that's heavier than a sausage dog. It's also shaped like a large bottom.
- The tallest tree in the world is the giant redwood. Some can measure over 110 m. That's taller than St Paul's Cathedral in London.
- The fastest growing plant is bamboo, which can grow up to 90 cm per day.

# Plant parts

The main parts of a flowering plant are:

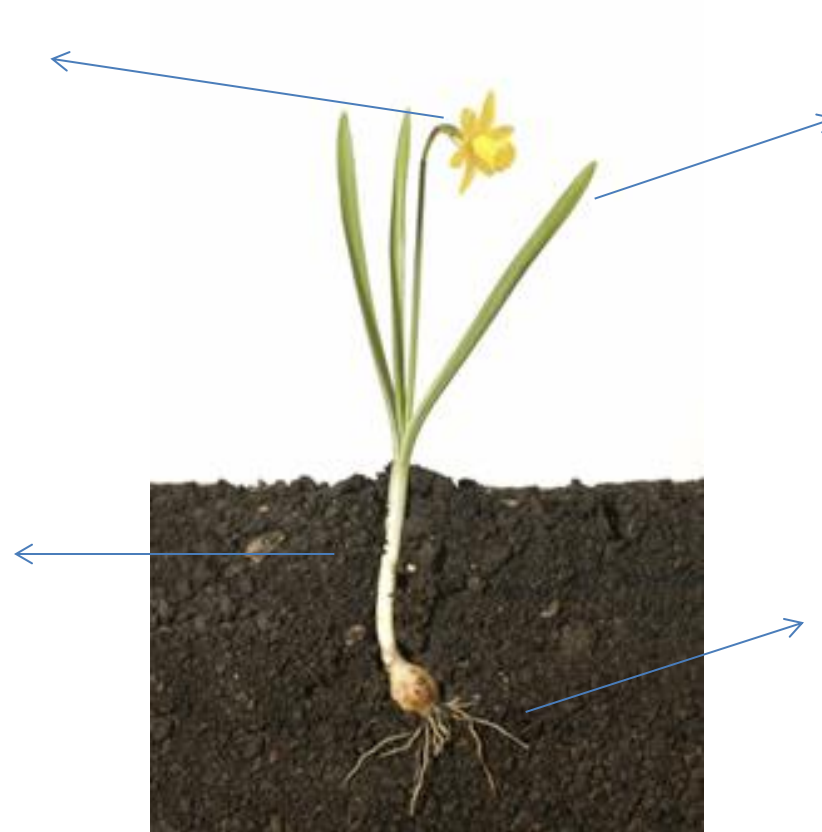


**What is the function  
(job) of each part?**

# Plant part jobs

Flower: this is the part where seeds are made.

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.

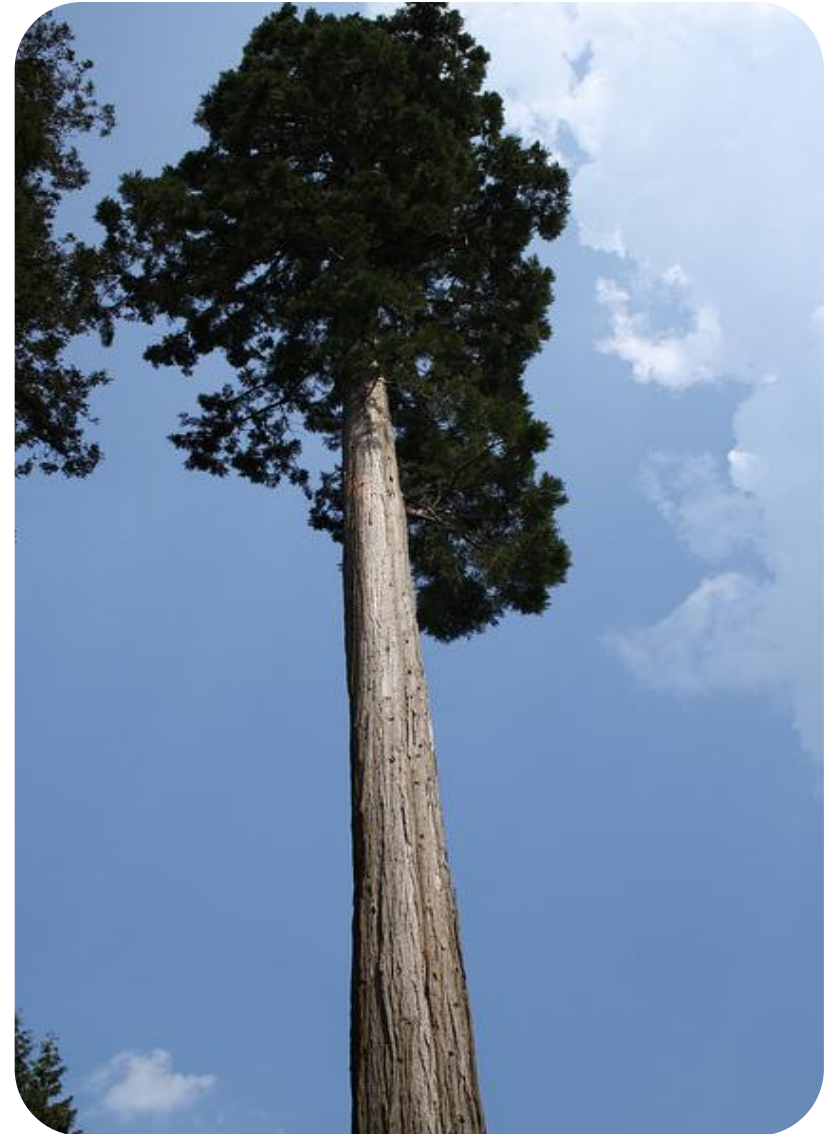


Leaves: catch sunlight and use this to make food.

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

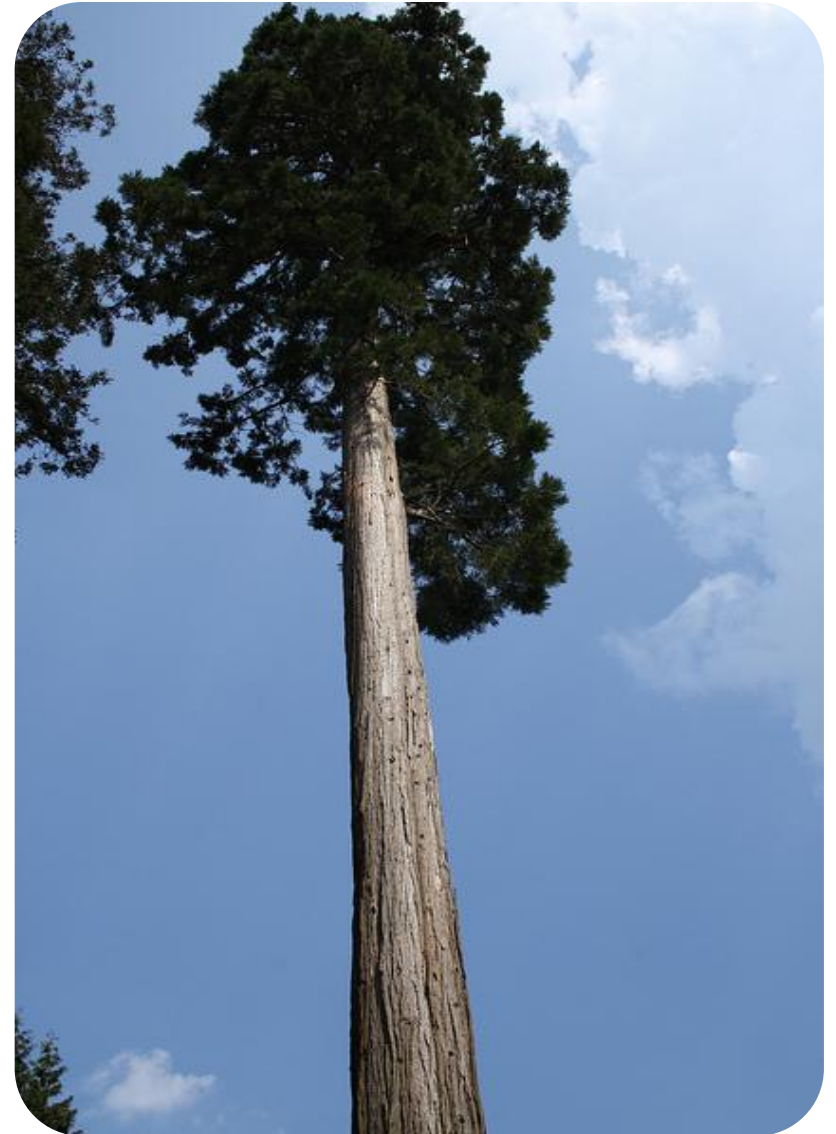
# Water transportation

- 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'.





# Predict what will happen



Predict what will happen.

Write your prediction down.

Explain why you think this will happen.

# Asking and answering questions

What do you want to know and how will you answer your questions?



What...?

Why...?

When...?

How...?

Which...?

Who...?

What if...?

How does...?

# How will you answer your question?

Will you...

- carry out observations over time?
- sort and classify?
- carry out a fair or comparative test?
- research information (using internet, books, people)?

# Do plants need soil?

What do you think?

Explain your ideas to  
your partner.

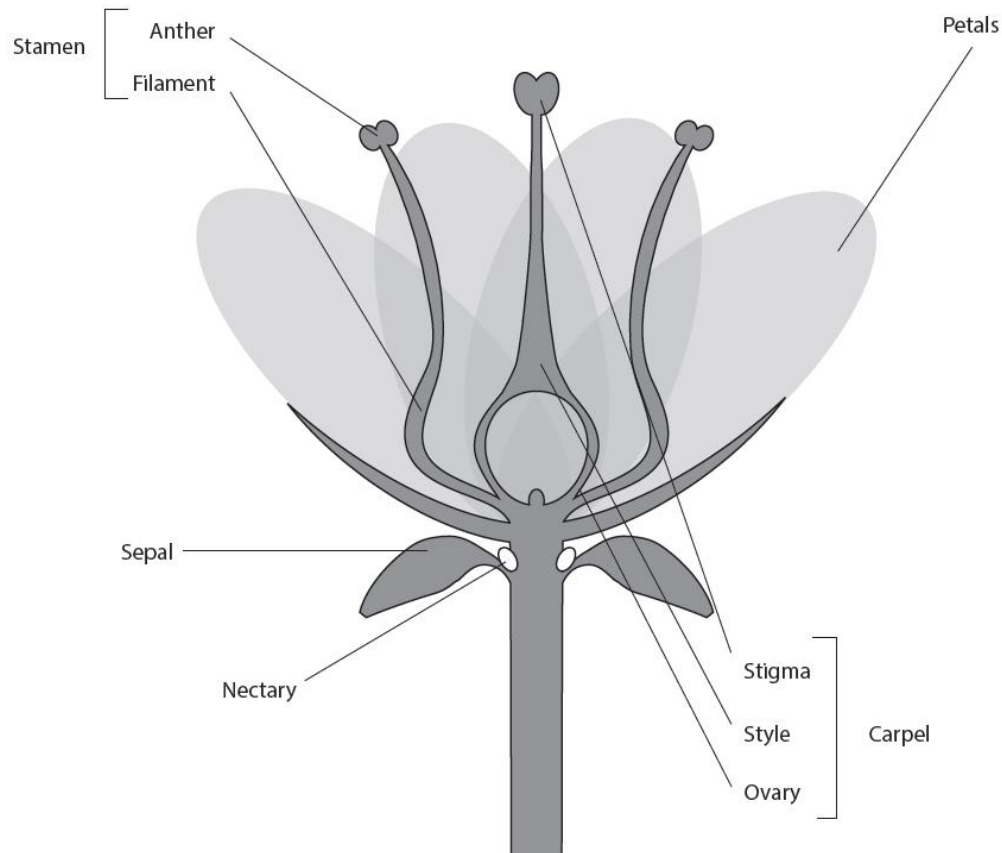


# Flowers: key words

- carpel
- ovary
- ovule
- petal
- pollen
- pollination
- sepals
- stamen
- stigma
- style

Here are the different parts of a  
flower.

Find out what their function (job) is.



Name the different parts of  
this 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

- 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?
- Every little 'parachute' on a dandelion seed head has a seed attached.
- What happens when the wind blows?
- Why?



# Seed spreading

- This is a coconut from a palm tree.
- How do you think its seeds are spread?

These are blackberries.  
Where are the seeds?  
How are the seeds dispersed?



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# How nature inspired an invention



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Find out how the burdock plant inspired George de Mestral to invent the Velcro used in these shoes.



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