



How many
different parts of a
plant can you
name?

Do you know
what each of
these parts
are for?

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Can you match the labels to the correct part of this plant? Write the correct words in the boxes:



root

leaf

stem

flower

BACK

NEXT

Did you get it right?

flower

leaf

root

stem



BACK

NEXT

Do you know what each part of a flowering plant does?

flower

leaf

root

stem



Discuss
your ideas.

BACK

NEXT

What does each part of the plant do?

flowers



Flowers produce seeds which make new plants. They are brightly coloured so that insects like bees will be attracted to them.

leaves



The leaves use light from the sun to make food for the plant. They convert the light to energy. This process is called photosynthesis. Leaves are green because they contain a green substance called chlorophyll.

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These pores are important because the leaves need to take in air as well as sunlight to make their own food. This process is called **photosynthesis**.

The leaves make a chemical called **chlorophyll**, which is used to turn sunlight into energy. It also turns the leaves green in colour!



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Do plants
need food?



BACK

NEXT

Plants need energy to grow.



Where do they get their energy from?

Discuss your ideas.

BACK

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Plants need:

- water
- mineral salts (these are found in soil; they dissolve in water, which plants then take in through their roots)
- light
- air

What
do flowers actually
do? What is their
purpose?



Discuss your ideas.

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A flower is the reproductive part of a plant. In a flower, pollen grains and egg cells combine and grow into seeds; this process is called **pollination.**



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Although the flowers of different plants can look very different, they have the same parts. Flowers contain both male and female reproductive parts.



Before a flower opens, the green **sepals** around the outside of the flower help to protect it.

The stamen holds pollen grains on the anther, at the top of the filament.

For pollination to occur, the pollen grains must come off the stamen and land on the female parts of a flower.



Anther

Filament

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Fertilisation is when genetic information from pollen combines with an egg cell in the ovary of a flower.



Seeds then start to grow inside the ovary. The flower of the plant changes as the seeds grow. Let's find out more...



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Once fertilised, the ovary of the flower starts to swell and grow. Seeds grow inside it, and the petals and stamen gradually fall off the flower.



The ovary becomes a fruit! The pictures above are all of fruit growing on different flowering plants. Do you recognise them? Can you think of some more?

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What is
inside a seed?



Discuss your ideas.

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A seed contains everything needed for a new plant to start growing.



Sunflower seeds have stripy black and white seed coats.



The seed coat around the outside of the seed helps to protect it. It starts to absorb water and soften when the seed lands in soil.

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The seed leaves inside seeds are a rich food source, storing lots of energy. This means that they are a great food source for animals too!

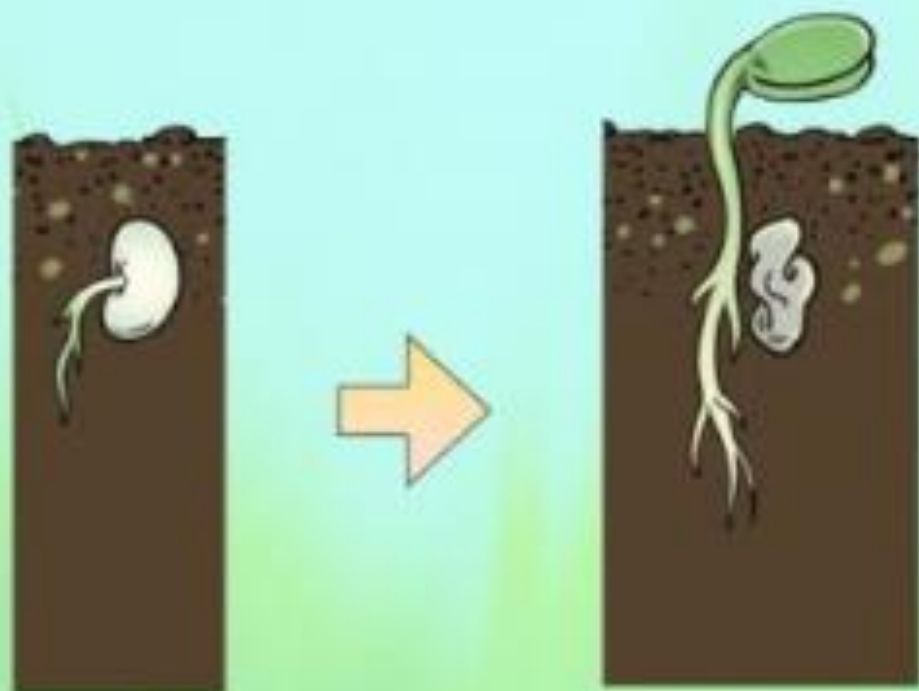


How many different seeds can you think of that form part of our diet?

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Inside the seed, a tiny root and shoot wait to grow out through the softened seed coat.



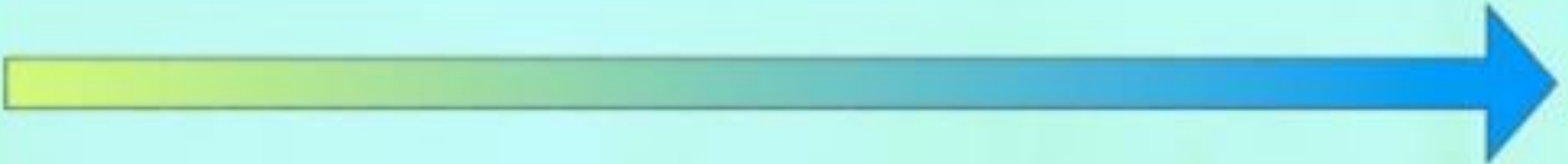
The root grows out first. This anchors the plant. It also means that the plant can start taking in water and minerals straight away.

The young root grows first, then the young shoot.



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pollination

seed formation

Can you correctly order these stages in the life cycle of flowering plants?

seed dispersal

plant growth

germination

fertilisation



BACK

NEXT



germination

plant growth

pollination

fertilisation

seed formation

seed dispersal

Did you
get it right?



BACK

NEXT

What is the name for the process of a new plant starting to grow from a seed?

fertilisation

pollination

seed
dispersal

germination

BACK

NEXT

Did you get it right?



germination

BACK

NEXT



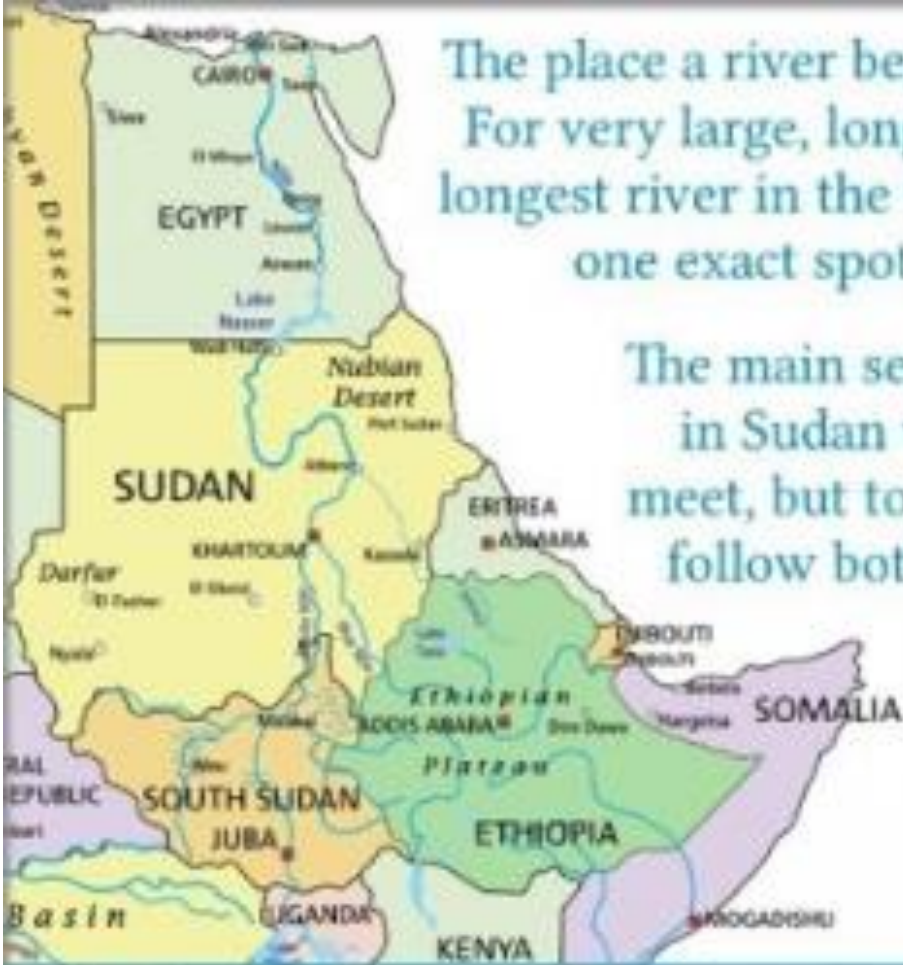
The picture you put together is a picture of the **River Nile** taken from space!



What can you tell me about the River Nile already?

Think, pair, share your ideas.





The place a river begins is known as the **source** of the river. For very large, long rivers like the River Nile (which is the longest river in the world) it can be very difficult to pinpoint one exact spot that is the true source of the river.

The main section of the River Nile starts at Khartoum in Sudan where the White Nile and the Blue Nile meet, but to get to the source of the Nile, you have to follow both of these **tributaries*** to their sources.

Can you find the White Nile and the Blue Nile on this map?

*A tributary is a river or stream that flows into a larger river.





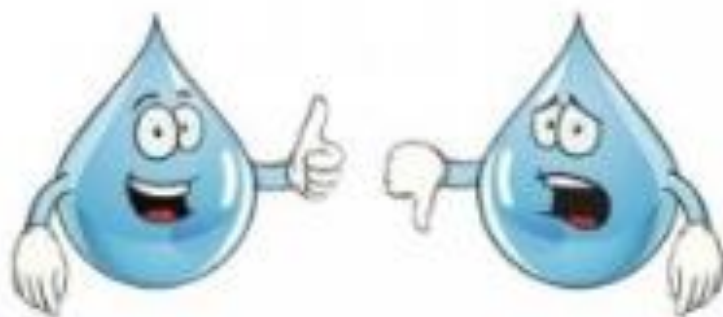
The Nile Delta is on the north coast of Egypt. It is one of the most fertile areas in Egypt and some of the most important cities in Egypt have developed on the delta.

A delta is formed when a river slows down so much that it no longer has the power to carry along **sediment**. Instead, the sediment is deposited, which creates a landform. Rivers slow down as the land gets flatter. The River Nile starts off flowing very quickly in the high mountain areas but by the time it reaches Cairo, it has slowed down enough for a delta to form.



The River Nile flows into the
Mediterranean Sea.

Is this **true** or **false**?



The River Nile is 5438 km long.



Do you think this statement about the River Nile is **true** or **false**?



(We're not going to tell you yet - you'll have to find out yourselves later if your answers were right!)





How do you think we could find the answers to these questions to find out if they are true or false?

What sources of information could we use?



Did you think of these things?



- Looking in an atlas to find out where the River Nile is
- Using information books
- Looking up information on the internet
- Looking at pictures of the River Nile
- Asking experts

Did you think of any others that I missed?



Length

The River Nile is the longest river in the world. It is 6695 km long.

There have been many disagreements about the true source of the Nile (meaning where the Nile starts). Most people now agree that the furthest distance from the mouth (the end) of the Nile is the small streams in Burundi that feed into Lake Victoria.



Lake Victoria, Uganda

There are three different sections of the River Nile:

- The White Nile is a tributary of the Nile. This means it feeds into the main Nile. It starts at Lake Victoria.
- The Blue Nile is another tributary of the Nile. It starts in Lake Tana in Ethiopia.
- The White Nile and the Blue Nile meet in Sudan to form the main Nile River.





Where does the River Nile begin?

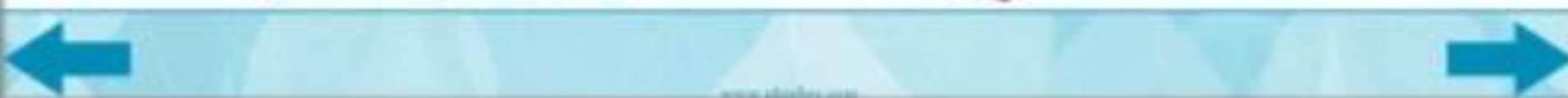
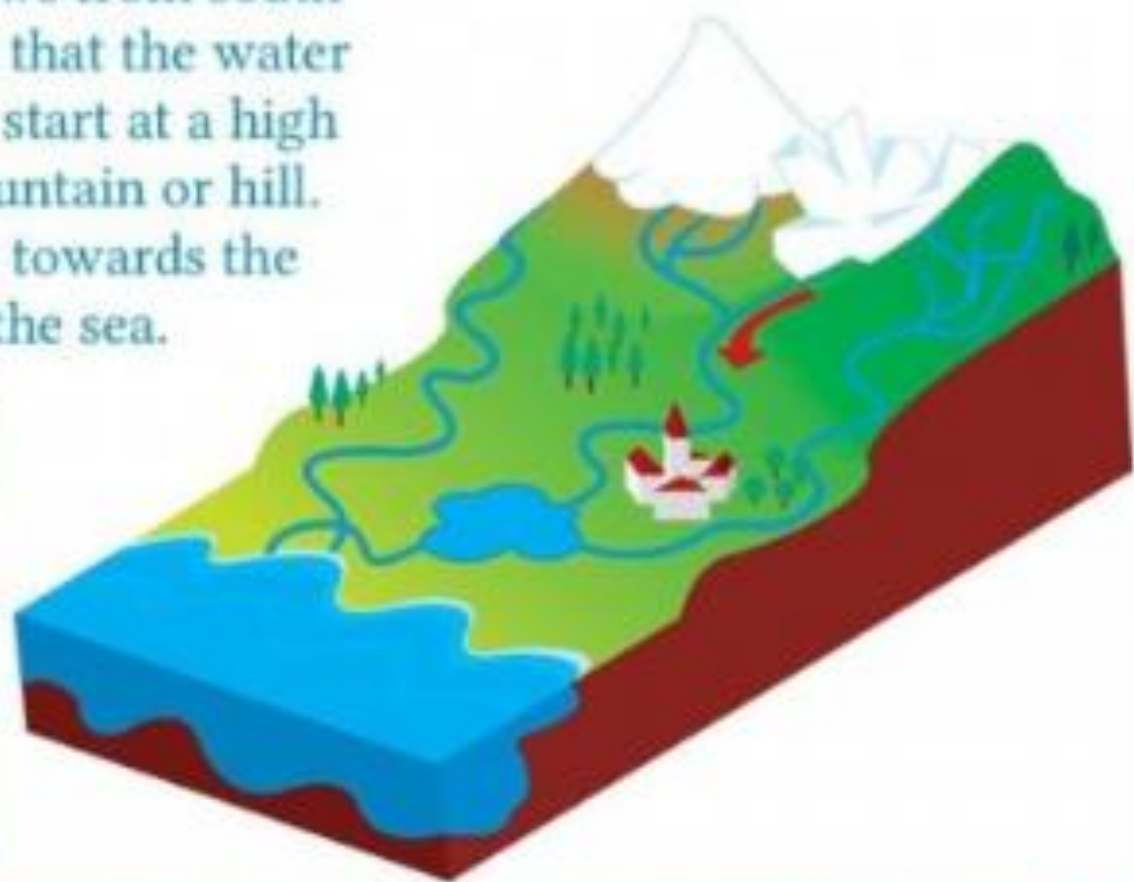


Where does the River Nile end?



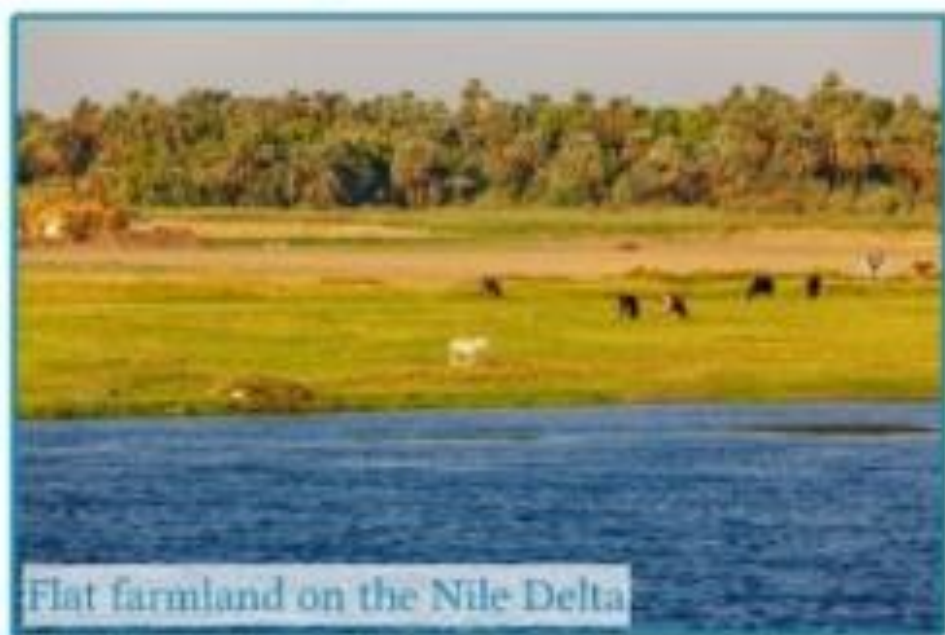
It's true that the River Nile flows from south to north but this doesn't mean that the water is flowing upwards. All rivers start at a high elevation, such as up in a mountain or hill. Gravity then pulls the water towards the lowest point, which is the sea.

The water in a river flows the fastest when it is highest up. It slows down as it gets towards flatter land.



The Nile Delta has the most fertile land in Egypt thanks to all the sediment that is deposited there. This means that many of Egypt's biggest and most important towns and cities have developed on the delta. Nearly half of all the people who live in Egypt live in the delta region.

Alexandria, Nile Delta



Flat farmland on the Nile Delta





During the time of the ancient Egyptians, the River Nile flooded each year. This was because of the monsoon season high up in the Ethiopian mountains that feed into the Blue Nile. The monsoons meant there was much more rain and therefore much more water that fed into the river.

When the floods subsided, it left a black sediment that was very fertile. This meant that the ancient Egyptians were able to grow lots more crops because the silt (sediment) gave the plants lots more nutrients than they would have had. It was the annual flood that enabled the ancient Egyptian civilisation to grow and flourish.



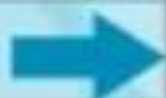
Today we are going on a trip to the Nile Delta!



What do you think we will need to take with us?

What kind of clothes will we need? Why?

What do you think we might see there?



What does this tell you about the Nile Delta?



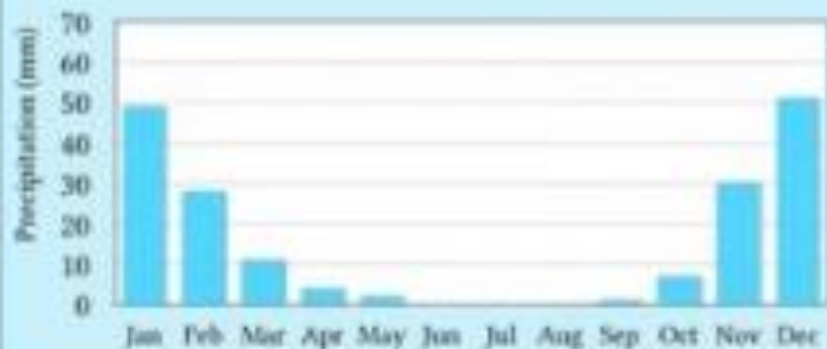
Fields at Giza



What does this tell you about the Nile Delta?



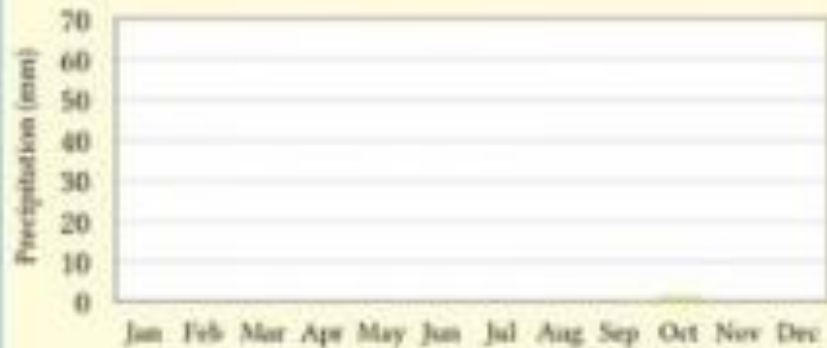
The average precipitation in **Alexandria, Egypt**



Precipitation is the amount of rain, sleet or snow that falls!



The average precipitation in **Luxor, Egypt**



The average precipitation in **London, UK**



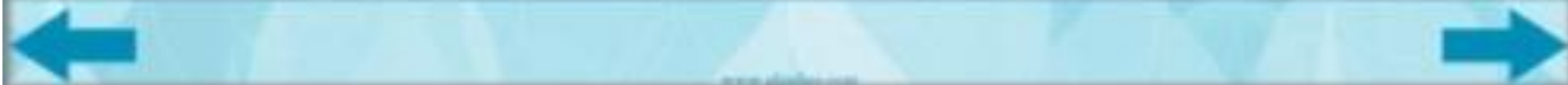
What does this tell you about the Nile Delta?

The River Nile was more important to the ancient Egyptians than to modern Egyptians.

The River Nile is more important to modern Egyptians than to the ancient Egyptians.



Which of these statements do you most agree with? Why?



The Nile in the Past

It was thanks to the River Nile that the ancient Egyptians became one of the first great civilisations on Earth.

Most of the historical sites from ancient Egypt are located along the banks of the Nile.



The ancient Egyptians used the Nile for growing crops, drinking water for both people and animals, washing, cooking, transportation and many other things.

The River Nile flooded every year between June and September. After the flood died down, it left a thick, black mud behind which was excellent for growing crops. It was thanks to the annual floods that the ancient Egyptian civilisation was able to survive and thrive.

FACT

The ancient Egyptians called the Nile the 'Aur' which means 'black'.



The pyramids of Giza at the time of the flood.



How do you think this picture shows how the River Nile is used today or in the past?





How do you think this picture shows how the River Nile is used today or in the past?





So how many uses for the River Nile can you think of now, either today or in ancient Egypt?



Uses for the River Nile:

