

Key Facts

Functions of different plant parts

Roots



- The roots grow into the ground. They are responsible for getting water and minerals to the plant.
- They expand into the ground to widen the area where they can find water. They also help to anchor the plant into the ground.

Stem/Trunk



- The stem/trunk carries the water and nutrients up to the leaves.
- The stem also carries food from the leaves to the rest of the plant.
- Stems grow upwards, helping with pollination, photosynthesis and seed dispersal.

Leaves



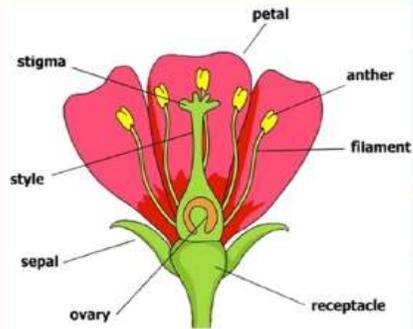
- Leaves use sunlight, air, and water to produce the plant's food.
- Leaves have veins inside them to allow water and nutrients to flow. There are many different sizes and shapes of leaves to fit the plant's needs.

Flowers



- The flower has male and female parts which work together to make seeds.
- The petals of a flower attract insects for pollination. Once the seeds are formed they are dispersed in different ways. Some flowers form berries or fruits to help with seed dispersal.

The Role of the Flower



Flowers play an important role in the reproduction of plants.

The male part of a flower is called a stamen - it is made up of a filament and an anther. The anther contains pollen.

The female part of a flower is called a carpel. It is made from a stigma, a style, and an ovary.

When the male pollen lands on the female stigma, pollination occurs.

This process means that a seed is produced.

Pollination can be done by insects. They are drawn to flowers by their bright petals. When they feed on the flower's nectar they are dusted with pollen. They then spread this to other places when they leave.

Prior Knowledge?

I can observe and describe how seeds and bulbs grow into mature plants.
I know talk about and describe how plants needs water, light and a suitable temperature to grow and stay healthy.

PLANTS

Key Vocabulary

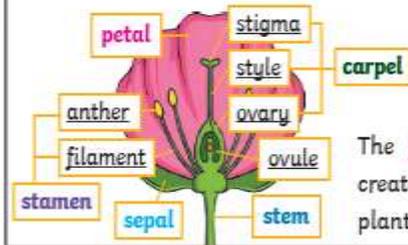
Definition

fertilisation	When pollen meets the ovule to form a seed.
germination	When a seed starts to grow.
carpel	Style (holds up the stigma), stigma (collects common), ovary (contains ovules which can be fertilised to become a new seed).
pollen	A fine powder produced by flowers. It fertilises other flowers of the same species so that they can produce seeds.
photosynthesis	The process by which plants make their own food using carbon dioxide, water and sunlight.
pollination (insect / wind)	Insects carry the pollen or the wind blows the pollen from one flower to another.
sepal	Leaf-like structures that protect the flower and petals before they open out.

Images / diagrams

Seed Dispersal

Seeds can be dispersed by:



The flower's job is to create seeds so that new plants can be grown.

Life Cycle of a Flowering Plant

Seed Dispersal

The fully formed seeds are moved away from the parent plant.

Germination

The seed starts to grow.

Growing and Flowering

The plant grows bigger and forms a flower.

Fertilisation and Seed Formation

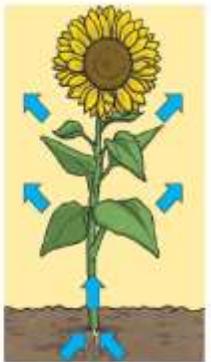
The pollen joins with an ovule and a seed starts to form.

Pollination

Pollen from the anther lands on the stigma and travels down the style.

How Water Moves through a Plant

1. The roots absorb water from the soil.
2. The stem transports water to the leaves.
3. Water evaporates from the leaves.
4. This evaporation causes more water to be sucked up the stem.



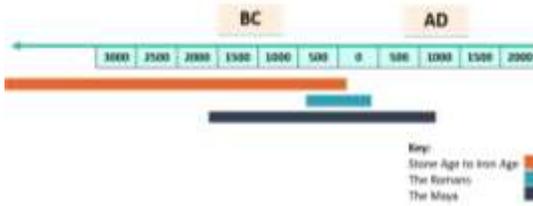
The water is sucked up the stem like water being sucked up through a straw.

Key Facts

- Mayans lived in the area we now call Mexico and Guatemala around 2000BC
- Some of the cultures and civilisations still exist today
- Diets today include many of the same ingredients and those of Ancient Mayans
- The Creation story is of great importance
- Historians believe the Mayans were the most advanced society as they used calendars and writing – know as glyphs – had a number system and understood agriculture, architecture and astronomy
- The Mayans did not use wheels, metals and had no major roads
- They lived in the rainforest and used the resources around them most effectively
- The Mayans disappeared around 900AD – it is believed that about 90% of them died
- There are many theories surrounding why they died out

Prior Knowledge

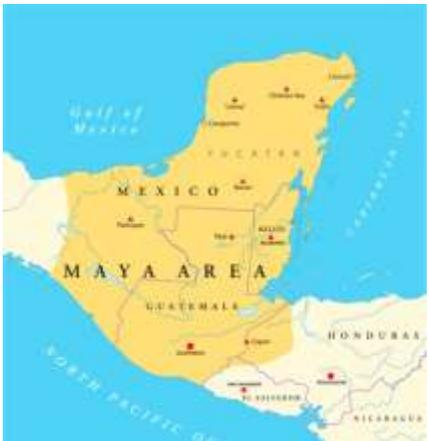
- Children know the 7 continents and know South America on a map.
- Children know about the Amazon rainforest and what that is like.
- Children have just learned about the Stone Age to Iron Age so can understand where this fits in on a timeline.



Mayans Y3

Key Vocabulary	Definition
Conquistadors	Spanish Catholics looking to spread the word of Christ
Creation Story	How the world came to be, and how people inhabited it.
Manuscript	Original writings
Meso America	Middle America – where different countries and people shared similar cultures
Popul Vuh	A collection of Mayan myths and stories including the creation story
Pyramid	A religious building in the shape of a pyramid
Sacrifice	Giving something to the gods to make your prayer stronger – sometimes involved killing things
Temple	A religious building

Image / diagram



Important People / Places

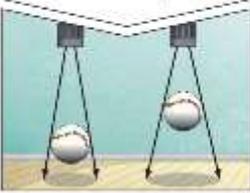
- Tikal Pyramid, Guatemala
- Xunantunich
- Hun Hanahpu – the maize god



Key Facts

- Light is a form of energy that makes it possible for us to see.
- Light is given off by some objects such as the sun.
- Darkness is when there is no light.
- Light can reflect off surfaces like mirrors.

A shadow is caused when light is blocked by an opaque object. A shadow is larger when an object is closer to the light source. This is because it blocks more of the light.



When the light source is directly above the object, the shadow will be directly underneath.



midday

When a light source is to one side of an object, the shadow will appear on the opposite side. The shadow will also be longer.



sunset

Protection from Light



Some types of light, particularly the sun, can be dangerous for our eyes and skin. This is because they contain UV rays that can cause damage. There are several things that we can do to protect ourselves in the sun.

Wearing Sunglasses

Sunglasses reduce the amount of light that reaches our eyes.



Covering up

Clothes can help to block some of the UV rays that can damage our skin.



Sun Cream

This stops our skin from absorbing as many UV rays, protecting it from harm.



Transparent, Translucent and Opaque

When light hits an object, it can be absorbed by the object, reflect the object or pass through an object.

- Transparent objects allow all of the light to pass through. This means that we can clearly see through them.
- Translucent objects only allow some light to pass through them. This means that we can partially see through them.
- Opaque objects do not allow any light to pass through them. This means we cannot see through them at all.

Prior Knowledge?

We l.

LIGHT



Key Vocabulary	Definition
dark	Darkness is the absence of light.
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light.
pupil	The back part of the eye which lets light in.
ray	Waves of light are called light rays or beams.
reflection	The process where light hits the surface of an object and bounces back into our eyes.
retina	A layer at the very back of the eye. The retina takes the light the eye receives and changes it to nerve signals to send to the brain.
shadow	An area of darkness where light has been blocked.

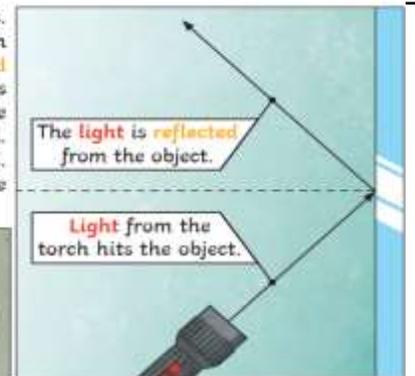
We need light to be able to see things. Light travels in a straight line. When light hits an object, it is reflected (bounces off). If the reflected light hits our eyes, we can see the object. Some surfaces and materials reflect light well. Other materials do not reflect light well. Reflective surfaces and materials can be very useful...



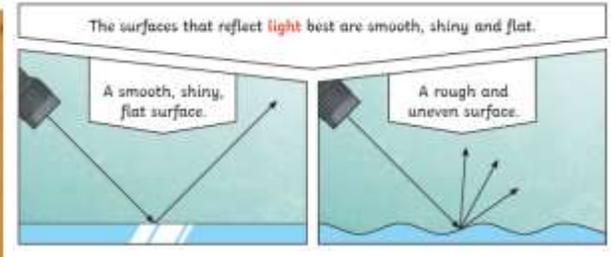
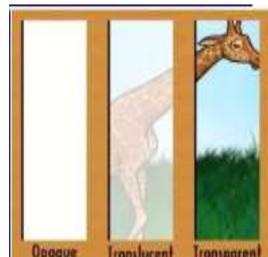
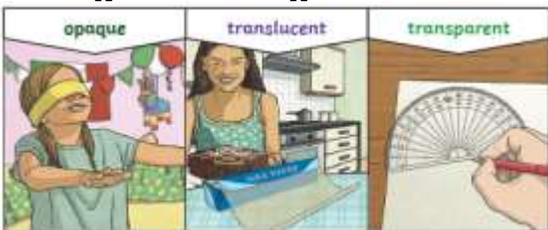
hi-vis jacket



cat's eyes



Images / diagrams



Important People / Places / Events

Key Facts

The equator separates the northern hemisphere from the southern.

The lines on maps and globes help us locate where places are in the world and tell us how far north or south a place is.

There are 5 major lines of latitude.

Lines of longitude help us find out how far east or west a place is. They also separate time zones.

Prior Knowledge

There are 7 continents and 5 oceans.

We live in England which is part of the United Kingdom.

A place's address is unique.

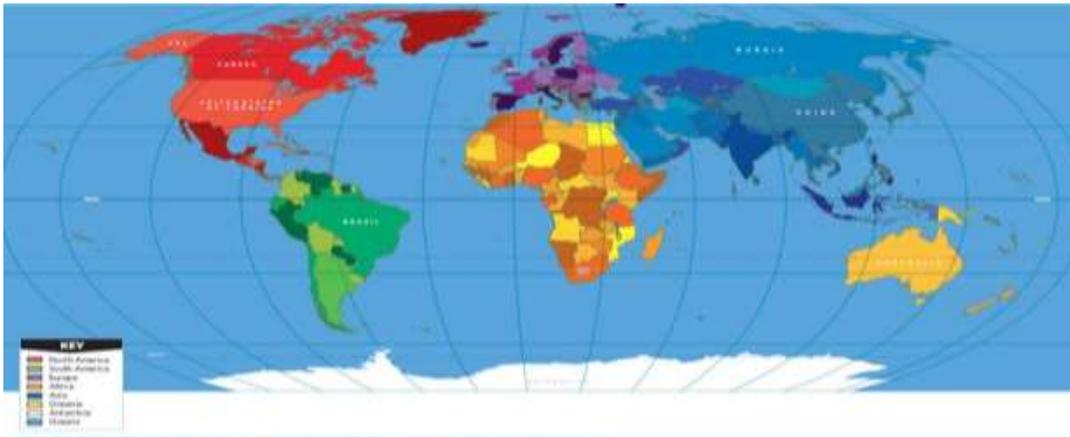
Key Vocabulary

Definition

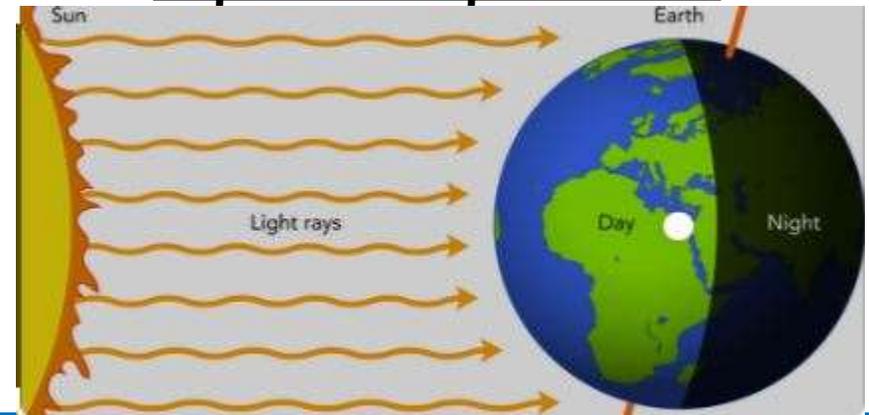
Polar circles	A line of latitude around the north and south pole
latitude	A geographic coordinate that defines the north-south position of a point on the Earth's surface
longitude	Imaginary vertical lines used to measure position on the Earth's surface E-W of the Prime Meridian
axis	An imaginary line around which the Earth rotates
Satellite Navigation	A system of computers which can tell us exactly where on Earth we are
Time zones	Area between lines of longitude following/sharing a standard time

Our World

Image / diagram



Important People / Places



Prior Knowledge

Make a basic structure ☐ Describe the materials that I have used to make my structure

☐ Know the features of familiar products ☐ Find out how to make materials for my structure stronger, by folding and joining

☐ Select appropriate tools, techniques and materials explaining my choices

☐ Use a range of joins ☐ Know how to make structures stronger by folding, joining or by shape

Technical Knowledge

Evaluate a range of existing photo frames.

Experiment with different strengthening and joining techniques.

Design a photo frame that is suitable for a particular purpose using their knowledge on making stable structures.

Structures can be made stable by using triangulation.

Structures are reinforced using additional materials. This makes them stronger and more stable.

What will I be able to do after I make my Photo Frame?

Design : Use what I have found out about photo frames to design a frame of my own. Label and annotate my design in detail, clearly identifying materials needed and how to make the structure stable.

Make: Use the correct joining materials to make my product long lasting. Use the best material and joining method to make a stable structure.

Evaluate: Say which material was the best to use and why. Explain how the structure was/was not stable enough. Explain how my photo frame could be improved.

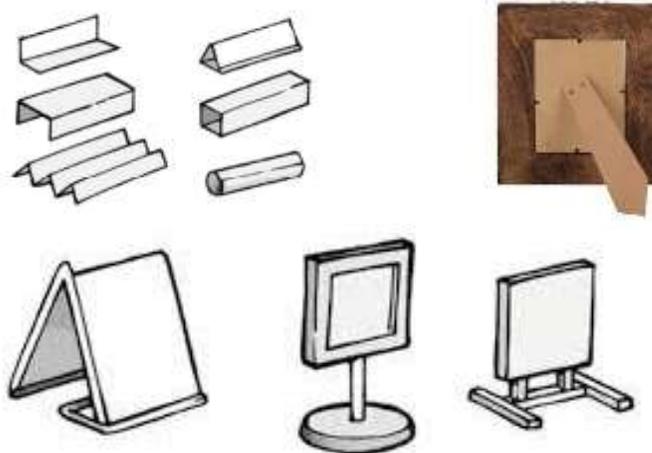
Photograph Frame – My favourite place in the world. **Year 3**

<u>Key Vocabulary</u>	<u>Definition</u>
Picture frame	A container that borders the edge of a picture, and is used for the protection, display, and visual appreciation of objects and imagery such as photographs, canvas paintings, drawings and prints, posters and mirrors.
Structure	Something built or constructed like a bridge, building or dam.
Strengthen	To make or become stronger.
Reinforce	To strengthen or support an object, especially with additional material.
Stable	Firmly fixed
Temporary	Lasting for a limited period of time. Not permanent.
Permanent	Lasting or remaining unchanged indefinitely.
Triangulation	Formation of or division into triangles to make a structure strong and stable.
Free standing	Not attached to or supported by another structure.

Image / diagram



Triangulation



Health and Safety

Hold scissors safely: blades closed, hand around the blade, always walk when carrying scissors.



Key Facts

- Comment t'appelles-tu? – What is your name?
- Je m'appelle... – My name is ...
- être – to be
- Quel âge as-tu? – What is your name?
- je suis – I am
- Adjectives for boys and girls have different spellings and pronunciations
- Months of the year do not have capital letters in French.

Prior Knowledge

Bonjour – hello
Salut - hi

C'est moi! Year 3

Key Vocabulary

Definition

Écoute	Listen
Répète	Say it back (repeat)
grand / grande	tall
petit / petite	small
Il y a ...	There are ...
j'ai ___ ans	I am ___ years old
Mon anniversaire c'est en _____.	My birthday is in _____.

Image / diagram

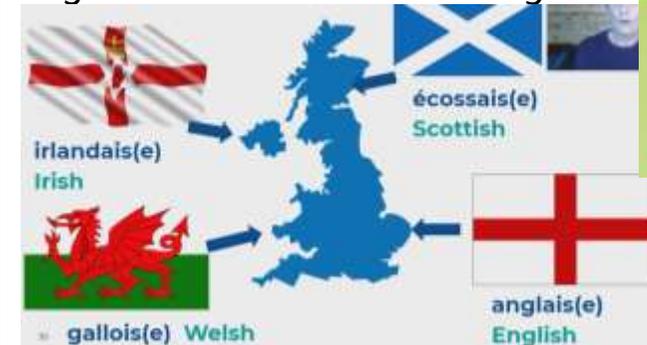
janvier	juillet
février	août
mars	septembre
avril	octobre
mai	novembre
juin	décembre



1	un	7	sept
2	deux	8	huit
3	trois	9	neuf
4	quatre	10	dix
5	cinq	11	onze
6	six	12	douze

Important People / Places

Royaume-Uni – United Kingdom





Year 3 Route Planners

Key Learning

- To create 2Go commands to move a turtle along a route.
- To create commands in 2Go in which the turtle turns using rotation.
- To plan algorithms and write 2Go code that uses angle of turn.
- To use 90° and 45° angles in 2Go.
- To use the repeat algorithm and coding in 2Go.

Key Resources



Key Vocabulary

Algorithm

A set of instructions in order.

Angle

(In relation to rotation), this gives a number value to the amount of rotation movement. For example, a quarter-turn is 90 degrees (°).

Command

A single instruction, such as, 'turn left'.

Degrees

The unit used to measure rotation.

Route

A path an object takes to get from one place to another.

Turtle Object

A type of object that moves by coding either directions or angles of rotation and distance to move.

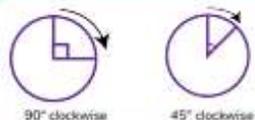
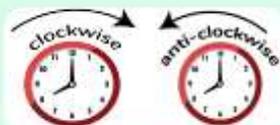
Repeat

This can be used to make a block of commands run a set number of times.

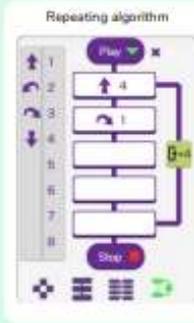
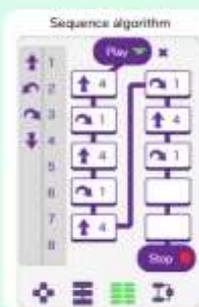
Rotation

The action of turning around a centre point. This is a circular movement where an object changes its direction.

Key Images



Rewind



Year 3 Route Planners

Key Questions

Which angles can the turtle rotate in one rotation?

90° and 45°.

How many commands can be in a program with a sequence?

Up to 10 commands.

How do you work out the angle and direction for a command?

Decide whether the turtle needs to rotate clockwise or anti-clockwise then decide whether the turn uses 90° or 45° angles turns and how many for each turn.

Which shapes can you make using repeat?

Square, rectangle, triangle, octagon.



Year 3 Branching Databases

Key Learning

- To understand the concept of using 'Yes' or 'No' questions to sort objects.
- To understand and use a branching database effectively.
- To plan and create a branching database.
- To test and debug branching databases to correct errors.

Key Resources



Key Vocabulary

Binary Choice

A decision between only two distinct options.

Data

A set of facts or information that help us learn something or make decisions.

Debug/Debugging

The process of finding and fixing mistakes (known as bugs) in computer code or a program so that it works the way it's supposed to.

Binary Tree

Another name for a branching database.

Database

A place where data is stored or organised. It helps us find information quickly.

Record

A collection of related data or information that is stored together as a single unit.

Branching Database

A type of database that uses yes or no questions to help sort and identify objects.



Year 3 Branching Databases

Key Images



Click to add a new record



Click to sort records in the tree



Edit records



Edit tree

Key Questions

What is meant by data?

Facts about something; data can be words, numbers or pictures. For example, the class register contains data about the names, addresses and attendance of the children in the class.

What is a branching database?

A branching database is used to sort and classify groups of objects. It is used to help identify objects by answering questions with either answer 'yes' or 'no'. Branching databases can also be called binary trees.

What makes a good question on a branching database?

Questions on a branching database should be binary choice, which means they can only have one or two answers. On a branching database, these answers should be 'yes' or 'no'. A good question should split the group roughly in half, with half of the records answering 'yes' and half the records answering 'no'.

What is a database used for?

A database is used to store, organise, manage and retrieve data and information quickly and easily.



Key Learning

- To learn how to open Slides, add text and change how it looks.
- To learn how to add slides, change slide designs and insert pictures into a presentation.
- To add animations to pictures and text, and transitions between slides.
- To create an effective presentation.
- To complete and present a slideshow to an audience.

Key Resources



Google Slides

Key Vocabulary

Animation

Adding movement to still objects such as text and images.

Font

A design of letters, numbers, and symbols, like Arial or Times New Roman.

Format

Change how media, such as text or images, look on a page.

Handles

A square that appears around a selected image, allowing it to be edited and formatted.

Media

Information in the form of text, sounds, images, or video.

Google Slides

A computer program that helps you make a slideshow presentation to show information.

Shape Styles

Set of ready-made designs you can use to quickly change how a shape looks.

Slide

One page of your slideshow presentation.

Speaker Notes

Words under a slide to help the presenter remember what to say when they present.

Slideshow

A collection of pages arranged in sequence that contains text and images to present to an audience.

Transition

How a slide moves from one to the next.



Key Images



Key Questions

What is presentation software used for?

A presentation program is used to present information to an audience in an engaging way, such as including text, pictures and videos. Google Slides is an example of a presentation program.

What features can you use to make a Google Slides presentation more engaging?

You can give your presentation an engaging look and feel by using different fonts, colour schemes and using an interesting layout. Using animations and interesting transitions between slides would also be engaging.

What media can you add to a Google Slides presentation?

In a Google Slides presentation, you can add media such as images, audio, video clips, tables, and animations to make slides more engaging, interactive, and visually appealing for your audience.