Knowledge Organisers

Year 3

Knowledge Organisers

Knowledge Organisers are designed to help ensure that all children remember all the key learning from their time at EPJS. For each unit of work, we set out the most important vocabulary, ideas and concepts that we want children to master, because it will be helpful for future years.

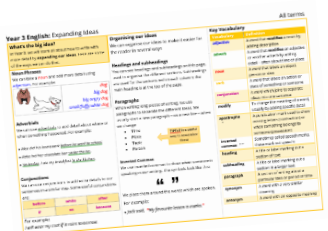
At the end of each academic year, we complete assessments of children's knowledge in key subjects and use this to inform both our teaching, and our judgements of children's attainment in those subjects. We also encourage families to make use of the knowledge organisers to discuss and review learning.

How to use Knowledge Organisers

Just as lots of practice of times tables or letter sounds can be useful for mastering maths and reading, you can also get better at other subjects by mastering the key knowledge. One of the most valuable ways of revising knowledge is through the 'testing effect'. This is as simple as it sounds: testing yourself (or asking someone to test you) to see if you can remember key information.

Importantly, it doesn't mean you need to get everything right every time. It's much better to make mistakes in the learning process, so that you focus on corrections and knowing what you know best. You can use the knowledge organisers to help with this in different ways:

New learning



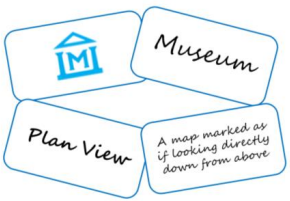
When you first meet a new topic, just browsing the organiser can help you to identify what you already know, and what is new learning for you.

Quizzing

Vocabulary	Definition
	Rocks which are resistant to erosion so they last longer.
erosion	
fossil	A fossil is the remains or the impression left by a prehistoric plant or animal embedded in rock.
hard rocks	Hard rocks need to be split by tools e.g. granite.
impermeable	Impermeable rocks do not let water pass through.
	Permeable rocks allow water to pass through.

You can quiz yourself on your knowledge, either by covering up parts of the organiser, or by asking someone else to ask you questions based on its contents

Flashcards



Some children like to make and play with flashcards or 'matching pairs' games to help master things like new definitions or matching symbols to meanings.

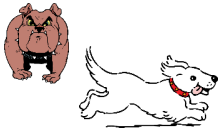
Year 3 English: Expanding Ideas

What's the big idea?

In Year 3, we will learn all about how to write with more detail by **expanding our ideas**. Here are some of the ways we can do that.

Noun Phrases

We can take a noun and add more detail using adjectives. For example:



dog
big dog
big angry dog
small fluffy white dog

Adverbials

We can use adverbials to add detail about where or when something happened. For example:

- *Max did his homework before he went to school.*
- *Katie hid her chocolate bar under the tin.*
- *Yesterday, I ate my breakfast in the kitchen.*

Conjunctions

We can use conjunctions to add extra details to our sentences in a similar way. Some useful conjunctions are:

before	**while**	**after**
if	**so**	**because**

For example:
*I will wear my coat **if** it rains tomorrow.*

Organising our ideas

We can organise our ideas to make it easier for the reader in several ways

Headings and subheadings

You can see headings and subheadings on this page, used to organise the different sections. Subheadings are used for the sections within each column; the main heading is at the top of the page.

Paragraphs

When writing long pieces of writing, we use paragraphs to separate the different ideas. We usually start a new paragraph – on a new line – when we change

- **T**ime
- **P**lace
- **To**pic
- **P**erson

TiPToP is a useful way to remember these

Inverted Commas

We use inverted commas to show when someone is speaking in our writing. The symbols look like this:

“ ”

We place them around the words which are spoken.

For example:

- *Jack said, “My favourite lesson is maths.”*

Key Vocabulary

Vocabulary	Definition
adjective	A word that **modifies** a noun by adding description
adverb	A word that **modifies** a verb or another word by adding detail – often about time or place
noun	A word that labels an object, person or idea
verb	A word that labels an action or state of something or someone
conjunction	A word which joins to separate ideas into one sentence
modify	To change the meaning of a word, usually by adding specific detail
apostrophe ’	A punctuation mark used to show missing letters (contraction) or when something belongs to someone (possession)
inverted commas “ ”	Sometimes called speech marks, these mark out speech:
heading	A title or label marking out a section of text
subheading	A title or label marking out a section in a larger text
paragraph	A section of writing about a particular idea or period of time
synonym	A word with a very similar meaning
antonym	A word with an opposite meaning

Year 3 Art & Design: Ben Cavanagh

Autumn

Ben Cavanagh is a mural artist living in Littlehampton, West Sussex.

He specialises in big, colourful designs and characters drawn from imagination. Ben is inspired by street art, graffiti, anime, mythology and the natural world.

He spends his time between painting large scale murals, digital art pieces and creating one off art on unusual objects, from spray cans to train tickets.

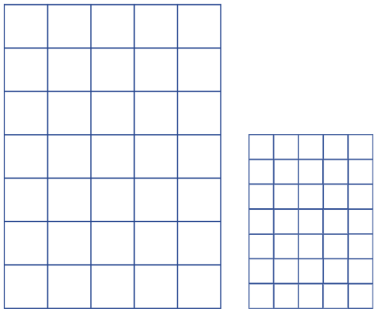
Recently Ben has worked with wild in art to paint a Shaun the sheep sculpture for the Brighton art trail.

Examples of his work

Custom painted Shaun the sheep for the Brighton art trail.

Key Vocabulary

Vocabulary	Definition
Drawing	Use of various instruments to mark paper or another two-dimensional medium.
Drawing materials: pencils	Contain a solid core of graphite and organised in a scale of hardness.
Drawing materials: colour pencil	Available in a range of different hues. Allow the user a high level of precision, control & depth.
Texture and surface pattern	How something would feel, and the shapes and patterns on the object's surface.
Grid method	A technique used to scale up by drawing a grid over a reference image and a proportional, larger grid on the final surface.
Scale	The overall size of an artwork or objects within it.



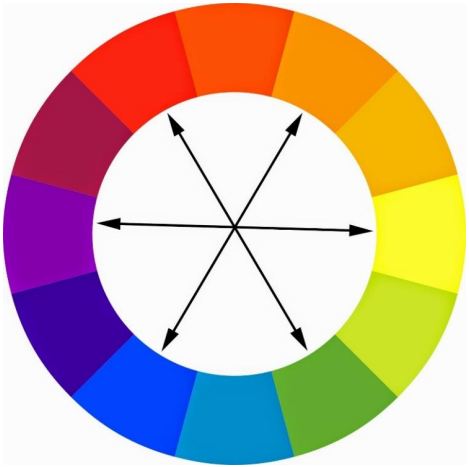
Year 3 Art & Design: Printing

Autumn

Kandinsky's Circles

Wassily Kandinsky is a famous abstract artist. Perhaps his most famous piece is **Colour Studies: squares with concentric circles.** It is well known for its use of vibrant and complementary colours.

Complementary colours:



In colour theory **complementary colours** appear opposite each other on the colour wheel. The colour complement of each primary colour (primaries are red, yellow and blue) can be obtained by mixing the two other primary colours together.

For example, the complement of red is green (a mix of yellow and blue); the complement of blue is orange (a mix of red and yellow); and the complement of yellow is violet (a mix of red and blue).

Key Vocabulary

Vocabulary	Definition
Mono-print	A single print taken from one design
Abstract art	Art in which it doesn't look like reality. It is made up of shapes, colours or different forms
Vibrant	Colours which are particularly bright
Complementary colours	These colours appear opposite each other on a colour wheel.
Primary Colours	The core colours of red, blue and yellow.

Mono-printing guide:

1. Create Your Design on the tile.
2. Roll poster paint onto the tile.
3. Put Paper onto the tile.
4. Apply Pressure to Paper to Transfer Paint.
5. Pull the Print.
6. Put the Print Somewhere Safe to Dry.

Year 3 Art & Design: 3-d sculptures

Spring

Zaha Hadid

Zaha Hadid was an Iraqi-British architect. She used her skills in maths and art to design innovative and structurally challenging buildings. Often the forms she designed were curved, like giant waves cresting on a shore made of concrete. During her lifetime, she won the Pritzker Prize which is an architect's highest honour.

Heydar Aliyev Center, Azerbaijan

Clay Tools

Different tools can be used to create different effects when working with clay.

	Serrated Tool: used for making surface patterns. It has a jagged edge.
	Pointed Tool: used for making holes and fine lines.
	Flat Scraper: used to smooth/refine larger areas of clay or scoop.
	Scalpel Tool: used for precision marks/cuts

Key Vocabulary

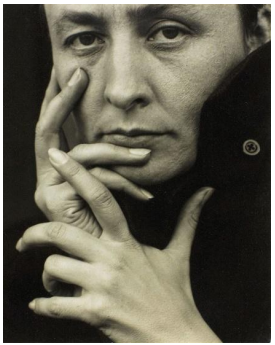
Vocabulary	Definition
3-dimensional	Having all of **length**, **width**, and **height.** For example, a cube or sphere
adaptations	Changes and improvements to a piece of work.
clay tools	A selection of tools that can be used to make marks, cut and add detail to claywork.
materials	Used to create sculptures i.e. clay, play-doh and plasticine.
moulding	Shaping a material. For example, clay into a certain shape.
relief	Something attached to a background, so it is not designed to be viewed from the back. These often decorate buildings.
Round 'in the round'	A sculpture which stands on its own and can be viewed from all sides.
sculpture	The art of making 3D forms and figures in clay or other materials.

Year 3 Art & Design: Watercolour Painting

Summer

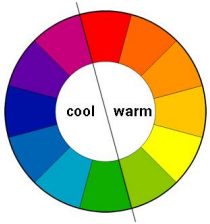
O'Keeffe's Oriental Poppies

Oriental Poppies, also called Red Poppies, made by **Georgia O'Keeffe** in 1927, is a close-up of two giant poppy flowers that fills the entire canvas.



Georgia O'Keeffe

Colour Wheel



Watercolour guide:

1. Wet (or rinse if you are between colours) your brush in the water.
2. Lightly dab your brush on the paper towel to remove excess water
3. Rub your paintbrush on the colour you wish to use to collect the paint onto the brush.

   Generally, the more water on your brush, the more translucent your paint will appear on the paper.

Key Vocabulary

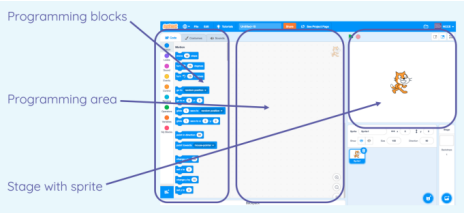
Vocabulary	Definition
colour wheel	A circular spectrum to show the relationship between colours
tone	The relative lightness or darkness of a colour
primary colours	The three key paint colours - Red, Blue and Yellow. They cannot be made from any other colour.
secondary colours	Created by mixing two of the three primary colours to create purple, green and orange. Red + Yellow = Orange Red + Blue = Purple Blue + Yellow = Green

Year 3 Computing

Programming

Sequencing Sounds

Scratch is a program that we can use to code our own stories and animations.



https://scratch.mit.edu/

Vocabulary	Definition
algorithm	a set of instructions to perform a task
block	a single instruction that can be placed in a sequence
motion block	a type of block is used to control the sprite's movement
programming	making a set of instructions (algorithm) for a computer to follow
sequence	a pattern or process in which one thing follows another
sound	an item which one hears that can be played in a Scratch project
sprite	a computer image which can be moved around the screen
stage	the area of the screen where the program instructions will happen

Creating Media

Desktop Publishing

Desktop publishing is when we create documents using page layout software. Examples of desktop publishers: Microsoft Publisher, Adobe Spark and Canva.

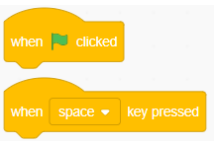
Text & Layout Tools	Action
B I U	Add text styles: **Bold** *Italics* Underline
Berlin Sans FE	Change the font style
14	Change the text size
A	Select a text colour
Styles	Apply font, size and colour rules to the whole document.
Draw Text Box	Allow you to type text anywhere on the document.
Pictures	Insert pictures into your document.

Vocabulary	Definition
font style	different ways the text can be displayed
images	photos/pictures
orientation	the way the paper is facing (portrait/landscape)
templates	a form, mould or pattern used as a guide
text	the words typed into the document

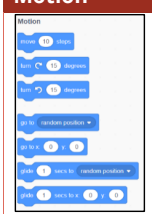
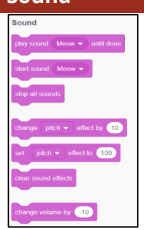
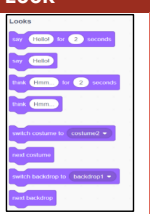
Programming

Events and actions in programs

Event blocks are needed for every project, to start sequences.



Action blocks make the sprite move, make sounds and change appearance when the event is triggered.

Motion	Sound	Look
		

Vocabulary	Definition
action	parts of a Scratch script that affect sprites or stages
event blocks	used to start sequences
sequence	a pattern or process in which one thing follows another
sprite	a character in Scratch

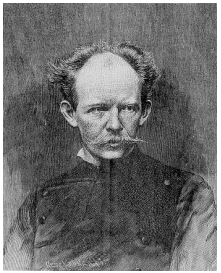
Year 3 Design & Technology: Pop-up books

Spring

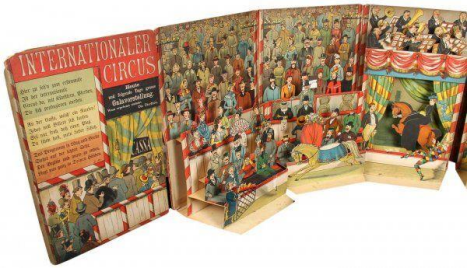
The history of pop-up books:

The very first pop-up books created for children were produced over 200 years ago in the late 1700s! Pop-up books were created to entertain young children.

Lothar Meggendorfer

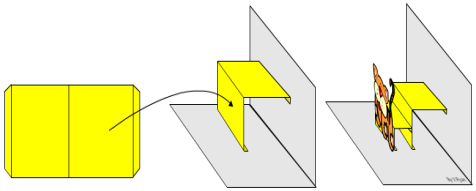


Lothar Meggendorfer was a German illustrator and early cartoonist known for his pop-up books. He was first moveable book was published in 1862.

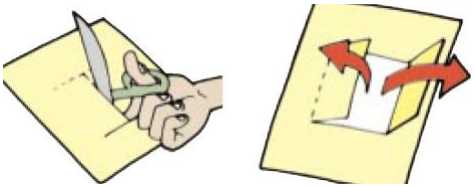


Examples of pop-up mechanisms

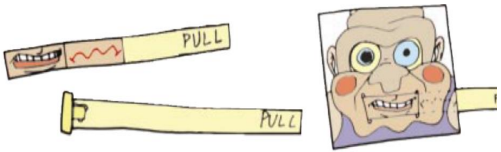
Box fold



Lift-the-flap



Pull-tab



Key Vocabulary

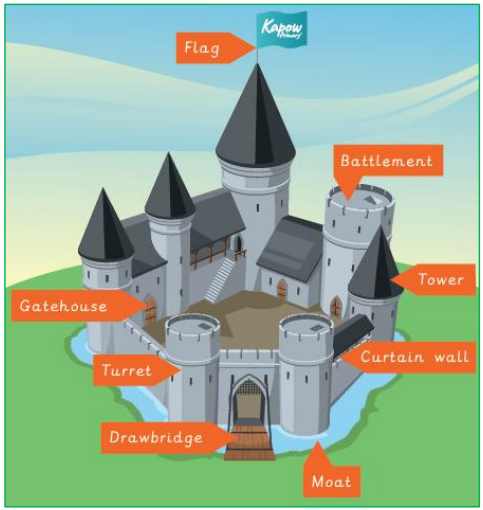
Vocabulary	Definition
Caption	A short piece of writing underneath a picture which describes or explains the picture.
Input	Motion used to start a mechanism.
Output	The motion which happens due to a result of starting the input.
Mechanism	A system of parts working together.
Motion	The movement of an object when controlled by an input or output (e.g. moving left, right, up or down)
Pivot	A shaft or pin on which something turns.
Force	Strength or energy used to create motion.
Design brief	A description of what you are going to design and produce.

Year 3 Design & Technology: Castles

Summer

Key Knowledge

Features of a castle



Basic 3-dimensional shapes

Cube

Cuboid

Sphere

Cylinder

Cone

Key Vocabulary

Vocabulary	Definition
2D shapes	Flat objects with 2 dimensions, such as a square or rectangle.
3D shapes	Solid objects with 3 dimensions, such as cube, cuboid or sphere
criteria	A set of rules to help designers focus their ideas and test the success of them
evaluation	Look at the good and bad points about something and think about how you could improve it
façade	The front of a structure
feature	A specific part of something
flag	A piece of cloth used to represent something or as decoration
net	A 2D flat shape that can become a 3D shape once assembled
recyclable	Material or an object that can be made into something else when no longer needed
scoring	Scratching a line with a sharp object into card to make it easier to bend
stable	An object which doesn't easily topple over
structure	Something which stands, usually on its own
tab	Small tabs on the net template that are bent and glued to hold the shape together

Year 3 Geography: Introduction to Mapping

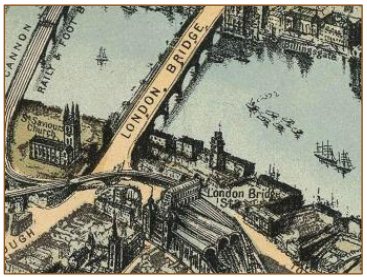
Autumn

Types of Map

We use maps to show us what different places are like. We can use maps at different **scales** to show different places – from a single room... to the world!

Different Views

Some maps (especially older maps) use a **birds-eye view**. This looks like what a bird might see as it flies past



Most maps use a **plan view**. This is like looking directly down from above.

Features of Maps

A compass rose

This shows the four main directions: **North**, **East**, **South** and **West**.

North is normally (but not always) at the top of a map.

Scale marker

This shows how big each part of the map is in real life

Symbols & Key

Because maps are smaller than real life, we use symbols to show where things are. A **key** tells you what each symbol means.

Car Park

Main Road

Windmill

Church with spire

Woodland

Museum

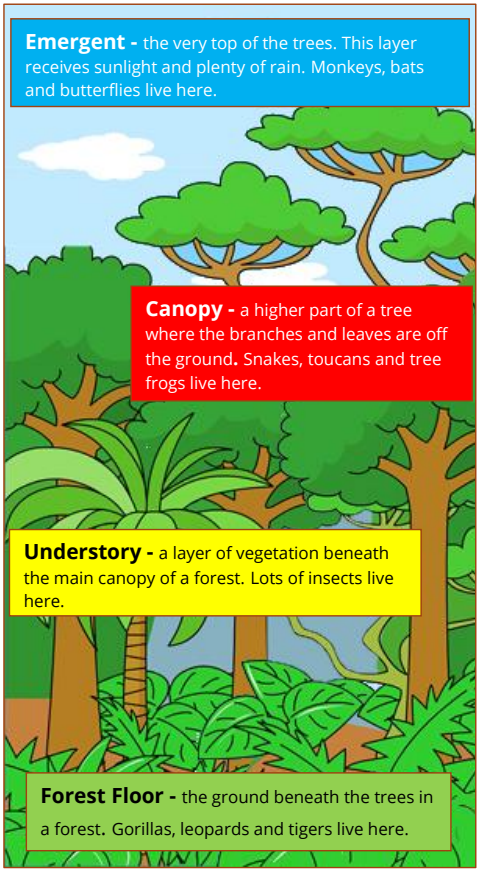
Key Vocabulary

Vocabulary	Definition
atlas	A book containing a collection of maps
birds-eye view	An area seen from an angle above, like a bird would see.
compass points	The main directions North, East, South and West
counties	The different areas that the UK has been separated into
country	A nation with its own government
human features	Different ways that humans use land
key	Explanation of what the symbols on a map represent
local area	The area where you live
map	A diagram showing an area of land or sea
OS map	A very detailed map of a specific area
physical features	The natural features of land, such as hills, lakes and coasts
plan view	A map marked as if looking directly down from above
relief	Difference between the higher and lower land height in an area
scale	The relationship between the distance on a map compared to the distance on the ground.
symbol	Picture to represent an item on a map

Year 3 Geography: Tropical Rainforests

Spring

Layers of the Rainforest



Key Vocabulary

Vocabulary	Definition
Amazon Basin	Part of South America drained by the Amazon river
Adapt	Make something suitable for a new use or purpose
Biodiverse	Containing a large variety of animals, plants and fungi
Brazil	Largest country in South America
Canopy	Uppermost branches of a tree in a forest
Emergent	Highest part of a tree which gets sunlight and rain
Forest Floor	The ground beneath the trees of a forest
Humid	Hot, with a lot of water vapour in the atmosphere
Layers	Different sections, one on top of the other
Primitive	In the early stages of development
Rainforest	Dense forest typically found in tropical areas with heavy rainfall
Tribe	A society of people linked by things they have in common
Tropics	The region between the tropics of Capricorn and Cancer
Understory	Layer of vegetation beneath the canopy of a forest

The Amazon Rainforest

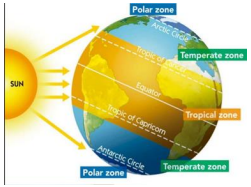
The Amazon Rainforest is the **largest** tropical rainforest in the world. It covers **more than half** of **Brazil** as well as parts of **eight** other countries. It is the most **biodiverse** region on earth, containing many plants and animals that aren't found anywhere else in the world.
The Amazon River, one of the longest rivers in the world, runs through the rainforest.

Weather and Climate

There are different types of weather that occur all over the world. However, depending on where you are in the world, you will experience weather that is affected by the climate of where you are.

Climate

The air temperature is different all over the world depending on which climate zone you are in. Humans, animals and plants have adapted to the climate that they are in so that they can continue to exist.



Biomes

Animals and plants are affected by the climate that they are in, meaning that how they live and grow is dependent on the climate that they experience.

Climate Zones

Polar

- Some snowfall
- Very cold temperatures

Temperate

- Moderate rainfall
- Warm temperatures

Mediterranean

- Wet winters
- Warmer summers

Tropical

- Wet all year
- Warm temperatures

Arid

- Almost no rain
- High daytime temperatures

Mountainous

- Some snowfall
- Cold temperatures

Key Vocabulary

Vocabulary	Definition
biome	A large area defined by its vegetation, soil, climate and wildlife
climate	The weather conditions in an area over a long period
climate change	Changes in Earth's climate caused by human activity
continent	A large expanse of land
desert	A barren area of land
equator	An imaginary line around the centre of the Earth
polar	The area near the North or South poles
region	An area with certain characteristics
temperate	An area with mild temperatures
tropical	An area that is very hot and humid
variation	The difference between two or more areas
weather	Daily changes in
woodlands	An area full of trees and some mosses and lichen
zone	A specific area with a defined by its climate

Year 3 History: Prehistoric Britain

Autumn

Prehistoric refers to a time before humans began writing down and recording what was happening. This makes it difficult to know what happened during that period.
Archaeologists use the clues they find to try and explain what happened during these times.

Hunter-Gatherers

The early **Stone Age** people were **hunter-gatherers**. They had to catch or find everything they ate. They began hunting animals using sharpened sticks. They later used bows and arrows and spears tipped with **flint** or **bone**. To **gather** food, people also collected nuts and fruits and dug up roots. They went fishing using nets and harpoons.

Key Vocabulary

Vocabulary	Definition
Agriculture	Growing crops and keeping animals to use as food
Archaeology	Using tools to find evidence of the past in the ground
Artefact	An object that tells us something about the past
BCE	Before the Common Era (the time before our years started)
CE	Common Era (the time since our years started at 1)
Century	A period of 100 years
Forage	Gathering food like fruit & nuts
Pre-history	The period of history before humans began writing things down
Tribe	A group of people who lived in the same area and worked together

Key Periods

Date	Event
Stone Age	The oldest period when humans used only simple stone tools
Bronze Age	The period when humans had learned to mix **copper** and **tin** to make a stronger metal: **bronze**
Iron Age	The latest period when iron was beginning to replace **bronze** as the material used for tools

Stone Age Evidence

Stonehenge: A prehistoric **monument** in Wiltshire, England. It consists of rings of standing stones and was constructed nearly 5000 years ago

Skara Brae: a stone-built **settlement**, found on the Bay of Skaill in Orkney, Scotland. It is the oldest group of building remains in the United Kingdom.

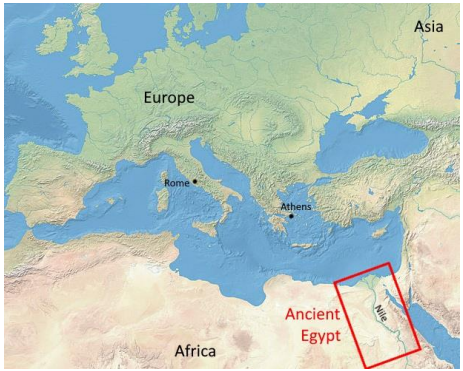
⇦ 43	43 – 410	410 – 1066	793 –1066	1066 –1485	1485 –1603	1603 –1714	1714–1837	1837–1901	1901 ⇨
Pre-history	Roman	Saxon	Viking	Medieval	Tudor	Stuart	Georgian	Victorian	Modern

Year 3 History: Ancient Egypt

Spring

Cradles of Civilization

Advanced societies emerged in several different places, usually around a river valley. In Ancient Egypt, this was along the **River Nile**.



The Gift of the Nile

Ancient Egyptians used **irrigation** to improve agriculture on the Nile. This allowed more food to be produced for the population, and allowed some people to do jobs other than farming.

Key Dates

3100 BCE	King Narmer unites two smaller kingdoms of Egypt
2500 BCE	Pyramids at Giza built (around the same time as Stonehenge)
30 BCE	Egypt becomes a Roman province

The Egyptian Pharaohs

Egypt's rulers were called **Pharaohs**. This means king, although some of the rulers were women. Some of the most notable pharaohs are:

Ramesses II

- **Lived** in the 1200s BCE
- **Known for** being a great warrior who brought peace to the kingdom
- **Buried in** the Valley of the Kings

Cleopatra

- **Lived** from 69 BCE to 30 BCE
- **Known for** being the last pharaoh of Egypt before it became part of the Roman Empire
- **Buried in** unknown tomb

Tutankhamun

- **Lived** in the 1300s BCE
- **Known for** becoming pharaoh at the age of 9, and for the discovery of his tomb.
- **Buried in** the Valley of the Kings

Tutankhamun's tomb was only re-discovered in 1922, by archaeologist **Howard Carter**. It still contained many precious treasures.

Key Vocabulary

Vocabulary	Definition
afterlife	Another life after one's death on Earth
agriculture	The practice of farming for crops and livestock
ancient	Periods of history up to the end of the Roman Empire
civilization	A more advanced society, with government and jobs
hieroglyph(ic)	An image used to represent a word or idea
irrigation	Using a man-made way of getting water to farmland
kingdom	A country or land ruled by a single ruler (king/queen)
pharaoh	A king or queen of ancient Egypt
pyramid	A huge stone structure used as a tomb
mummification	To preserve a dead body using chemicals and wrapping in cloth
tomb	A hole or structure in which a dead body is buried

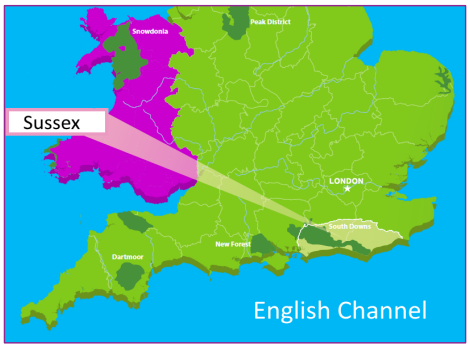
⇦ 43	43 – 410	410 – 1066	793 –1066	1066 –1485	1485 –1603	1603 –1714	1714–1837	1837–1901	1901 ⇨
Pre-history	Roman	Saxon	Viking	Medieval	Tudor	Stuart	Georgian	Victorian	Modern

Year 3 History: Sussex by the Sea

Summer

The location of Sussex

The history of Sussex has long been affected by its location on the coast of the English Channel.



It has been the site of invasion landings, as well as an important location for the defence of England and rest of the United Kingdom. It also affects the future of our area.

Resources at Sea

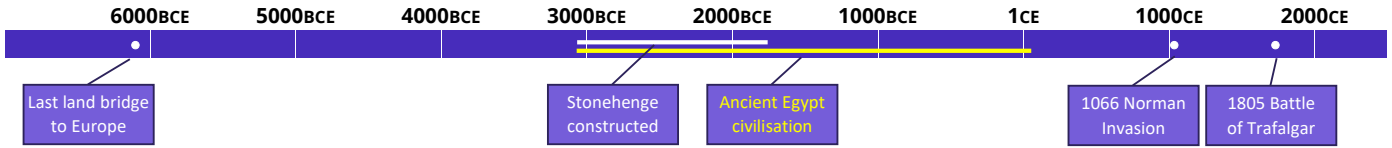
The sea provides the people of Sussex with food, transportation, energy and encourages people to visit the area.

	Dover Boat: a paddle boat used in the Bronze Age for trade
	Longship: a long, narrow ship powered by oars and a single sail on a mast
	Sailing ship: a larger ship that uses sails mounted on masts for power
	Steam ship: a ship powered by a steam engine which drives a propeller
	Most modern ships are powered by large diesel engines

Key Vocabulary

Vocabulary	Definition
conquest	when one group or country completely takes over another
defend	resist an attack against a country
English Channel	water separating Britain from the rest of Europe
invade	enter another country to try to take it over
Napoleon	the military leader of France in the early 1800s
navy	armed forces which operate mainly at sea
resource	an object or material in our environment that people can use
tourism	people traveling from where they live to another place for fun
trade	buying and selling goods

Key events timeline



⇦ 43	43 – 410	410 – 1066	793 –1066	1066 –1485	1485 –1603	1603 –1714	1714–1837	1837–1901	1901 ⇨
Pre-history	Roman	Saxon	Viking	Medieval	Tudor	Stuart	Georgian	Victorian	Modern

Year 3 Music

Theme: Nativity performance

Vocabulary	Definition
chorus	The part of a song that repeats many times.
dynamics	How loud or soft each part is, compared to rest of the piece
melody	The tune of a song that people sing along to.
tempo	The speed at which a song or piece of music is played at.
verse	Song lyrics, often different in each section but with the same melody repeating
vocals	The singing voices in a song
volume	How loudly or quietly a piece is played

Vocabulary	Definition
crescendo	Getting louder
diminuendo	Getting softer

Theme: Glockenspiel Stage 1

Vocabulary	Definition
clef	a symbol at the start of written music that tells you about the notes you will play.
glockenspiel	a tuned **percussion** instrument with metal keys that are hit.
percussion	a family of instruments which are hit or scraped with beaters.
pulse	The steady 'heartbeat' in music, usually the beat that you clap to.
stave	the five lines used to show musical notes
time signature	The number of beats in each bar.

Theme: Carnival of the Animals

Vocabulary	Definition
brass	Instruments played by blowing air through a tube – often with buttons/keys
percussion	Instruments played by striking or shaking
strings	Instruments played by plucking or bowing strings
woodwind	Instruments played by blowing air into a mouthpiece
glockenspiel	A percussion instrument played by hitting metal bars
xylophone	A percussion instrument played by hitting wood bars
composer	An artist who creates new pieces of music
conductor	The leader of an orchestra or other music group
ostinato	A continually repeating pattern in music
pitch	Differences in notes which are high or low
pulse	The constant beat through a piece of music (that you can tap with your foot)

Year 3 Religious Education

Autumn: Christianity

Vocabulary	Definition
Bible	The holy text of Christians, split into two parts
cathedral	A large and important church
Holy Trinity	Christians believe in one god who takes three forms: the father, the son, and the holy spirit
miracle	An amazing event that cannot easily be explained. Christians believe that God causes these events.
Nativity	The story of the birth of Jesus
parable	Story told by Jesus to teach a lesson
sabbath	A day of rest and worship
worship	Love and devotion shown to a God or object/person

Key Festivals	
Advent	Celebrates the arrival of Jesus
Lent	Remembers Jesus' 40 days of fasting and prayer
Holy Week	Celebrates the last days of Jesus' life

Spring: Ceremonies

Vocabulary	Definition
Aqiqah	A Muslim ceremony for welcoming a new baby
Bar Mitzvah	Jewish celebration for boys reaching maturity at age 13
Bat Mitzvah	Jewish celebration for girls reaching maturity at age 12
ceremony	A special event which has particular features
Dastar Bandi	Sikh ceremony where boys receive their first turban
rite of passage	A common part of growing up for many people
Torah	Jewish holy text
wedding	The ceremony when two people get married

Summer: Hinduism

Vocabulary	Definition
Atman	The soul, or spiritual being
Brahman	One god of Hinduism, who has different aspects:
Brahma	*God of creation*
Vishnu	*Protector of the universe*
Shiva	*Renewer of things*
Dharma	To do the right thing with good behaviour
Holi	Festival of colours
Karma	The sense that for every action there is a consequence
Mandir	Temple where Hindus worship
shrine	A holy place to pray
Veda	Ancient Hindu holy text

Hinduism is over 4000 years old, making it one of the world's oldest religions.

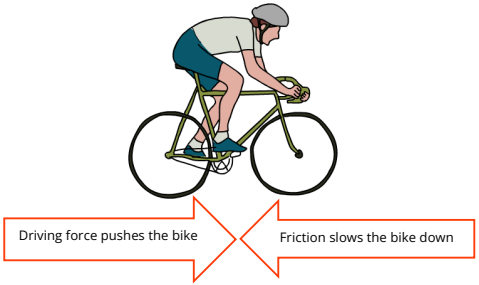
Hinduism has several different holy texts

Year 3 Science: Forces & Magnets

Autumn

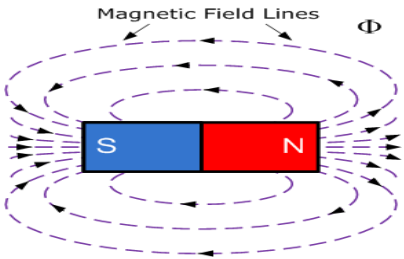
Friction

- When objects are **pushed** or **pulled**, an **opposing** force can be felt.
- This opposing force is called **friction**.
- Friction releases **energy**, causing **heat**.
- Friction causes things to **slow down** or **stop**.
- The **rougher** the surface, the **greater** the friction.
- The **smoother** the surface, the **less** the friction.



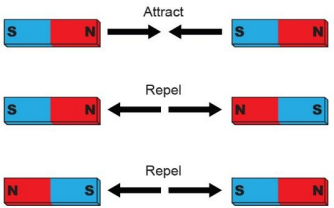
Magnets

- A **magnet** is an object which produces an area of **magnetic force** called a **magnetic field**.
- **Metal** objects inside a magnetic field are **attracted** towards the magnet.
- **Non-metallic** objects are not attracted.
- Magnetic forces can act **at a distance**.
- Magnetic materials are always made of metal, but not all metals are magnetic.



Magnetic poles

- The two ends of a magnet are known as the **north pole** (N) and the **south pole** (S).
- The **same poles repel** and **opposite poles attract**.
- If you try to put two magnets together with the same poles pointing towards one another, the magnets will push away from each other.
- Opposite poles attract and are brought together.



Key Vocabulary

Vocabulary	Definition
attract	To pull together with physical force.
contact force	A force that must directly touch another object to affect it.
forces	Pushes and pulls that can change an objects speed, direction and shape.
friction	A 'sticking' force. The resistance that a surface or object encounters when moving over another surface.
magnet	An object that has a magnetic field (an invisible pattern of magnetism). It attracts or repels other items.
magnetic force	An invisible force created by electrons. It controls magnetism and electricity.
materials	The matter or substance that objects are made from. Different materials have different properties which make them suitable for different uses.
non-contact force	A force that affects something at a distance e.g. gravity or magnetism.
poles	Either end of a magnet where lines of magnetic force are directed from.
pull	Any action moving an object towards you.
push	Any action moving an object away from you.

Quizzes

www.epjs.co.uk/Curriculum/Science/

Year 3 Science: Animals including humans

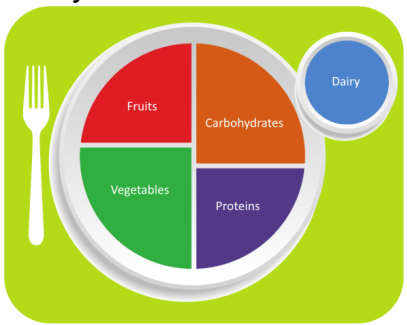
Autumn

Healthy diet

To keep your body fit and healthy you need a balanced diet using all of the main food groups:

Group	Sources
carbohydrates	Carbohydrates include foods such as: rice, potatoes, pasta and bread.
dairy	Products such as milk, cheese or soya alternatives.
proteins	Examples of foods high in protein are: fish, meat, eggs and cheese.
sugars & fats	We should not have too much of these. Examples of foods high in fat and/or sugar are: chocolate, sweets, butter, oil and cream.
vitamins & minerals	Fruits and vegetables contain lots of vitamins and minerals.

Healthy Plate

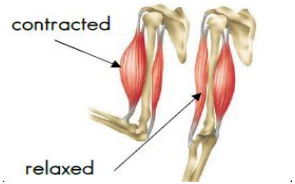


Skeleton and Muscles

The skeleton protects our internal organs, keeps us supported and helps us move. Skeletons move because bones are attached to muscles.

Muscles

When a muscle contracts (bunches up), it gets shorter and pulls up the bone it is attached to. When a muscle relaxes, it goes back to its normal size.



Key vocabulary

Vocabulary	Definition
carbohydrate	The main source of energy for our bodies.
contract	When muscles tense and get shorter.
endoskeleton	An internal support made of bone that gives the body shape and allows it to move.
exoskeleton	A hard covering that supports and protects the bodies of some types of animals.
fats	Stored for energy and creates a layer of fat to keep us warm.
invertebrate	An animal without a backbone
muscle	An organ of the body which allows for the body to move. Attached to the skeleton.
nutrition	The study of food and how it works in your body.
protein	Repairs and builds muscles and organs.
vertebrate	An animal with a backbone.
vitamins & minerals	These help us to grow, form bone and muscle and prevent infection.
relax	When muscles are less tense and return to normal size.
skeleton	A strong structure made of bone which supports us protects internal organs from damage, and allows movement.

Quizzes

www.epjs.co.uk/Curriculum/Science/

Year 3 Science: Rocks & Fossils

Spring

Rocks

There are three main types of rock, which are formed in different ways

Sedimentary Rock

Formed by other rocks, and the remains of dead plants and animals (called **sediment**) forming rock **layers** at the bottom of the sea.

Examples: ***flint***, *chalk*

Metamorphic Rock

Formed when other rocks get placed under great **pressure** or **heat** over time

Examples: ***marble***, *slate*

Igneous Rock

Formed when **hot** magma emerges from a volcano as lava and **cools**

Examples: *granite*, ***pumice***

Rocks can be changed from one form to another through the rock cycle

Fossils

Fossils can be formed when a plant or animal dies. This happens through a process called **fossilisation.**

1. A plant or animal dies, and falls as **sediment** to the bottom of the sea, river or lake

2. Over time, more **layers** of **sediment** build up and cover the body

3. The body is completely covered and begins to break down inside the layers of rock

4. Eventually, the body is gone, but a space or different sediment is left where it once was

5. Over time, **erosion** can reveal the fossil that has been left.

Quizzes

www.epjs.co.uk/Curriculum/Science/

Key Vocabulary

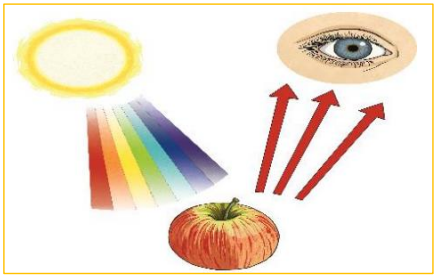
Vocabulary	Definition
durable	Rocks which are resistant to erosion so they last longer.
erosion	Water, wind, and other natural forces cause rocks and earth to wear away.
fossil	Remains or the impression left by a prehistoric plant or animal embedded in rock.
hard rocks	Rocks that need to be split by tools e.g. granite.
impermeable	Materials which do not let water pass through.
permeable	Materials which allow water to pass through.
minerals	Substances found from broken down rock.
organic matter	Living and dead plants and animals.
sediment	The remains of dead plants and animals that settles on the seabed
soft rocks	Rocks which can be moulded e.g. clay.
soil	The loose layer of the Earth's surface where plants grow. It consists of a mix of organic matter, air, water and minerals.

Year 3 Science: Light

Summer

How do we see?

- Light travels in **straight lines**
- When light hits an object, it is **reflected** (bounces off).
- If the reflected light **hits our eyes**, we can see the object.
- Some **materials** reflect light well; others do not.



Sun safety

The sun's rays can damage our eyes so we should never look directly at it. We can protect our eyes using sunglasses which filter harmful rays.

Blocking light

- 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 as it blocks more of the light.

Different material let different amounts of light pass through them.

Transparent
All light can pass through
A clear image is visible

Translucent
Some light can pass through
An unclear image is visible

Opaque
No light can pass through
No image is visible
A shadow may be formed

Key Vocabulary

Vocabulary	Definition
darkness	The absence of light
illuminate	To brighten with light
light	A type of energy that makes it possible to see things around us
light source	An object that emits (gives out) its own light
mirror	A surface, typically metal coated with glass, which reflects a clear image
opaque	A material which does not let light pass through
reflect	To bounce off
shadow	An area of darkness where the light has been blocked
source	Where something starts from
sunglasses	Glasses with dark lenses which you wear to protect your eyes from bright sunlight
translucent	A material that lets some light pass through
transparent	A material that lets all light pass through

Quizzes

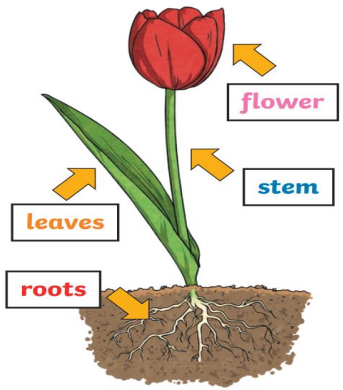
www.epjs.co.uk/Curriculum/Science/

Year 3 Science: Plants

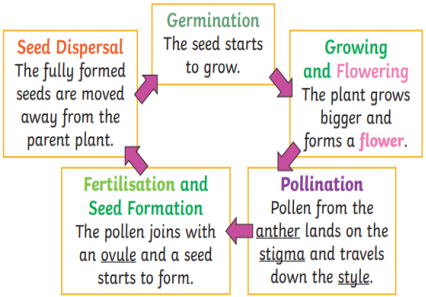
Summer

Key Knowledge

Parts of a flowering plant



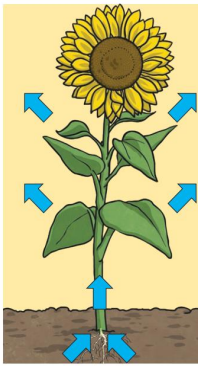
Life Cycle of a flowering plant



How water moves through a plant

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.

What plants need to grow

Water	Light	Air
Nutrients	Room to grow	

Seed dispersal

Seeds can be dispersed in various ways:

- Travelling on water or wind
- Falling to the ground
- Carried by animals
- Excreted in animal droppings
- Shaken by plants
- Bursting from pods

Key vocabulary

Vocabulary	Definition
dispersal	The scattering, or spreading of something over a large area.
dissect	To carefully cut something up in order to examine it scientifically.
fertilisation	In plants, where pollen meets the ovule to form a seed.
flower	The part of a plant which is often brightly coloured and grows at the end of a stem.
function	A useful thing that something does.
leaves	The parts of a tree or plant that are flat, thin, and usually green.
life cycle	The different stages of life for a living thing.
nutrients	Substances that help plants and animals grow.
petal	Thin coloured or white parts which form part of the flower.
pollination	To fertilise a plant with pollen. This is often done by insects.
roots	The parts of a plant that grow underground.
seeds	The small, hard part from which a new plant grows.
soil	The loose, upper layer of the Earth's surface where plants grow.
stem	The thin, upright part of a plant on which the flowers and leaves grow.

Quizzes

www.epjs.co.uk/Curriculum/Science/

Year 3 Spanish: Numbers, Greetings & Colours Autumn

Los números

1 uno

2 dos

3 tres

4 cuatro

5 cinco

6 seis

7 siete

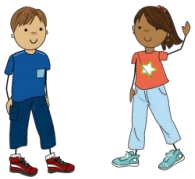
8 ocho

9 nueve

10 diez

Los saludos

¡Hola!



¡Buenos días!

¡Adiós! /
¡Hasta luego!

Me llamo

¿Como estás?

Estoy bien

Estoy mal

Mas o menos

Los colores

rojo

azul

amarillo

verde

gris

marrón

naranja

morado

Negro

blanco

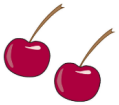
Year 3 Spanish: Fruit & Musical Instruments

Spring

La fruta

las manzana**s**

las fresa**s**



las cereza**s**

las naranja**s**

las ciruela**s**

las pera**s**

los kiwi**s**

los albaricoque**s**

los plátano**s**

los melocotone**s**

Me gustan... (for plural items)

Me gustan...

No me gustan...

The definite article (the)

	singular	plural
masculino	el	los
femenino	la	las

The indefinite article (a/an)

	singular
masculino	un
femenino	una

Los instrumentos

el arpa

el piano

el triangulo

el clarinete

el violín

la trompeta

la guitarra

la batería

la flauta

los cimbalo**s**

Year 3 Spanish: Animals & Ice Cream Summer

Los animales

un caballo

un ratón

un cerdo

un león

un conejo

un pájaro

un pato

un mono

una vaca

una oveja

Soy

Soy... *I am...*

We usually use it for permanent situations

Soy un león I am a lion

Ordering an ice cream

Español	Inglés
Quisiera...	*I would like...*
un helado	*an ice cream*
una tarrina	*a pot/bowl*
un cucurucho	*a cone*

Examples

Quisiera un helado de fresa
I would like a strawberry ice cream

Quisiera un cucurucho de vainilla
I would like a cone of vanilla

Un helado de...

vainilla

fresa

plátano

menta

pistacho

chocolate

café

limon

caramelo

mora

Year 3: Other foundation subjects

Not all curriculum subjects have knowledge organisers. The table below shows the main content that will be covered in each subject.

	Autumn	Spring	Summer
Maths	Numbers Addition & Subtraction Multiplication Division	Measures Money Time	Pictograms and Bar Graphs Fractions Angles & Lines Perimeter
Physical Education	Multiskills Sports leadership Dance Netball	Fitness Quicksticks Hockey Boccia Tennis	Athletics Outdoor Adventure Gymnastics Bat and Ball games
Life Skills	Friendships, trust, respecting difference Stereotyping, 'wonderful me', resilience	Dental health, first aid, online safety, cyberbullying Influences, safety out and about, rights & responsibilities	Recycling, charity, democracy Economic wellbeing, careers

Maths practice

The most important skills to practise in maths are mastering number facts, and securing the written methods of arithmetic. You can practise addition facts using Numbots, and times tables using Times Tables Rockstars. There are videos on the EPJS website showing how we carry out each of the written methods.

Numbots

www.numbots.com

Times Tables Rockstars

www.ttrockstars.com

EPJS Maths methods

www.epjs.co.uk/maths