



**Year Six**  
**Autumn Term**  
**Power Pages for Home Learning**

*This booklet is designed to support children with  
learning they can do at home.*

# Power Pages

## ***What are Power Pages?***

*In a nutshell, a Power Page is a summary of the key foundational knowledge for each topic studied, that we expect children to embed in their long term memories and to retain as they move through the school. We have Power Pages for each of the History, Geography and Science topics and year group pages for Music and Art. They were developed over a period of two years by the teachers, led by the Subject Leaders.*

*At school, the children's Power Pages are A4 and they are kept in a personal folder. Children use them continuously as they work through a topic. They return to them throughout the year to keep embedding those key facts and figures. When they move on to their next class, they will keep returning to this core knowledge.*

*Teachers run regular quizzes to check progress and to identify gaps in learning.*

*The end of year judgement as to whether your child has met the age related expectations for the year group is based partly on these quizzes, combined with how well they attain in lessons. This is what you will see on the annual report.*

*At the end of the year, children who score 98% in the Scholarship Quiz are awarded a Scholar pin badge to wear on their uniform for the next year.*

## ***What to do at home***

*You will receive a booklet once a term with updated power pages. Keep this one safe so that you can refer back to it!*

*Parents should help and encourage children to learn the content of the Power Pages. You might read them together, play 'can you find where it shows...' or quiz them on the contents once they have committed it to memory.*

# Home Learning for Year Six

## Annual Overview of Topics

Autumn Term	Spring Term	Summer Term
<b>The Tudors and The Thames</b> <b>The human heart</b> <b>Electricity</b> <b>Icons</b>	<b>Space</b> <b>Mountains</b> <b>Martin Luther King—Equal Rights</b>	<b>Evolution</b> <b>Changing Climate</b> <b>Control Coding</b> <b>WWII</b> <b>Eric Ravilious</b>

## Learning for the Autumn Term

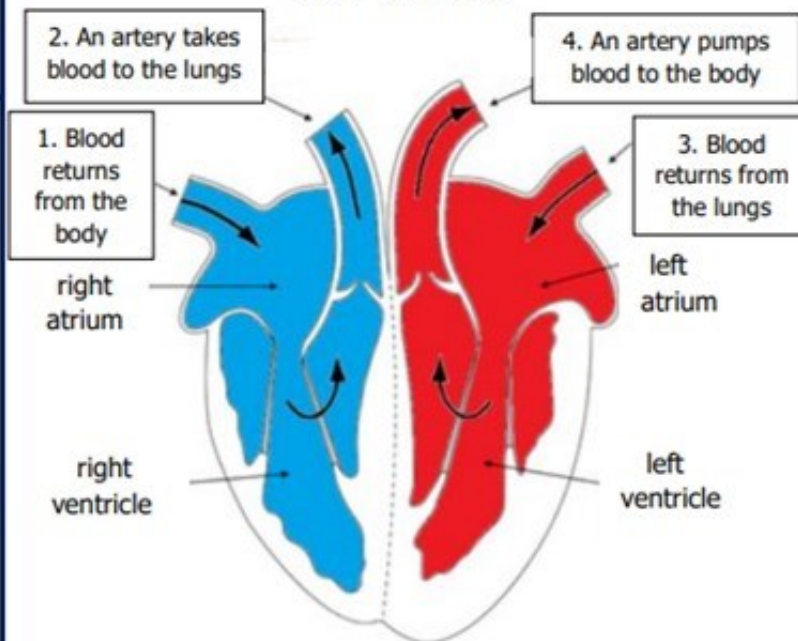
<p><b>Geography:</b> Lines of longitude; Meridian Line; mapping the Thames; 6 figure grid references</p> <p><b>Science:</b> Circulatory system—heart, blood, blood vessels; diet and exercise; effects of smoking and drinking; electrical circuits—circuit diagram, voltage</p> <p><b>EPR</b> Types of relationship; marriage; positive self esteem; democracy; tolerance</p> <p><b>Fairtrade:</b> poverty in textile industry; <b>Eco Awareness:</b> energy use</p>	<p><b>Music:</b> Tudor music: Read music on treble clef; drone and ostinato; Motown: play two part songs; play from notation; Aeolian scale</p> <p><b>Computing:</b> Online Safety; ArcGIS – Environmental Quality Survey; line graphs; blogging</p> <p><b>RE</b> Psalms; called to service; vocations and Holy Orders; called by God—St Francis; Mary; Advent and Christmas</p> <p><b>PE</b> Incorporate balls, ribbons into movements</p>	<p><b>DT:</b> Make a Tudor pie; make a drawbridge</p> <p><b>History:</b> Henry VIII -Power and Monarchy; change and Continuity in life style; the Tudor Dynasty; schism from Rome</p> <p><b>Art:</b> Self portraits; Tudor portraits Texture and tone; religious icons</p> <p><b>Drama and Dance:</b> Dialogue and questions in role; adapt and improvise movement; perform with confidence</p>
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# Year 6 The Heart and Healthy Living

## Facts I need to know

1. The **circulatory system** consists of the heart, blood vessels and blood.
2. The heart is an organ in the body and its job is to **pump blood** around the body.
3. **Deoxygenated blood** from the body enters the right atrium and then flows into the right ventricle.
4. **Oxygenated blood** from the lungs flows into the left atrium and then into the left ventricle.
5. The blood transports **nutrients, water** and **oxygen** round the body.
6. **The nutrients in the digested food** pass into the small intestine, where they are absorbed into the blood stream.
7. **Water** is absorbed from the small intestine into the bloodstream via blood vessels.
8. **Diet, exercise, drugs** and **lifestyle choices** impact how well our heart and lungs work.

## The flow of blood through the heart



## Keeping your Heart Healthy

1. **Exercise** causes your heart rate to increase as the muscles need more oxygen.
2. **Regular exercise** tones muscles, reduces fatty deposits from the body and strengthens the heart and lungs.
3. A **poor diet rich in fatty rich foods** can clog up arteries and veins, preventing the blood from flowing well.
4. **Smoking is harmful** to our health. The tar in cigarettes damages your lungs and can cause lung disease.
5. **Alcohol** slows down your reactions. Heavy drinking damages your liver, heart and stomach.
6. **Drugs** prescribed by a doctor are safe. Other drugs can be addictive and cause health issues and death.

## Key Vocabulary

<b>Circulatory System</b>	The body system that circulates blood around the body.
<b>Heart</b>	The heart has four chambers, two atrium and two ventricles, which the blood flows through.
<b>Blood vessels</b>	Narrow tubes which our blood flows through. They are called arteries, veins and capillaries.
<b>Arteries</b>	Carry oxygenated blood from the heart to the rest of the body.
<b>Veins</b>	Carry deoxygenated blood from the body to the heart.
<b>Capillaries</b>	Nutrients, oxygen and carbon-dioxide are exchanged via the capillaries.
<b>Lungs</b>	Fill with air when you breathe. They remove carbon-dioxide from the blood and add oxygen to the blood.
<b>Heart Rate</b>	The number of times the heart beats in a minute (bpm).
<b>Resting heart rate</b>	The number of times your heart beats per minute when you are not active. Typically 60 – 100bpm.
<b>Pulse</b>	Every time the heart beats, it can be felt as a pulse in an artery close to the skin in your neck or wrist.
<b>Aerobic activity</b>	Exercise that makes your heart beats faster and increases your breathing rate.

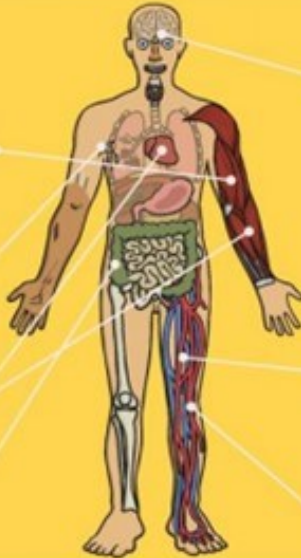
## Diet

Carbohydrates give all cells energy. It also protects your muscles because if the body does not have enough energy it has to use the protein tissues in muscles instead. This weakens muscles in the body.

Water helps control your temperature via sweating.

Proteins are needed to create muscles and organs.

Fibre: Keeps your bowels - which include your large intestine healthy.



Fats are needed for every cell membrane - the membrane holds the cell together. Brain tissue is rich in fat. Fat is used to create hormones.

Water half the weight of a human body is water! You can survive without food for longer than you can water. 92% of the volume of blood is water! Without blood your body would not be able to transport nutrients and oxygen.

Protein is needed to make haemoglobin - the part of the red blood cells that carry oxygen.

## Exercise

Helps you fall asleep faster and deeper so you are better rested.

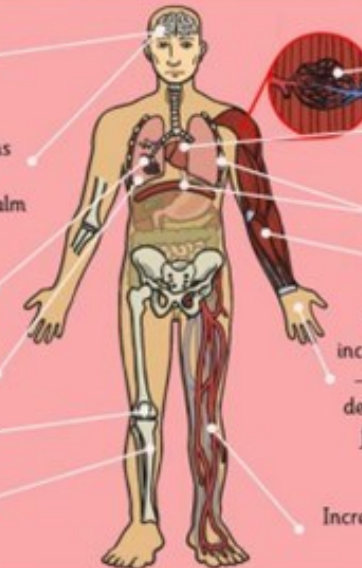
Stimulates and releases brain chemicals - for example endorphins leave you feeling happier and serotonin helps keep your mood calm and leaves you feeling relaxed.

Increases the number of air sacs (alveoli).

Increases the amount of oxygen delivered to and carbon dioxide removed from the body.

Joints are more stable.

Bones increase in width and density (The denser the bone, the stronger it is).



Increases the number of capillaries in the muscles.

Strengthens heart muscle.

Strengthens diaphragm and intercostal muscles.

Strengthens muscles.

When you exercise your body increases the circulation of blood - this means that nutrients are delivered and waste taken away faster which improves parts of the body like skin.

Increases the volume of blood and red blood cells.

## Food sources

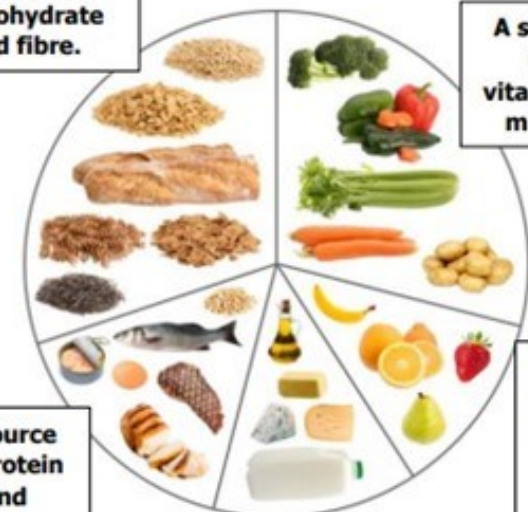
<b>Carbohydrates (1)</b>	Carbohydrates are found in a wide array of both healthy and unhealthy foods—bread, potatoes, pasta, rice, cereal, biscuits and pastries.
<b>Proteins (2)</b>	Lean meats – beef, lamb, pork, chicken, turkey. Fish and seafood – fish, prawns, crab Eggs. Dairy products – milk, yoghurt, cheese
<b>Fats (3)</b>	Found in fatty meat, sausages and pies. Also in dairy products such as butter, cheese and cream. It is also in cakes, biscuits and chocolate confectionery.
<b>Fibre (4)</b>	Fibre is found in wholegrain breakfast cereals, whole-wheat pasta, wholegrain bread and oats. It is in fruit such as berries, pears, and oranges and vegetables such as broccoli, carrots and sweetcorn. It is also in peas, beans, nuts and seeds.
<b>Vitamins (5)</b>	<b>Vitamin A</b> Eggs, milk, carrots and sweet potatoes. <b>Vitamin C</b> Oranges, strawberries, tomatoes, kiwi, broccoli, red and green peppers. <b>Vitamin E</b> Avocados, nuts, seeds, whole-grain foods and dark leafy greens
<b>Minerals (6)</b>	Including calcium and iron can be found in meat, cereals, fish, milk and dairy foods, fruit and vegetables and nuts.

A source of carbohydrate and fibre.

A source of fibre, vitamins and minerals.

A source of protein and minerals.

A source of fats, vitamins and minerals.


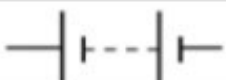








# Year 6 Electricity

## Facts I need to know

1. There are **universal symbols** used for components when drawing circuit diagrams.
2. If there is a **gap or break** in a circuit, then electricity cannot flow.
3. **Switches** control components in circuits.
4. More batteries or a higher voltage battery gives **more power** to flow through the circuit and so a bulb is brighter and a buzzer is louder.
5. Fewer batteries or a lower voltage will give **less power** to the circuit and so a bulb is dimmer and a buzzer is quieter.
6. **Lengthening the wires** in a circuit means that it is harder for the electricity to flow because there is **more resistance**.
7. Adding more **components** to a circuit means the electricity has to be shared and so lamps are dimmer and buzzers are quieter.

## Symbols used in Circuit Diagrams

Cell	
Battery	
Wire	
Lamp	
Motor	
Buzzer	
Open Switch	
Closed Switch	

## Key Vocabulary

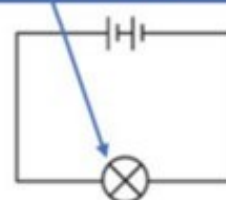
<b>Circuit</b>	A path that an electric current can flow around.
<b>Circuit symbol</b>	A symbol used to represent various electronic components in a diagram of a circuit.
<b>Cell</b>	A single electrical energy source.
<b>Battery</b>	A device consisting of two or more cells.
<b>Voltage</b>	The size of the force that makes the electric current flow through the wires. The greater the voltage, the more current will flow.
<b>Switch</b>	An electrical component that can make or break an electrical circuit. When a switch is open (off), there is a gap in the circuit and electricity cannot flow around the circuit.
<b>Current</b>	The amount of electricity flowing through a circuit. It can be measured in amps using an ammeter.

## Explaining what happens in circuits

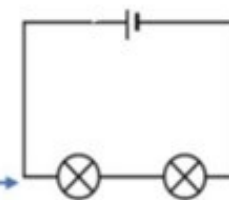
When we have one bulb and one cell, it is called normal brightness



The bulb in this circuit will be brighter.



Adding more bulbs to a circuit will make each bulb less bright.

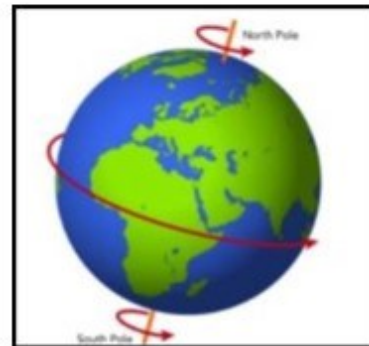


## The UK and Ireland

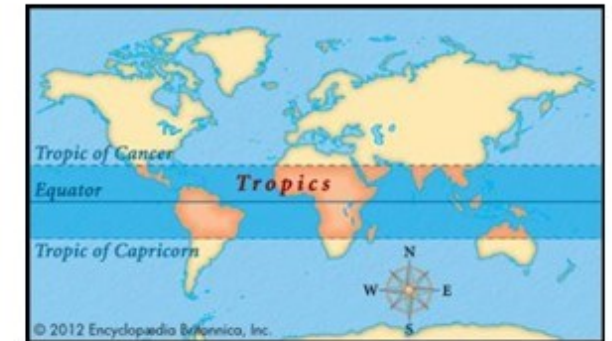
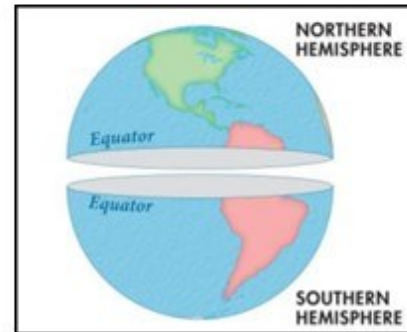


## Year 6 Where in the World?

The **South Pole** is in **Antarctica**.  
The **North Pole** is in the **Arctic**.



The **equator** is an imaginary line which goes around the centre of the earth. It divides it into the Northern and Southern Hemisphere.



The region of Earth's surface that is closest to the Equator is called the tropics. Two imaginary lines that circle the globe mark the boundaries of the tropics. The line called the Tropic of Cancer marks the northern edge. The line called the Tropic of Capricorn marks the southern edge.

## The Seven Continents and Five Oceans



## Major Cities of the UK



## Waters around the UK



## The World's Mountain Ranges



## UK Rivers

**River Thames** runs through **London**.

**River Mole** runs through **Leatherhead**.

**Hogsmill River** runs through **Ewell Village**.

**Cuckmere River** runs through **Sussex**.

**River Severn** runs through **England** and **Wales**.

**River Tay** runs through **Perth** and **Dundee** in **Scotland**.

**River Trent** runs through **Nottingham** in **England**.

**River Mersey** runs through **Liverpool** in **England**.

## World Rivers

**River Amazon** runs through **Brazil**.

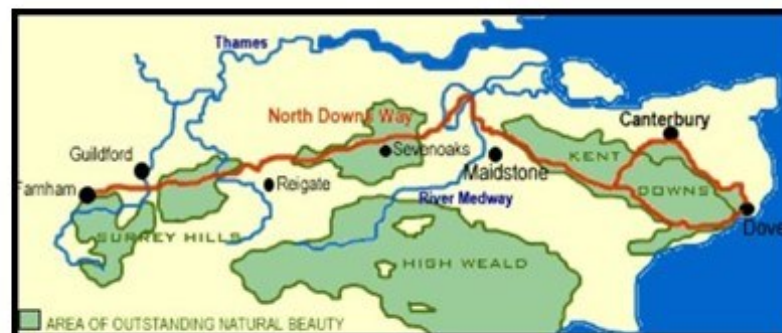
## Counties in the South-East of England



## Regions of the UK



The **North Downs** and **South Downs** are parallel ranges of chalk hills in **SE England**. They rise to 965 ft (294 m) at **Leith Hill, Surrey**. The North Downs range extends 160 km from near Farnham, Surrey, to the White Cliffs of Dover, Kent. The South Downs extends 100km from near Winchester, Hampshire, to Beachy Head,

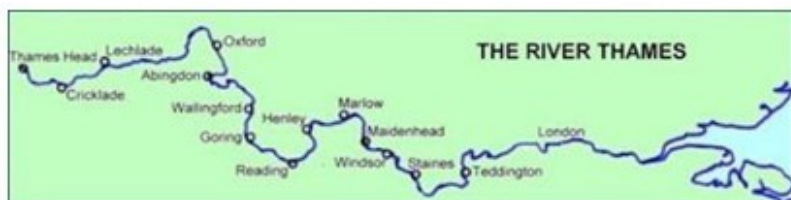


# Year 6 Geography

## The River Thames

### Facts to read and know

1. A **river** begins at its **source** which is in the mountains and ends when it flows into the sea which is known as the **mouth**.
2. The **River Thames** is a river that runs through the South East of England including London.
3. The source of the River Thames is called **Thames Head**. It is a group of seasonal springs, near the village of **Coates in the Cotswolds**.

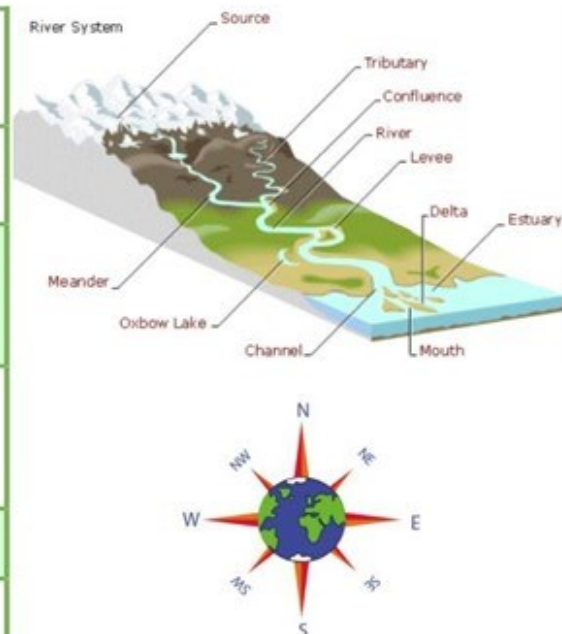


### Key Sites along the River Thames



### Key Vocabulary

<b>Tributaries</b>	Smaller rivers and streams that join the main <b>channel</b> of a river.
<b>Floodplain</b>	Flat area around a river that is covered in water when it floods— often good agricultural land.
<b>Oxbow lake</b>	A meander which has been cut off from the main river over time. It is often horse-shoe shaped.
<b>Meander</b>	A bend in the river.
<b>River mouth</b>	The point where the river flows into the sea.



### Time Zones

1. A **time zone** allows everyone to have sunrise in the early morning and sunset at night in relation to the rotation of the Earth.
2. The Royal Observatory in Greenwich is the site of the Greenwich **meridian line**.
3. The **meridian line** in **Greenwich** (known as the **Greenwich meridian**) represents the **Prime Meridian** of the world, Longitude Zero (0° 0' 0").
4. Greenwich Mean Time is a **time zone line** also known as **GMT**.
5. Time zones lie between **lines of longitude**.
6. **BST** stands for British Summer Time, when we put the clocks forward by one hour from Greenwich Mean Time.



<b>Longitude</b>	A distance measured in degrees <b>east or west</b> of an imaginary line that runs from the north pole to the south pole and passes through Greenwich, England ( <b>The Meridian</b> ).
<b>Latitude</b>	The distance <b>north or south</b> of the <b>Equator</b> measured in degrees.
<b>Grid figure</b>	Is a geographic coordinate system that defines locations on maps using numbers.

# Year 6 History Tudors

## Facts to know about monarchy Wealth and Power

An important aspect of successful **monarchy** was and is **wealth**. Wealth brings **power and influence**. Power shows you are a strong monarch.

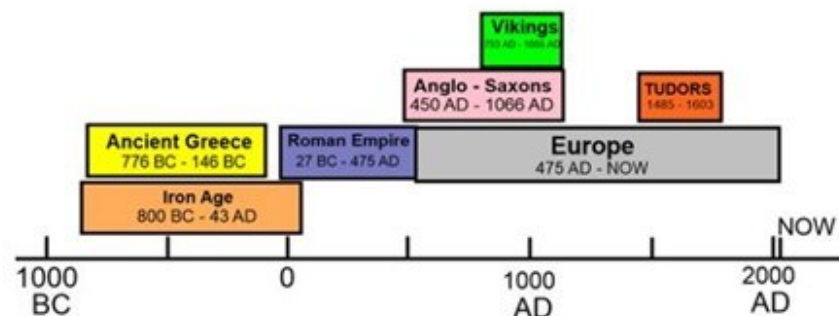
A **monarchy** is a form of government that has a single person at its head. Monarchs use such titles as king, queen, emperor, or empress. Most monarchies are hereditary.

Henry VIII owned over **60 residences** including Hampton Court, one of his favourite.

**Food was a key symbol of wealth.** Henry VIII had to show his noblemen that he was rich.

- Being served a peacock or swan—a sign of wealth.
- Spices from the Orient had travelled half way around the world—this was another sign of wealth.

The **Reformation in England** led to the **dissolution of the monasteries** and their dismantling.



## Monarchs need power -The Reformation

The many reasons for the Reformation in Europe.

1. **England broke away from Rome.** This means that England stopped being Catholic and stopped looking to the Pope for leadership. Why this happened is complicated...there were many reasons:
2. **Henry needed a son to be his heir** and **Catherine of Aragon** could not produce a son. The Pope would not allow Henry VIII to divorce Catherine as it is against the Catholic faith.
3. The **Reformation** was the change from the Pope being the Head of the church to Henry being the Head. The new church was the **Church in England**. Under **Elizabeth I**, it became the **Church of England**.
4. Other countries broke away from the Roman Catholic Church at about the same time. Many people were annoyed at the wealth of priests and their extravagant lifestyles. **They destroyed churches in anger.**



Pope Leo X. Pope during the Break from Rome.



## Hampton Court

1. It has over 1000 rooms and 750 acres of gardens and parkland.
2. 600 people lived and worked there.
3. Henry could travel from his palace in London to Hampton Court



### Sequence of Events

**22 April 1509**  
Henry VIII is crowned King of England

**1509-1533**  
Catherine of Aragon is Queen

**Feb 10th 1516**  
Mary is born

**1533-1536**  
Anne Boleyn is Queen

**Sept 7th 1533**  
Elizabeth is born

**1536-1537**  
Jane Seymour is Queen

**October 12th 1537**  
Edward is born

**1540-1540**  
Anne of Cleves is Queen

**1540-1542**  
Catherine Howard is Queen

**1543-1547**  
Catherine Parr is Queen until Henry dies.

## The heirs of Henry VIII



### 1. Catherine of Aragon:

She became his first wife when her husband Arthur, Henry VIII's brother died. She bore Henry several children but only

Mary survived. Henry needed the Pope's permission to divorce Catherine. He refused so Henry became head of the church. Henry divorced Catherine because she was too old to give him a son.



### 2. Anne Boleyn:

Henry fell in love with Anne. She was young and pretty. The marriage lasted for three years 1533 – 1536. She

gave Henry one child- a daughter called Elizabeth. Anne was accused of having lovers and put on trial. The trial was not fair as people did what the king told them. She was executed.



### 3. Jane Seymour:

Henry married Jane because she was a plain and simple girl. They were married for one year 1536 – 1537. She gave Henry a child.

Edward the son he wanted so much. Jane became ill and died. Henry was heartbroken at her death.



### 4. Anne of Cleves:

Henry married Anne in 1540 to form a friendship (alliance) with

Germany. Anne was ugly and Henry did not like her. The marriage only lasted for seven months.



### 5. Catherine Howard:

Catherine was young and pretty and the King was old and fat.

They were married for two years 1540 – 1542. The King liked young and pretty women around him. Catherine soon had a lover. She was executed.



### 6. Catherine Parr:

Henry and Catherine were married for four years 1543 – 1547.

The king was old and sick and needed somebody to look after him and his children. In January 1547 Henry died.

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Edward VI



Mary I



Elizabeth I

## Monarchy and Power

For Henry VIII, his time as a monarch was focused heavily on securing an heir for his **dynasty**—the Tudor family line.

Families like the Boleyns, the Seymours and the Howards wanted power and so tried to influence the King.

His father Henry VII was the first Tudor king. The dynasty only lasted until the death of Elizabeth I. The Stuarts then took over.

## Symbols in Clothing

**Wealth and power.** Look at Elizabeth I—her clothes make her look 'big' and powerful. Her clothes are covered in **expensive jewels**.

Edward VI is wearing ermine—an **expensive fur**. He was a sickly child, but his clothes make him look **stronger**.

# Year 6 Music

## Facts to read and know

### RENAISSANCE MUSIC

Gaudete has a medieval feel with flowing melodies and changing rhythmic time. It was written in the 16th Century.

### TUDOR RENAISSANCE MUSIC

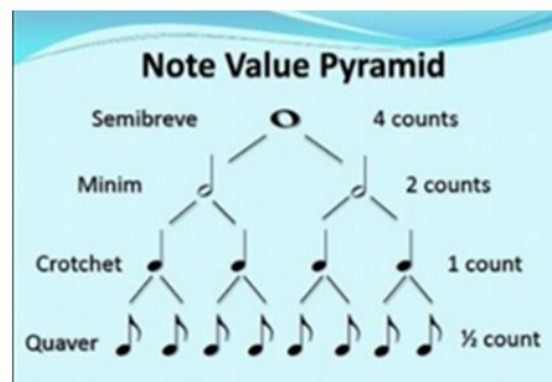
William Byrd wrote "La Volta" It uses a drone, ostinato and simple dance tune.

### CLASSICAL MUSIC: 1750-1800

Music forms such as the symphony were developed by composers like Mozart, Haydn and Beethoven.

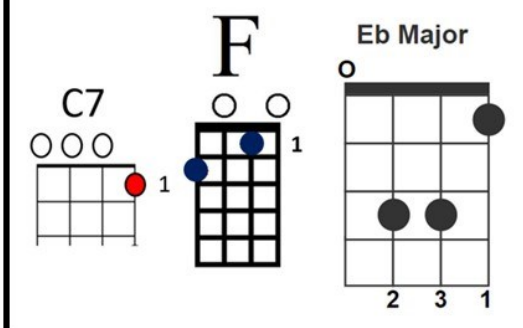
### ROMANTIC MUSIC: 1800s

Beethoven wrote the first romantic music. He expressed feelings and did not worry about what the audience thought. Tunes became longer and stronger with mood changes.



**Every Good Boy Deserves Fun**  
**F A C E**

### Ukulele chords:



## Key Vocabulary

### Medieval



Music in Europe up to 1400 AD  
Usually single flowing melody.  
Secular: folk songs  
Religious: Gregorian Chants

### Renaissance



Music in Europe up from 1400 AD up to 1600 AD, between the middle ages (Medieval) and Baroque times.

### Motown

A record label known for African-American soul music, very popular in the 1960s

### Major Scale

Made of 7 notes, the simplest is CDEFGAB e.g. white piano notes

### Minor Scale

Made of 7 notes, sounds "sad" compared to the major.  
CDE(flat) FGAB

### Diminuendo

getting quieter >

### Ensemble

A music group performing together.

### Sequences

Notes repeated in an order.

### Critique

Understanding and talking about what is happening e.g. in music.

## ROMANTIC RUSSIAN

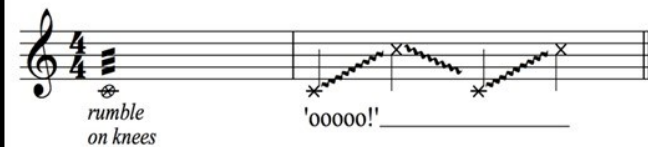
### COMPOSER:

Modest Mussorgsky (1839-1881)

"Night On A Bare Mountain" is a tone poem—the music describes a story of witches.



Use the timbre of instruments or voices for effect.



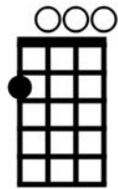
Structure music into different sections

Spell - Dance - Dawn



## UKULELE CHORDS

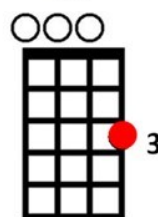
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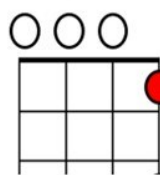
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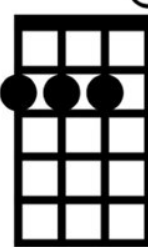
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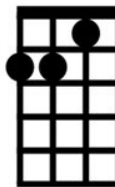
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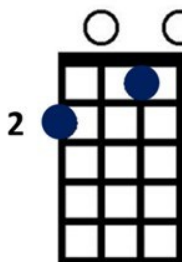
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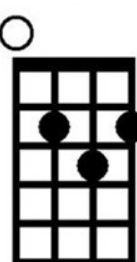
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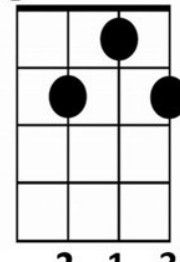
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G7



## FILM COMPOSER:

**HANS ZIMMER** born 1957



Zimmer loves using technology such as synthesizers and computers. His works are notable for integrating electronic music sounds with traditional orchestral arrangements. His film scores include "The Lion King" and "Pirates of the Caribbean". Zimmer also wrote "Interstellar" which is a film score about the vastness of space, the importance of human emotions and the place humans occupy on planet Earth. He wrote a simple melody in a minimalist style:



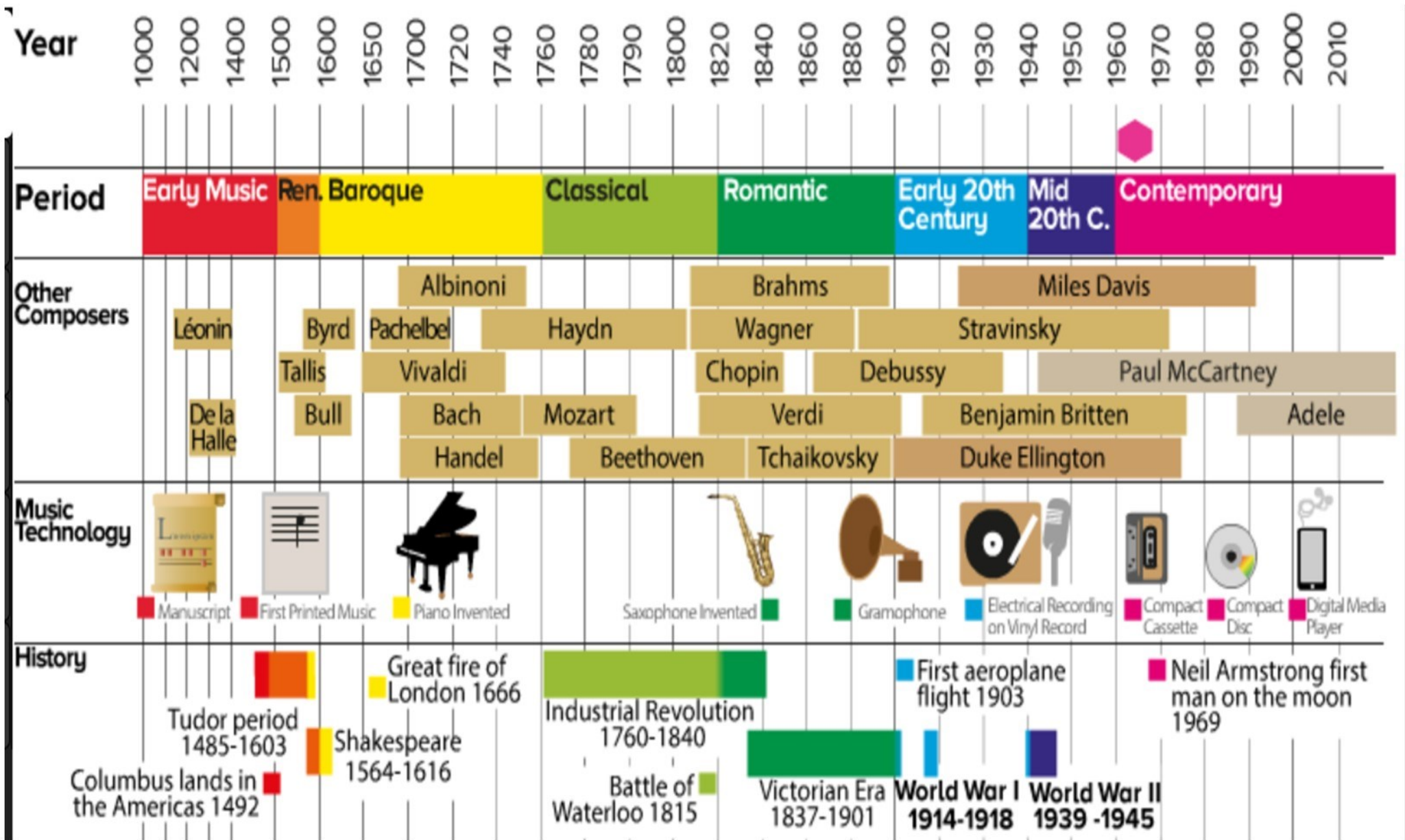
We learnt to create small motifs and play them in different ways e.g. longer/shorter note duration using IT.

## ENGLISH COMPOSER:

**GUSTAV HOLST (1874—1934)**

"The Planets Suite" - Mars





Periods of music history:

Medieval Early music—Renaissance—Baroque—Classical—Romantic—Early/Mid 20th Century— Contemporary

# Year 6 Art History

## Eric Ravilious

- 1903 - 1942.
- British **painter, designer, book illustrator and wood-engraver**.
- He grew up in East Sussex, and is known for his **watercolours** of the **South Downs** and other English landscapes.
- He served as a **war artist**, and died when the aircraft he was in was lost off Iceland.



He used:  
⇒ muted colours  
⇒ natural colours  
⇒ soft lines  
⇒ shades of green to make the landscape come alive.

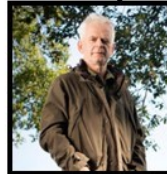


**Art technique: painting.**

Painters looked at before: **Vincent Van Gogh, David Hockney, JMW Turner, Alma Thomas, Stephen Wiltshire, Katsushika Hokusai, Joan Miró, Impressionists (e.g. Claude Monet) and Pointillists (e.g. Georges Seurat).**

## Andy Goldsworthy

- British **sculptor and photographer** born in 1956.
- Creates **site-specific installations** involving **natural materials** (e.g. leaves) and the passage of time.
- When he has created a piece of artwork, he takes a photo of it, and then leaves it for the wind and rain to **blow and wash it away naturally**.



**Art technique: sculpture and installation**



Sculptors looked at before: **Alexander Calder.**

## Tudor Art and Hans Holbein

- In **Tudor times**, only the **very rich** could afford to have their portraits painted. People used portraits as a way of showing their **wealth, status and power**.
- People often dressed in fabrics in **rich, dark colours** for portraits, as these were the most **expensive** dyes.



• **Hans Holbein the Younger** was born in **Augsburg, Germany in 1497/98**. He is best known for his work as the court artist during the reign of **King Henry VIII**, having created many famous portraits of the Tudor court.

**Art technique: painting.**



Historical art looked at before: **Cave paintings at Lescaux, Roman mosaics, Ancient Egyptian, Ancient Greek and Ancient Mayan art.**

## Icons

- Within icons, there are a variety of symbols and colours with different meanings.
- E.g. **Light**: Light always emanates from a Holy person in an icon. The holy person is at the centre. There are no shadows.
- Icons have **frames** because it is like looking into **heaven** through a window.
- The **iconostasis** is the screen in the church where icons were **placed**. It is between the **nave** and the **altar**.

An **icon** is a religious work of art.

**Iconographers** created the special art and were holy people doing God's work.



**Art technique: painting.**

# Year 6 Art Skills

## Key Words

<b>Marbling</b>	Colouring or marking that resembles marble.
<b>Installation</b>	Large-scale, mixed-media construction artwork that is often designed for a specific place or to only be in place for a short period of time.

## Self-portrait

It is a representation of an artist that is drawn, painted, photographed, or sculpted by that artist. It may be a portrait of the artist or within a group of people.



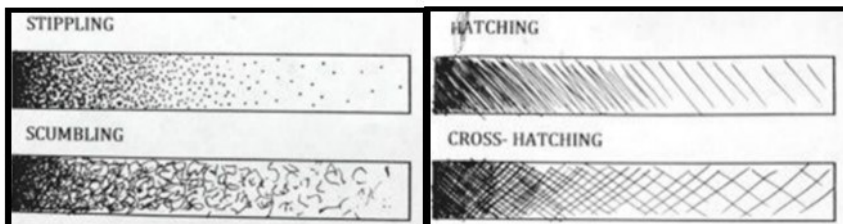
Self-portrait without beard  
Vincent Van Gogh (1889)



Self-Portrait with Thorn  
Necklace and Hummingbird  
Frida Kahlo (1940)



Self-Portrait  
Pablo Picasso (1907)



**Perspective**  
helps the viewer to know what to focus on to create space and depth.

## Collagraph printing

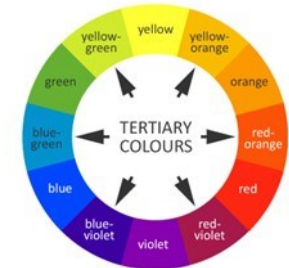


**Collagraph printing** is a print-making process where a variety of textures and materials are placed in a collage on a plate (e.g. cardboard) to create a printing block.

Printmakers looked at before:  
**Katsushika Hokusai, William Morris and Andy Warhol.**

## Colour Theory

### The Colour Wheel



### Brush Chart

<b>FLAT</b>	Good for: bolder strokes, large washes, filling wide spaces.	<ul style="list-style-type: none"> <li>Can use it on its edge for thinner lines.</li> <li>Creates straight edges and stripes.</li> <li>Long bristles are great for varnishing.</li> </ul>
<b>BRIGHT</b>	Good for: short controlled strokes.	<ul style="list-style-type: none"> <li>Can handle thick, heavy color.</li> </ul>
<b>ROUND</b>	Good for: outlining, detailed work, controlled washes, filling in small areas.	<ul style="list-style-type: none"> <li>Creates thin to thick lines - depending on pressure applied.</li> <li>Best used with thinned paint rather than thick paint.</li> </ul>
<b>SCRIPT/LINER</b>	Good for: fine lettering and lines.	<ul style="list-style-type: none"> <li>Can hold lot of paint and create long thin lines.</li> </ul>
<b>FILBERT</b>	Good for: blending, soft rounded edges like flower petals.	<ul style="list-style-type: none"> <li>Very versatile.</li> <li>Can create curves like a round but cover more space.</li> </ul>
<b>FAN</b>	Good for: blending and feathering.	<ul style="list-style-type: none"> <li>Creating textural effects like grasses, clouds, and leaves on trees.</li> </ul>

SPRING

# Year 6 Speaking Out Against Inequality— Martin Luther King

## Facts to read and know

1. **Dr Martin Luther King (MLK)** was an American campaigner who tried to make sure that everyone was treated equally.
2. Many people had racist attitudes in America at the time. There were even laws meaning that **black/ minority people did not have the same rights as white people.**
3. A very brave man who believed in **non-violent protest**, a brilliant **public speaker**.
4. **Inspired by Rosa Parks**, the MIA in Montgomery had **boycotted the bus service**. They won a legal battle to have segregation banned on buses throughout the USA.
5. His most famous moment was in August 1963, during the "March on Washington" when he gave his '**I Have a Dream**' speech. Over 250,000 people attended this march in an effort to show the importance of civil rights legislation.
6. He was also the youngest person who won the **Nobel Peace Prize**.
7. He was **assassinated** in April 1968 for his beliefs. Martin Luther Day is now celebrated in the USA every January 17th.



**Martin Luther King's house was bombed in 1956**



**Martin Luther King leads a bus boycott.**



**Martin Luther King delivers his 'I Have a Dream' speech.**

## Key Vocabulary

<b>Boycott</b>	To refuse to take part in something.
<b>MIA</b>	Montgomery Improvement Association
<b>Non-violence</b>	A belief that violence should not be used in protest or demonstrations.
<b>Sit-in</b>	A protest where people sit down and refuse to leave a place.
<b>Campaigner</b>	A person who works in an organised and active way towards a goal.
<b>Prejudice</b>	A liking or dislike for one rather than another especially without good reason.
<b>Civil rights</b>	The rights of citizens to political and social freedom and equality.
<b>Discrimination</b>	The unjust or prejudicial treatment of different categories of people, especially on the grounds of race, colour or gender.
<b>Segregation</b>	The practice of keeping people apart, e.g. people of different races. This is
<b>Equality</b>	The state of being equal, especially in status, rights or opportunities.



**1929**

Born in Atlanta, (USA)

**1947**

Delivers his first

**5th December 1955**

Rosa Parks refuses to give up her seat. MLK becomes improvement

**20 August 1963**

Delivers 'I Have a Dream' speech.

**10 December 1964**

Awarded Nobel

**4 April 1968**

Martin Luther King is killed by James Earl

## Year 6 History To Boldly Go

### Facts to know

In 1969, NASA achieved the goal of getting the first person to the Moon with the Apollo 11 mission.



### Did you know...

The footprints made by **Armstrong** and **Buzz Aldrin** are still on the Moon.

Neil walked a distance of about **60 metres** on the surface of the moon—that's roughly the length of 11 Asian elephants!

**Space debris**, known as space pollution, is defunct artificial objects

**Neil Armstrong** was the first person to walk on the moon.

As he stepped onto the moon, he famously said the words, "**That's one small step for man, one giant leap for mankind.**"

**Neil Armstrong** and **Buzz Aldrin** landed on the moon in the Lunar Module on **July 20th 1969 at 8:17pm.**



**Saturn 5**



**Neil Armstrong (1930-2012)** went to space twice: The first was Gemini 8 in 1966. The second was Apollo 11 in 1969.

**Michael Collins (1930-2021)** went to space twice: The first was Gemini 10 in 1966. The second was Apollo 11 in 1969.

**Buzz Aldrin (1930)** went to space twice: The first was Gemini 12 in 1966. The second was Apollo 11 in 1969.

### Key Vocabulary

<b>NASA</b>	The National Aeronautics and Space Administration. It is based in the US and runs the space program as well as conducting aeronautics and space research.
<b>Aeronautics</b>	Science of studying, designing and manufacturing air flight.
<b>Lunar</b>	Anything relating to the Moon
<b>Orbit</b>	The path of an object or spacecraft around a star, moon or planet.
<b>Telescope</b>	An optical instrument designed to make

**The Hubble** is a space telescope which was launched in 1990. Pictures captured by Hubble are used by scientists to learn more about space such as black holes, stars and comets. Sometimes it needs repairing and that means a space walk!



### First space flight ever

On **October 4, 1957**, the Soviet Union launched Sputnik 1, the first satellite of Earth.

On **November 3, 1957**, the Soviet Union launched the second satellite, Sputnik 2, and the first to carry a living animal, a dog named Laika.



## Year 6 Space

### Facts I need to know

1. The Sun, Earth and Moon are approximately **spherical bodies**.
2. The Earth is the third planet from the Sun.
3. The Sun is the star at the centre of our **solar system**.
4. The Moon is the **natural satellite** of the Earth.
5. The Earth spins on its **axis** and **orbits** the Sun.
6. The Moon **orbits** the Earth and the same side of the moon always faces the Earth.
7. The Sun appears to move across the sky but the Sun does not move, it is due to the Earth's **rotation**.

## The Planets

The eight planets in our solar system all orbit around the Sun.

This is their order starting from nearest the Sun:  
**Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.**

The nearer a planet is to the Sun, the shorter the length of its orbit.



A Mnemonic to remember the order of the planets:

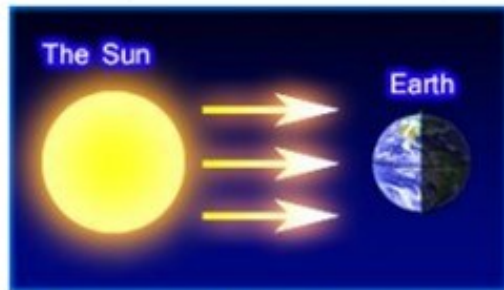
**My Very Easy Method Just Speeded Up Naming PLANETS.**

## Key Vocabulary

<b>orbit</b>	The curved path of an object around a star, moon or planet.
<b>axis</b>	An imaginary line about which a body rotates.
<b>solar system</b>	The sun and all the planets that orbit around it.
<b>rotate</b>	When an objects rotates, it turns (spins) on its axis.
<b>satellite</b>	Any object or body that orbits something else.
<b>spherical</b>	Shaped like a sphere.

## Day and Night

We have day and night because the Earth **spins on its axis** and it takes **24 hours** to spin around once completely.



It is **day** for half of the Earth facing the sun.  
It is **night** for the half of the Earth facing away from the sun.

## Our Year

The Earth **orbits** the sun.  
It takes **365 ¼ days**.



## The Moon

It takes the Moon **27.3 days** to make a complete orbit around the Earth, but because the Earth is moving around the sun at the same time, it takes the moon **29.5 days** to go through its eight different 'phases' – a **lunar month**.



As the moon orbits the Earth, the Sun lights up different parts and so the moon appears to be different shapes.

## Year 6 Materials

### Facts I need to know

1. Heat always travels from a warmer area to a cooler one.
2. **Conductors** are materials that allow heat or electricity to travel through easily.
3. **Insulators** are materials that do not let heat or electricity to travel through them.
4. **Thermal conductivity** is how well a material allows heat to pass through it.
5. We use the **thermal conductivity** property of materials in our everyday lives.

### Insulators of Heat

Wood, plastic and some fabrics are good thermal insulators. Thermal insulators **can keep heat out or away** so that something stays cold. Thermal insulators **can stop heat from escaping** so something stays hot.

Oven gloves stop heat travelling to your hands when you take something very hot out of the oven.



A coat, hat, scarf and gloves stop the heat from your body travelling through to the air outside, keeping you warm.

### Key Vocabulary

#### 'therm'

Therm comes from the Greek word meaning heat.

The root word is found in –

- thermometer
- thermal
- thermostat
- hypothermia
- thermos flask

#### Thermal conductor

Materials that allow heat to travel through them easily.

#### Thermal insulator

Materials that do not allow heat to pass through them easily.

### Conductors of Heat

**Metals** are good thermal conductors. Everyday items are made of metal that need **heat to travel through them**. Eg. A saucepan, cooking foil or a radiator.

When you cook some food in a saucepan, you need the heat from the ring on the cooker to get through the saucepan to the food.



When your radiators are on heat escapes from them and heats up the room.

### Grouping Materials as Conductors and Insulators

	Good Conductors allow energy to pass through	Insulators stop or slow down energy
Electrical	Metals e.g. copper, silver, gold, iron, steel, aluminum tap water 	rubber wood plastic glass paper cotton 
Thermal	Metals e.g. copper, silver, gold, iron, steel, aluminum 	plastic wood rubber fabric polystyrene 

SUMMER

# Year 6 History

## World War II 1939-1945

### What led to the war in Europe?

#### The impact of the Treaty of Versailles on Germany

The Treaty signed at the end of WWI placed many restrictions on Germany and they did not like it.

- Unemployment (economic poverty) was high due to WW1 reparation payments.
- Land was taken away.
- Military restrictions were put in place.

Germans needed strong **leadership** because they believed politicians had failed them. Adolf Hitler was feeding their need for national pride and identity that they lost in WWII, as well as making promises about a better life.



#### Hitler's Manifesto:

- Make Germany great again.
- Unite all German speakers.
- More land for Germans.



#### Invasion of Britain

In 43AD, the Romans invaded.

In 449AD, The Anglo-Saxon tribes began to invade

In 793AD, the Vikings began to invade.

In 1066, the Normans invaded. That was the last invasion of Britain.

### Key dates to be aware of

#### Leading up to the War

1933 30th January - Adolf Hitler becomes Chancellor of Germany. His Nazi Party, or the Third Reich, takes power.

1937 7th July- Japan invades China.

1938 12th March - Hitler annexes Austria into Germany.

#### World War II

Sept 1st 1939 - Germany invades Poland. World War II begins.

Sept 3rd 1939 - France & Great Britain declare war on Germany.

June 9th 1940 - Germany takes control of Denmark & Norway.

May 30th 1940 - Winston Churchill becomes leader of GB.

June 10th 1940 - Italy enters the war as a member of the Axis powers.

July 10th 1940 - Germany launches an air attack on Great Britain. These attacks last until the end of October and are known as the **Battle of Britain**.

December 7th 1941 - The Japanese attack the US Navy in **Pearl Harbour**. The next day the US enters World War II on the side of the Allies.

September 3rd 1943 - **Italy surrenders** to the Allies.

**June 6th 1944- D-day and the Normandy invasion in Operation Overlord.** Allied forces invade France and push back the Germans.

August 25th 1944 - Paris is liberated from German control.

December 16th 1944 - The Germans launch a large attack in the **Battle of the Bulge**. They lose to the Allies.

March 22nd 1945 - The US Third Army crosses the Rhine River.

April 30th 1945 - **Adolf Hitler commits suicide** as he knows Germany has lost the war.

# How did the war impact on people?

## Evacuation

**Children were evacuated:** from the city to the countryside to keep them safe, away from bombing.

The British government was worried that British cities and towns would be targets for bombing raids by aircraft.

Those evacuated...

- Schoolchildren (827,000) and their teachers
- Mothers with children under five (524,000)
- Pregnant women (12,000)
- Some disabled people

The government recommended that in addition to their gas mask and identity card the evacuees had the following items:

- Clothes
- Coat or raincoat
- Comb
- Wellington boots
- Towel and soap
- Faced cloth
- Toothbrush



## The Holocaust

The **Holocaust** was one of the most terrible events in human history.

**Six million Jewish people were murdered by the Nazis.**

Millions of other people who Hitler didn't like were killed as well. This included **Polish people, Catholics, Serbs, and disabled people.**

It is thought that the Nazis murdered as many as 17 million innocent people.

**Racism** is when someone is treated differently because of their race, ethnicity, nationality or colour.

**It is wrong. It is unacceptable. It must not be tolerated.**

**Prejudice** is a liking or disliking for one rather than another especially without good reason.

**It is wrong. It is unacceptable.**

**Ghettos** The Nazis would take over a city in Europe they would force all of the Jewish people into one area of town. This area was called a ghetto and was **fenced in with barbed wire** and guarded. There was little food, water, or medicine available.

**Concentration Camps** were like prison camps. People were forced to do hard labour. The weak were quickly killed or died of starvation. Some camps had **gas chambers**. People would be led into the chambers in large groups only to be **killed with poison gas**.



## Role of women

The role of women changed during the war.

**Women were needed** to do what men would have typically done, as men had been drafted to the army e.g. farming, factory work

**Land girls** were farmworkers doing work to replace a man who had gone to fight.



## Hiroshima and Nagasaki

6th August 1945 - USA drops the **Atomic Bomb on Hiroshima, Japan**. The city is devastated.

9th August 1945 - Another atomic bomb is dropped on **Nagasaki, Japan**.

We must pray that atomic bombs are never used again.

The Japanese say that 250,000 people died. Many more suffered horrific injuries. In the years that followed, many of the survivors, known as 'hibakusha', developed ill health.



## Year 6 Evolution and Inheritance

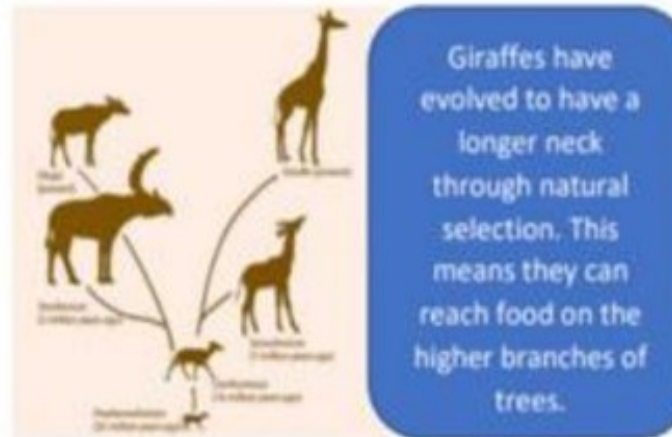
### Facts I need to know

1. Living things produce **offspring** of the same kind who **vary** and are not identical to their parents.
2. **Adaptation** of living things to their environment, may lead to **evolution**.
3. Living things have changed over time. **Fossils** provide information about living things that inhabited the Earth millions of years ago.
4. **Charles Darwin** was a naturalist who came up with the modern theory of the evolution of species based on **natural selection**.
5. Micro-organisms, plants, and animals are **classified** into broad groups according to observable characteristics and based on similarities and differences.

### How adaptation can lead to Evolution

If the environment changes, then animals and plants with variations that are **best suited**, will survive in greater numbers. These living things then reproduce and pass on their characteristics on to their offspring.

This is called **natural selection**. Over time, these inherited characteristics become more dominant within the population.



### Fossils

By studying fossils, scientists can put together how a plant or animal looked. They can identify what the animal ate, where it lived and how it died.



### Key Vocabulary

<b>Natural selection</b>	The process whereby living things that are better adapted to their environment survive and produce offspring.
<b>Inherited characteristic</b>	A characteristic that is passed on to offspring from their parents.
<b>Variations</b>	The differences between individuals within a species
<b>Environmental characteristic</b>	An acquired characteristic that enables a living thing to adapt to its environment so that it can survive.
<b>Evolution</b>	The way in which animals and plants have slowly adapted over millions of years.
<b>Species</b>	A group of closely related organisms that are very similar to each other.
<b>Fossil</b>	The naturally preserved remains or imprint of a prehistoric plant or animal.
<b>Microorganisms</b>	A living organism that can only be seen with a microscope such as bacteria, and viruses.
<b>Classification</b>	Grouping things based on their characteristics so that they can be identified.
<b>Genes</b>	Sections of DNA that lead to a particular characteristic.
<b>DNA</b>	Living things are made of cells. Cells contain DNA which carries the characteristics we inherit.

# Year 6 Geography

## Changing Climate

### What causes climate change?

There are lots of factors that contribute to Earth's climate. However, scientists agree that **Earth has been getting warmer** in the past 50 to 100 years due to human activities.

Certain gases in the Earth's atmosphere block heat from escaping. This is called the greenhouse effect. These gases keep the Earth warm like the glass in a greenhouse keeps plants warm.

Human activities — such as **burning fuel to power factories, cars and buses** — are changing the natural greenhouse.

These changes cause the atmosphere to trap more heat than it used to, leading to a warmer Earth.



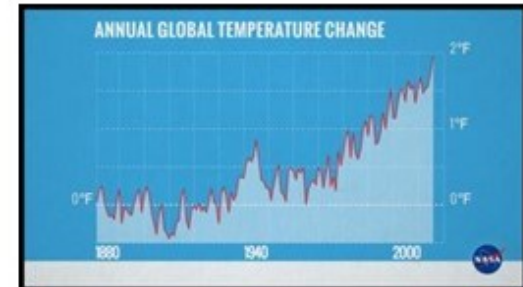
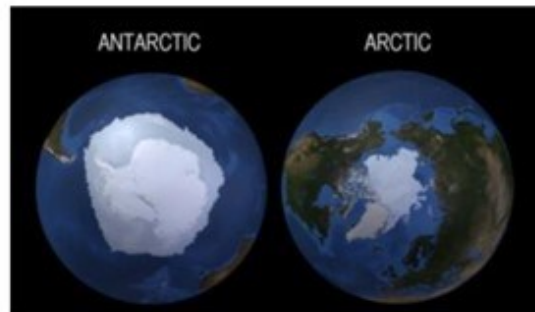
**'Climate is what you expect.  
Weather is what you get'.**

### What causes global warming?

As the temperature of the Earth increases, the waters warm up.

1. Warmer water **expands** and so the oceans expand.
2. **Globally**, sea levels are rising due to the melting of ice **glaciers** on land masses such as Greenland and the Arctic (not melting sea ice).

### The polar ice caps



### How Much Is Earth's Climate Changing Right Now?

Some parts of Earth are warming faster than others.

On average, **global air temperatures** near the Earth's surface have gone up about **1 degree in the past 100 years**.

The past five years have been the warmest five years in centuries.

When the whole Earth's temperature changes by one or two degrees, that change can have big

### Difference between weather and climate

**Weather** describes the conditions outside right now in a specific place. For example, if you see that it's raining outside right now, that's a way to describe today's weather. Rain, snow, wind, hurricanes, tornadoes — these are all weather events.

**Climate**, on hand, is more or two rainy describes the ditions that are region over a of time.



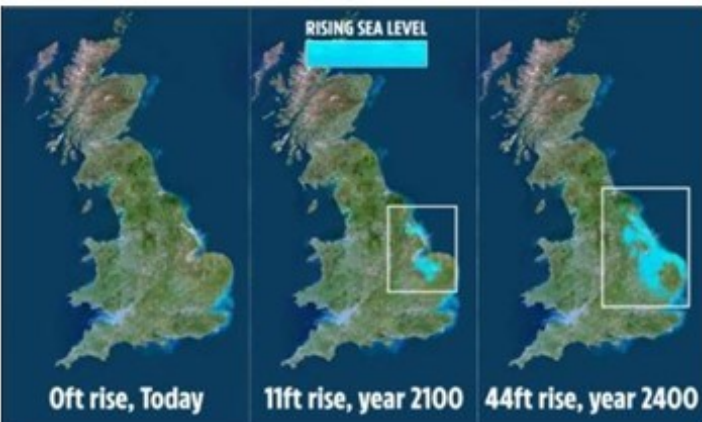
the other than just one days. Climate weather con-expected in a longer period

## How does global warming effect coastal areas?

1. **Global warming** is having an impact on the weather. Global means the whole world.
2. There is increased chance of **tidal surges** (large waves pushing into the land) due to more frequent and deep storms.
3. Storms cause damage to the **coastline**, with waves bombarding the cliffs.
4. This can result in properties along the coast falling into the sea.



Birling Gap—lighthouse keepers' cottages



## A Case Study: Belle Tout Lighthouse at Birling Gap

**Birling Gap**, on the South Coast of England, is on a coastline which is **eroding**.

**Belle Tout Lighthouse** was moved further inland in 1999 because the cliff was falling away.

On 17<sup>th</sup> March 1999, in a remarkable feat of engineering work the 850-ton Belle Tout lighthouse was moved 17 metres away from the cliff face.

In 2019, there were further cliff falls at Birling Gap.

Our school trip to the area stopped that year because of the risk of cliff falls.

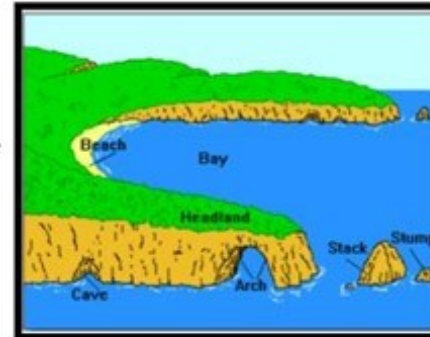


## As coasts erode....

The **coastline** is where the coast meets the sea.

A **headland** is when the coast juts out into the sea.

As **waves** crash against the **rock-face** of the headland, **erosion** occurs.



In time, **caves** appear.

Sometimes the caves become **arches**.

Then after a long time, the **arch** breaks through and a **stack** is left.

