

Vocabulary

<b>Computer Game</b>	A game played using a computer, typically a video game.
<b>Instructions</b>	Detailed information about how something should be done or operated.
<b>Perspective</b>	Representing three dimensional objects on a two-dimensional surface to give the right impression of their height, width, depth, and position in relation to each other.
<b>Playability</b>	A measure of either the ease by which a video game may be played, or of the overall quality of its gameplay.

Reading Challenge: 'Get Coding' by Young Rewired State teaches children the skills needed in creating games.



Sticky Knowledge

A good game designer gives the player continuous challenges in a visually stimulating environment, each of which leads to another challenge, to keep the game challenging and fun.

Evaluating your game as you make it allows you to think about ways in which it can be improved. Evaluation may also involve the views of other people who play your game.

2DIY 3D allows users to create a playing area, such as a maze, in 2D and then turn it into a 3D computer game.

Key Question: How much money do you think game computing programmers generate each year?

Opportunities to explore Game Computing using Purple Mash:

- To plan a game.
- To design and create the game environment.
- To design and create the game quest.
- To finish and share the game.
- To self and peer evaluate.

Vocabulary

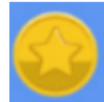
<b>Animation</b>	Creating an illusion of movement.
<b>Image</b>	In this case, a picture displayed on the computer screen.
<b>Texture</b>	High frequency detail or colour information on a computer-generated Graphic.
<b>Interactive</b>	Responding to a user's input on a computer or device.
<b>Screenshot</b>	An image of the data displayed on the screen of a computer or mobile device
<b>Evaluation</b>	The making of a judgement about the value of something.



Open, close and share work



Change the settings of your game



Insert treasure into your game



Insert enemies into your game



Drag to set the start position of your game



Play your game

Vocabulary

Elizabethan	The reign of Queen Elizabeth I was known as the Elizabethan Era
Exploration	The action of exploring an unknown area
Theatre	A building where plays and other dramatic performances are given
Armada	A fleet of warships used against the Spanish
Patriarchal Society	A society in which men have more power than women

Sticky Knowledge:

Elizabeth I was the Queen of England and Ireland from 17 November 1558 until she died in March 1603

Her reign was distinguished with great achievements in the arts, trade and exploration.

She was never married, but members of Court, including the Earl had several favourite of Leicester.

Exploration during this era was to open up trade routes with countries around the world. There were a number of famed explorers who led these voyages such as Francis Drake.

She ably defended her country through the days of the Spanish Armada.

Previous learning:

Year 2:

- The Tudor family ruled England from 1485 - 1603
- Henry had six wives, Catherine of Aragon, Anne Boleyn, Jane Seymour, Anne of Cleves, Katheryn Howard, Catherine Parr
- Henry VIII wanted a son to be heir to the throne

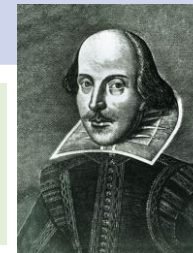
Significant Individuals:



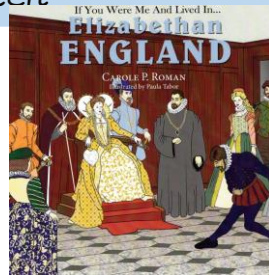
Sir Francis Drake



Walter Raleigh



Did you know?  
William Shakespeare was a famous playwright, creating over 38 plays to entertain Queen Elizabeth!



Reading Challenge:  
'If You Were Me and Lived in the Elizabethan Era' by Carole Roman

Timeline

1533 Elizabeth I is born	1547 King Henry VIII dies and Edward VI becomes king	1553 King Edward VI dies and Mary becomes Queen	1559 Elizabeth becomes queen of England	1587 Sir Francis Drake raids the Spanish Armada	1597 Second Armada defeat	1599 The Globe Theatre is built	1600 Elizabeth I introduces the Poor Law	1601 Earl of Essex rebels and is executed for treason	1603 Elizabeth I dies and James VI becomes king
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Vocabulary

Hacksaws



Hacksaws can cut through materials ranging from metal to wood.

Planes



A plane is a tool for shaping wood. Planes are used to flatten, reduce the thickness of, and impart a smooth surface to a rough piece of lumber.

Clamp



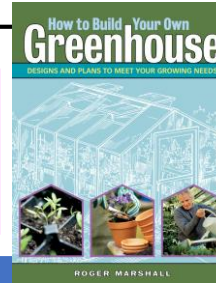
A clamp is a fastening device used to hold or secure objects tightly together to prevent movement.

Vice



This strongly secures an object while it is being worked on.

Reading Challenge: 'How to Build Your Own Greenhouse' by Roger Marshall. Can you explore how greenhouses help plants thrive?



Sticky Knowledge

A prototype is a full-scale, functional model of what is going to be built.

It is a good idea to make a prototype to find flaws in the build.

Designs can be done through sketches and diagrams (cross-sectional and exploded)

The purpose of greenhouses are to extend the growing season and protect plants from the cold weather

Previous learning:

Year 1:

- A design is drawing of what you intend to make
- A structure is a building constructed from several parts
- Parts of a structure can be joined in a variety of different ways
- An evaluation says what went well and what could be changed

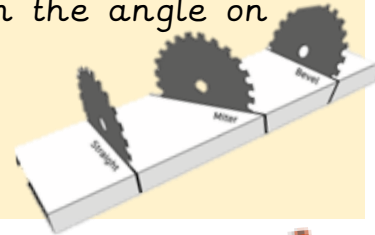
Key Questions:

1. What safety rules should I follow when sawing wood?
2. What types of cuts are there?
3. Are there different cuts for different purposes?
4. What is the function of a vice?
5. What is the purpose of a greenhouse

Fun Fact:

Wood can be cut in four different ways depending on the angle on the blade:

- Cross Cut
- Ripe Cut
- Miter Cut
- Revel Cut



How to use a saw:



1. Fix the wood in a vice or clamp
2. Hold the saw with one hand.
3. Place your other hand on the table away from the saw
4. Start by pulling the saw back, then gently sawing.
5. Try to keep the saw straight.

Research



Design



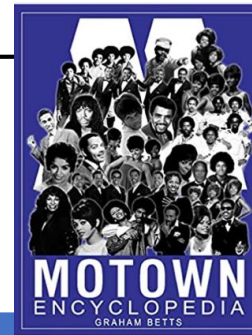
The Rosecliffe Design and Technology stages

Make



Evaluate





Vocabulary

Reading Challenge:  
 'The Motown Encyclopedia' by Graham Betts has all the classic Motown hits in. Which one is your favourite?

Sticky Knowledge

The music of Motown is a blend of popular (pop) and soul music. The Motown sound was soulful, sultry, uplifting, and relatable to the people of its time.

Instruments such as strings, vibes, harmonicas and saxophones were often used in Motown music.

Marvin Gaye, also known as the 'Prince of Motown' sang songs of this genre such as 'I heard it through the Grapevine.'

Dancing In The Street is a signature Motown song written by Marvin Gaye, William "Mickey" Stevenson and Ivy Jo Hunter.

Previous learning:

Year 2:

- Tempo is how fast a piece of music is.
- Dynamics is how quietly or loudly a piece of music should be played.
- The pulse is the heartbeat of the song.

Listen and Appraise

Melody	Who is singing/playing the main tune?
Rhythm	What pattern are the notes played in?
Pitch	Are the notes high, low or both?
Instruments	What instruments are used in the music?
Tempo	What is the speed of the song? Does it change?
Texture	Are there many layers to the music?
Structure	How is the song put together?
Dynamics	Is the music loud, quiet, in between or changes?
Riff	A repeated chord

Martha and the Vandellas



Marvin Gaye was once part of a boy band called The Moonglows.

Have you heard of these artists and songs before?  
 We will be listening and appraising these during our lessons:

- Dancing In The Street by Martha And The Vandellas
- I Can't Help Myself (Sugar Pie Honey Bunch) sung by The Four Tops
- I Heard It Through The Grapevine sung by Marvin Gaye
- Ain't No Mountain High Enough sung by Marvin Gaye and Tammi Terrell
- You Are The Sunshine Of My Life sung by Stevie Wonder

Vocabulary

Khanda



This is the symbol of the Sikh faith.

The Guru Granth Sahib



This is the holy scripture for Sikhs and is regarded as the living Guru.

Gurdwara



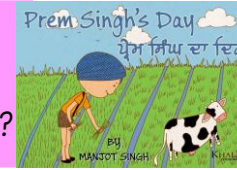
A place of assembly and worship for Sikhs. People from all faiths are welcome.

Guru



The term Guru comes means teaching, guide or mentor. The traditions and philosophy of Sikhism were established by ten Gurus from 1469 to 1708.

Reading Challenge: Prem Singh's Day by Manjot Singh describes a typical day for a Sikh in India. How does this compare to your life?



Sticky Knowledge

Sikhs call God 'Waheguru' which means Wisdom Teacher.

Sikh stories kept in The Guru Granth Sahib remind Sikh of the struggles they have overcome in history.

Sikhs show their commitment to God by keeping Him in mind always, leading an honest life and sharing with those less fortunate.

Fun Fact: Sikhism began in Northern India in a place called Punjab.

There are over 25 million Sikhs across the world! This makes it the worlds 5<sup>th</sup> largest religion.

The word 'Sikh' translated to disciple. Can you find any similarities to other religions?



The 5 Khalsa's

Kesh

Uncut long hair and beard shows a sign of spiritual devotion as well as a respect for the perfection of God's creation.

Kangha



A small wooden comb used twice a day that is worn in the hair at all times and covered by a turban.

Kara



An iron bracelet that is circular to symbolise that God is never ending.

Kachera



An undergarment with a tie knot worn by baptised Sikhs. They were originally made as part of a Sikh soldier's uniform.

Kirpan



A dagger or sword of any size and shape which symbolises a Sikh's duty to come to the defence of others in peril

Guru Nanak Founded - 1539	Guru Angad 1539-1552	Guru Amar Das 1552-1574	Guru Ram Das 1574-1581	Guru Arjan 1581-1606	Guru Har Gobind 1606-1644	Guru Har Rai 1644-1661	Guru Har Krishan 1661-1664	Guru Tegh Bahadur 1665-1675	Guru Gobind Singh 1675-1708	Guru Granth Sahib 1708 - onwards
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**Reading Challenge:**  
 'Staying Safe Online' by Steffi Cavell-Clarke teaches children what they can do to ensure they are being careful when using social media.

**Sticky Knowledge**

- Belonging to an online community can have positive and negative consequences.
- There are rights and responsibilities when playing a game online.
- Spending too much time using devices (screen time) can impact physical and mental health.
- Staying safe when communicating with friends online must only be with people you know in everyday life.

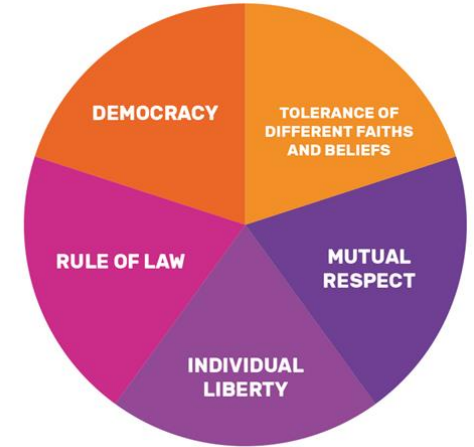
**Previous learning:**  
Year 4:  
 Showing respect in how they treat others

**Key Question:**  
 What do you think it means to be 'trolled' online and what can we do to prevent it?

What type of technology do we need to keep safe relationships with?

- What things can you do to create a good relationship with technology?
- Strong and secure passwords.
- Keep your privacy settings on.
- Have cybersecurity software.
- Get parents' permission to sign into apps.
- Do not talk to strangers online.

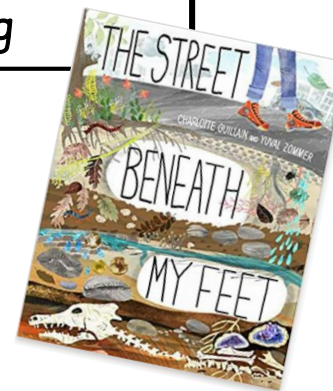
How does this link to our British Values?  
 Mutual Respect for one another and using technology appropriately.



**Vocabulary**

<b>Characteristics</b>	A feature or quality belonging typically to a person, place, or thing to help identify them.
<b>Responsibility</b>	Being accountable for something. For example, your own actions.
<b>Social Network</b>	A network of social and personal relationships that may extend online.
<b>Age restriction</b>	A rule which limits how old someone can be before they join something. TikTok has an age restriction of 13.

Social networking sites are a great way to stay connected with friends and family. Many people have positive experiences with it; however it can be risky. If you feel unsafe, report it to your parents or teachers! Know your trusted adults.



Vocabulary

Sustainability

The ability to maintain at a certain level and to fulfil the needs of the current generation without compromising the future.

Fossil Fuel

A fuel formed from the remains of living organisms. When they are burnt, they release harmful greenhouse gases into the air.

Minerals

A naturally occurring element.

Renewable Energy

Energy from sources that do not run out, e.g. solar, wind, and water.

Non-renewable energy

Energy from sources that will one day run out e.g. fossil fuels: oil, coal and natural gas.

Over-exploited

The act of using too much of something, especially a natural resource.

Reading Challenge:  
The Street Beneath My Feet by Charlotte Guillian

Key Question: What small changes can we make at home and at school that will make a difference?

Sticky Knowledge

Scientists are providing increasingly more evidence of environmental change and stress. Around the world glaciers and ice sheets are retreating, the overall health and diversity of wildlife is declining, human numbers are increasing and natural resources are over-exploited.

Examples of common minerals include coal, oil, seashells, diamonds, rubies, pyrite (fool's gold), table salt, gold, copper, aluminium, iron, steel, gravel, brick, sand and stone.

Renewable energy emits no or low greenhouse gases.

A Marine Protected Area is a space in the ocean where human activities are more strictly regulated than the surrounding waters.

Sustainability is about small changes we can make to help look after the planet. Making these changes helps protect animals, plants and our natural resources so that future generations will be able to enjoy them.

Previous learning: You will have already learnt some ways that we can look after the environment in year 3 and 4.

Types of renewable energy

Hydropower



Uses energy from moving water to drive turbines and generate electricity

Solar Power



Solar panels collect energy from the Sun to create electricity.

Wind power



Wind turns turbines to create electricity.

Vocabulary

<b>Adolescence</b>	The social and emotional stage of development between childhood and adulthood.
<b>Puberty</b>	The physical stage of development between childhood and adulthood.
<b>Adulthood</b>	The stage of development when a human is fully grown and mature.
<b>Life Expectancy</b>	The length of time, on average, that a human or animal is expected to live.
<b>Reproduce</b>	To produce young.
<b>Gestation</b>	The process or time when prenatal development takes place before birth.

Reading Challenge:  
Questions and Answers about  
Growing Up by Katie Daynes



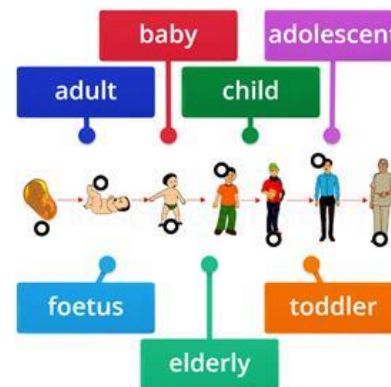
Sticky Knowledge

Humans go through specific stages of human growth and development, but we only have rough ages of when these happen. Babies grow at different rates as they grow and develop. Puberty is something we all go through. It is a process which prepares our bodies for being adults and reproduction. Hormones control these changes, which can be physical and/or emotional. Different animals mature at different rates and live to different ages. Different animals have different gestation periods. Humans experience changes as they move into older age too. There are things that we can do to help protect and look after our bodies as they age.

Key Question:  
How will exercise help us to protect us to look after ourselves as we age?

<https://www.bbc.co.uk/bit-size/topics/z7x78xs/articles/z2msv4j>

Follow this link on BBC to find out more!



Vocabulary

<b>Infancy</b>	The state or period of babyhood or early childhood.
<b>Prenatal</b>	The stage of development from the time of fertilisation to the time of birth.
<b>Asexual</b>	A process where one parent produces new life.
<b>Fertilisation</b>	The process of the male and female sex cells fusing together.

Did you know?  
Elephants have the longest gestation period out of all living mammals. It can last up to 22 months long!

Previous learning:  
You will have learnt to notice that animals, including humans, have offspring which grow into adults back in year 2.





Vocabulary

Self portrait	A portrait that an artist produces of themselves.
Realism	The quality or fact of representing a person or thing in a way that is accurate and true to life.
Symbolism	An artistic or poetic movement or style using symbolic images and indirect suggestion to express ideas and emotions.
Surrealism	A 20 <sup>th</sup> century movement in which art and literature was sought to release the subconscious mind e.g. through dreams. Find out more about surrealism here: <a href="https://www.tate.org.uk/kids/explore/what-is/surrealism">https://www.tate.org.uk/kids/explore/what-is/surrealism</a>
Proportions	Proportion in art can be defined as the relation based on size between parts or objects within a piece.

Reading challenge:  
Little People Big Dreams: Frida Kahlo

Sticky Knowledge

Frida Kahlo (July 6, 1907 - July 13, 1954) was a Mexican painter, who has achieved great international popularity. She painted using vibrant colours in a style that was influenced by indigenous cultures of Mexico as well as by European influences that include realism, symbolism, and surrealism.

Frida focussed on portraits. We can begin to get proportions of the face correct by correctly placing and lining up the eyes, edge of the nostrils and corners of the mouth.

Frida is celebrated in Mexico for her attention to Mexican and indigenous culture.

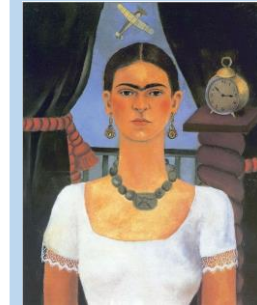
Frida was not the only surrealist artist. Marion Adnams (who was born in a neighbouring county of Derby and went to the University of Nottingham) and Salvador Dali are also well-known for their surrealist artwork.

How can a picture make you feel? What about it creates the mood you are experiencing?

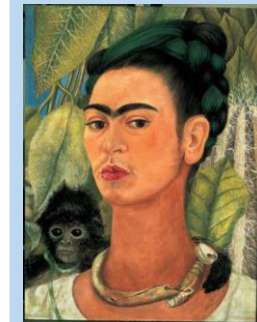
Previous learning:

During Key Stage 1, children will have begun developing their skills in portraits and self portraits.

Art work



'Time Flies'



'With Monkey'



'Me and my Parrot'