Hartford
Church of England
High School

CARITAS ET VERITAS

Year 7

Knowledge Organiser

Contents

Maths

Maths

Algebra Definitions	
Variable	A quantity represented by a letter
Term	A single number, variable or numbers and variables multiplied together
Expression	A mathematical statement without an equals sign
Equation	A mathematical statement with an equals sign
Expand	Multiply out the bracket in the expression
Factorise	Rewrite an expression with brackets
Substitute	Replace a variable with a number

Collecting Like Terms

Ex1 $x + 4y + 6x + 2y = 7x + 6y$

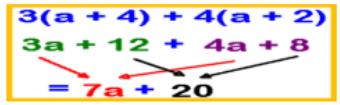
Ex $3x + y - 2x + 4y = x + 5y$

Ex2 $5a + 3b + 3 - 2a - b + 5$

Ex4 $2a + 3b - 6a + 2b$

Ex5 $x + 2y - 4 + 2x + 3y + 9$

Expand Single Bracket



BIDMAS	
B	Brackets
I	Indices
D	Division
M	Multiplication
A	Addition
S	Subtraction

How to use key Facts

Look through These examples

Factorise	Answer
7x + 14	7(x + 2)
45 - 27k	9(5 - 3k)
12ab + 7b	b(12a + 7)

Substitution

Substitution means replacing the variables in an algebraic expression with numerical or algebraic values.

E.g.
Find the value of $3b + 4$ when $b = 10$

$3b$ means $3 \times b = 3 \times 10 = 30$

So $3b + 4 = 30 + 4 = 34$

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Ex4 $2a + 3b - 6a + 2b$

Ex5 $x + 2y - 4 + 2x + 3y + 9$

Expand Single Bracket

$3(a + 4) + 4(a + 2)$

$3a + 12 + 4a + 8$

$= 7a + 20$

BIDMAS	
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English

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English

Fiction vs. Non-Fiction

Non-fiction texts are based on facts and real life, while **fiction** texts are made up.

Types (conventions/forms) of Non-fiction Texts:

Article: Usually for a newspaper or a magazine – gives information, thoughts, facts and details on a certain topic.

Autobiography: A book that somebody writes about themselves. Usually covers their life in chronological order.

Report: Includes information about something that has happened. Usually gives facts and statistics about the topic.

Diary: Written in first person, a diary is a recollection of events that happened in someone's life, in chronological order. Usually displays thoughts, feelings and opinions

Speech: Written to be said aloud. A text which aims to persuade, inspire, inform or motivate a group of people.

Letter: A written communication, from one person to another. Would be posted and received a day or two later.

HT4 – Y7 - Non-Fiction Writing

Techniques to use in your writing:	Definition	Example
Alliteration	Repeating a consonant sound to create a particular sound or tone.	*"The four best bets for better business"*
Opinions	Saying what you think or feel about a certain topic.	*I find the whole thing completely and entirely disgusting. This should not be happening in today's society.*
Facts	Writing something that is true and can be proven.	*Hartford is in the Cheshire West and Chester authority.*
Rhetorical question	A question asked in order to prompt further thought or to make a point rather than to get an answer.	*If not me, then who? If not now, then when?*
Emotive language	Words/ phrases deliberately used to evoke a powerful feeling from the reader i.e. sympathy, anger.	*With just one pound a day, you could transform the life of these poor, starving, innocent animals.*
Statistics	A fact that is supported by numerical data.	*Over 60% of children on the planet are suffering due to the cost of living crisis.*
Eye-witness quotation/ expert quotation	Direct speech from a person who witnessed an event/ direct speech from someone who has an in-depth understanding of the topic.	*"We are losing ground in the fight to end child labour" said the Unicef chief, Henrietta Fore*
Rule of three	The use of three sentences, adjectives, nouns, questions etc.	*This situation is disgusting, shocking and appalling.*
Repetition	Using the same word or phrase in the same sentence, paragraph, or throughout your writing. You may choose a phrase to repeat between paragraphs, or a word to repeat within a sentence.	*We see this happening time after time, again and again.*

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Punctuation Marks

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	Capital letters	My friend is called Sam. He and I go to Park School in the United Kingdom.
.	Full stop	The dog is in the basket.
?	Question mark	Are you coming?
!	Exclamation mark	How wonderful!
,	Comma	I have fruit, crisps and a drink.
" "	Inverted commas	"Hello," said the frog.
'	Apostrophe	Don't sit there. That's Sam's seat.
( )	Brackets	Sita (my sister) likes football.
–	Dashes	In each city – Leeds, Bristol and London – we stayed in hotels.
-	Hyphen	I love chocolate ice-cream.
:	Colon	You have two choices: the pasta or the burger.
;	Semi-colon	I don't go swimming; I prefer playing football.
...	Ellipses	I went to the park... but my friend wasn't there.

Audience

All writing has an intended audience – from emails, to text messages, ingredients on a cereal package to political speeches - even graffiti on a wall. The intended audience are the readers you expect to engage with the text.

In the case of direct messages – such as emails, texts or hand-written letters – the audience is usually the one or two people you address the message to. In this case the language and style of your writing will change according to a number of factors, including how well you know the recipient.

For example, you might use chatty language with emoticons and abbreviations in an email to a close friend. However in a job application email, you'd be expected to use formal language with full words and sentences.

Other texts, such as newspaper articles, blogs or leaflets are intended for a broader audience. In this context, you are unlikely to know your readers personally and so you need to make assumptions about them. Some writers have an 'ideal' reader in mind. You might consider the following things about your reader:

- age
- gender
- culture
- specialist knowledge
- hobbies
- political leanings

Knowing your audience allows you to choose language and a style that will appeal to them.

Tone refers to the mood or feel of your writing, e.g. should your tone be:

- Friendly and chatty, or distant and polite?
- Sarcastic, pleading, or dismissive?
- Upbeat and positive, or calm and controlled?

Structure refers to the way you present your writing, e.g. should you use:

- Full sentences and paragraphs?
- Subheadings and bullet points?
- A sequence of linked paragraphs that lead to a final conclusion?

Purpose

What will your writing 'do'?

The purpose of a text is the reason for writing. There are many reasons for writing. You might be writing to:

- share information
- give instructions on how to do something
- persuade someone that you are right
- persuade a group of people to buy a product
- review a film or website
- explain why you're the best person for a job

Think about your purpose before you start:

What do you want your writing to achieve?

How do you expect your reader to feel as a result of reading?

For example, if your purpose were to instruct a beginner how to fold an origami swan, your language would need to be clear and concise. Simple language and imperatives would help convey your message.

If your purpose were to persuade a group of voters to support a political campaign, your writing would need to be exciting and dynamic. Rhetorical language combined with facts and figures might help to sway your readers.

Time Periods

Texts vary when they are written in different time periods. If a text is produced in the 18th or 19th century, the sentence structures will be different and there will be some vocabulary that we are not familiar with.

Life was very different 100 years ago, and even more different 200 years ago, so there will be different ideas and information about things like:

- How children were treated
- How women were treated
- How different races and religions were treated
- What rights people did/didn't have

When should you start a new paragraph?

Science

Electrical circuits

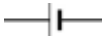
Electricity is a flow of **charges**. Electricity can flow through **conductors** but not through **insulators**. Metals are good conductors of electricity. Plastics are good insulators.

For current to flow in a circuit, you need:

- a complete circuit with no gaps
- a cell or power supply.

We can use **models** to help us to think about electricity and circuits. One model for a circuit is a central heating system. The boiler and pump represent the cell, the pipes represent the wires, and the radiators represent bulbs.

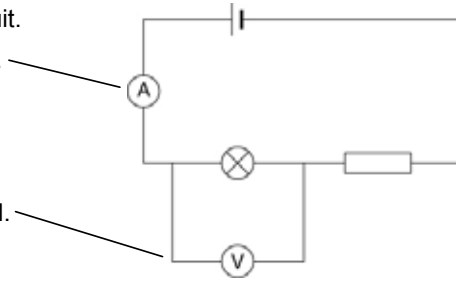
Symbols

Component	Symbol	Component	Symbol	Component	Symbol
cell		bulb		ammeter	
switch		resistor		voltmeter	

Measuring electricity

- **Current** is the amount of electricity flowing in the circuit.
- It is measured using an **ammeter** connected in series.
- The units for current are **amps** (A).

- **Voltage** provides the 'push' and energy.
- It is measured using a **voltmeter** connected in parallel.
- The units are **volts** (V).



Resistance

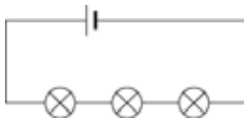
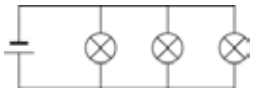
The **resistance** of a circuit is a way of saying how easy or difficult it is for electricity to flow.

- High resistance = hard for electricity to flow = small current.
- Low resistance = easy for electricity to flow = large current.

Thin wires and resistors have high resistances. Thick wires have low resistances.

Series and parallel circuits

Circuits can be **series** or **parallel** circuits.

Series circuit	Parallel circuit
	
If one bulb breaks, all the others go off. The current is the same everywhere. If you put more bulbs in they will be dimmer, because it is harder for the electricity to get through. The resistance of the circuit is higher with more bulbs.	If one bulb breaks, the bulbs in the other branches stay on. The current splits up when it comes to a branch. The current in all the branches adds up to the current in the main part of a circuit. If you add more bulbs, they stay bright. It is easier for the current to flow with more branches, because there are more ways for the charges to go.

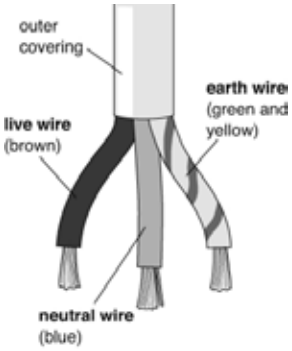
Safety

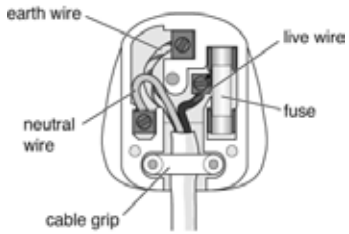
Electricity can be dangerous if it is not used properly. It can cause:

- fires
- burns
- shocks that can stop your heart or lungs working.

The wiring in houses is designed to be safe.

- **Fuses** are used in plugs. They melt if the current gets too high. A fuse has a **rating** that shows what current it can carry without melting. It is important to use the correct fuse.
- **Circuit breakers** also cut off the current if it gets too high. They protect the **ring mains** in buildings (loops of parallel circuits).
- Cables have three colour-coded inner wires. The live and neutral wires are part of the circuit. The earth wire works with the fuse for safety.





Science: 7F

Hazards

- A **hazard** is something that can cause harm.
- Chemicals are labelled with hazard symbols to warn people of potential dangers.
- Some common hazard symbols are:

Risk WS

- A **risk** is the chance that a hazard will actually cause harm.
- Risks can be reduced by taking **precautions**. E.g. wearing eye protection to prevent chemicals splashing in your eyes or tying long hair back to prevent it catching fire in a Bunsen flame.

Acids

- Common substances at home that contain acids include: citric acid, vinegar, fizzy drinks and car battery acid.
- Acids have a sour taste.
- Most concentrated acids are **corrosive**. If they are added to water they become more **dilute**. Dilute acids are less hazardous. Many dilute acids are **irritant**.

Alkalis

- Common substances at home that contain alkalis include: toothpaste, drain cleaner, oven cleaner.
- Many alkalis are metal hydroxide solutions.
- An alkali can be described as a soluble base. A base is any substance, soluble or insoluble, that neutralises an acid forming a salt and water.

Indicators

- Indicators change colour and can be used to detect acids, alkalis and neutral solutions.
- Litmus is a common indicator.

Solution	Colour of litmus
acid	red
neutral	purple
alkali	blue

Science: 7F

pH scale

- A numbered scale from 1 to 14.
- Acids have a pH less than 7. The lower the pH, the more acidic the substance is. The lower the pH, the more hazardous the acid is.
- Neutral solutions have pH 7.
- Alkalis have a pH more than 7. The higher the pH, the more alkaline the substance is. The higher the pH, the more hazardous the alkali is.

strong acid			weak acid			neutral	weak alkali			strong alkali			
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
stomach acid		vinegar	fizzy drinks		skin	pure water	indigestion powder			washing powder			oven cleaner
		lemon juice			milk		toothpaste						

Neutralisation

- This is a reaction between an acid and an alkali.

  acid + alkali → salt + water

- It is also a reaction between an acid and a base.

  acid + base → salt + water

Word equation

- This summarises a reaction by writing the names of the substances you start with and the names of the new substances that are made.
- **Reactants** are the substances you start with and are written on the left side of the word equation.
- **Products** are the new substances that are made and are written on the right side of the word equation.
- There is an arrow between the reactants and products. The arrow means ‘react to form’. Do not write an equals sign, =.
- For example

  hydrochloric acid + sodium hydroxide → sodium chloride + water

  Hydrochloric acid and sodium hydroxide are the reactants.

  Sodium chloride and water are the products.

  Notice the arrow between the reactants and the products.

Salts

- Salts are made when an acid reacts with an alkali or a base.
- Salts names are made of two words.
- The first part of the name of the salt is the same as the metal in the alkali or base.
- The second part of the name of the salt comes from the acid.

Acid	Second part of the name of the salt	Example
hydrochloric acid	chloride	Zinc chloride is made from zinc oxide and hydrochloric acid
nitric acid	nitrate	Magnesium nitrate is made from magnesium oxide and nitric acid
sulfuric acid	sulfate	Copper sulfate is made from copper oxide and sulfuric acid

Neutralisation in everyday life

- Antacids are indigestion remedies. People take these medicines if they have indigestion caused by too much acid in the stomach. The antacid contains a base that neutralises the extra acid.
- Soil can become too acidic for some crops to grow. Farmers spread lime (a base) on the soil to neutralise the acid.
- Toothpaste contains a mild alkali to neutralise the acid in our mouths.
- Alkalis are used to neutralise the acidic gases coming out of power stations.
- Sulfuric acid reacts with iron oxide in rust and removes it from the surface of an object.

History

MARTIN LUTHER AND THE REFORMATION

KNOWLEDGE ORGANISER

Overview

Martin Luther was a German theologian and religious reformer, who lived from 1483 to 1546.

Luther was the main individual behind the Reformation (1517 to approx 1555): the split in the Catholic Church in which Protestantism was born.

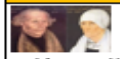
Through his words and actions, Luther began to question the differences that he found between the Bible and the practices of the Catholic Church.

Although he was accused of heresy, his actions kick-started a movement that spread across Europe, resulting in several new churches being founded.

The Protestant Reformation is now considered one of the most important events in Christianity.

A portrait of Martin Luther from 1529.

Times in Luther's Life



Early Life

-Luther was born to Hans Luther and his wife Margarethe in the town of Eisleben on 10th November 1483.

-His family moved to Mansfeld, Germany, in 1484, and his father was elected as town councilor in 1492.
-Luther later described his education as 'purgatory' and 'hell.'

Young Adulthood

-Between 1501-1505, Luther earnt his Master degree from the University of Erfurt.

-In 1505, he abandoned the study of law and became a monk. He then studied theology and received his doctorate in 1512.

Starting the Reformation

-Luther began to question the practices of the Catholic Church as he studied the Bible. He wrote the *Ninety-Five Theses* in 1517, which were a list of the areas that he felt the Catholic Church had gone wring. Paying for indulgences was a particular area of concern for him.
-It is thought that he may have pinned these to the door of a Church in Wittenburg.
-The Papacy saw his actions as heresy (going against Christianity – a serious accusation at the time) and excommunicated him from the Church around 1520-21. Luther burned the paper that they gave him, known as the 'Papal Bull.' He showed that he would not obey the Church against his beliefs.

Diet of Worms

-The Diet of Worms was a council of the Holy Roman Empire, led by Emperor Charles V, in the city of Worms, southwestern Germany.
-This was seen as the final opportunity for Luther to say that he had been wrong, but he refused. However, Luther refused, and therefore he was declared as an outlaw.

Later Years

-Luther's role in the Reformation after 1525 was more advisory.
-He married Katherina von Bora on 13th June, 1525. They had six children together.
-From 1531, his health deteriorated. He died on 18th February, 1546, shortly after a stroke.

Answers to Important Questions and Key Vocabulary

What did Luther believe?

-In the early 1500s, almost everyone in western and central Europe was Roman Catholic. Laws and customs were governed by the Church, which was all-powerful. The Renaissance, however, had led people to begin questioning traditional thought. Luther felt that people could learn all religious truths directly from the Bible – not Catholic scripture. He also disagreed with how people could 'buy' indulgences and forgiveness – this favoured the rich.
-Luther also called for an end to many of the sacraments and rituals of the Catholic Church, which he felt had become self-indulgent. Over time, he began to reject the authority of the Pope.

How did the Reformation spread across Europe?

-Huldrych Zwingli called for even greater changes in Christian worship, and quickly spread Protestant ideas in Switzerland.
-John Calvin helped to bring the Reformation to France, and turned the city-state of Geneva (which is now in Switzerland) into a Protestant city-state.
-Luther and his associates all over Europe began translating the Bible from Latin into their languages.

What has been the lasting impact of the Reformation?

-The Reformation became the foundation for Protestantism, which has become one of the three major branches of Christianity (alongside Catholicism and Eastern Orthodoxy).
-Changes in power occurred. As the Church lost power, monarchs and rulers gained it for themselves.
-Several wars were fought, costing countless lives.

Key Vocabulary

- Martin Luther
- Lutheran
- Roman Catholic
- The Bible
- Practices
- Heresy
- Europe
- Germany
- Protestantism
- Priest
- Theologian
- Christianity
- Reformation

Top 10 Facts!

1. The word 'Protestantism' came from the idea of 'protest' against the Church.
2. Sola Fide means 'justification by faith alone' and was the Lutheran ethic.
3. Some of the other sections that formed were Calvinism and the Anglican Church.
4. The Edict of Worms banned the possession or the reading of Luther's writings.
5. Guttenberg's revolutionary printing press helped spread Protestant ideas.
6. The spirit of learning in the Renaissance period made people start questioning traditional thoughts.
7. Henry VIII challenged the idea that the Church wields ultimate power.
8. The Catholic Church aimed to respond with their own 'Counter Reformation.'
9. Arguments of the Reformation eventually led to wars, e.g. influencing the Thirty Years War.
10. The Bible was translated into many languages.

History

Areas of our study

1. Reformation – Henry's Break with Rome
2. Edward VI – Monarchical Authority
3. Mary I
4. Catholic vs Protestant threats
5. Elizabeth I – Monarchical Authority
6. Elizabeth I – Spanish Armada

Year: 7 – Knowledge organiser
Topic: The Tudors

Henry VII

Key Words – Individuals – Events – Henry VII	
Monarchical Authority	Someone who reigns over a country for life, usually by hereditary right, and remains unchallenged
Tudor Rose	The joining of the White Rose of Yorkshire and the Red of Lancashire. Symbolic of union.
War of the Roses	War between the House of York and Lancaster for control of England
Nobility	Belonging to the higher ranked area of society
Revolt	To take violent action against a Government or ruler
Elizabeth of York	Member of the House of York taken by Henry as his wife to secure peace.
Prince Arthur	Henry's oldest son who died making his second son Henry Heir to the Throne.

Henry VIII

Key Words – Individuals – Events – Henry VIII	
Cardinal Wolsey	First Chief Minister, failed to get Henry a Divorce and died.
Thomas Cromwell	Second Chief Minster, key to the dissolution of the Monasteries.
Six Wives	Catherine of Aragon, Anne Boleyn, Jane Seymour, Anne of Cleves, Catherine Howard, Catherine Parr.
Catholic	A section of the Christian Religion. Pope as Head.
Protestant	New area of Christian Religion. King/Queen as Head.
Renaissance	Revival of European art/literature – The Enlightenment.
Reformation	Changing a practice/institution
Dissolution of the Monasteries	Destruction of the Monasteries for wealth, land and power.

Edward VI

Key Words – Individuals – Events – Edward VI	
Duke of Northumberland	Second Lord Protector for Edward. Was less attempted to stop Wars and save the Economy.
Duke of Somerset	First Lord Protector and carried on were Henry left off – Waging Expensive Wars etc
Treasury	The Monarchs money. This funded War, Improvements etc
Rebellion	An Act of Armed resistance to an established Government or Leader.
Parliament	People who are selected to represent their regions and help run the Country.
Alliance	Union of mutual benefit between organisations or Countries.
The Pope	Head of the Catholic church.

AD 1455	Start of the War of the Roses – Between houses of York and Lancaster
AD 1483	Richard III takes the crown after the death of Edward IV, over- throwing Edward V.
AD 1485	The Battle of Bosworth Field – Henry Tudor is Victorious
AD 1485	Henry Tudor is crowned Henry VII – The first Tudor Monarch
AD 1486	Henry VII marries Elizabeth of York – merging the house of York and Lancaster
AD 1502	Death of Prince Arthur paved the way for Henry to be heir to his fathers' throne.
AD 1509	Henry VII dies – His son Henry becomes Henry VIII and is crowned n the same year.
AD 1509	Thomas Wolsey – First minister to Henry until his death 1530
AD 1516	Birth of Mary – Eventually Mary I of England
AD 1520	Field of Cloth and Gold – Showing power and status to French King Francis I
AD 1521	Henry VIII named defender of the faith by the Pope
AD 1533	Thomas Cromwell First Minister – key figure in the dissolution of the Monasteries

History

Year: 7 – Knowledge organiser
Topic: The Tudors

AD 1539	Large Monasteries are forced to close – the money and land goes to Henry VIII
AD 1547	Death of Henry VIII and the Crowning of his Protestant Son Edward VI
AD 1547-49	Duke of Somerset acts as Lord Protector – 2 rebellions during this period
AD 1550 - 53	After the execution of Somerset – Northumberland takes over as Lord Protector
AD 1553	Death of Edward VI and the crowning of his sister the Catholic Mary I
AD 1554	Married Catholic Phillip of Spain.
AD 1554	Attempts to turn England back to Catholicism. Burns close to 300 Protestants during her reign
AD 1558	Death of Mary I – Her sister Elizabeth is crowned Elizabeth I
AD 1558	William Cecil is Secretary of State and key minister to Elizabeth I
AD 1559	Act of Supremacy and Uniformity passed
AD 1572	Francis Walsingham Becomes Secretary of State.
AD 1575	Sir Robert Dudley welcomes Elizabeth to his Castle at Kenilworth and attempts to win her hand in marriage.
AD 1588	Spanish Armada sets sail towards the English Channel.
AD 1601	Earl of Essex attempts a Rebellion, but it is crushed, and he was executed.
AD 1603	Elizabeth I dies and the Tudor line ends with James VI of Scotland becoming James I of England and the Stuarts reign begins.

Hungry for more?

Henry VII – https://www.youtube.com/watch?v=aBpSRQ6wVPU&t=115s

Henry VIII - https://www.bbc.co.uk/bitesize/guides/zghrd2p/revision/1

Edward VI – https://www.bbc.co.uk/bitesize/guides/zrpcwmn/revision/1

Mary I https://www.bbc.co.uk/bitesize/guides/zrpcwmn/revision/5

Elizabeth I https://www.bbc.co.uk/bitesize/guides/zcn4jxs/revision/1

Also go to the LRC and ask for books on this topic.

Mary I

Key Words – Individuals – Events – Mary I

Phillip of Spain	Became King of Spain – The most powerful Catholic nation in Europe. Mary married him.
Calais	Important port in France held by the English for decades.
Counter Reformation	Under doing a reformation which has changed practice/institutions.
Heresy	Belief or an opinion contrary to the normal (Going against the set religion)
Bishop	Is an appointment high ranking member of the Catholic Church.
Tax	Government/Monarch requesting money to fund elements of Government.
Rebellion	An act of resistance to a Government/Leader
Feudal System	Social system to help Kings/Queens run a country.

Elizabeth I

Key Words – Individuals – Events – Elizabeth I

Act of Supremacy	Placed Elizabeth as Supreme Governor of the Church of England.
Act of Uniformity	All Catholics and Protestants had to worship in the same way.
Armada	Fleet of ships.
Francis Drake	Key figure in defeating the Spanish Armada – Second in command behind Lord Howard of the English Fleet.
Earl of Essex	Stepson of Sir Robert Dudley, hot headed and attempted to rebel against Elizabeth.
William Cecil	Trusted minister of Elizabeth Secretary of state twice and key figure in her Government.
Francis Walsingham	Secretary of State for a period and key councillor for Elizabeth during her reign.
Religious Settlement	Elizabeth's solution to the Catholic and Protestant threats. Acts passed to appease both sides.
Sir Robert Dudley	Elizabeth's favourite and minister in her court.

Research:

Research what the Field of the Cloth of Gold was

What is meant by the term Renaissance?

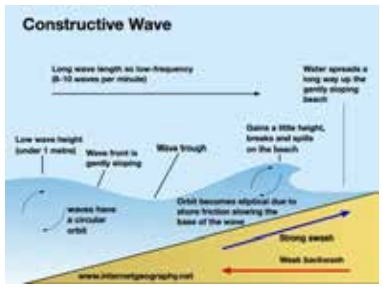
Who was John Calvin and why was he important to the Reformation?

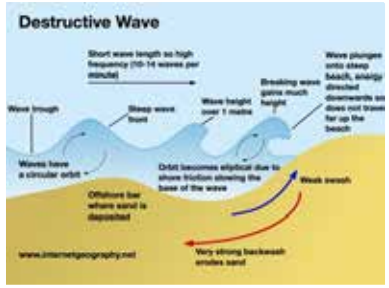
Geography

Geography - The Changing Coast

Key words:
Erosion
Hydraulic action
Abrasion
Attrition
Headland
Transportation
Longshore drift
Fetch
Prevailing wind
Deposition
Spit
Constructive
Destructive

Waves are the main action of change at the coast. There are two types of waves ***Destructive waves***. These are powerful and erode, they have high energy. ***Constructive*** and gentle lapping waves and build beaches through disposition.

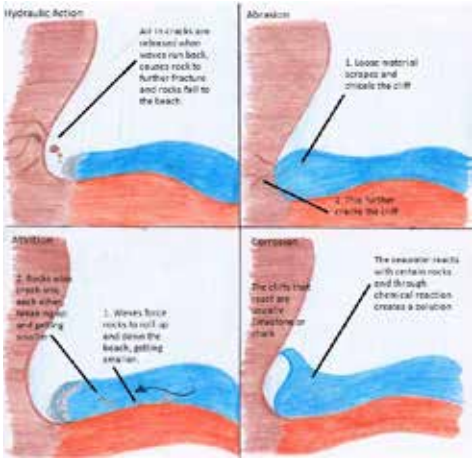




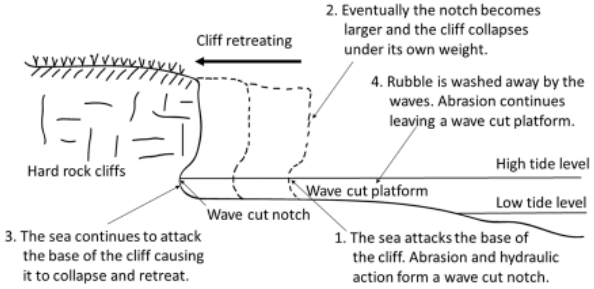
Factors that affect the type of wave are : the strength of the wind, the time the wind has blown for and the distance the wave has travelled called the FETCH

These process of erosion create some distinctive landforms

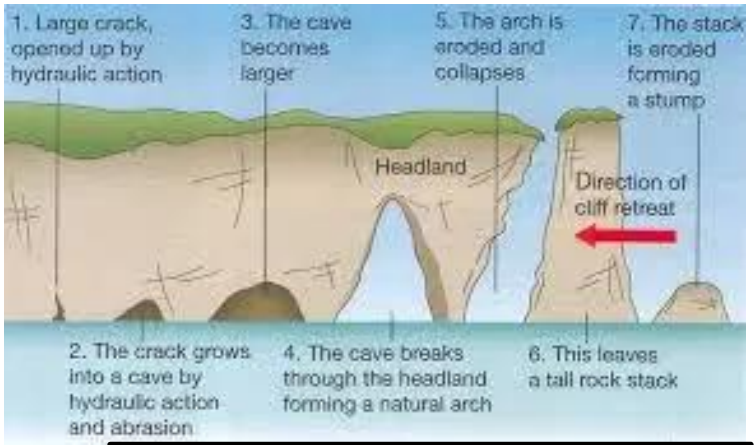
Destructive waves have the power to erode the coast. There are four types of erosion at the coast



A wave cut platform is formed at the base of a cliff and can exist between a stack and the headland



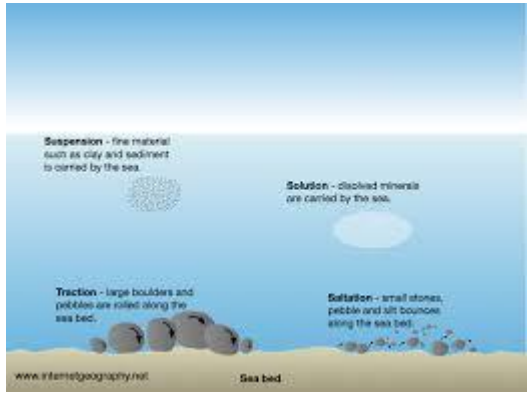
Caves arches stacks and stumps form on headlands.



Durdle Door in Dorset is an example of a Natural Arch

Geography - The Changing Coast

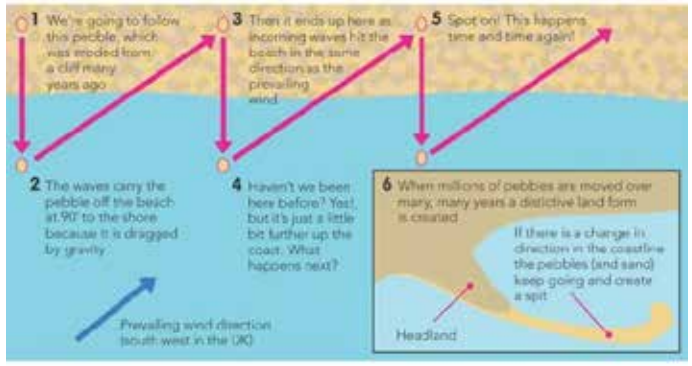
Waves move sediment eroded by the coast



Destructive waves have more energy and are able to move larger pieces of sediment

Longshore drift is the movement of material along the coast. Swash moves sediment up the beach at an angle and backwash moves it straight back down the beach. In this wat sediment can be moved along the coast.

Long-shore drift (LSD)

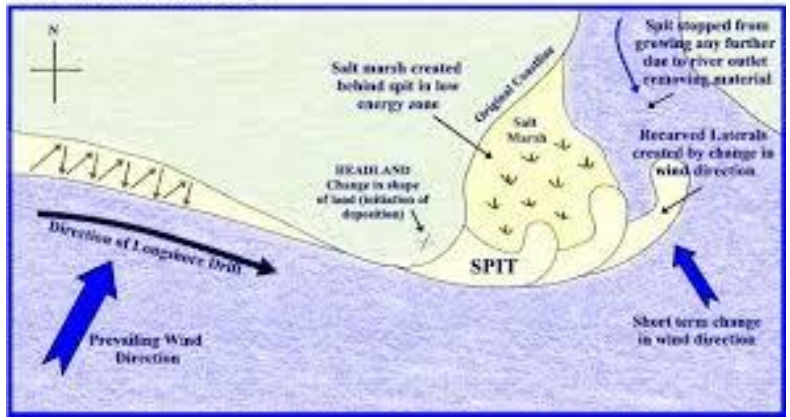


Hurst Spit in Hampshire on the south coast of England

Constructive waves create features of Deposition.

Coastal deposition. When the sea loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition. Deposition happens when the swash is stronger than the backwash and is associated with constructive waves

The Formation of a Spit



As sediment is moved along the coast features of deposition are created. When a coastline changes direction LSD will NOT change. Deposition will continue as before. This can create features such as **sand spits** to form, often at the mouths of rivers.

Beaches are an important feature of coastal deposition as constructive waves with their strong swash push sediment on shore


Religious
Studies

Hartford Church of England High School

Religious Studies

R.E: SON OF GOD — KNOWLEDGE ORGANISER

Overview

-Jesus (also known as Jesus Christ or Jesus of Nazareth) was a preacher and religious leader.

-He is the central figure of Christianity. Jesus was born a Jew, but went on to begin Christianity.

-Most Christians believe that he is God the Son in human form. He is also thought of as the Messiah.

-His birth, actions, teaching, death and resurrection are extremely important for Christians.

-Jesus influenced many of his followers whilst alive, and continues to influence many people today.

***Head of Christ* by Walter Sallman, 1940.**

The Importance of Jesus

Information about his Life

-Almost all scholars agree that Jesus existed historically, and that he was a Galilean (a person from Galilee, a region of Israel).
-There is also evidence that he was baptised by John the Baptist.
-He is known to have been a preacher, who told his message of God to others, and attracted many followers.
-Jesus was crucified (executed on a cross) by order of Pontius Pilate, a Roman governor leading in the area. After his death, his followers began the Christian faith.

Christian Beliefs

-Christians believe that Jesus was conceived (created) by the Holy Spirit and was born to a virgin named Mary.
-They also believe that he performed miracles, for example healing the sick and creating food and drink for those in need.
-Christians believe that Jesus died to save humans, who had committed many sins. After being crucified, he was resurrected (raised from the dead) before rising to heaven.
-Jesus' main message was that people should love – love God and love each other.
-Many Christians devote their lives to good causes in the same way as Jesus did.

The Baptism of Jesus

Jesus' Early Life

-Except for the story of his birth, very little is known about the early life of Jesus.
-Most of the accounts of his life then jump 30 years to the time at which he was baptised by John the Baptist.
-It is thought that Jesus grew up around the town of Nazareth, raised by Mary and Joseph, alongside his brothers and sisters.
-It is likely that Jesus would have learnt his fathers' trade as a carpenter/ builder before leaving home.

John the Baptist

-It is thought that Jesus and John the Baptist knew one another when young.
-When John and Jesus were aged about 30, John began preaching about 'turning away from sins' and being baptised.
-He attracted large crowds.

Jesus' Baptism

-Jesus came to John at the River Jordan to be baptised.
-John was hesitant to baptise someone as special as Jesus.
-At the moment of his baptism, the heavens opened, a light beamed on Jesus, and God spoke to him. Jesus realised his mission.

The Twelve Disciples

-After spending time in the desert reflecting on the events of his baptism, Jesus returned to Galilee and preached the good news of God. He began to choose his disciples.
-The first four disciples were fisherman: Simon, Andrew, James and John.
-Simon became known as Peter – a name that Jesus gave him.
-The next disciples chosen was a tax collector named Matthew, also known as Levi.
-The other disciples were: Phillip, Bartholomew, Thomas, James (son of Alphaeus), Simon (the patriot), Judas (son of James), and Judas Iscariot (this is the Judas who became the traitor).
-All of the disciples immediately followed Jesus when he asked.
-Jesus sent the disciples around villages to share God's message.

Key Vocabulary

Jesus
Christ
Messiah
Influence
Communities
Resurrection
Beliefs
Symbolism
Disciples
Duties
Choices
Sacrifice
Morality

Personal Spirituality – Key Questions

- Which people are important in your own life?
- Why are they important?
- Who influences you in your life?
- What makes them special?
- Which communities do you belong to?
- How do your communities make you feel?
- What things do you believe? Why?
- What are some difficult choices that you make in your life?
- What does sacrifice mean to you?


Spanish

Hartford Church of England High School

Spanish

Mi vida escolar

Los adjetivos (describing facilities)	
Bonito/a	Pretty
Pequeño/a	Small
Antiguo/a	Old
Moderno/a	Modern
Feo/a	Ugly
Grande	Big
Fenomenal	Great
Fatal	Awful

El uniforme (uniform)	
Una falda	A skirt
Una corbata	A tie
Una chaqueta	A blazer
Una camisa	A shirt
Un jersey	A jumper
Unos pantalones	Some trousers
Unos zapatos	Some shoes
Unas medias	Some tights
Unos calcetines	Some socks

Los adjetivos (describing teachers)	
Divertido/a	Fun
Aburrido/a	Boring
Generoso/a	Generous
Raro/a	Strange
Tonto/a	Silly
Serio/a	Serious
Simpático/a	Nice
Tímido/a	Shy
Estricto/a	Strict
Amable	Kind
Valiente	Brave
Inteligente	Smart

El instituto (facilities)	
Un gimnasio	A gym
Un pátio	A yard
Un comedor	A canteen
Una piscina	A pool
Un campo de fútbol	A football pitch
Una biblioteca	A library
Unos laboratorios	Some labs
Unas aulas	Some classrooms
Unos baños	Some toilets

Personas (people)	
Mi profe de inglés	My English teacher
Mi profe de español	My Spanish teacher
Mi profe de francés	My French teacher
Mi profe de arte	My Art teacher
Mi profe de teatro	My Drama teacher
Mi profe de religión	My R.E teacher
Mi profe de educación física	My P.E teacher
Mi profe de música	My Music teacher
Mi profe de geografía	My Geography teacher
Mi profe de historia	My History teacher
Mi profe de tecnología	My D.T teacher
Mi profe de informática	My I.C.T teacher
Mi profe de ciencias	My Science teacher
Mi profe de matemáticas	My Maths teacher
El director/a	The Head teacher
Los alumnos	Students

Preguntas (questions)	
¿Qué tal los profes?	Do you like your teachers?
¿Qué haces durante el recreo?	What do you do at break?
¿Qué hay en tu insti?	What is there in your school?
¿Cómo es tu uniforme escolar?	What is your school uniform like?
¿Qué piensas de tu insti?	Do you like your school?

Los verbos (verbs)	
Como	I eat
Bebo	I drink
Juego	I play
Hago	I do
Leo	I read
Mando / Escribo	I send

Comida y bebida (food and drink)	
Un bocadillo	A sandwich
Unos caramelos	Some sweets
Una chocolatina	A chocolate bar
Fruta	Fruit
Agua	Water
Zumo	Juice
Un Refresco	A fizzy drinks

Deportes (sports)	
Fútbol	Football
Baloncesto	Basketball
Ajedrez	Chess

Sustantivos (nouns)	
Mis deberes	My homework
Mensajes (SMS)	Messages
Libros	Books


IT

IT - Python

What is a Python?

Python is a **text based programming language** that can be used to create small programs, web applications, games and even search engines like Google and YouTube!

Python is easy to learn and is a great beginner language.

Print statements

In order to display text in the **shell** you need to use a **Print** statement.

```
print ("Hello World")
print ("I am a programmer")
```

This is the output:

```
Hello World
I am a programmer
```

Input statements

Using **var = input ()** we can ask a user to input some information.

We can then **print** this back to the console window.

```
userName = input("what is your name?")
print ("Welcome ", userName)
```

userName is a **variable.** This means we can change the information stored. We can also name it whatever we want.

Syntax

Syntax is what we call the format that the code needs to be in, in order to be processed correctly.
If it is not in the correct format then the code will not work.

```
Traceback (most recent call last):
  File "C:/Python33/a.py", line 2, in <module>
    prin (greeting)
NameError: name 'prin' is not defined
>>>
```

Python tells us where the error is and what type it is.
Here it says the line the error is on
Here it says what type of error.

Key Words

Python	Programming	Print	Input	Output	
Syntax	IF/ ELIF	String	Integer	Float	Variable

IF statements

IF statements can be used to select different options in a program depending on a condition. Also known as **selection.**

```
question = input("Are you revising?")
if question == "yes":
    print ("Well done!")
elif question == "no":
    print("Oh dear!")
else:
    print("I don't understand")
```

Variables

A variable is something that can be **used to store information.** The information that is stored can be changed.

Data types

Different types of data are stored in variables as different **data types**. There are **three** main data types:
String, Integer & **Float**

String
A type of variable for storing **text** "strings" **e.g.** "Hello World"

```
string = str("This is a string")
```

Integer
A type of variable for storing **whole numbers**
e.g. 10, 182, -44

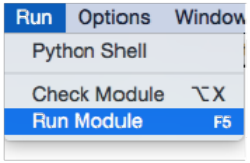
```
integer = int("This is an integer")
```

Float
A type of variable for storing **decimal numbers**. Also known as a **real** number
e.g. 2.5, 5.05, 3.14

```
decimal = float("This is a decimal")
```

Executing a program

In order to run or **test** a program written in Python the user needs to go to **Run** and then **Run Module.**



Alternatively, you could press the **F5** button on the keyboard.

IT - Understanding Computers - Part B

What is a storage device?

A piece of computer equipment on which information can be stored.

Rules of Binary Addition

0 + 0 = 0
0 + 1 = 1
1 + 1 = 10
1 + 1 + 1 = 11

Storage Devices

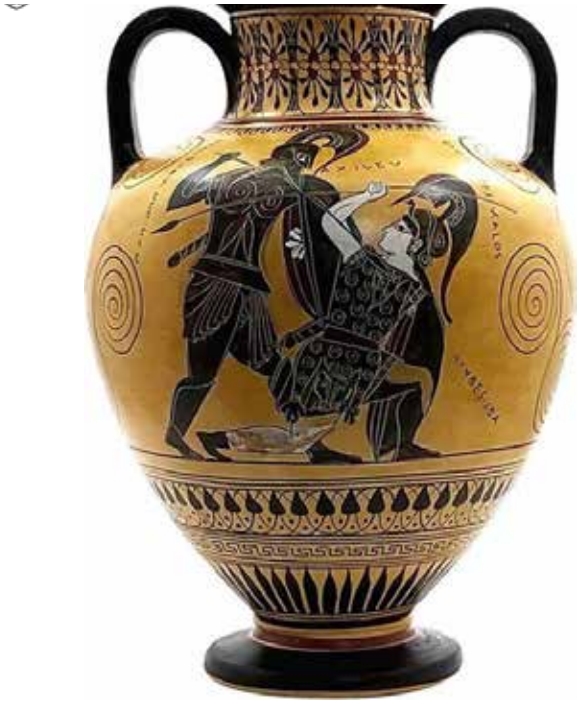
Convergence

New Technologies

Artificial Intelligence (AI) and Machine Learning (ML)
Quantum Computing.
Virtual Reality (VR) and Augmented Reality (AR)
Internet of Things (IoT)
Robotic Process Automation (RPA)
Blockchain

Art

ART - Greek Pots



Deliberate Practice:

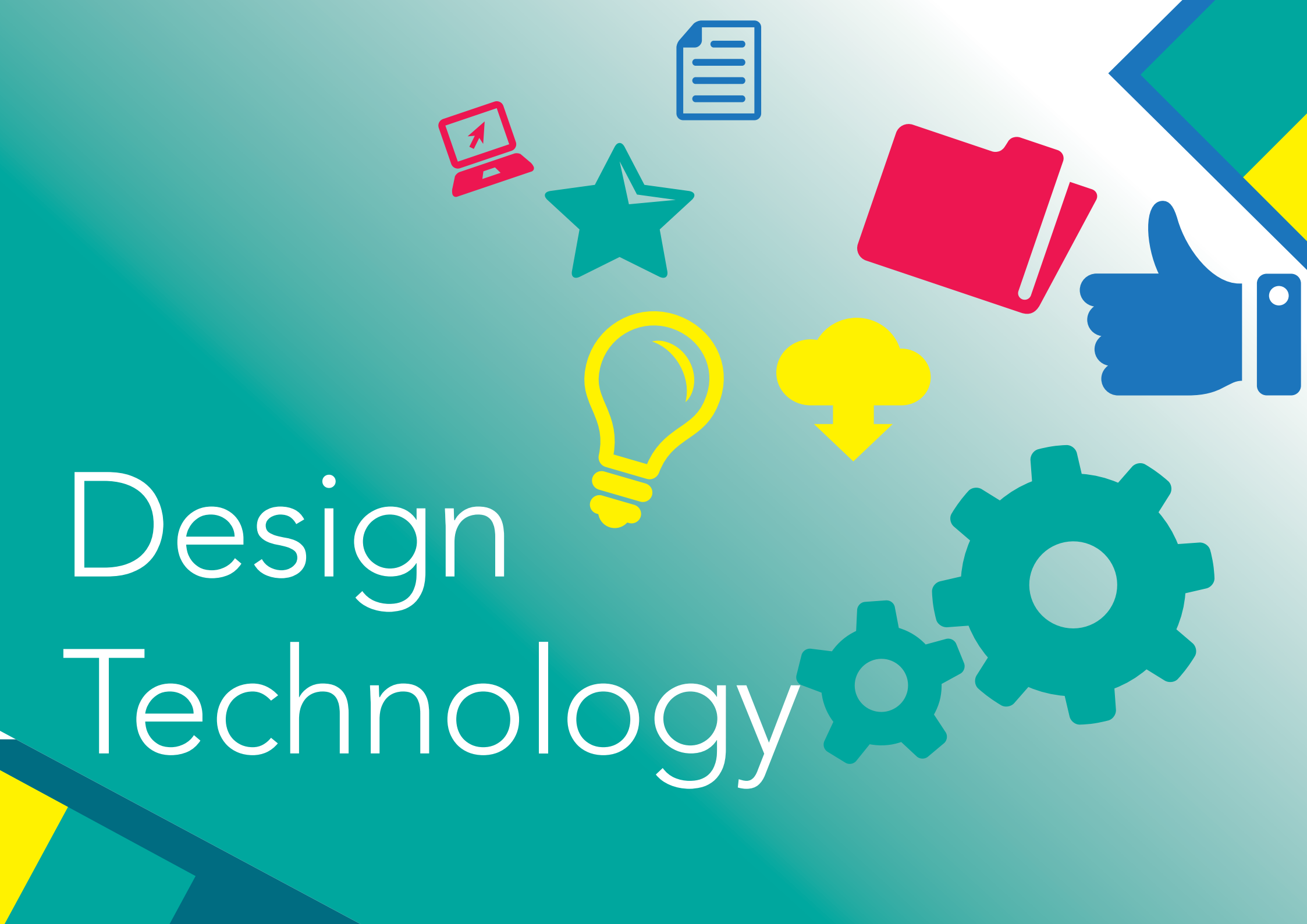
- Research the history of Greek Pots
- Find out what the technique sgraffito is.
- Design your own Greek pot based on modern day events. Your design should include pattern and images and should use colours inspired by Greek pots.

Careers Link: Ceramiscist

- What objects do Ceramicists make?
- Which area of the UK is famed for its pottery?
- Look at the work of Grayson Perry. Can you see similarities in his work and that of the Ancient Greeks?

Key Vocabulary

Narrative, Sgraffito, Communication, Scratch, Clay, Design, Pattern, Ancient, Modern, Geometric, decoration, frieze.


Design
Technology

Design & Technology - Control

Design and Technology Knowledge organiser YEAR 7 control

KEY WORDS AND THEIR DEFINITIONS

Component: a part that combines with other parts to make something bigger (your circuit)

Target market: the group of people for which your product is Aimed at. Who is likely to buy or use it.

Sensor: a device that detects and responds to a type Of input (light/heat/motion/pressure etc)

Transistor a component that regulates the voltage flow through your circuit

Resistor a component that limits the flow of electricity in your circuit

Machines, tools and safety wear

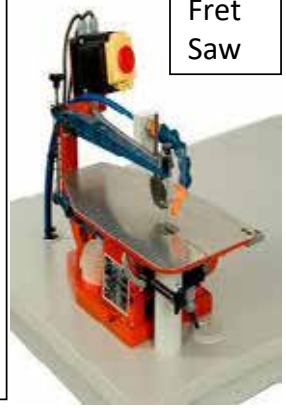

Coping Saw

Pillar Drill


Safety Glasses


DT APRON


Belt sander


Fret Saw

Input>process>output

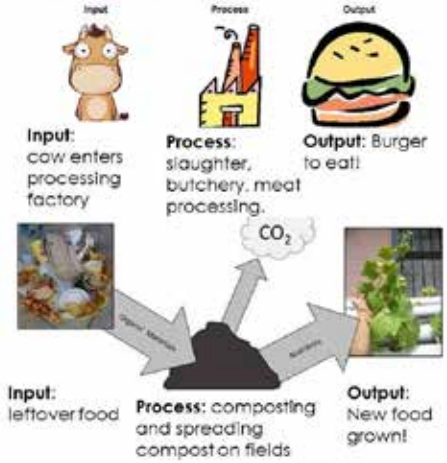
Every system has:

Input (ingredients that are put into the system)

Process (what happens to make the system work)

Output (what the system creates)

For example…



COMPONENTS & SYMBOLS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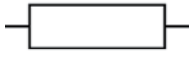
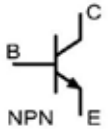
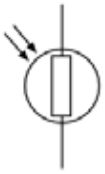
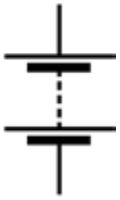

Resistor



Transistor


Buzzer


LDR


Battery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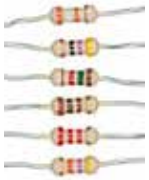
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Design & Technology - Resistant Materials

Natural Timbers		Manufactured Boards
Hardwood	**Softwood**	
		
Hardwoods are usually obtained from **deciduous** trees, which lose their leaves in autumn. ❑ usually grow in warmer more humid climates, mainly in South America and Asia ❑ grow slowly (80+ years) ❑ are more difficult to sustain than softwoods ❑ are more expensive than softwoods ❑ are strong and hardwearing.	Softwoods are usually obtained from **coniferous** trees, which keep their leaves in winter and are also known as evergreens. These grow quickly which makes them sustainable as they are renewable. This also makes them cheaper when compared to hardwoods. ❑ Usually grow in colder climates and are mainly grown in Scandinavia and Northern Europe ❑ Grow thin, needle-like leaves ❑ Grow relatively quickly (30 years) ❑ Are easier to sustain than hardwood trees ❑ Are easy to cut and shape ❑ Are usually cheaper than hardwoods	Manufactured boards are made from the waste sections of felled trees – the parts which are of little use as planks. The wood is reduced to pulp, particles or thin strips and bonded together using special adhesives or resins. Manufactured boards are made as alternative to natural timber. ❑ Come in sheet form (usually 1.2 x 2.4m) ❑ Are extremely stable and of uniform thickness ❑ Are less expensive than laminating planks of timber ❑ Can be covered with veneers ❑ Ae available in a variety of thicknesses (3, 6, 9, 12, 15, 18, 22mm)

Woods—Key Words:

Manufactured

Deciduous

Coniferous

Felling

Seasoning

Converting

Grain

Knots

We always measure in millimetres!

1cm = 10mm

Steel Rule

Adding Dimensions

Pillar Drill

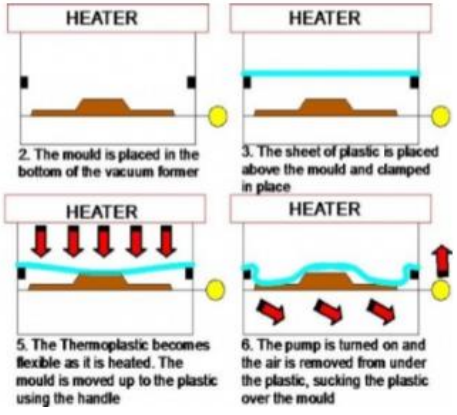
Tri Square

Mitre Saw

Tenon Saw

Bench Hook

Vacuum Forming



1. Mould is made from MDF or Expanded Polystyrene

2. The mould is placed in the bottom of the vacuum former

3. The sheet of plastic is placed above the mould and clamped in place

4. The electric element (heater) is turned on and begins to warm the plastic sheet

5. The Thermoplastic becomes flexible as it is heated. The mould is moved up to the plastic using the handle

6. The pump is turned on and the air is removed from under the plastic, sucking the plastic over the mould

Adhesives

P.V.A. – Poly Vinyl Acetate – best for joining 2 pieces of wood together

Epoxy – a *thermosetting* resin that can be used to bond most types of material

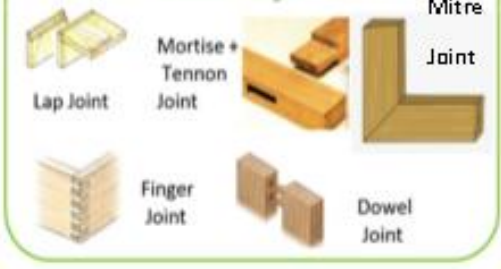
Contact Adhesive – a glue type that creates a tacky bond on both surfaces to be joined. It can be used with most materials.

1: Joining Methods

Wood joints can be either permanent of temporary depending on the type and if glue is used.

Permanent:	Temporary:
When we do not want to take the pieces apart again	When we will, or might need to take pieces apart again
Glues, welding, rivets	Screws, bolts, nails

1.1Wood Joints



Food Technology

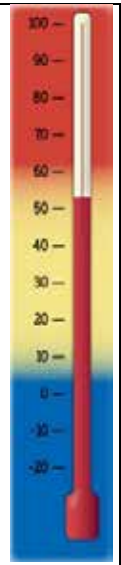
Food and Nutrition

KS3 Y7 Food Tech Knowledge Organiser

KEYWORDS
Nutrition
Hygiene
Infestation
Dormant
Hazard
Microorganism
Contamination
Saturated
Dense
Restrictions

Hazards in the food room

1. Physical hazard	2. Hygiene hazard	3. Infestation hazard
Physical hazard: can cause harm with **contact**. A door left open, spill on floor	**Hygiene Hazard:** microorganisms' (tiny living things) e.g. bacteria/ germs	**Infestation Hazard:** Food left out could encourage pests e.g. mice or ants
		



The 4 key Temperatures for Bacteria activity

75°

5°-63° Danger Zone

0°-5° Sluggish

-18° Dormant


			
4Cs: Always wash and dry your hands properly. **Keep everything clean**	**4Cs:** Keep raw meat and cooked foods apart to avoid **cross contami-nation**	**4Cs: Cook food properly!** You must make sure foods like 'meat' are cooked in the middle.	**4Cs:** Store food at the correct temp. **Keep it chilly silly.**

8 Tips for healthy eating

1. Base your meals on starchy foods.
2. Eat lots of fruit and veg.
3. Eat more fish.
4. Cut down on saturated fat and sugar.
5. Try to eat less salt – not more than 6g a day.
6. Get active and try to be a healthy weight.
7. Drink plenty of water.
8. Don't skip breakfast.

The **Eatwell Guide** is based on the 5 food groups and shows how much of what you eat should come from each group.

The 5 different groups are:
Fruit & Veg (F&V) – Starchy Carbs SC) – Protein (P) – Dairy & Alternatives (D&A) – Oils & Spreads (O&S)

F&V Vits. & Minerals	SC Energy	P Build & Repair muscles	D&A Calc-ium	F&O Fat soluble vitamins. Insulation

YouTube foodtech 101
See FoodTech 101 for all KS3 practicals

5 Things bacteria need to thrive:

1. Plenty of moisture
2. Plenty of food
3. Warm temperature
4. Correct PH (not too acidic or too alkali)
5. Enough time

Allergies and Intolerances:

- Dairy
- Eggs
- Peanuts
- Shellfish
- Gluten
- Yeast

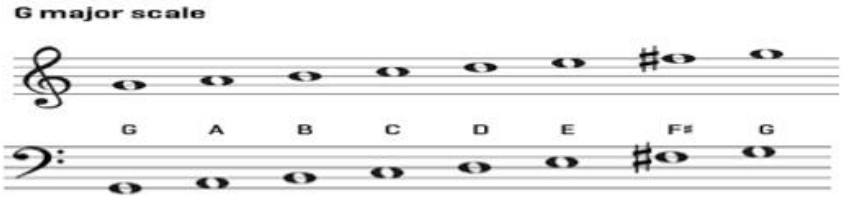
SDN=Special Dietary Needs & Restrictions: Vegetarian, Vegan, Pescatarian, Lacto Vegetarian, Lactose Intolerance, Kosha, Halal

Nutrient Dense Foods=		Energy Dense Foods=	
			
			

Music

Knowledge Organiser Elgar's Pomp and Circumstance

G major scale



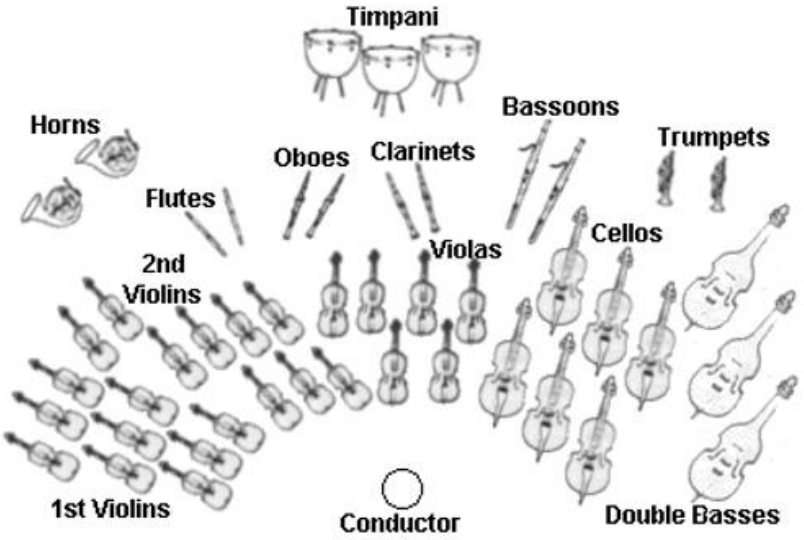


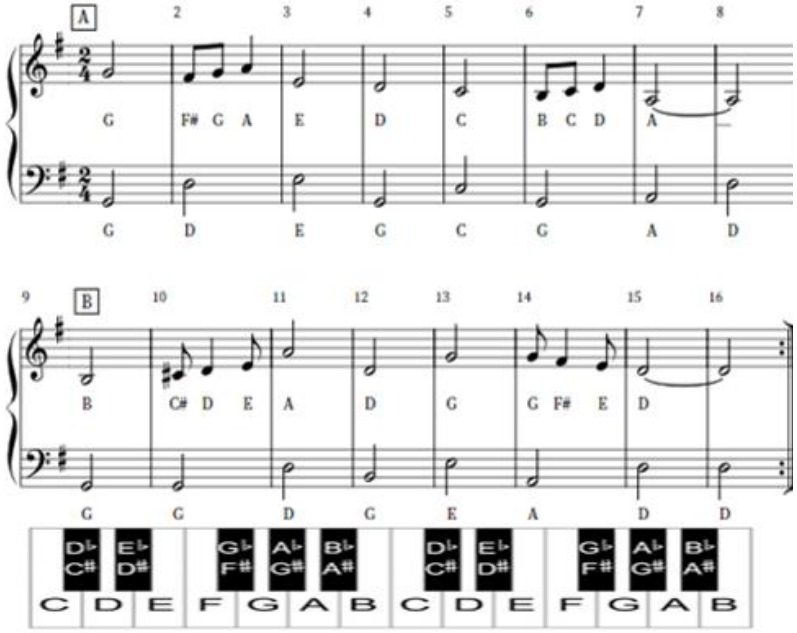
IMAGE A

IMAGE B

IMAGE C

Pomp and Circumstance

Benson wrote lyrics for Land of Hope and Glory — Edward Elgar



Land of Hope and Glory Lyrics

Land of hope and glory
Mother of the free
How shall we extol thee
Who are born of thee

Wider still and wider
Shall thy bounds be set
God who made thee mighty
Make thee mightier
God who made thee mighty
Make thee mightier yet

Drama

Drama - The Island

Y7 Drama – The Island – HT4 – Knowledge Organiser

Key Techniques:

Improvisation: Improvisation is the activity of making or doing something not planned beforehand.

Spontaneous Improvisation: When an actor(s) performs 'on the spot' with no script or prior rehearsal.

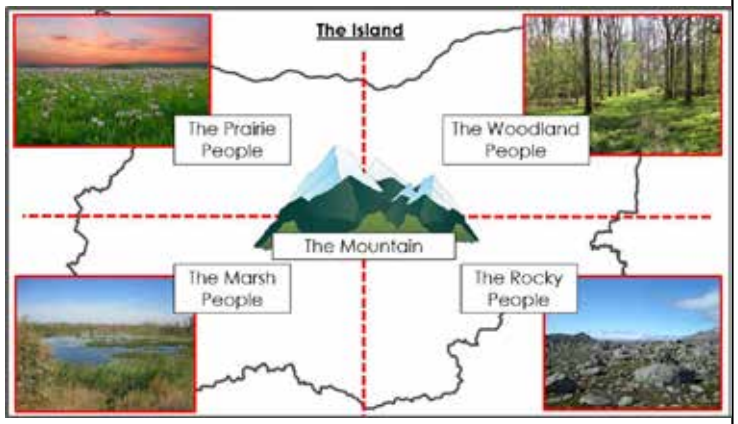
Polished Improvisation: When an actor(s) performs a piece of drama with no script and a very short amount of time to rehearse beforehand.

Role Play: When an actor takes on the role of a character, and uses spontaneous improvisation to mimic the actions/ behaviours of that character.

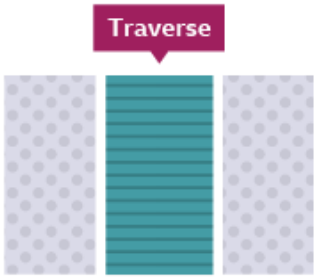
Whole Class Role Play: Where the whole class or a large group, work together using spontaneous improvisation to create a piece of drama. This may include negotiation, problem solving and leadership skills from one or more pupils.

Key Vocabulary:

Vocal Projection: the volume of your voice
Vocal Tone: The 'colour' or emotion of your voice
Blocking: The decisions made by actors/ directors about where actors should stand on stage and how they should move/ act.
Levels: Heights used by actors on stage to create interest for the audience.
Symbolism
Themes: big ideas that are presented within a story/ play
Non-naturalism: techniques used in Drama that are unrealistic. E.g. still image/ mime/ thought-tracking
Narration: a spoken commentary to the audience about the play
Sustain Character: the ability to stay in character (no corpsing)
Unison: Speaking or moving at exactly the same time as one or more actors.
Physical Theatre: Using your body to tell a story rather than words/ Creating objects on stage using your body



Stage types:



Remember:

- When blocking your performances, you must be mindful never to show your back to the audience for longer than necessary.
- Before you begin your rehearsal, pick and agree on where your audience will be.
- Use diagonal positioning when speaking to another character on stage so that the audience can still see your facial expressions clearly.
- Aim to face the audience as much as possible – this means that the audience gets the most out of your vocal projection and will be able to hear you clearly at all times.