Year 8
Autumn Term

Knowledge Expert Booklet

Knowledge Organisers

- You should always have this booklet with you **every day**.
- The knowledge organisers contain the key facts, dates, events, characters, concepts and vocabulary you must memorise to succeed this year and in your future studies.
- Use your green exercise book for **self-quizzing**. It may be set for extended learning or during a form period.
- Use the following method for self-quizzing:

Read a section of your knowledge organiser and try to memorise it	Repeat it to yourself from memory until you think you have got it right.
Cover it up	Put your Knowledge Organiser sheet away so that you cannot copy it. This will mean that your brain will have to work harder, meaning it is more likely to stay in your long-term memory.
Write it out	Put the date and title in your self-quizzing book. Write out what you can remember. Even if you are finding it difficult, do not look back at your KO, but think hard and challenge yourself to find that answer. Always take pride in your work, so write neatly, taking good care of spelling, capital letters and punctuation.
Check it	Refer to your KO sheet and check your work against it.
Correct it	Make corrections using a green pen and continue this process until you can recall the information.

How should you use your knowledge organisers? – 20-minute plan	
20 minutes Quizzing	Select the relevant parts of the knowledge organiser to quiz from – this could be key terms from English, or key formulae from Maths. It should only be small chunks of information. Spend 3 minutes reading and re-reading the section of the knowledge organiser. Spend 2 minutes trying to recall the information in your head or say it out loud. You could ask yourself 'how' and 'why' questions. This is called 'Elaboration'. Put your KO away and write out the topic and answers relevant to the information – use your self-quizzing book for this. Spend about 10 minutes on your Qs and & As. In your self-quizzing book, spend the last 5 minutes checking your answers by looking again at the knowledge organiser and writing any corrections in a green pen. Remember to correct any spelling errors by writing them out again.
Flash Cards	Another way to revise from your knowledge organiser is to put the information onto flashcards. Put key terms / key questions on one side of the card, then the definition / answer on the other side. Either test yourself or ask somebody else to test you.
Online learning	Quizlet, Memrise, and Brainscape are examples of free learning platforms which will help you learn in a fun way. You could use the information on your knowledge organisers to create your own quizzes. You would then be able to use these regularly.

Art

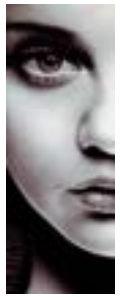
Year 8 – Drawing Skills 2
Portrait Project
Knowledge Organiser

You will learn

- To draw a face using accurate proportions
- The drawing skills to blend and contour
- To identify and apply highlights, core and cast shadows
- How to draw the shape of an eye, nose and mouth and add tone to create form.

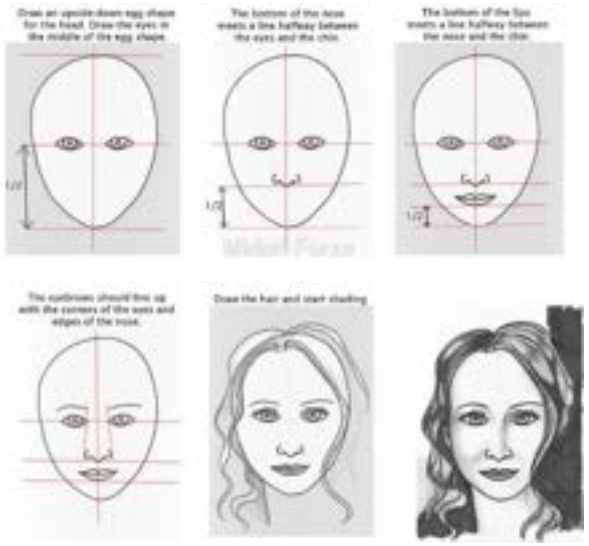
Assessment 1 – Apply the knowledge and skills learnt to draw half of a portrait

Working at

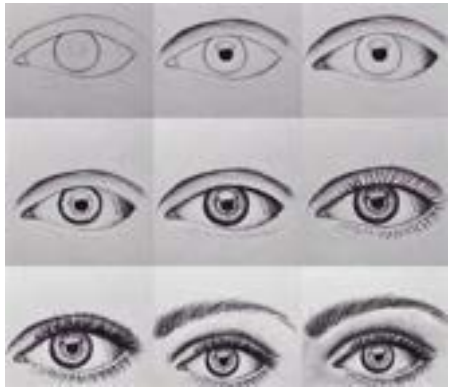


Working above

How to draw a face in proportion

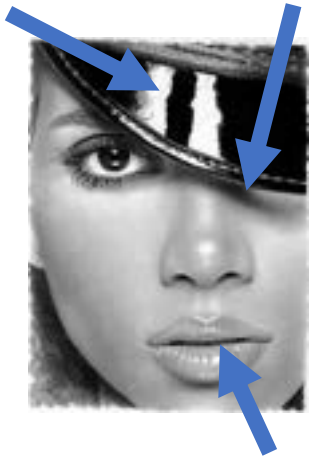


How to draw an eye, nose and mouth



Proportion -
Relationship between the parts to a whole within one image

The artist Margaret Keane enlarges the size of the eyes.
The eyes are out of proportion compare to the rest of the face.



Blending – To smooth out between the tones e.g. blend light into medium tone smoothly

Contouring – To shade in the direction of the shape

Highlight – An area left blank where the light shines on the surface of an area

Core Shadow – A core shadow is the darkest shadow on an object where the light cannot reach

Cast Shadow – A cast shadow is where the light is blocked by the object and it casts a shadow on surrounding surfaces

How to draw a face on YouTube	https://www.youtube.com/watch?v=pE2-CGTtQzc

Computer Science

Term 2a – Computer Systems

Keywords

Hardware – The physical parts of a computer.
Software – A set of instructions that tell the computer what to do.
Systems Software – controls and maintains the way a computer works. For example, operating systems like iOS and Android.
Applications Software – used to carry out a task. For example, PowerPoint, Word.
Input device - used to transfer data into a computer system.
Output device – used to transfer information out of a computer system.
RAM – Random Access Memory
ROM – Read-Only Memory
WAN – Wide area network
LAN – Local area network

What is a computer system?

A computer system is one that is able to take a set of **inputs**, **process** them and create a set of **outputs**. This is done by a combination of **hardware** and **software**.

Input - The role of an input in a computer system is to **provide data** for further **processing**. An input consists of **data or commands** that are entered into the computer system via an **input device.** The input data is converted into **digital data** that can be dealt with by the computer.

Processing - The processing stage is where the **input data** is manipulated to produce **meaningful information.**

Output - Output is the stage where the information obtained via processing **is presented** to the **user** in a suitable format.

Memory

Memory is the area where the computer stores or remembers data. Memory consists of **Random-Access Memory (RAM)** and **Read-Only Memory (ROM)**

RAM
- Stores programs and **data currently in use**
- **Volatile** – when the power is switched off, the **data in RAM is lost**.

ROM
- Stores permanent data.
- **Non-volatile** – when the power is turned off, the **data is not lost.**

Networks

A **network** is when two or more computers are connected together.
There are two types of networks – **Local Area Networks** and **Wide Area Networks.**

Types of networks

WAN:

- Cover a large geographical area
- Use cables, telephone lines, satellites and radio waves to connect

Examples include:
International banking systems and ATM machines
The Internet

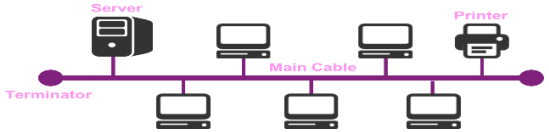
LAN:

- Cover a small geographical area
- Usually operate on a single site or within a single institution
- Use cables and radio waves to connect

Examples include:
Your school networks
A home or small business network

Network Topologies

Bus Topology

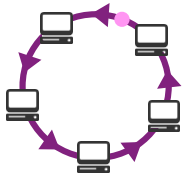


Advantages:
- The simplest and cheapest to install and extend
- Failure of one node does not affect the rest of the bus network

Disadvantages:
- If the main bus cable fails then the whole network will fail
- Performance of the network slows down rapidly with more nodes or heavy network traffic

Ring Topology

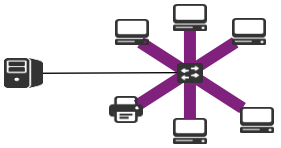
Advantages:
-One-way system so not affected by heavy traffic



Disadvantages:
- Cable failure anywhere will affect the whole network
- Need to 'break' the ring in order to add a new node
- All nodes must be switched on

Star Topology

Advantages:
-Fastest performance
-Easy to install and to expand with extra nodes



-A failure in the minor cables will only affect one node

Disadvantages:
-Uses the most cable which makes it more expensive
-An extra hub or switch further increases the cost

Term 1b – Mobile App Development

What is an app?

A mobile application is a type of application software designed for a mobile device such as a smartphone or tablet. We can create a mobile app using block or text based programming.

Decomposition

Decomposition is breaking a problem down into smaller chunks. App developers do this when designing and creating an app. For example, they might break down the creation of a game by first making the characters, then the levels, then the score.

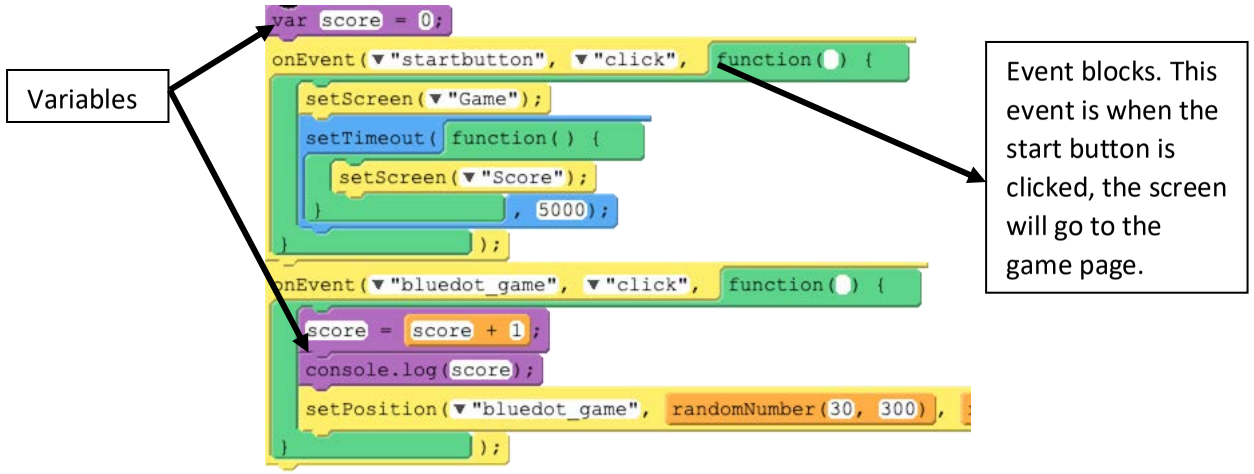
Graphical User Interface

Most computers have an environment with tiles, icons and menus which allow the user to interact. This type of interface is called a GUI, because the user interacts with images through the use of a mouse, keyboard and screen.

Success Criteria

Success criteria are used at the end of a project to help judge its success. Success criteria should allow for factual yes or no answers. They should not be subjective (based on opinion); 'Must be easy to use' would be an example of a subjective success criterion.

Example Code



Keywords

Computational Thinking - The process of formulating and solving problems by breaking them down into simple steps.

Decomposition – Breaking a problem down into smaller, more manageable chunks.

Algorithm – step-by-step instructions

Events – Programming in which the flow of the program is determined by events such as user actions.

Variable – Store's information in a game, such as the score.

User Input – Allows the user/player to enter information.

Sequencing - the specific order in which instructions are performed in an algorithm**.**

Selection - The process of making a decision. The result of the decision determines which path the program will take next.

Debugging – Detecting and fixing errors in a program.

Programming Constructs

Sequencing

Sequence is the first programming construct. In programming, instructions are executed one after another. Sequence is the order in which the instructions are executed.

Selection

Selection is the process of making a decision. The result of the decision decides which path the program will take next.

Dance

Hillcrest School & Sixth Form Centre

UNIT 1 STREET DANCE

PERFORMANCE SKILLS

Technical Skills	Definitions	Expressive Skills	Definitions
Arm and leg extensions	To fully stretch your arm and leg.	Musicality	How you interpret the music and stay in time with the music.
Movement memory	Remembering the steps.	Facial expressions	Feelings expressed on your face. Not just smiling, but suiting a character and expressing the style of music.
Focus	Where you look, avoiding looking down. Concentrating and being ready to dance.	Dynamics	The way you perform an action. For example; softly or jerky.
Balance	Maintaining an upright and controlled position of the body whether in movement or still.	Projection	Sharing your energy with the audience.
Co-ordination	The ability to move two or more body parts with control, smoothly and efficiently.		
Posture	Having a straight back, not slouching		
Flexibility	The range of movement in your legs and back.		

PERFORMANCE TIPS:

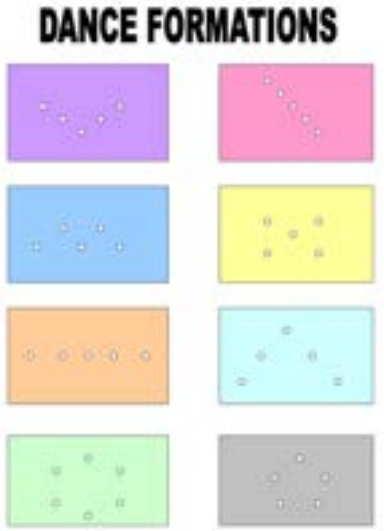
- You get graded individually so go for it!!
- Use as much energy in your performance as possible
- Think about the style you are performing
- Make your movements as BIG as possible
- Don't look at the floor!

Types of stimuli used in dance

VISUAL	KINESTHETIC	TEXTUAL	AUDITORY
PICTURE	A PROP	POEM	SONG
PAINTING	A CHAIR	MAGAZINE ARTICLE	SOUNDS OF NATURE – BIRDS, WAVES CRASHING
POSTER	A SUITCASE	STORY	SPOKEN WORD
VIDEO	A ROPE	NEWS ARTICLE	SOUND EFFECT

5 Key Street Dance Actions

- Locking
- Popping
- Breaking
- Waving
- Isolation



The 4 Components of Dance:

Action – what you do
Space – where you are in the space
Dynamics – how you perform the actions
Relationships – who you dance with

Drama

DNA by DENNIS KELLY

Plot

The play DNA was first staged in 2007 at the National Theatre before going on national tour for the first time. It's a play about a group of teenagers, who could be described as a 'gang', who have accidentally killed one of their classmates. When they realize the terrible mistake they have made, they try to cover up this crime, but inadvertently implicate an innocent man in the process. At each moment when they could come clean, the group instead weaves a darker, more complex web of lies.

Born in 1970, wrote his first play when he was 30 years old.

Lou

We are screwed!!

Considerations

- Freeze frame
- Levels
- Music
- Proximity
- Direction
- Physical contact
- Emotion
- Stage directions

Key Themes

Gangs	Bullying	Morals

The play contains a number of different themes. One of the obvious ones is **bullying** and the most obvious character who is bullied is Adam. He is desperate to be a member of the group and this means he is an easy target for the bullies. His bullying at the start of the play is so bad we believe this is the cause of his death. Even when he returns at the end of the play he is still bullied.
Another theme is **gangs**. The group of characters in the play can be described as a 'gang'. We witness a few of the characters who, in their own way, want to be accepted as a member of the gang. They are willing to do things that they don't really want to in order to 'belong'. Morals is another theme as they are many moments within the play where you want the characters to do the right thing but mostly end up making the wrong choice.

Structure & Locations:

1. Street
2. Field
3. Woods

Characters

John Tate

Jan

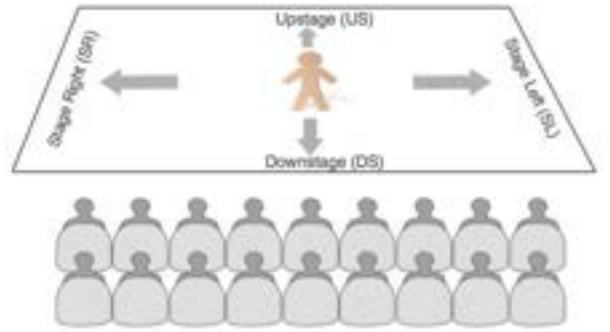
Lou

Mark

Danny

Vocal Skill	Definition	Physical Skill	Definition
Tone of voice	This suggests your mood, emotion and your intention towards the listener	Gesture	A movement of part of the body, especially a hand or the head, to express an idea or meaning
Pitch	Speaking in a high, low or natural voice	Gait	The way in which a character travels on stage
Pace	The speed in which you speak	Facial Expressions	The emotion displayed through facial features
Diction	How clearly and precisely words are spoken	Mannerism	A habitual gesture or way of speaking or behaving
Accent	A way of pronouncing words that shows where you are from and your social class.	Posture	The way in which you hold your upper body

Volume	**How loud or quiet you speak**	**Body language**	**The conscious and unconscious movements and postures by which attitudes and feelings are communicated.**
Elongate	To make a word longer to create dramatic effect		
Emphasis	the pressure on individual words that makes them stand out		
Pause	the Dramatic Pause is a beat or two of silence with no dialogue and little or no music/background sound		



Stage Directions

TOP TIPS

Learning Lines

- **Annotate thoughts on <u>why or how</u> your character says the line.** What are they trying to get from the other characters? What is there objective? How are they feeling? This information will help you learn the lines and the character's emotions.
- **Write your lines out, one at a time**. Read line 1 – cover it – write it – check it. Read lines 1 and 2 – cover it – write it – check it. Read lines 1,2 and 3 – repeat. If you get something wrong, go back over and repeat from the beginning.
- **Run your lines with another person.** Give them the script and ask them to test you. This could be a friend or a sibling or anyone else at home. *Ask them to not correct every tiny mistake* but to note areas that need re-learning once you get through it. Again, repeat this as much as you can.
- **Memorise one line at a time**. Similar to writing your lines out but this is in your head. Try practicing this on the bus to school. You cannot learn everything at once! Break it down to small manageable 'bits'.

English

Vocabulary	Definition
Metaphor	When a comparison is made of one thing to another.
Simile	A comparison between two things using the words 'like' or 'as'.
Personification	Giving human qualities to inanimate objects
Rhyming Couplet	A pair of rhyming lines that are next to each other
Symbolism	The use of symbols to represent ideas or qualities.
Sonnet	A one stanza 14 line poem with a regular rhyme scheme
Enjambment	Incomplete sentences at the end of lines in poetry, where one line runs on to the next for effect
Juxtaposition	Placing contrasting ideas close together in a text
Pathetic Fallacy	Giving human behaviour and feelings to nature.

'I wandered lonely as a cloud' - William Wordsworth

"A host of golden daffodils […] fluttering and dancing in the breeze" This suggests the daffodils are precious and valuable to the speaker. The personification of the daffodils suggests that they are joyful, carefree and energetic.
"continuous as the stars that shine" This suggests the daffodils are beautiful and never-ending like stars in the sky. Comparing the flowers to stars could suggest that the flowers provide guidance or company for the speaker as they felt lost earlier in the poem.
"And then my heart with pleasure fills, and dances with the daffodils" This suggests the flowers have a powerful effect on the speaker even in their memory. Whenever they think of the flowers, it fills them with contentment and happiness.

'The Garden of Love' - William Blake

"And the gates of this Chapel were shut" This suggests the church is not very welcoming to the speaker. The 'gates' reflect how a once free and open space has been given boundaries and restrictions which could reflect how Blake saw the church as controlling and oppressive.
"I saw it was filled with graves, and tomb-stones where flowers should be" This suggests the speaker is angry at how they have degraded the garden. It is now a place of death where not life, innocence or children can be found.
"Priests in black gowns, were walking their rounds" This suggests the priests are ominous, evil figures who patrol and guard the garden. The internal rhyme creates a claustrophobic tone and reflects how the church restricts people's freedom

'Upon Westminster Bridge' - William Wordsworth

"The City now doth, like a garment wear, the Beauty of the morning" This suggests that the view is beautiful. By combining the cityscape with the natural beauty of the sunrise, Wordsworth highlights how the city is connected to nature and this enhances the wondrous beauty of the scene.
"All bright and glittering in the smokeless air" This suggests the city looks pure and unspoilt. This subverts the reader's expectations given the effects of the Industrial Revolution, however, perhaps because it was so early in the morning, Wordsworth is reflecting this moment of rare peace and beauty that he saw when travelling in London.
"All that mighty heart is lying still!" This suggests the speaker is amazed and astounded by such a powerful and busy city being so serene and tranquil.

'The Chimney Sweeper' - William Blake

"My father sold me while yet my tongue could scarcely cry "'weep'" This suggests the speaker is exploited at a young age. He is sold like a commodity and not protected by his father. His youth is highlighted by the fact he is so young he cannot properly speak.
"That thousands of sweepers, Dick, Joe, Ned, & Jack, were all of them locked up in coffins of black" This suggests many children died in this line of work, but by naming them, Blake gives their identities back to them. The "coffins" reflect how the chimneys led to many horrible deaths for the children.
"the Angel told Tom, if he'd be a good boy, he'd have God for his father & never want joy." The angel here could represent the church and could reflect how Blake felt the children were manipulated by the church into accepting their own oppression.

Context: Industrial Revolution
This is when cities began to grow and more factories were built. This led to a lot of nature being destroyed, and people being oppressed as the working class did hard jobs for very little pay.

Comparative PEAZ:
Link (Comparative Point) – name of poem and poet – link to question and identify a key similarity or difference
EAZ – Poem 1 + Context
Comparing Connective
EAZ – Poem 2 + Context

Comparative point: Both Wordsworth and Blake presents experience as …..
Evidence: In 'Upon Westminster Bridge' this is shown by Wordsworth in the line '____'
Analysis: This reveals ….
Zoom: The word (identify it if you can)/phrase/technique "___" highlights ….
Context: Perhaps this could reflect
Comparing Connective: Similarly, In the same way / However, In contrast,
Evidence: In 'The Chimney Sweeper' Blake presents experience as …. in the line '____'
Analysis: This reveals ….
Zoom: The word(identify it if you can)/phrase/technique "___" highlights…
Context: Perhaps this could reflect

Punctuation and Grammar rules to succeed in AO6

Sentence types:
Simple: a sentence which contains a main clause made up of a verb and a subject. **E.g. The dog barked loudly.**
Compound: A sentence which contains two main clauses joined by FANBOYS co-ordinating conjunction.
E.g. I went to school, and I completed all of my homework.
Complex: This is a sentence which consists of a main clause and a subordinate clause. I WAS A BWABE should help you remember some key subordinators. **E.g. Although I had never tried it before, I enjoyed my vegan burger.**

Comma rules:
Rule 1: use a comma to separate items in a list **E.g. I needed to buy apples, bananas, grapes and a pineapple.**
Rule 2: use a comma around an embedded clause ('who' / 'which').
E.g. The dress, which had red roses on the hem, was completely ruined.
Rule 3: use a comma in a compound sentence before a FANBOYS co-ordinating conjunction.
E.g. I needed to eat healthily, but I really wanted a slice of cake.
Rule 4: use a comma after a subordinate clause when it is used before a main clause.
E.g. As I was ten minutes early, I decided to get a coffee.

Apostrophes:
Contractions: these can be used to show where letters have been missed out. These are called contractions. **E.g. Don't worry**.
Possession: these show that someone owns something. **E.g. That is Sarah's dog.**

Adverbial Phrases: Adverbials build on verbs by telling us their manner, time, place or degree.
Time: He walked in the room just **before 9AM**. / **Place**: There was a mess **everywhere**
Manner: He smiled **wickedly** at his victim / **Degree**: I saved **the most**.
Remember, if you **begin** your sentence with an adverbial phrase, you need a **comma** before your main clause:
E.g. With a murderous look in his eye, Bill Sikes thundered through the streets.

Colon or semi-colon:
Colons: these show that the words which follow it are an explanation, example or list of what has been written before it. **E.g. There were two choices this time: fight or run away.**
Semi-colons: a semi-colon joins two main clauses that are closely linked into one sentence.
E.g. I slept for a long time; I am still tired.

Dialogue rules:
Rule 1: All dialogue must be contained in quotation marks. **E.g. "Sit down,"** ordered the teacher.
Rule 2: Before the end of the quotation marks, you must punctuate (, ! ? .) **E.g.** "Sit down," ordered the teacher.
Rule 3: Include dialogue tags – who said what and how. **E.g.** "Sit down," **ordered the teacher.**
Rule 4: New speaker, new line E.g. **"Yes miss," replied the student.**

Sentences for year 8

De:De rule: This is when the first sentence states the description, and the second sentence adds in detail. You separate the ideas using a colon. **E.g. Snails are slow: they take hours to cover a short distance.**

3 show start rule: This is when you begin your sentence with a list of 3 actions which will show the reader how your character is feeling. **E.g. Legs twitching, palms sweating, heart racing, Oliver made his way through the crowd.**

Getting Worse rule: This is where you list three adjectives which get progressively worse in their meaning.
E.g. The situation was becoming worse, desperate, earth-shattering.

Detail

Evoke the Senses

Sentence Variety

Colour

Range of Punctuation

Imagery

Brilliant Vocabulary

Emotion

Spelling is Accurate

Nothing too Far-Fetched

Ambitious Vocabulary

Range of Literary Devices

Really Detailed Setting

Accurate Spelling and Punctuation

Tense and Time Control

Introduce Main character

Varied Sentence Structures for Effect

Ending should not be Clichéd

ASPICED in Complex Sentences

A (Adverb) – Start your sentence with an adverb.
Lovingly and attentively, he stared into her beautiful green eyes.

S (Simile) – Start your sentence with an 'As' or 'Like'.
As brave as a lion, he slayed the evil monster.

P (Preposition) – Start your sentence with a preposition.
As brave as a lion, he slayed the evil monster.

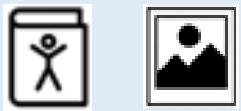
I (-ing word - verb) – Start your sentence with an '-ing' word.
Unlocking the door, she left the room.

C (Connective – a subordinator) – Start your sentence with a 'I WAS A BWABE' connective.
Although he was hurt, he continued on his quest!

E (-ed word - verb) – Start your sentence with an '-ed' word.
Scared by the sound, he hid under his covers for shelter.

D (drop in clause – **embedded clause**) Add a drop in clause to your sentence. (who = person / which = place)
Michelle, who was very clumsy, always fell over her own laces.
Birmingham, which is located in the West Midlands, is the second biggest city in England.

Freytag's Structure for a Narrative Opening

Exposition 	Introduce your character and setting
Rising Action 	Introduce conflict
Climax 	Conflict and tension increases

Geography

Year 8 - **Knowledge Organiser** - Term 1A

Causes of climate change

1. Climates of the world

Polar = Very cold and dry.
Temperate = Cold winters, mild summers
Subtropical = Hot and dry
Tropical = Hot and wet, around the equator.

2. The greenhouse effect

3. Natural causes

Volcanoes: Short-term cooling as ash blocks sunlight. Long-term warming due to greenhouse gases released.
Distance from the sun: Earth's orbit around the sun changes shape. Closer to the sun means a warmer climate.

4. Climate change over time

Ice cores: Air trapped in ice shows us what the atmosphere used to be like.
Tree rings: The rings on a tree trunk vary in size based on the climate.
Landscapes: Big glaciers make unique landscapes like large U-shaped valleys.

5. Little Ice Age

- Occurred between **1300** and **1870**.
- **Europe** and **North America** had much **colder** winters.
- **Farming** was difficult due to the colder temperatures.
- More people **died** from the cold.

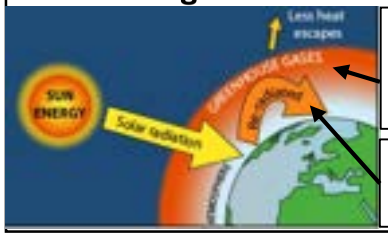
6. Megafauna extinction

Near the end of the last ice age, ~50,000 years ago, many megafauna (large animals) became extinct, e.g. woolly mammoth.
Climate change may have caused this as the temperatures rose. Alternatively, it could have been due to **humans hunting**.

7. Human causes

Agriculture (farming): Animals such as cows produce GHGs, e.g. methane.
Deforestation: Less trees means less GHGs are absorbed.
Transport: Burning oil, gas and coal produces lots of CO_2.

Enhanced greenhouse effect



More greenhouse gases.

More heat trapped.

	Key Term	Definition
1	**Atmosphere**	The layer of air surrounding the Earth.
2	**Weather**	The day to day events and conditions that occur in the atmosphere. E.g. rain, snow.
3	**Climate**	The long term **average** weather conditions in an area. E.g. tropical climates are hot and wet.
4	**Climate zone**	An area of the Earth within which the climate is similar, e.g. the Polar zone.
5	**Climate change**	A gradual change in the climate over time, e.g. becoming warmer and wetter.
6	**Greenhouse effect**	Warming of the Earth caused by heat trapped by the atmosphere.
7	**Greenhouse gas (GHG)**	A type of gas that traps heat, such as carbon dioxide (CO_2).
8	**Glacier**	A large 'river' of ice. These tend to be found at high altitude or high latitude.
9	**Deforestation**	The removal of trees from an area.
10	**Fossil fuel**	Fuel sources that formed from organisms that died millions of years ago, e.g. coal.

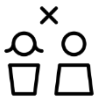
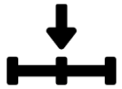
Key question:
Is it too late to mitigate climate change?

History

History Knowledge Organiser – Year 8 - Early Modern Monarchies

1509	1517	1533	1547-1553	1553-1558	1558-1603
Henry VIII becomes king	Martin Luther's Ninety Five Theses	Henry VIII breaks with Rome	Edward VI's reign	Mary I's reign	Elizabeth I's reign

Key people, ideas and developments

1	Martin Luther 	A German **monk** called Martin Luther is claimed to have started the **Reformation**. He and his followers called Lutherans protested against the Catholic church. This led to the birth of **Protestantism**. He wrote a document called The Ninety-five Theses and nailed it on to the door of his local church. New services in the Protestant Church were no longer in Latin and included praying, singing, Bible reading and sermons. These ideas spread across Europe. *Not to be confused with Martin Luther King, the civil rights leader who lived in the 20th century.*
2	Henry VIII's break from Rome 	Henry VIII wished to divorce Katherine of Aragon, but the church would not allow it. In 1533, Henry VIII broke from the church headed by the Pope in Rome and established the Church of England. He then married the pregnant Anne Boleyn in a secret ceremony. This solved his heir problem, but Henry was **excommunicated** by the **Pope**. The English **Reformation** had begun.
3	New Church of England	The break from Rome gave Henry VIII power over the church in England and he became very wealthy. He dissolved the monasteries and took their money and land. This created some rebellion as there were still some Catholics in England. Despite being Head of the Church of England, Henry never became a Protestant himself.
4	Edward VI	Edward was brought up as a devout Protestant. When king, he changed the church in England to make it a Protestant church, introducing new services and a new prayer book, English bible and plain churches. Some rebelled against his changes, such as the Prayer Book Rebellion in Cornwall and Devon. Edward responded harshly.
5	Mary I	Mary was a Catholic, and when she became queen she returned England to Catholicism, with Latin bibles, Catholic mass and so on. Some refused to convert back to the Catholic religion. These people were accused of **heresy** and many of them were executed by being burnt at the stake.
4	Elizabeth I 	Elizabeth chose a 'middle way', returning the Protestantism but a milder version than Edward's, to try to please both Catholics and Protestants. The Bible was written in English and there were new rules about how churches looked.
	Problems with Catholics and Puritans 	The Pope **excommunicated** Elizabeth in 1570. Some Catholics wanted Mary Queen of Scots to be queen instead of the Protestant Elizabeth, so there were a number of **plots** to replace her. Elizabeth became more anti-Catholic as her reign went on. 162 Catholics were executed between 1577 and 1603. Some people refused to follow the instructions of the Queen, they became known as recusants. Elizabeth also faced problems from more extreme Protestants, known as Puritans.




History Knowledge Organiser – Year 8 - Early Modern Monarchies
Key terms

Word	**Definition and characteristics**	Related words	**Examples in a sentence**
monk	A man who dedicates himself to religion, living in a separate community and serving God through prayer and charitable works.	monastery : a place where monks live and work	Martin Luther was a monk
excommunicate	Officially exclude from/send out of the church		Henry VIII and Elizabeth I were both excommunicated from the Catholic church.
petition	A set of demands, often signed by many people		The Prayer Book Rebellion started with a petition to the king complaining about his religious changes
heresy	Going against the official religion of a country – a crime during the Tudor period	heretic: a person who commits heresy	During the reign of Mary I, many people were executed for heresy.
martyr	Someone who dies for their faith.		People who were executed by Mary I were remembered as Protestant martyrs.
treason	The crime of being disloyal to your monarch or country, e.g. by plotting to kill the monarch.	traitor, betray	Mary, Queen of Scots was executed for treason after she took part in a plot to kill Elizabeth I.
Reformation	The name given to the split between Catholics and those who followed the ideas of Protestant reformers such as Martin Luther and John Calvin.	reform : to make a change or an improvement	The period of the Reformation was a time of religious change in Britain.
Protestant	A type of Christianity: no Pope, plain churches, English Bible	protest : showing unhappiness towards something by taking action.	The Protestant belief spread about Britain following the ideas of Martin Luther.
Catholic	A type of Christianity: Pope, decorated churches, Latin Bible.		The Catholic church was powerful in the Medieval period and led by the Pope.
Puritan	A Protestant with particularly strong views.	pure : not mixed with something else.	The Puritans wished for all elements of the Catholic church to be removed.

Knowledge Organiser – Year 8 - How successful were Parliament in controlling the Crown's power?

James I (1603-1625) | Charles I (1625-1649) | The Interregnum (1649-1658) | Charles II (1660-1685) | William and Mary 1688-1702) | Anne (1702-1714) | George I

		Details	Power of Parliament
1	James I	James I was the first Stuart King of England and was far less tolerant of Catholics than Elizabeth had been. This resulted in the Gunpowder plot, an attempt to assassinate him, as he opened Parliament.	James I believed in the divine right of kings. He regularly used his royal prerogative to close Parliament. By the end of his reign the monarchy was very poor.
2	Charles I	Charles I was a very unpopular King. During his reign England descended into a civil war between those loyal to Parliament and loyal to the monarchy. Parliament won!	Charles I went even further than his father and was regularly in conflict with Parliament. They even went to war, as Parliament refused to be bossed about.
3	Trial of Charles I	Following the Civil War, Parliament voted to put Charles on trial for treason and eventually found him guilty. He was sentenced to death by the 57 judges present.	Charles claimed than Parliament had no authority over him when they put him on trial. However, they still sentenced him to death. This sent shockwaves across Europe.
4	The Interregnum (Oliver Cromwell)	England was now a republic and was led by Oliver Cromwell as Lord Protector. He had strong Puritan beliefs and even banned celebrations like Christmas.	Even though he was selected by Parliament he was accused of acting like a King. He closed Parliament often and regularly ignored them.
5	Return of the monarchy (Charles II)	Following Cromwell's death, Charles I's son returned to be King of England on his 30th birthday. He was known as the merry monarch because he reintroduced lots of fun things like sport, singing and holidays that had been banned by Cromwell.	Upon Charles II's restoration, he worked well with Parliament for most of his reign. However, they fell out over the next heir. Charles II wanted his Catholic brother James, Parliament did not.
6	William of Orange and Mary	William of Orange and Mary were chosen by Parliament over James II. Parliament wanted a Protestant monarch and told them to invade. No blood was spilt in their invasion. It is known as the Glorious Revolution	William and Mary were selected by Parliament because they were Protestant. However, Parliament forced them to sign a Bill of Rights, limiting their power, before they became monarchs.
7	George I	George I was the first Georgian King of England. He was chosen as King, as he was the nearest related Protestant to the Stuart family. He was from Germany and barely spoke any English.	George was a foreign King, who needed Parliament as he was so disconnected from the people. He chose Lord Walpole to be the first Prime – Minister.

Knowledge Organiser – Year 8 - How successful were Parliament in controlling the Crown's power?

Word	Definition	In a sentence
Bill of Rights	A set of rights (strict rules) that gave Parliament powers – now known as Parliamentary Privilege.	Parliament's powers were shown in the Bill of Rights.
the crown:	The position of the monarchy.	During the reign of Charles I, the crown had a lot of power.
divine right	The idea that the King is appointed by God and therefore only responsible to God.	James I believed in his divine right as King.
Interregnum	The time period in England, in which there was no Monarch.	Oliver Cromwell led England during the Interregnum.
male primogeniture	The right of the firstborn male child to be the heir of the throne.	Male primogeniture was abolished in Britain in 2011.
Member of Parliament (MP):	Person elected to represent people in Parliament	Oliver Cromwell was a Member of Parliament.
personal rule:	Charles I's period of rule without involving Parliament.	Charles I's personal rule upset Parliament.
prorogued:	Closing Parliament – part of the royal prerogative.	Charles II prorogued Parliament when they tried to stop his brother being his heir.
regicides	Group of people who take part in the killing of a King.	Fifty-nine judges became regicides when they ordered Charles I's execution.
republic	A system of running a country without a Monarch	Following the execution of Charles I, England became a republic.
royal charters:	A power of the King to give certain areas special privileges, allowing them to come up with some of their own rules and laws.	Charles II gave the City of London a royal charter.
royal prerogative:	Special powers reserved for a King	Charles I, used his royal prerogative to close parliament.

Knowledge Organiser – Year 8 – How can historians uncover the history of the Kingdom of Benin?

11th-12th centuries	15th century	15th-16th centuries	1640	18th century	17th-19th centuries	1897
Rise and expansion of Kingdom of Benin	Benin at its most powerful	Christian missionaries try (& fail) to spread Christianity to Benin	Benin City walls completed	After resisting for a long time, Benin starts participating in slave trade	Decline of Benin's power	Benin taken over by British Empire

Key people, ideas and developments

1	Historical sources	Historians piece together what happened in the past by studying different historical sources. Historical societies like the Kingdom of Benin which did not widely use writing can present a challenge for historians. However, Benin's history can be pieced together from a range of sources (see 2-4).
2	Written sources from outsiders	People from other countries that interacted with Benin, e.g. due to trade, wrote about what Benin was like. Benin had a long trading relationship with Portugal, and later with the Netherlands and Britain. People from these countries wrote about what Benin was like. However, they had an outsider perspective.
3	Oral histories	Like many other African societies, there was a tradition of history being remembered by storytellers and passed down in the form of stories through the generations. These oral histories are very detailed. Historians can use them to provide a perspective from inside Benin.
4	Archaeology and material culture	Objects that survived from across Benin's history can be used to give historians insight into Benin's culture. An important example of this is the Benin Bronzes.
5	The Oba	The Oba was the ruler of Benin. His power was believed to have a divine element. Strict rules governed his behaviour to emphasise how special he was. For example, only a few people could see him eating and he hardly left his palace.
6	Religion	Religion was important to culture in Benin. This is shown through the Oba's power, which was thought to be partly divine, and through religious depictions in the Benin Bronzes. Also, the fact that Benin resisted conversion to Christianity shows the strength of the local religious beliefs.
7	The rise of Benin	Benin grew in strength from the 11th century. It won wars against neighbours. It traded a range of items, for example textiles (cloth).
8	Benin's decline	After an Oba died without an heir in the early 1600s, there was a crisis of leadership. At the same time, its economy became dependent on the Transatlantic Slave Trade. European empires were taking over many parts of Africa, and eventually the British Empire took control of Benin in 1897.
9	The Benin Bronzes	The Benin Bronzes are a series of bronze sculptures that were made throughout its history. They decorated the Oba's palace. They show a range of people and clearly demonstrate some of the things that were important to the Kingdom. They also show a high level of skill in their production. Many of the Bronzes were looted when the British Empire took control of Benin and, due to this, several Bronzes are in the British Museum.

Knowledge Organiser – Year 8 – How can historians uncover the history of the Kingdom of Benin?

Word	Definition	In a sentence
written source	Something that is written down that can tell historians about the past. For example, a law, a document, a letter.	Written sources produced by outsiders – for example, people from Portugal – are important for studying the history of Benin.
oral history	Histories that are remembered and passed down the generations through storytelling, rather than being written down.	Many African societies have a tradition of oral histories.
archaeology	Studying the past by excavating (digging up) objects and studying them.	Archaeological digs in the 1970s led to the study of many objects that tell us about the history of Benin.
material culture	The objects and *things* that tell us about the culture of a group or place. For example, practical objects, artworks and buildings.	The Benin Bronzes are an important example of material culture from Benin.
Oba	The ruler of Benin.	People believed there was a divine element to the Oba's power.
divine	Relating to religion or god.	People believed there was a divine element to the Oba's power.
craft	The creation of something using a skill, particularly using your hands.	The craft of casting bronzes was made using the 'lost wax' method. Skilled craftsmen made the Benin Bronzes.

Maths

Year 8 Maths Term 1A – Proportional reasoning

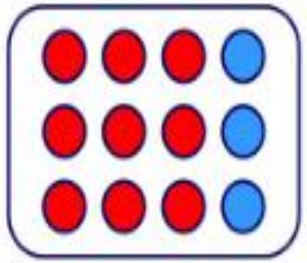
Autumn Term Knowledge Organiser

Ratio & Scale

Ratio: A statement of how two numbers compare
Equal Parts: All parts in the same proportion, or a whole shared equally
Proportion: A statement that links two ratios
Order: To place a number in a determined sequence
Part: A section of a whole
Equivalent: Of equal value
Factors: Integers that multiply together to get the original value
Scale: The comparison of something drawn to its

For example,

What is the ratio of red counters to blue counters?



red : blue
= 9 : 3
= 3 : 1

For every three red counters there is one blue counter.

Multiplicative Change

Proportion: A statement that links two ratios
Variable: A value that is unknown or can change
Axes: Horizontal and vertical lines that a graph is plotted around
Approximation: An estimate for a value
Scale Factor: The multiple that increases/ decreases a shape in size
Currency: The system of money used in a particular country
Conversion: The process of changing one variable to another
Scale: The comparison of something drawn to its actual size.

Multiply & Divide Fractions

Numerator : the number above the line on a fraction. The top number. Represents how many parts are taken
Denominator: The number below the line on a fraction. The number represent the total number of parts..
Whole: A positive number including zero without any decimal or fractional parts.
Commutative: An operation is commutative if changing the order does not change the result.
Unit Fraction: A fraction where the numerator is one and denominator a positive integer.
Non-unit Fraction: A fraction where the numerator is larger than one.
Dividend : The amount you want to divide.
Divisor: The number that divides another number.
Quotient: The answer after we divide one number by another. e.g. dividend÷divisor = quotient
Reciprocal: A pair of numbers that multiply together to give 1.

$$\frac{1}{2} \times \frac{3}{4} = \frac{1 \times 3}{2 \times 4} = \frac{3}{8}$$

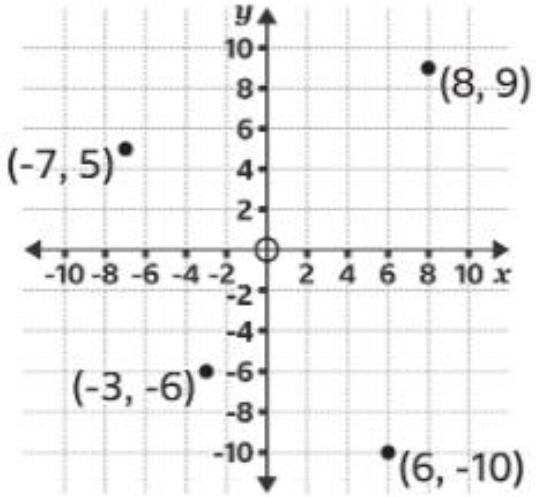
$$\frac{2}{5} \div \frac{2}{3} \rightarrow \frac{2}{5} \times \frac{3}{2}$$

Year 8 Maths Term 1B- Representations

Autumn Term Knowledge Organiser

Working in the Cartesian Plane

Quadrant: Four quarters of the coordinate plane.
Coordinate: A set of values that show an exact position.
Horizontal: A straight line from left to right (parallel to the x axis)
Vertical: A straight line from top to bottom (parallel to the y axis)
Origin: (0,0) on a graph. The point the two axes cross
Parallel: Lines that never meet
Gradient: The steepness of a line
Intercept: Where lines cross

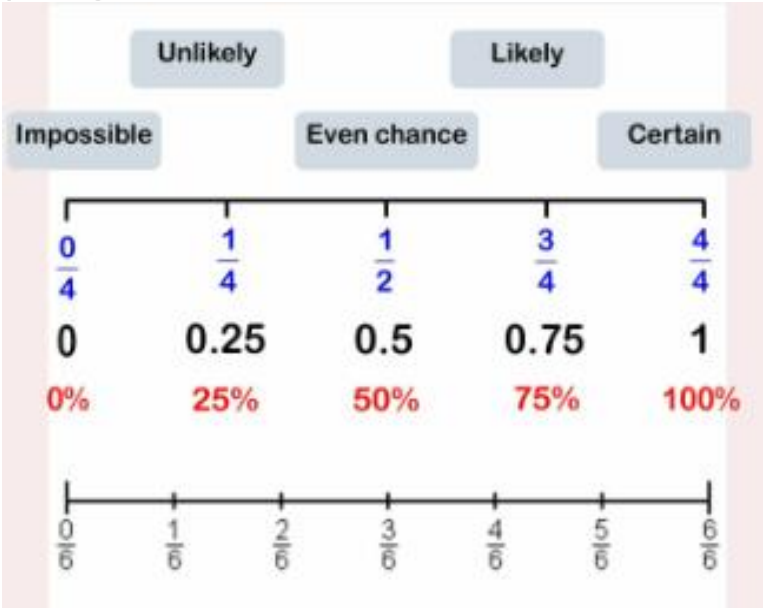


Representing Data

Variable: A quantity that may change within the context of the problem.
Relationship: The link between two variables (items). E.g. Between sunny days and ice cream sales
Correlation: The mathematical definition for the type of relationship..
Origin: Where two axes meet on a graph.
Line of best fit: a straight line on a graph that represents the data on a scatter graph.
Outlier: A point that lies outside the trend of graph.
Quantitative: Numerical data
Qualitative: Descriptive information, colours, genders, names, emotions etc.
Continuous: Quantitative data that has an infinite number of possible values within its range.
Discrete: Quantitative or qualitative data that only takes certain values.
Frequency: The number of times a particular data value occurs.

Tables & Probability

Outcomes: The result of an event that depends on probability.
Probability: The chance that something will happen.
Set: A collection of objects.
Chance: The likelihood of a particular outcome.
Event: The outcome of a probability –a set of possible outcomes.
Biased: A built-in error that makes all values wrong by a certain amount.
Union: Notation '∪' meaning the set made by comparing the elements of two sets.



MFL
(French)

Year 8 Term 1

Qu'est-ce qu'il y a dans ta région?

Sentence Starter	There is/ are	BAG S ADJECTIV E	Noun	Adjective	
Dans ma ville *In my town* Dans mon village *In my village*	il y a de(s) *there is/ are* Il n'y a pas de /d' *there isn't / aren't* *(any)*	petits *small* grands *big* beaux *beautiful* vieux *old* nouveaux *new* anciens *old/ ancient*	cinémas *cinemas* centres commerciaux *shopping centres* théâtres *theatres* musées *museums* cours *playgrounds* jardins publics *parks* fastfoods *fastfood restaurants* magasins *shops*	propres *clean* sales *dirty* confortables *comfortable* culturels *cultural* de bon prix *cheap* chers *expensive*	extraordinaires *extraordinary* célèbres *famous* tendances *trendy* historiques *historic* modernes *modern*
Si c'était posible je voudrais avoir plus de… *If it was possible, I would like to have…* Si je pouvais je voudrais construire plus de *If I could, I would like to build more…*		petites *small* grandes *big* belles *beautiful* vielles *old* nouvelles *new* anciennes *old/ ancient*	mosquées *mosques* plages *beaches* piscines *swimming pools* églises *churches* écoles *schools*	propres *clean* sales *dirty* confortables *comfortable* culturelles *cultural* de bon prix *cheap* chères *expensive*	extraordinaires *extraordinary* célèbres *famous* tendances *trendy* historiques *historic* modernes *modern*

Opinion phrase	C'est	Intensifier			
je pense que *I think that* je trouve que *I find that* je crois que *I believe that* je dirais que *I would say that*	c'est *it is* ce n'est pas *it is not* Scanne-moi!	trop *too* un peu *a bit* assez *quite* vraiment *really* plus *more* moins *less*	intéressant *interesting* utile *useful* ennuyeux *boring* nul *rubbish* affreux *awful* pratique *practical*	Ma ville se situe *My town is situated* Mon village se situe *My village is situated*	au centre du pays *in the centre of the country* dans le nord *in the North* dans le sud *in the South* dans l'est *in the East* dans l'ouest *in the West*

J'habite dans une ville/ un village qui s'appelle Birmingham.

I live in a town/ village which is called Birmingham

Qu'est-ce que tu veux faire le weekend?

Time Phrase	Weather	Modal Verbs	Infinitive	Avec…
Normalement *Usually* Le week-end *At the weekend* Le soir *In the evening*	s'il fait beau *if the weather is nice* s'il fait mauvais *if the weather is bad* s'il fait chaud *if it's warm (makes warm)* s'il fait froid *if it's cold (makes cold)* s'il y a du soleil *if it's sunny (there is sun)*	je peux *I can* tu peux *you can* il/ elle/ iel/ on peut *he/ she/ they (n.b.) can* nous pouvons *we can* vous pouvez *you all can* ils/ elles/ iels peuvent *they can*	jouer au football *to play football* jouer au tennis *to play tennis* aller en ville *to go into town* faire du vélo *to cycle* aller à la pêche *to go fishing* faire du sport/ shopping *to do some sport/ shopping* faire de la natation *to go (do) swimming* faire les devoirs *to do homework* voir des monuments *to see the monuments* sortir *to go out* manger au restaurant *to eat in a restaurant* regarder un dvd/ film *to watch a DV D/ film* rester à la maison *to stay at home*	avec la famille *with family* avec un copain *with a friend (m.)* avec une copine *with a friend (f.)* avec des copains *with friends*
Si j'ai le temps *If I have the time* Si je n'ai pas de devoirs *If I don't have homework*	s'il y a du vent *if it's windy (there is wind)* s'il pleut *if it rains* s'il neige *if it snows*	je veux *I want* tu veux *you want* il/ elle/ iel/ on veut *he/ she/ they (n.b.) want* nous voulons *we want* vous voulez *you all want* ils/ elles/ iels veulent *they want*		

Scanne-moi!

quoique *although* cependant *however* malheureusement *unfortunately* tandis que *whereas* pourtant *yet* donc *therefore* en plus *in addition* alors *so*

Qu-est-ce que tu vas faire le weekend prochain?

1. Sentence opener	2. Aller	3. Infinitive phrase	4. Rest of the sentence
Le weekend prochain *Next weekend* Mercredi prochain *Next Wednesday* La semaine prochaine *Next week* L'année prochaine *Next Year* Demain *Tomorrow* A l'avenir *In the future*	je vais *I am going* tu vas *you (s.) are going* il va *he is going* elle va *she is going* iel va *they (n.b.) are going* nous allons *we are going* vouz allez *you (all) are going* ils vont *they (m.) are going* elles vont *they (f.) are going* iels vont *they (n.b.) are going*	aller en ville *to go into town* manger au restaurant *to eat in a restaurant* regarder un dvd/ film *to watch a DV D/ film* retrouver mes amis *to meet up with my friends* rester à la maison *to stay at home* voir des monuments *to see the monuments* sortir *to go out* faire du sport/ shopping *to do some sport/ shopping* faire de la natation *to go (do) swimming* faire les devoirs *to do homework* faire une promenade *to go (do) a walk*	avec ma famille *with my family* avec mes amis *with my friends* s'il fait beau *if the weather is nice* s'il fait mauvais *if the weather is bad* s'il fait chaud *if it's warm (makes warm)* s'il fait froid *if it's cold (makes cold)* s'il y a du soleil *if it's sunny (there is sun)* s'il pleut *if it rains* s'il neige *if it snows*
D'abord Firstly Après After Puis Then Ensuite Next Finalement Finally Enfin Finally	je **ne** vais **pas** *I am **not** going* nous **n'**allons **pas** *we are **not** going*		

Scanne-moi!

Comment ce sera?

Opinion	Ce sera	Intensifier	Adjective	Because	Reason
À mon avis In my opinion Selon moi In my opinion Je pense que I think that Je trouve que I find that Je crois que I believe that Je dirais que I would say that Il me semble que It seems to me that	ce sera it will be ce **ne** sera **pas** it will **not** be	très very un peu a bit assez quite trop too vraiment really plus more moins less absolument absolutely certainement certainly malheuresment unfortunately probablement probably généralement generally	beau beautiful amusant fun extraordinaire extraordinary passionnant exciting délicieux delicious super super fantastique fantastic génial great intéressant interesting ennuyeux boring dangereux dangerous fort loud dégoutant disgusting nul rubbish	car because parce que because puisque because comme as pourtant yet toutefois however Scanne-moi!	J'aime mes amis I love my friends Je peux me relaxer plus facilement I can relax more easily Je peux m'amuser beaucoup I can have a lot of fun j'aurai faim I will be hungry j'aurai sommeil I will be tired je m'ennuyerai I will be bored

pourtant *yet*	en plus *as well*	aussi *also*	cependant *however*	donc *therefore*	mais *but*

Music

Music Unit 4: West African Music

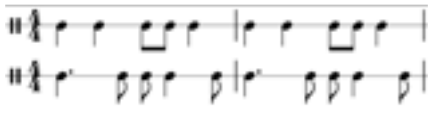
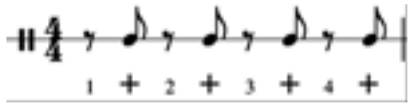
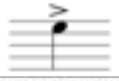
A. West African Music Vocabulary

	Master drummer	A master drummer is the leader of the drum circle. Similar to a conductor in the orchestra.
	Djembe	A traditional and popular African drum.
	Oral tradition	When music is passed down from one generation to the next.

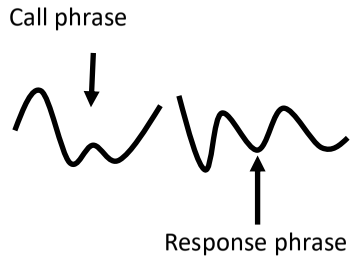
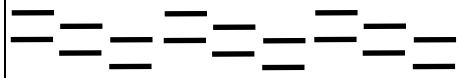
B. Drumming Techniques

	Bass	A low pitch sound made by striking the drum with a flat palm in the middle of the drum.
	Tone	A high pitched tone created by striking the drum with fingers together.
	Slap	A piercing tone created by 'slapping' the edge of the drum with finger-tips.
	Flam	Two slap or tone sounds in very quick succession.

C. Tempo, Rhythm and Metre Vocabulary

	Pulse	A regular beat which is felt throughout most pieces of music.	**1** 2 3 4 **1** 2 3 4 — A 4 beat pulse **1** 2 3 **1** 2 3—A 3 beat pulse **1** 2 **1** 2—A 2 beat pulse
	Rhythm	A series of notes of different lengths that create a pattern. A rhythm "fits" with the pulse.	
	Polyrhythm	Two or more different rhythms are played at the same time.	
	Syncopation	Emphasising the "weaker" beats in a bar.	
	Accent	Emphasising a specific note or set of notes.	

D. Keywords

	Call and Response	A **musical "call"** is a phrase that feels unfinished. A musical "**response**" is a phrase which finishes it.	
	Phrase	A musical sentence.	
	Unison	When all the instruments play the same part.	
	Ostinato	A repeated musical pattern	

Physical Education

Knowledge organiser – FOOTBALL year 7, 8 and 9

Key Skills/Techniques

Dribbling

Dribbling allows you to move the ball around the field without losing possession.
Keep the ball close to your feet at all times, when running with it.
Use the inside of your foot to control the ball when moving.
Don't look down when running with the ball. Keep your head up.

Passing

Non-kicking foot is closest to the ball.
Kicking foot needs to be at a right angle to the ball.
Body need to be over the ball.
Eyes focused upon the ball and arms are to be used for balance.

Shooting

Non kicking foot needs to be next to the ball and players needs to keep their body balanced with their head slightly over the ball.
Contact the ball either with the side of the foot (placement of ball) top of the foot (to generate power).
Both legs need to be fixed but when striking the ball, kicking foot needs to be fully extended on the follow-through.
For accuracy, aim to shoot between the goal keeper and the posts

Heading The forehead is used to contact the ball. Eye must be focused on the ball. Meet the ball with your head by moving your feet or jumping to gain the extra height advantage and power. Do not wait for the ball to hit your forehead.

Chest – Used when the ball is played in the air, to bring it down onto the floor. Player needs to align himself with the ball. Roll their shoulders back to generate a greater surface for the ball to contact with. Chest needs to be slightly curved, to cushion the ball. Bend your knees to take the impact of the ball and then allow the ball to roll down your leg to your kicking foot.

Rules/Tactics

Rules

Game is started with a **kickoff** or restarting it after a goal is scored. It is taken at the centre part of the soccer field. During a kickoff, both teams must be on their own halves and only the kicker and the receiver can be inside the centre circle.
The game has 11 players on the pitch, consisting of a goal keeper, defenders, midfielders and strikers. A referee and 2 linesmen, officiate the game. If the ball is played outside of the pitch lines, the possession is given to the opposing team. If it goes out the side of the pitch, a throw in is awarded. If it is kicked behind the A corner kick is awarded **when the whole of the ball passes over the goal line**, either on the ground or in the air, having last touched a player of the defending team. If the attacking team hit the ball behind the goal line a goal kick is awarded.
If a foul is committed a free kick or penalty is issued, depending on the incident.
To score a goal the ball must cross the opposition's goal line.
The team with the most amount of goals at the end of the game will win the game.

Tactics

Vary the passes that you make
Play to your opponents weaknesses (if they are dominantly using their left foot, then play the balls on their right).
Move opponents around he pitch to tire them out.
Vary the pace and direction of passes.

Glossary

Throw in Attack Defend Dribbling Foul
Off side Referee Volley Accuracy Penalty Pass Formation Goal Ball Posts
Free kick Striker Midfielder Header Tackle Passing communication Formation Corner kick

Pictures

Volley – The volley involves striking a ball that is still in the air. Focus eyes upon the ball. Arms out for balance. Keep eyes focused on the ball as you get into the line of flight. Head still. Non kicking foot on the floor and lead with the kicking leg forward.

Turning with the ball

Cruyff - Great skill for losing your opponent.
Named after the brilliant Dutchman Johan Cruyff.
Shape as if to pass or cross but then drag the ball behind your standing leg with the inside of foot. Turn your shoulders and your hips so that you are back in line with the ball and then race away.

Step over – Skill for sending an opponent in the opposite direction.
Lift your foot over the top of ball to use a 'step over' and this should immediately create you time and space. Then hook the ball away with the outside of the foot and race away.

Inside Hook - You need to keep your body between the ball and your opponent.
Reach round the outside of the ball with your foot so that you can change its direction. Bend your knees so that you can transfer your weight quickly and turn your hips to change your own direction. Then get a positive first touch on the ball that puts it into an area that is comfortable for you to move on to and accelerate away from your opponent .

Outside Hook – This tricks your opponent
Use the outside of the foot to hook the ball back in the direction that you are going to go.

Drag Back - The drag back is a great turn to use when you haven't got a lot of space to work.
Place one foot on top of the ball and staying in contact with it throughout, roll it back and move off in the opposite direction.

Team formation

4-4-2 (4 defenders, 4 midfielders and 2 strikers) a traditional team set up

5-4-1 (5 defenders, 4 midfielders and 1 striker) A more defensive set up.

3-5-1-1 (3 defenders, 5 midfielders, and 2 strikers one in front of each other). A more attacking set up.

Counter attacking – The team withdraws players into their own half but ensuring that one or two players are committed to the attack

Direct long ball football – Often used to deride 'boring' teams, the long-ball style of play is genuine route one football. Rather than spending time on the ball picking up the pass, exploiting small gaps in the opposition's defence or utilising the flanks, the long-ball is employed as an opportunistic method of attack.

Wide/Wing plays – The ball is played to the wings. By spreading the ball wide, you allow a different angle of attack and offer a number of opportunities for the winger; take on the fullback and drag central defenders out of position, cut inside and drive forward at an angle, or whip in a cross from deep for the strikers to attack.

Off side - An attacking player is flagged offside by the assistant referee if there is only one defending player between the player and the goal line at the time the ball is struck. The player should be in active play if the offside offense is to be called.

Throw in - A method of restarting play during the game, when the ball has exited the side of the field of play. Throw in is taken from where it went out. At the moment of delivering the ball, the thrower must face the field of play. The thrower must have part of each foot on the touchline or on the ground outside the touchline, and use both hands to deliver the ball from behind and over the head.

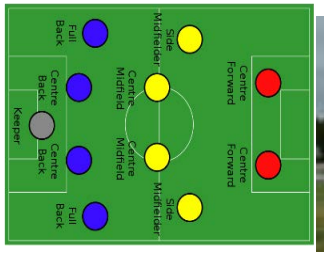
Cruyff Turn

Inside Hook

Step over

Free Kick

4-4-2 example



Throw in

Knowledge organiser – NETBALL year 7, 8 and 9

Skills and Techniques

Footwork: When you receive the ball from another player you will land with your feet using '1, 2' the first foot is your landing foot the second foot is your pivoting foot.

Pivoting: You may move around on a pivot by keeping foot number 1 on the floor, but not lifting it up, your foot number 2 can help you by moving around in a circle.

Chest pass: This is a short and powerful pass, you have your hands in a W shape and push to extend your arms, you also step forward to give more power.

Shoulder pass: This is a long and powerful shot, you start with the ball in your strong hand next to your shoulder, you extend your arm and follow through with your body.

Bounce pass: This is a pass which is low to the ground, you use the same position as a chest pass but aim in ¾ of the way between you and the person you are bouncing too.

Marking: You must be 1m away with your feet from the player, once you have this distance you put both of your arms up over the ball and go onto your tiptoes, when the ball is released you jump to attempt to intercept.

Shooting: You have once hand underneath the ball and the other helping it to balance, you get your aim correct and then bend your knees and release the ball, flicking your wrists

Dodging: When you need to get free from your player you push off one foot and then turn your hips to change direction and run the other way.

Rules

Contact: You can't touch or push any player during the game as it is a non-contact sport, this will result in a **penalty pass** or if they contact you whilst you are in the shooting circle, you will get a penalty shot.
Footwork: If the player moves the landing foot or takes 3 steps with the ball, the other team gets a free pass.
Obstruction: You must be 1 metre away from the player with the ball before your arms go up and over the ball. If your defender is obstructing you before you shoot, you get a penalty shot.
3 Seconds: You can only hold the ball for 3 seconds before you pass or shoot.
Centre Pass: To start a game, and after a goal is scored you go back to the centre pass and players must receive the ball in the centre third.
Repossession: If a players drops the ball or bounces the ball and picks it back up again the other team gets a free pass.
Offside: If you go into a third that you are not allowed in or if any other player than GS GA GK GD go into the shooting circle the other team gets a **free pass**.
The Game:
Netball is played over 4 quarters.

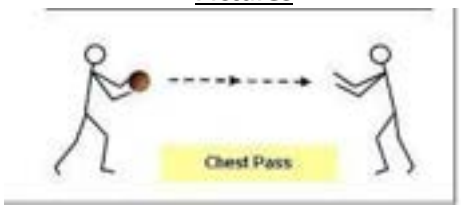
Glossary

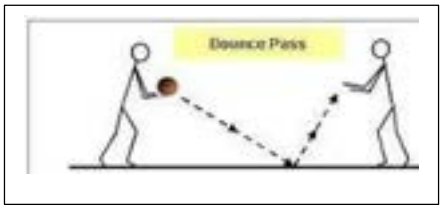
Attack
Defence
Footwork
Pass
Interception
Marking
Dodging
Receive
Obstruction
Contact
Pivoting
Shooting
Repossession
Signal
Space
Rebound
Umpire

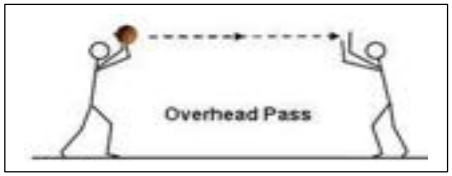
Positions

GS
GA
WA
C
WD
GD
GK

Pictures








Marking the ball


Landing

Tactics

Blocking: This is where you face on and try and block a player. You have to have your hands by your side and if your opponent pushes/runs into you, it would be contact and you get a free pass. This is usually used around the circle. E.G, the defending C will block out the GA, which assists the GD

Dodging tactics: always signal when you want to receive the ball.

Feint Dodge: This is where you trick your player into thinking you are going to run into a certain space by dropping your shoulder but then change your direction and get free for the pass.

Drive/Sprint Dodge: Start on your toes and sprint into a space to receive the ball.

Roll Off: Step to one side to draw the defender, pivot on that foot, make a quick half turn with your back towards the defender and sprint in the opposite direction.

Double feint dodge: Drop your shoulder one way and then the other and then sprint into the space in the opposite direction.

Attacking: Gain the front position on a defender. Move in front of the defender to gain an advantage. Receive the ball on ball side

Defending- 3 steps - mark the player, mark the ball and mark the space Limit available options for the ball carrier.

Umpire decisions:

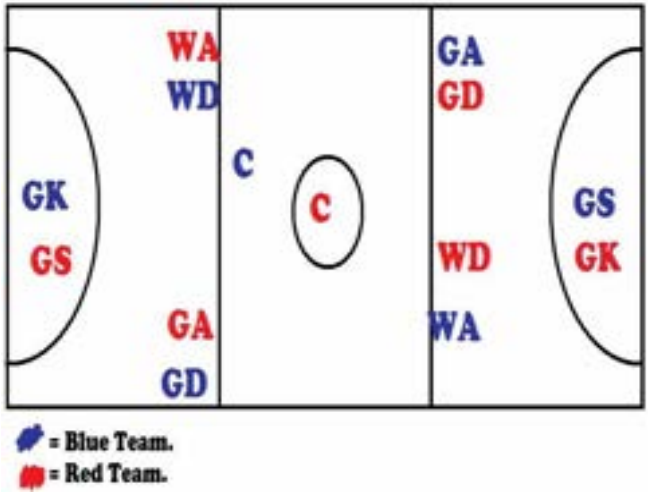
Penalty pass - Awarded to the opposing team for any penalty incurred involving obstruction or contact**.** The offending player must stand to the side of the opposing player and is not allowed to move until the ball has been released.

Free pass - If a player breaks a minor rule such as footwork, offside, the opposition is awarded a free pass, which is a pass taken from the same spot where the rule was broken.

Scoring systems and positions

To score a point the GA or GS must shoot the ball into the net and it must travel all the way through the net. You get 1 point for each goal. They must be wholly inside the goal circle to shoot. If the shooter does not hit the rim of the net/post with the ball and the shooter catches the ball after shooting, this is repossession and the ball goes to the other side.

Goal Shooter (marks GK)	To score goals and to work in and around the circle with the GA. Allowed in the shooting third.
Goal Attack (marks GD)	To feed and work with GS and to score goals. Allowed in the shooting and centre third.
Wing Attack (marks WD)	To feed the circle players giving them shooting opportunities. Allowed in the centre and shooting third but not the circle.
Centre (marks C)	To take the centre pass and to link the defence and the attack. Allowed everywhere except the 2 semi circles.
Wing Defence (marks WD)	To look for interceptions and prevent the WA from feeding the circle. Allowed in the centre and defending third but not the circle
Goal Defence (marks GD)	To win the ball and reduce the effectiveness of the GA. Allowed in the defending third and centre third
Goal Keeper (marks GS)	To work with the GD and to prevent the GA/GS from scoring goals. Defending third only.



Religion and Worldviews

Year 8 Religion and Worldviews knowledge organiser
Christianity

Key Words

Messiah	A rescuer sent by God.
Disciples	Jesus' 12 main followers.
Incarnation	God coming to earth as a human.
Resurrection	Coming back to life after dying.
Baptism	A ritual in which people are immersed in water to symbolise turning away from sin and following God.
Miracle	An event that breaks the laws of nature or science.
Parable	A short story intended to make a particular point or give a moral lesson.
Samaritan	Jews from a region called Samaria.
Prodigal	Reckless or wasteful with money.
Outcasts	People who are not accepted by society.
Prophecy	A prediction that something will happen.
The Last Supper	Jesus's final meal with the disciples, where he predicts peter's denial and Judas's betrayal.
Crucify	To kill a person by tying or nailing them to a large wooden cross
Ascension	Jesus's return to heaven after his resurrection.

Summarise your learning	
Key content	**Explanation**
The gospels in the New Testament	The first four books in the New Testament are named after the people who may have written them: Matthew, Mark Luke and John. Together they tell us about the birth, life, death, resurrection and ascension of Jesus.
Birth and life of Jesus	Matthew and Luke record the events of Jesus' birth, saying that he was born to Mary in Bethlehem. Christians believe that Jesus was human, but they also believe he was God living on earth. Luke says that at the age of about 30 Jesus was baptised by his cousin John and went into the wilderness, where he fasted for 40 days and nights and where the devil tried to tempt him. The Gospel writers record Jesus as performing many miracles, including turning water to wine and feeding the 5000, walking on water and healing lepers and a paralysed man.
The last supper and the crucifixion	According to the first three gospels, Jesus ate a meal with his disciples the day before he died which is called the Last Supper. He told his disciples to eat bread (to symbolise his body) and drink wine (to symbolise his blood) in remembrance of him. Jesus was arrested, tortured and killed by crucifixion.
The resurrection and ascension of Jesus	After Jesus' death, the Gospels say that he was resurrected and 40 days later he ascended to heaven. When he was resurrected, he appeared to his discipled and confirmed their belief in life after death.

What is Christianity?

Christianity began nearly 2000 years ago in present-day Israel. The first Christians had radical beliefs. They believed that three days after being killed on a wooden cross Jesus was resurrected. These beliefs spread rapidly across the Roman world, creating a new religion: Christianity.

Christians are monotheists who believe in the Trinity-God the Father, Son and Holy Spirit.

There are over 2.2 billion Christians in the worlds today who belong to 30, 000+ denominations, The largest denomination of Christianity is Catholicism.

Key Teachings

1. Parable of the Good Samaritan : "Love thy neighbor"
2. "Love one another"
3. The first four books of the New Testament (Matthew ,Mark Luke and John describe the birth of Jesus, life, death and resurrection of Jesus.
4. "God so loved the world that he gave his one and only son, that whoever believes in him shall not perish but have eternal life." The Bible
5. "When Jesus was baptised, a voice from heaven said 'You are my son'" The Bible
6. The Parable of the Sheep and Goats – from the Bible

This tells Christians that there will be a judgment day. At this point people will be divided into two groups, like a shepherd divides the sheep from the goats. Those who have been like sheep following Christian teachings to care for others will go to heaven. Those who have been like goats doing whatever they want and ignoring the needs of others will be sent to hell.

7. "Jesus Christ… is the atoning sacrifice for our sins"

What is the Bible?

- Bible means 'books'.
- In the Protestant Bible, there are 66 books arranged into two sections: 39 are in the Old Testament and 27 are in the New testament. In the Catholic Bible, there are 7 more books included in the Old Testament.
- There seem to have been about 40 different authors who wrote the Bible over a period of many centuries.
- The Old Testament was written in the centuries before Jesus' birth and the New Testament was written within 70 years of Jesus' death.

Should women lead the church?

In 1 Corinthians 14:34-35, Paul wrote: "As in all the congregations of the saints, women should remain silent in the churches. They are not allowed to speak, but must be in submission, as the Law says. If they want to inquire about something, they should ask their own husbands at home; for it is disgraceful for a woman to speak in the church" (verses 33-35).

1 Corinthians 11:11-12

[11] Nevertheless, in the Lord woman is not independent of man, nor is man independent of woman. [12] For as woman came from man, so also man is born of woman. But everything comes from God.

Galatians 3:28

[28] There is neither Jew nor Gentile, neither slave nor free, nor is there male and female, for you are all one in Christ Jesus.

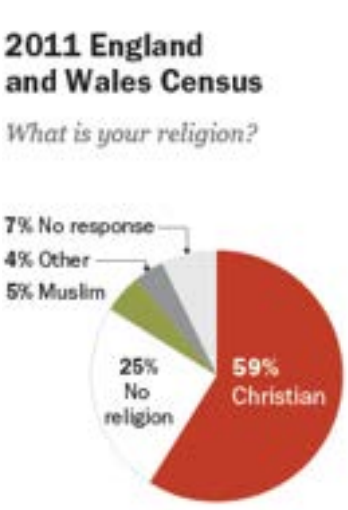
Christianity in the modern world

The persecution of Christians

Between 2006 and 2010, Christians were persecuted in 139 different countries including:

- North Korea (Christians are persecuted because they refuse to worship the country's leader, Kim Jong-Un)
- Orissa, India (In 2008 the death of a Hindu man sparked riots in which Hindu radicals killed 500 Christians with machetes)
- Myanmar (Anyone who spread the Christian message would be put in prison)
- Baghdad, Iraq (Christians live in constant fear of violence. In 2010 Islamic militants killed 58 Christians during a Catholic service.)

Is Britain a Christian country?



The problem of evil

The problem of evil is an argument or theory that has been around since the time of the ancient Greeks. There are four main stages to the argument:

If God is omnibenevolent, he would want to get rid of evil and suffering as it causes so much unhappiness

↓

If God is omnipotent, he would have the ability to get rid of evil, because he can do anything

↓

If God is omniscient, he would know how to get rid of evil, because he knows everything

↓

There is evil in the world, so either God does not exist, or he is not omnibenevolent, omnipotent or omniscient.

Science

C1 Chapter 4: Acids and alkalis
Knowledge organiser

Activate
Question • Progress • Succeed

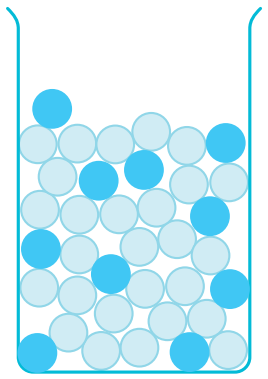
Acids and alkalis

Acids and **alkalis** are special solutions which are chemical opposites to each other.

If a solution is between acid and alkaline it is **neutral**.

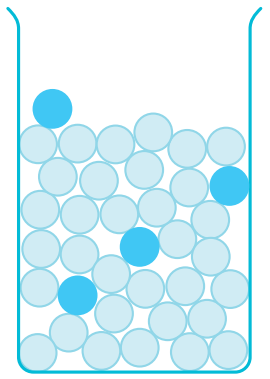
Acids and alkalis can be:

concentrated



Lots of acid/alkali particles for the amount of water.

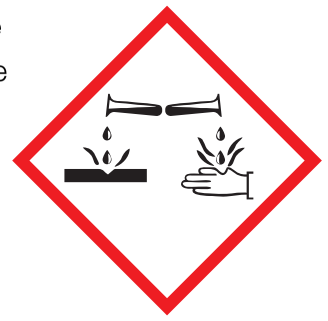
dilute



A small number of acid/alkali particles in the same amount of water.

Acids and alkalis are **corrosive**

This means that they can cause burns if they get on your skin.



Acids and alkalis can be extremely dangerous, depending on the type of acid/alkali and its concentration.

As a general rule the more concentrated the solution, the more dangerous it can be.

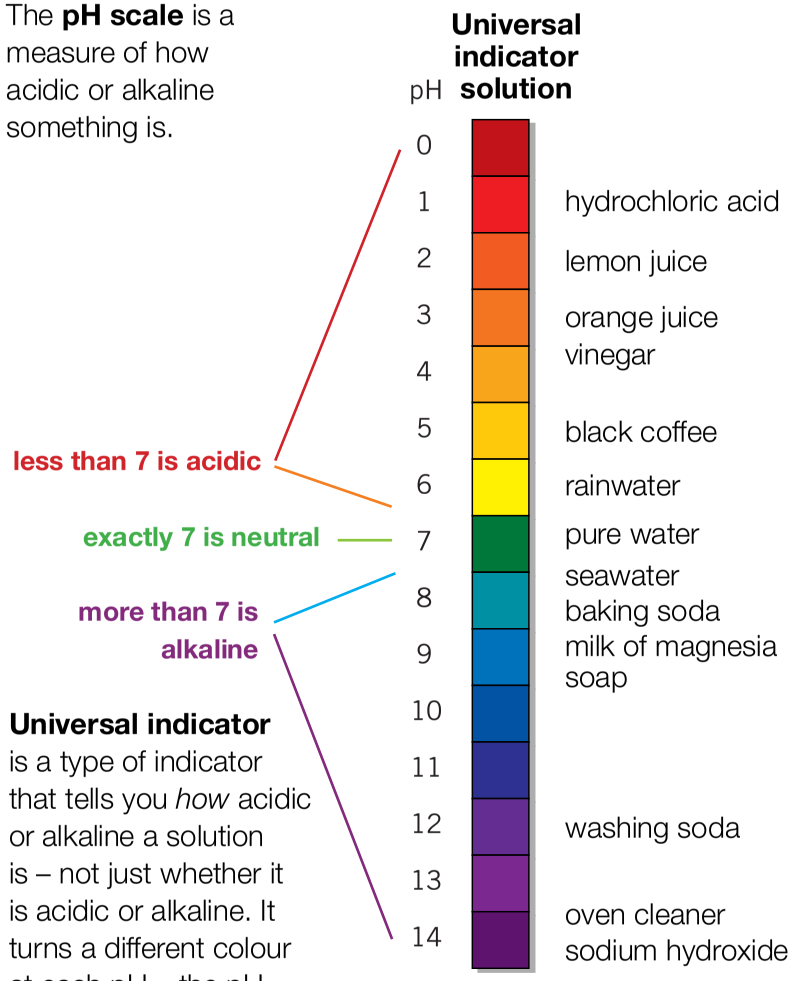
Indicators

If you want to know if something is acidic or alkaline, you need to use an **indicator**. Indicators contain a dye that turns different colours in acidic and alkaline solutions.

Litmus paper is a type of indicator. It can be either **pink** paper or **blue** paper.

- in acid – **blue** paper turns **pink**
- in alkali – **pink** paper turns **blue**

The **pH scale** is a measure of how acidic or alkaline something is.



Universal indicator is a type of indicator that tells you *how* acidic or alkaline a solution is – not just whether it is acidic or alkaline. It turns a different colour at each pH – the pH scale shows the colours of universal indicator in solutions of different pH.

Reactions with acids

When an acid reacts with a metal element or compound a **salt** is formed.
The hydrogen atoms of the acid are replaced with atoms of the metal element.

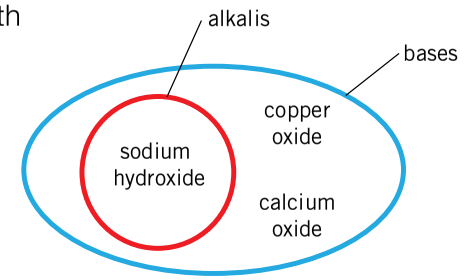
$$Zn + H_2SO_4 \rightarrow ZnSO_4 + H_2$$

zinc + sulfuric acid → zinc sulfate + hydrogen

A **base** is a compound that can react with an acid to make a neutral solution.

This is called **neutralisation**.

Bases that are soluble in water are alkalis.



Neutralisation reactions produce water and a salt.

acid + base → salt + water

for example,

sodium hydroxide + hydrochloric acid → sodium chloride + water

copper oxide + sulfuric acid → copper sulfate + water

Metals can also react with acids, but they produce a salt and hydrogen gas.

for example,

magnesium + hydrochloric acid → magnesium chloride + hydrogen

Naming salts

The name of the metal comes first, for example, **magnesium** chloride.

Different acids produce different types of salt:

- hydrochloric acid produces metal **chlorides**
- sulfuric acid produces metal **sulfates**
- nitric acid produces metal **nitrates**

Key terms

Make sure you can write definitions for these key terms.

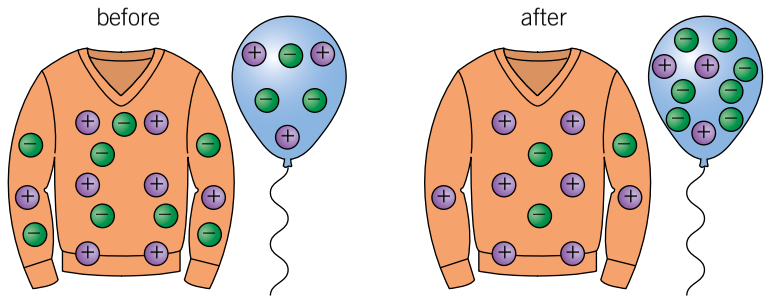
acid *alkali* *base* *concentrated* *corrosive* *dilute* *indicator* *litmus* *neutral* *neutralisation* *pH scale* *salt* *universal indicator*

P2 Chapter 1: Electricity and magnetism
Knowledge organiser

Activate
Question • Progress • Succeed

Charging up

Static electricity: by rubbing **insulators** together **electrons** are transferred, which gives the objects magnetic charges.



Like charges **repel**, and opposite charges **attract**.

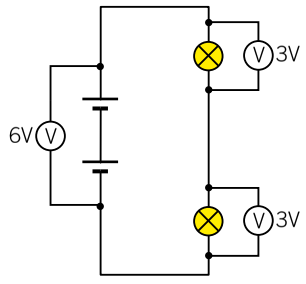
Charged objects have **electric fields** around them.
These lines show how a positive charge will act.

Series and parallel circuits

In a series circuit all of the components are connected in one loop. If one component or wire breaks, **current** stops flowing everywhere.

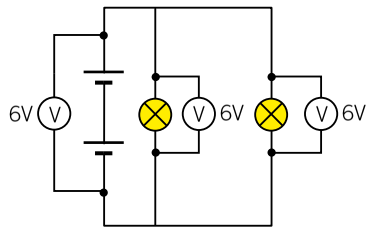
Series circuits

- contain only one loop
- the current is the same everywhere
- the **potential difference** across each component adds up to the potential difference across the battery



Parallel circuits

- contain multiple branches
- currents in all the branches add up to make the total current
- the potential difference across each component is the same as the potential difference across the battery



Resistance

The **resistance** is a measure of how easy it is to pass through a component.

conductors – low resistance

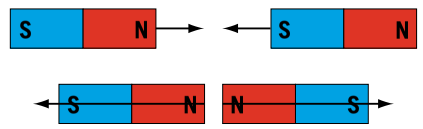
insulators – high resistance

Resistance is calculated by measuring the potential difference and the current.

The unit for resistance is the **ohm (Ω)**.

Magnets

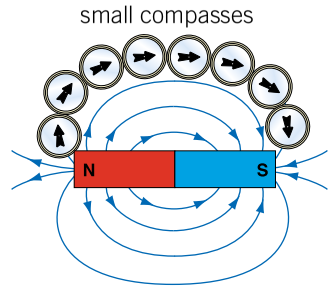
- **Magnets** have north and south poles.
- Opposite poles attract, and the same poles repel:



Magnetic fields

- A magnet has a field around it.
- You can see the field around a bar magnet with a small compass or iron filings.
- If the lines are close together the field is stronger.

small compasses



- The Earth has a magnetic field, which acts like a big bar magnet, with the south pole at the top of the planet.

Circuits and currents

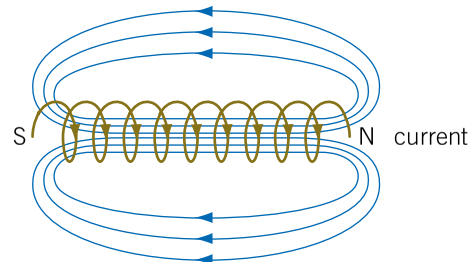
- Current is the amount of charge flowing per second.
- It is measured with an **ammeter** (connected in series).
- The unit for current is the **amp (A)**.

Electromagnets

- **Electromagnets** are only magnetic when they have a flow of current, so they can be turned off.
- They are made by running a current through a coil of wire.
- They usually have an iron core in the middle of the coil, which makes them stronger.

You can make an electromagnet stronger by:

- adding more turns of wire on the coil
- using more current.



Uses of electromagnets

- moving cars or other metal objects
- sorting iron and steel from aluminium
- making motors and speakers
- making levitating trains, which travel much faster as there is no friction

How motors work

Applying a current to a coil of wire makes it electromagnetic.

↓

This causes a force between the coil of wire and the permanent magnet nearby, driving a motor.

Potential difference

- Potential difference is the amount of energy transferred by the charges in the circuit.
- It is measured with a **voltmeter** (connected in parallel). The unit is the **volt (V)**.

Key terms Make sure you can write definitions for these key terms.

ammeter attract conductor current electron electric field electromagnet insulator repel magnet magnetic field line motor north pole ohm parallel potential difference resistance series static electricity south pole volt voltmeter

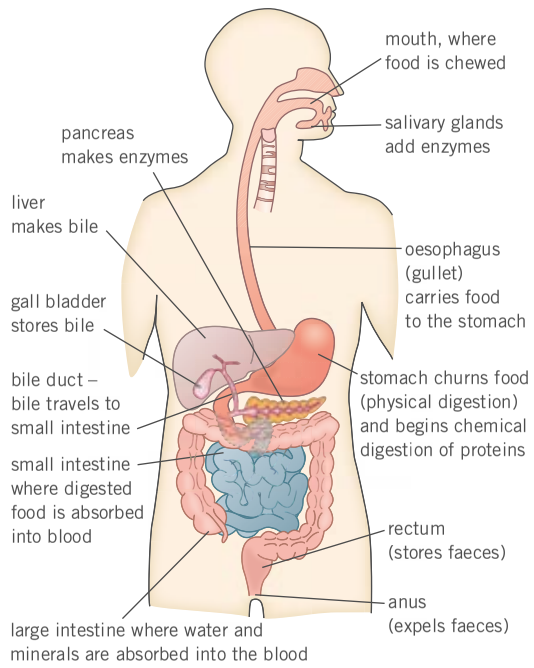
B2 Chapter 1: Health and lifestyle

Knowledge organiser

Activate
Question • Progress • Succeed

Diet

The digestive system



Bacteria live on fibre in your diet in the large intestine and make important vitamins (e.g., vitamin K).

Enzymes

Enzymes are special proteins that can break large molecules of nutrients down into small molecules.

Enzymes are known as biological **catalysts** – they speed up **digestion** without being used up.

There are three main types of enzyme involved in digestion:

	Type of enzyme		
	carbohydrase	protease	lipase
digests	carbohydrates (e.g., starch) ↓ sugars	protein ↓ amino acids	lipids ↓ fatty acids and glycerol

Nutrients

Nutrient	Role in your body
carbohydrates	main source of energy
lipids	fats and oils provide energy
proteins	growth and repair of cells and tissues
vitamins and minerals	essential in small amounts to keep you healthy
water	needed in all cells and body fluids
fibre	provides bulk to food to keep it moving through the gut (not actually a nutrient)

Food tests

Starch

Add a few drops of iodine solution to the food solution.

Result: If the solution turns blue-black, the food contains starch.

Lipids

Add a few drops of ethanol to the food solution, shake it, and leave for one minute. Then pour the ethanol into a test tube of water.

Result: If the solution turns cloudy, the food contains lipids.

Sugar

Add a few drops of Benedict's solution and heat the solution in a water bath.

Result: If the solution turns orange-red, the food contains sugar.

Protein

Add a few drops of copper sulfate solution and sodium hydroxide solution.

Result: If the solution turns purple, the food contains protein.

Effects of an unhealthy diet

A **balanced diet** is when you have the right proportions of the food groups to keep you healthy.

Eating an unbalanced diet can lead you to be:

underweight

Increased risk of:
- poor immune system
- lack of energy
- lack of vitamins and minerals.

overweight

Increased risk of:
- heart disease
- stroke
- diabetes
- some cancers.

vitamin and mineral deficient

Vitamin A deficiency can lead to night blindness.

Vitamin D deficiency can lead to rickets.

Effects of lifestyle on health

Drugs

Drugs are any chemicals that affect the way your brain and body work.

Medical drugs	Recreational drugs
• used in medicine • benefit your health if used correctly • used to treat symptoms or cure illness • some have side effects	• taken for enjoyment/to relax/stay awake • normally have no health benefits • many can be harmful • many are illegal
examples include: painkillers, antibiotics, and cough mixture	examples include: alcohol, caffeine, heroine, cocaine, tobacco

Alcohol

Alcohol is a depressant because it slows down your body's reactions.

Drinking large amounts of alcohol over a long time can cause:
- stomach ulcers
- heart disease
- reduced fertility
- brain damage
- liver damage (cirrhosis)

Drinking during pregnancy increases the risk of:
- miscarriage
- stillbirth
- premature birth
- low birth weight babies
- Fetal Alcohol Syndrome (FAS)

Smoking

Cigarette smoke is full of harmful chemicals including:

tar – clogs the lining of the lungs and alveoli, contains cancer-causing chemicals

nicotine – an addictive stimulant

carbon monoxide – stops blood from carrying oxygen.

Smoking can cause many different diseases, including:
- heart disease
- emphysema
- respiratory infections
- strokes
- lung cancer

Smoking during pregnancy increases the risk of miscarriage and low birth weight babies, and can also affect the fetus' development.

Addiction – When your body becomes used to the chemical changes caused by a drug and you need to take the drug to feel normal.

When a person who is addicted to a drug tries to stop taking it, they may suffer from sickness, nausea, stomach cramps, headaches, anxiety, and sweating. These are called **withdrawal symptoms**.

Key terms Make sure you can write definitions for these key terms.

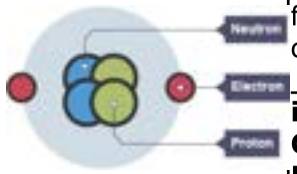
addiction anus balanced diet carbohydrase carbohydrate carbon monoxide catalyst deficiency digestion digestive system drug enzyme fibre food test large intestine lipid lipase mineral nicotine nutrient oesophagus protease protein rectum small intestine stimulant stomach tar vitamin withdrawal symptom

Chemistry 1: Atomic Structure and the Periodic Table

Section 1: Key Terms

	The **smallest part of an element** that can exist. All substances are made of atoms. **No** overall **electrical charge**. **Very small**, radius of 0.1nm.
	An element **contains only one type of atom**. Found on the Periodic Table. There are about 100 elements.
	Two or more elements chemically bonded with each other. Can only be separated into the elements through chemical reactions.
	Contains two or more elements or compounds not chemically bonded. Can be separated using physical methods e.g. by filtration, crystallisation, distillation and chromatography.
	A process that **separates** mixtures of **insoluble solids and liquids**.
	A process that **separates dissolved solids from liquids** by **evaporating** the liquid to leave crystals.
	A process that **separates a mixture of liquids** based on their **boiling points**.
	A process that **separates mixtures** by **how quickly they move through a stationary phase** (e.g. paper)
	An atom of the **same element** with **different numbers of neutrons**.
	An **average value of mass** that takes account of the **abundance of the isotopes** of the element.

Section 2: Development of Atomic Model

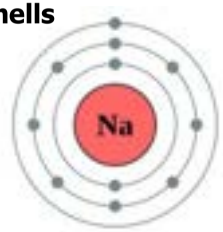
	The _____ _____ model shows that the atom is a **ball of positive charge** with **negative electrons embedded** in it. Was **incorrect**.
12 Nuclear Model 	**Rutherford's** scattering experiment found a central area of positive charge. The nuclear model has a _____ **nucleus** and **electrons in shells**. **Chadwick** later discovered **neutrons**. **Bohr** discovered the arrangement of _____ **in shells**.

16 **Mass number** – the total number of **protons** and **neutrons**

$^{23}_{11}Na$

17 **Atomic number** – the **number of protons** (the number of electrons is the same in an atom)

18 **Electron configuration**– Electrons fill the first energy level (shell) first.
Maximum electrons:
2 in first shell
8 electrons in other shells



Section 3: Properties of Sub-Atomic Particles

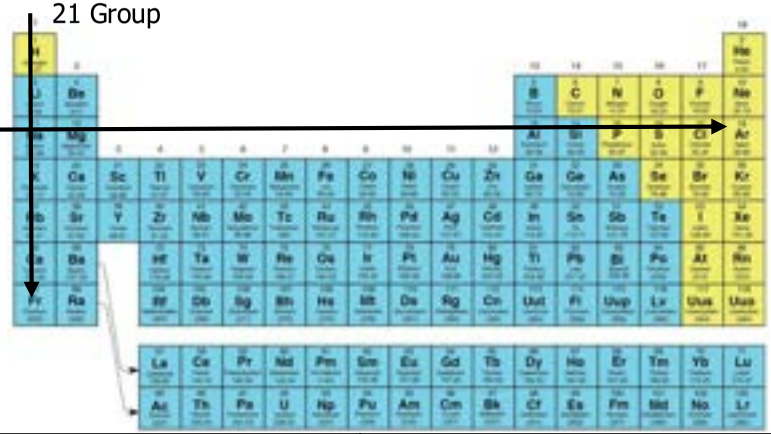
Sub-atomic particle	Mass	Charge	Position in Atom
13 Proton			
14 Neutron			
15 Electron	Very small		Orbiting in shells

Section 4: Periodic Table

	Elements in the **same vertical column** are in the same group. Elements in the same group have the **same number of electrons in their outer shell**, and therefore **similar properties**.
	Elements in the **same horizontal row**. The atomic number increases by one moving across the period.
	Elements that react to form positive ions (except Hydrogen). Left and centre of periodic table
	Elements that react to form negative ions. Right of periodic table.
	Was able to make a relatively accurate periodic table by **leaving gaps for undiscovered elements** and **re-arranging some elements** (Mendeleev could only measure relative atomic mass, not atomic number).

21 Group

22 Period



23 Elements in the modern periodic table are **arranged by atomic (proton) number**.

Section 3: Groups of the Periodic Table

Sub-atomic particle	Properties	Trends	Reactions
24 Group 0 (Noble Gases)	**Unreactive** and **do not form molecules**.	**Boiling point** _____ going **down the group**.	Very unreactive as they **have full outer shells**.
25 Group 1 (Alkali Metals)	**Reactive** because they can easily lose one electron.	**Reactivity** _____ going **down the group**.	With water: Metal + water → Metal hydroxide and hydrogen With oxygen: Metal + oxygen → Metal oxide With chlorine: Metal + chlorine → Metal chloride
26 Group 7 (Halogens)	Non-metals **Form molecules**	**Reactivity** _____ going **down the group**. **Boiling point** and **melting point** _____ going **down the group.**	A **more reactive halogen** can **displace** a **less reactive halogen** from a solution of its salt.

Food Preparation and Nutrition

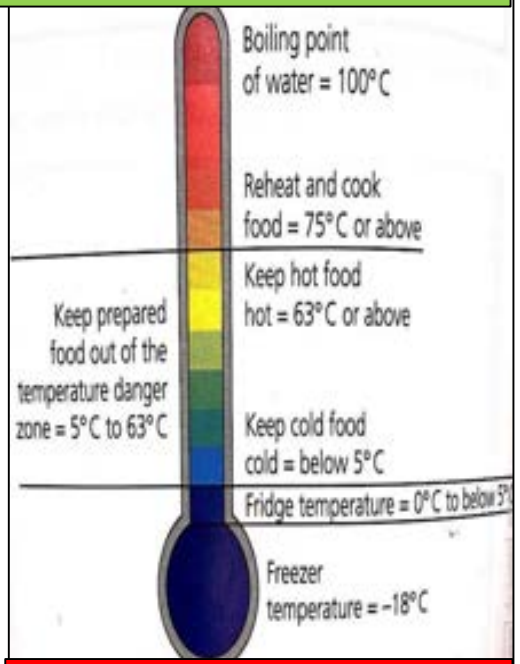
Year 8 - Why is temperature control important?

Teacher Assessment
To plan and make a food product using 'critical control checks'.
Success Criteria
To apply quality control checks to the process steps of making the cheese cake
To produce a quality outcome
- Edible
- Safe to eat
- Appealing

- **Temperature control is very important when you buy, store, prepare and cook food**
- **food correctly will Storing minimise the risk of food spoilage and food poisoning**
- **Food poisoning can be caused by high risk foods when they are stored in warm conditions for too long**
- **Controlling the temperature of food will help keep your food safe until it is ready to be eaten.**

Preventing food poisoning

- **Bacteria grow best in the danger zone which is between 5◦C and 63◦C**
- **Below 5◦C they are dormant, this means that grow very slowly or not at all**
- **Above 63◦C they are mainly destroyed by the heat**



Checking that food is out of the danger zone

When cooking use a temperature probe to check the food Has reached the correct temperature.

Thermometers can be put in the fridge and freezer to check these are Working at the correct temperature.

WWW Cooking and Nutrition
Can follow health and safety practices
Can use CCC's
Can use a food probe correctly
Can follow a process plan to make a
_____
Can create a quality outcome – edible, safe to eat, appealing

Critical Control Checks:
In-date ingredients
Weight and measurements
Timings
Temperature control
Size and shape

When using high risk ingredients/food products

Recording CCC's including temperature control

Plan the making of a quality food product

Product Name:	
Ingredients: **List the ingredients to be used**	**Storage Conditions:** **Write down the storage conditions of each ingredient – frozen -18 C, chilled 0-5C or ambient.**
Process of Making: **Include a step by step instructions on how to make your food product** **1) Organise self, unit and washing up area.** **2) Place ingredients on tray** **Include the use of key words –bridge claw dice slice whisk beat**	**CCC's** **Record a CCC next to the appropriate step of making eg when a Cheesecake is chilled check the temperature of the chilled product with a food probe. Is the temperature between 0-5C.** **Timings of making could also be added.**

- ***Food poisoning:*** **an illness caused by eating contaminated food**
- ***High-risk foods:*** **ready-to-eat moist foods, usually high in protein**
- ***Bacteria:*** **microscopic living organisms, which are single-celled and can be found everywhere**
- ***Temperature Danger Zone:*** **temperatures between 5◦C and 63◦C where most bacteria can multiply**

Year 8 -Sauces – What are they? Why are they used? How are they made?

A Sauce is a well-flavoured liquid which has been thickened.
Sauces are added to food to:

Knowledge - Sauces

- **Provide colour, flavour and texture**
- **Bind different ingredients together**
- **Make the dish look more appetising and attractive**

- **Starches can be used to make sauces, gravies and glazes.**

Starch-based sauces

Starch is the main food source of plants.
It is made up of molecules of glucose.

- **Starch is very useful because it can thicken mixtures**
- **When liquids and starch are mixed together and heated the mixture will thicken. This process is called gelatinisation. Starch-based sauces are usually thickened with either flour, cornflour or arrowroot.**

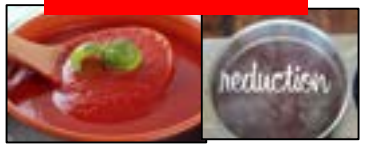
Making a roux

The roux method is a traditional way of making a white sauce.

- **A roux is made by mixing melted fat and flour.**
- **In the traditional recipe milk is added gradually and the white sauce comes to the boil and thickens.**
- **In the all-in-one recipe the cold milk is added to the cold fat and flour. The sauce is stirred continuously as the fat melts and gelatinisation occurs.**

Roux Sauce

Reduction Sauce



Reduction sauces are made when liquid is simmered over heat so that the water content evaporates; this leaves a concentrated, well-flavoured sauce.

Examples of British Sauces

Gravy is probably the best known sauce. Served traditionally with a roast dinner.
Cheese sauce can be adapted to go with fish, vegetable, poultry, and egg dishes.
Tomato sauce is an extremely versatile sauce. Excellent with homemade burgers.
Hollandaise sauce is a classic - serve with fish, egg, chicken and vegetable dishes.
Apple sauce is traditionally served with pork and cranberry sauce with turkey.





Indian cuisine - uses tomato based curry sauces, tamarind sauce, coconut based sauces
Mexican - salsa, guacamole, hot sauce and mole are all integral to Mexican cuisine.
Italian – Sauces in Italian cuisine include: Bolognese, arrabiata, pesto, and marinara sauce.
French cuisine – some classic sauces are Bechamel, roux, veloute and Hollandaise.
Chinese cuisine - uses soy, hoisin, oyster, sweet and sour and chilli bean sauce.





Gelatinisation is the name of the process for when starch granules are mixed with a liquid and heated; they swell and break open, causing the liquid to thicken.

Self Assessment:
List 3 reasons why you would use a sauce.
Watch this video clip https://resources.dynamic-learning.co.uk/Titles/FoodKS3T_L_9781510458208/a5e33289-0e72-4492-a970-53ebb50d681d/Resources/KS3Food_02450.mp4
Explain the process of gelatinisation,
In Practice:
Make a British and International dish which uses a sauce such as spaghetti Bolognese, pasta bake or vegetable curry,

Year 8 Raising Agents- What are they? Why are they used?

Raising agents are added to mixtures to make them rise.
When you heat a mixture that contains a raising agent, the gas within it expands and then rises. Some gas escapes and some is trapped in the mixture. The gas sets when it cooks and then cools.

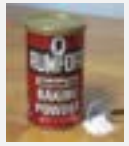
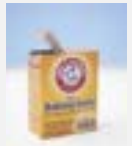
- Many baked items such as breads, pastries, cakes and biscuits depend on raising agents for their soft, light, springy texture.
- Without raising agents cakes, bread and scones would be flat
- The 3 types of raising agents are chemical, mechanical and biological.

Biological Raising Agent.
Yeast is a biological raising. It is a single-celled plant fungus. Yeast is the raising agent used in bread, doughnuts and current buns.
Fermentation is the process in which yeast produces CO2 and alcohol. The yeast requires food(flour, sugar), moisture (water), warmth (environment and from the oven). The CO2 gas expands and collects as small bubbles. This will make the dough rise. When the dough is baked in the oven, the yeast is killed, the alcohol escapes and the dough sets.
Types of yeast:
Fast acting 'easy bake' dried yeast –Added to the flour before the warm liquid. Stored in cupboard for many months. We use this in school.
Fresh yeast – moist, cream-coloured block. Blended with warm water and sugar to activate the yeast. Stored chilled.
Active dried yeast – Small granules that are mixed with warm water and sugar to activate the yeast. Stored in cupboard for many months.

Active dried yeast	Fresh yeast	Fast acting 'easy bake' dried yeast

Chemical Raising Agents produce the gas carbon dioxide when they are heated with a liquid.

- **Baking powder** reacts with moisture and heat to produce CO2. The CO2 forms small bubbles in the mixture, which make it rise. Once cooked the result is a well-risen, light, baked product. **Baking powder** is added to make **Self Raising flour** during production. Used as a raising agent in cakes and scones
- **Bicarbonate of soda (baking soda)** also produces CO2 when heated, forming small bubbles which make it rise. In order for it to produce CO2 it needs moisture and an acid such as yoghurt and buttermilk.


- **Bicarbonate of soda** can add a soapy taste so it is used in recipes where it can be disguised by other flavours. It is used as a raising agent in soda breads and strong-flavoured cakes such as gingerbread, fruit cake and chocolate cake.

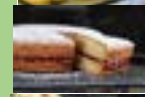
Mechanical raising agents are air and steam. When air is incorporated into a mixture, the mixture rises.

- **Air** can be introduced mechanically in several different ways.

Whisking	**Eggs or egg whites are whisked. This traps air bubbles in the egg white.**
Beating	Liquids are beaten and air bubbles are trapped in the liquid.
Folding	Layers of air are trapped between the layers of pastry when the pastry is folded. During baking, the air expands between the layers and lifts the pastry. Using a spatula or spoon to fold a light ingredient(such as egg whites) into a heavier ingredient.
Sieving	Sieving flour traps air between the flour particles.
Creaming	Beating fat and sugar together traps tiny air bubbles into the mixture. When heated, the mixture sets and stops the bubbles from escaping.
Rubbing-in	Rubbing fat into flour traps air into mixture.






- **Steam** is produced during cooking from water or other liquids in the mixture as it is heated to boiling point in the oven. The oven temperature must be hot for this to happen.
- **Steam** is used in **Yorkshire puddings, choux, puff and flaky pastry.**

What is a raising agent? Describe what happens when you heat a mixture containing a raising agent?
Which raising agents are added to gingerbread?
Which raising agents are added to bread?
Which raising agents are added to Victoria Sandwich?
Which raising agents are added to Yorkshire pudding?

Watch this video clip https://youtu.be/OUSi4DbRVVQ
Explain the conditions required by yeast.
In Practice:
Make a dish which uses air or steam as a mechanical raising agent, such as a savoury soufflé omelette, Swiss roll, pavlova or a whisked flan.

Year 8 - Why do I need to eat food? Page 1

Knowledge - Nutrients

The body needs food (nutrients) for the growth and repair of cells, for energy, warmth, protection from illness and keeping the body working properly. A variety of food is needed to ensure the body has all the nutrients it requires.

MACRONUTRIENTS—needed in large quantities. (grams)

MICRONUTRIENTS—needed in small quantities , (micrograms)

Vitamins	Food source	Main functions	Picture
A	Liver, carrots, milk, eggs and bread	To improve vision, especially at night.	 
B group	Milk, cheese, meat, breakfast cereals, bread and	Helps the body release energy from the food you eat.	 
C	Berries, oranges, broccoli, red and green peppers	Helps wounds heal. Helps the body to absorb iron.	 
D	Milk, butter, oily fish, eggs and mushrooms	Strong bones.	

Minerals	Food source	Main functions	Picture
Calcium	Yoghurt, milk, cheese, tofu	Build strong bones and teeth.	
Iron	Dark green vegetables, beans, fish, egg yolk, red meat	Keeps red blood cells healthy	
Sodium (salt)	Cheese, ready meals, salted nuts, bacon	Keeps the correct water balance in the body	 

Nutrient	Food source	Main functions	Picture
Protein	Beans and pulses, Fish, Eggs, Chicken, Meat, fish	Growth and repair of cells, Repair, Energy	Soya beans are high in protein 
Fat	Vegetable oils, Butter, Lard, Margarine, Fat spreads	Keeps the body warm, Provides energy, Protects organs	Fats and oils 
Carbohydrate	Starch	Potatoes, Rice, Pasta, Bread	Starch provides slow-release energy	Foods high in starch 
	Sugar	Sugars and syrups, honey, fruit juice	Sugar provides fast-release energy	Foods high in sugar 
	Fibre	Wholegrain cereals Fruit and vegetables	Fibre keeps the digestive system healthy	A food high in fibre 

Self Assessment:

Why do some people need more protein than others?
Which 2 plant foods are high biological value?
Describe the difference between fat and oil.
What happens if too much carbohydrate eaten?
How much fibre should adults each eat day?
What is the main function of the B group vitamins?
Name 3 foods high in iron

In Practice:

Plant proteins are popular.
Plan and make-

- hummus and pitta bread
- a recipe using mycoprotein

Year 8 - Why do I need to eat food? Page 2

Knowledge – Key vocabulary

Nutrients – the components which make up food

Maintenance – to keep something working

Diet – the foods you choose to eat

Balanced Diet – a diet that contains all the nutrients in the correct amounts

Healthy Diet – a diet that is LOW in fat, salt and sugar and HIGH in fibre

Malnutrition- caused by a lack of nutrients in the diet

Deficiency- a lack of a particular nutrient in the diet

Energy Needs – the average amount of food energy needed by individuals, usually measured in kilocalories (kcal)

Absorb – the nutrients are taken into the body (absorbed) and are mainly carried off in the blood stream to other parts of the body for storage or further chemical change.

Macronutrients- nutrients needed by the body in large amounts. They are fats and oils, carbohydrates & proteins

Micronutrients - nutrients needed by the body in smaller amounts. They are Vitamins and Minerals

Amino Acids – the building blocks of protein

Essential Amino Acids – amino acids that your body needs and cannot make by itself, they come from your diet

Non-essential Amino Acids – amino acids that your body can make by itself

High Biological Value (HBV) – protein foods that contain all the essential amino acids

Low Biological Value (LBV) – protein foods that are missing one or more essential amino acids

Protein Complementation – when two LBV protein foods are combined to form HBV protein

Sugar – simple sugars (eg glucose) and double sugars (eg sucrose)

Starch – a complex sugar (eg potatoes, rice and bread are high in starch)

Saturated Fats – usually from animal sources; can be harmful to health

Unsaturated Fats– usually from plant sources; can be good for health

Cholesterol – a fatty substance which is needed for the normal functioning of the body

Fat Soluble Vitamins - Vitamins A D E & K

Water soluble vitamins – B group vitamins , vitamin C

Minerals – eg calcium, iron, sodium chloride

Sodium Chloride (salt)- linked to strokes and heart attacks

Dietary fibre (NSP) – a complex sugar found in the cell walls of plants (fruits, vegetables, pulses and grains). Helps the digestions of food and remove waste (NSP –Non Starch Polysaccharide)

Digestive system – parts of the body where food is broken down to provide nutrients

Constipation – when stools are dry and hard to pass,

Type 2 Diabetes – a condition where the body's sugar levels cannot be controlled properly

Heart Disease (CHD) – a build-up of fatty deposits in the coronary arteries (CHD- Coronary heart disease)

Obesity – being very overweight, carrying more body fat than is healthy.

Anaemia- Too few red blood cells caused by a lack of iron in the diet.

Bowel Cancer- Can be prevented by eating dietary fibre

.

Osteoporosis- brittle bone disease caused by a lack of calcium.

Tooth decay- caused by plaque and too much sugar eaten.

Water

Dehydrated? Thirst, headache

- 6—8 glasses a day
- Helps with transporting
- nutrients, removing waste, regulating body temp

Assessment activity:
Research into a specific nutrient. Plan and make a food product containing a good supply of the nutrient. Carry out a nutritional analysis of the food product. Comment on the results and suggest changes you could make to alter the nutritional content

Year 8 Extension–Food Provenance

Food Provenance- knowing where food is grown, reared, caught and how it is produced and transported.

Food Miles - The distance food travels from **Farm To Fork**

Where does our food come from, how is it produced and why do we need to know?

Red Tractor is a food assurance scheme showing the food has been farmed, processed and packed in the UK. It is traceable, safe to eat and has been produced responsibly.	**Foods:** Milk, cheese, yoghurt, poultry
The animals have access to outdoor space and can live naturally. The welfare standards are high.	**Foods:** Eggs, meat
Foods that have this label mean the animals have had a good life and have been treated with respect	**Foods:** Eggs, meat & fish
This means the food has been produced without using any chemicals. Only natural fertilisers and pesticides are used to help the crops grow.	**Foods:** Eggs, chicken, fruit and vegetables
The farmer gets a fair price for his produce and fair working and living conditions.	**Foods:** Sugar, bananas, coffee, tea
Using sustainable methods of fishing to prevent the decline in number of fish in our seas.	**Foods:** Fish, seafood

Locally Sourced Foods – A way of reducing food miles is to buy locally sourced foods, these are also seasonal and can sometimes be organic too.

Local and Seasonal Foods

Seasonal Foods - Foods that are harvested and eaten in the season they are naturally ready to eat.

Reduce Your Carbon Footprint

Most **UK-grown fruit and vegetables** are not available all year round.

Spring Summer Autumn Winter

http://eatseasonably.co.uk/what-to-eat-now/calendar/

(Food)

Technology (RM)

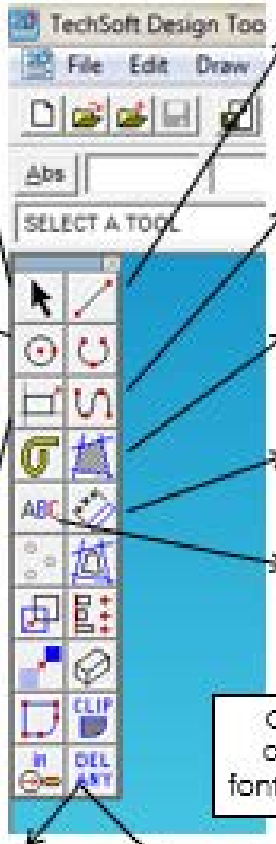
2d Design Key Tools

This sheet aims to give you a brief introduction into the key tools that you will need to use 2d Design efficiently.

The drawing tools are all located on the left-hand side of your screen. At the top of your screen here, you will also find the default 'File,' 'Open' and 'Save' buttons.

Before you start anything, please make sure your page is Setup correctly. Use the options in this toolbar to do this.

Select – to select multiple items hold down SHIFT on the keyboard and click the lines you want



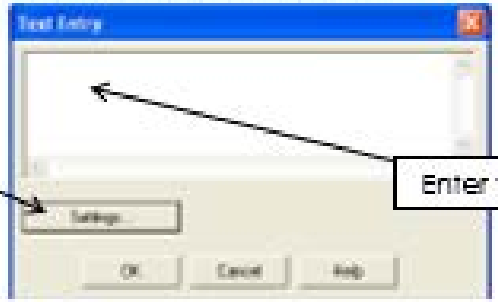
Straight line tool – click to place the start of the line, click to place end of line

Curved line tool – click to place the start of the line, click to place the first bend, second bend, etc. and right click to finish the line

Fill– select the area you want to fill. 'Are there any islands?' Click 'Yes' if you don't want to fill these in, or 'No' if you do.

Dimensions – Click at the beginning of where you want to measure, then again at the end. This will give you the measurement in millimeters.

Text – click to place text. The box below appears



Click to change font, size etc.

Enter text

Draw a Circle – click to place the center, and then click to place a point on the circumference.

Draw a Rectangle – click to place a corner, and then click to place the opposite corner.

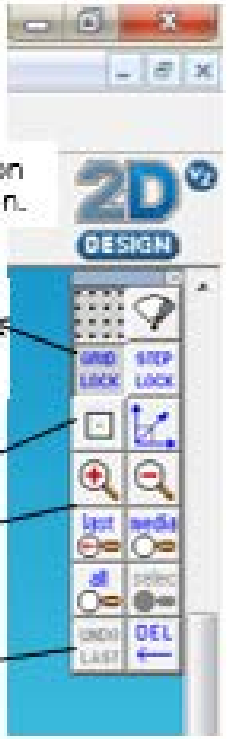
Deleting – click on a part you want to get rid of and use the DELETE button on the keyboard. To delete part of a shape, click and hold on the DEL ANY icon.

Delete anything

Delete part of a line

Draw a box, and delete the contents

Your grid tools are all located on the left hand side of your screen.



Lock to grid – Keep this on to keep your lines straight and measurements accurate

Attach – Use this tool to attach one point directly to another

Zoom in/Out

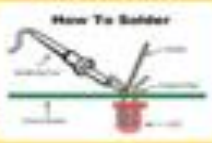
Undo – Undo or Delete your last move.

Resistant Materials

Circuits, CAD-CAM and Soldering

SOLDERING

Soldering is a process when electronic components are connected to the circuit board using solder to form a joint between them.



Take care as the soldering iron will become very hot.

COMPONENTS

These are the basic elements of an electronic circuit. A standard set of symbols are used to represent them in diagrams.

	Real	symbol	description
Resistor			Reduces the current through the L.E.D.
L.E.D.			Light emitting diodes are an energy efficient light source they are polarised components.
Slide switch			A switch with two positions open and closed.

A polarized component - **can only be connected to a circuit in one direction.**

PRINTED CIRCUIT BOARD

A printed circuit board is a non-conductive material with conductive (cooper) lines on it, onto which electronic components can be soldered.

C.A.D.

Computer aided design (C.A.D.). This is the use of computer-based software to help draw out designs. 2D design is used to draw your final design.

C.A.M.

Computer Aided Manufacturing (C.A.M.) is the **use of software and computer-controlled machinery to automate a manufacturing process**. A laser cutter is used to make your products.

KEYWORDS & TERMS

INPUT	The part of a system or circuit that takes something in, e.g. a sensor, switch or input socket
PROCESS	The central part of a system or circuit that changes the input(s) in some way, e.g. amplifies it
OUTPUT	The end of the system or circuit that could be the generation of light, sound or movement
CURRENT	The flow of electricity, measured in AMPs. This can be likened to the flow of water.
VOLTAGE	The amount of energy (push) behind the flow of electricity. Measured in VOLTs.
POWER	The voltage multiplied by the current, measured in WATTs
RESISTANCE	The opposite to flow. A reduction in the flow of electricity through part of a circuit or component. Measured in OHMS (Ω).

TOOLS - CIRCUIT CONSTRUCTION

PRECISION DRILL UNIT	
SOLDERING IRON	
SOLDERING IRON HOLDER	
SIDE CUTTERS	
WIRE STRIPPERS	
SOLDER (LEADED)	

What are the advantages of using CAD-CAM?

What type of materials can be used in computer aided manufacture?

What different methods of computer aided manufacture are there and can you give examples of products that have been manufactured this way?

Metals Knowledge Organiser
Resistant Materials

ferrous: Metals that contain iron. Besides iron itself, all ferrous metals are alloys.

iron: Heavy and strong, iron is most commonly found nowadays in various alloys. Historically, iron was the key material which enabled the industrial revolution to thrive in the UK. Machines, bridges and weapons could all be cast in iron, allowing mass-production.

Used in heavy kitchen skillets, radiators and fireplaces in older houses.

The Iron Bridge (opened 1781) in Shropshire was the first bridge to use cast-iron structurally.

ferrous alloys

mild steel: General purpose metal for general engineering. Good strength and cold-forging properties. Corrodes quickly without protection. Can be welded and braised.

Used in structural components, general workshop projects.

high speed steel: Very hard, resistant to frictional heat.

Used in lathe cutting tools, drills, milling cutters.

high carbon steel: Very hard, difficult to cut, easily joined by carbon treatment.

Used in hand tools, hammers, screwdrivers, chisels.

stainless steel: Hard, tough, resists wear, corrosion resistant, difficult to cut.

Used in dishes, sinks, teapots, cutlery.

non-ferrous: Metals that do not contain iron.

aluminium: High strength to weight ratio, light, soft, difficult to join.

Used in kitchen utensils, packaging, cans, foils, window frames.

copper: Bright and decorative colour when polished. Corrosion resistant. Soft and easy to work by hand. Good heat and electrical conductor.

gold: Soft, malleable, ductile, often alloyed to give more strength, doesn't corrode or tarnish.

Used in jewellery, electronics, hi-fi equipment, dentistry.

tin: Soft, corrosion-resistant pure metal. Silver-coloured and bright when polished. Can be worked by hand. Used to plate other metals.

non-ferrous alloys

brass: Corrosion resistant, casts well, work-hardens, polishes well.

Used in castings, boat fittings, ornaments.

bronze: Corrosion resistant, casts well, work-hardens, polishes well.

Used in castings, boat fittings, ornaments, statues.

pewter: Soft alloy of tin, copper, lead or silver. Low melt temperature makes it ideal for casting projects.

Used in sand-casting, old-fashioned tableware.

solder: Soft alloy, usually made from copper and tin. An added substance, called flux, allows the solder to flow over other metals when heated.

Used in jewellery manufacture, electronics.

Properties of Metals

Property	Definition	Found in
brittle	Hard, but easily broken or cracked.	cast-iron, steel with high carbon content.
conductor	Metal which allows heat or electricity to flow through it easily.	copper, gold, brass.
corrode	To become damaged by chemical reaction (normally water).	ferrous metals in the form of rust, some alloys become powdery.
corrosion-resistant	A metal which resists damage by chemical reaction.	copper, gold, bronze.
ductile	Can be deformed without losing toughness.	lead, copper, gold.
hard	Not easily bent or broken.	steel, iron, brass.
lightweight	A metal which has a good strength-to-weight ratio.	aluminium, duralumin.
malleable	Can be deformed by beating, bending or pressing into shape.	lead, copper, gold, silver, tin
soft	Metals with comparatively low melting temperatures. Easily scratched and malleable.	lead, copper, gold, tin.
tensile strength	A material with good tensile strength resists breaking under tension.	steel, iron, aluminium.
tough/durable/ strong	Able to withstand rough handling or treatment.	iron, stainless steel.

base metal: Pure, non-precious metals, such as iron, copper and tin. Commonly electro-plated with other metals such as chromium to achieve a higher quality finish.

precious metals: Pure metals which are valued for their ductility, colour and lustrous natural finish and other properties. Platinum, gold and silver are commonly used in jewellery design.

alloy: Metals which are a mixture of two or more elements, at least one of which is a metal. The purpose of an alloy is to create a metal with improved properties over the original.

Wood v metal v plastic.

Can you think of why it would be better to use a certain type of material over another?

What products can you think of, either for indoor and outdoor use that combines some, if not all three materials with reasons why?

Art
(Textiles)

Right side – Template- Sew- Seam allowance – Applique – Embroidery- Fabric-Cotton

Year 8 Wall hanging Project : MAKING

PROJECT OBJECTIVES::
Design a product suitable for a specific person and need
Develop greater accuracy and apply components
Produce a 3D end product

Double hem fold 1cm twice

Seam allowance = 1.5cm

SKILLS

Creating a template
Applying a seam allowance
Cutting fabric using a template
Pinning and tacking
Applique
Sewing on buttons
Basic sewing machine skills
Sewing on a zip
Making a pocket
Creating 3D parts
Correctly applying the 'right side' of the fabric

Applique

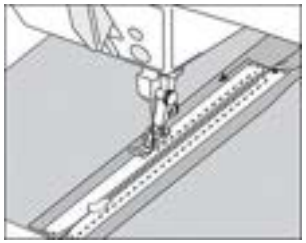
1. Cut out your template .
2. Pin your template to your fabric.
3. Cut around the template.
4. Pin and tack the shape onto your background fabric.
5. Sew around the edge of the shape.
6. Add further decoration if you want to.

SAFETY: One person on a sewing machine / 4 H rules/ Carry equipment correctly

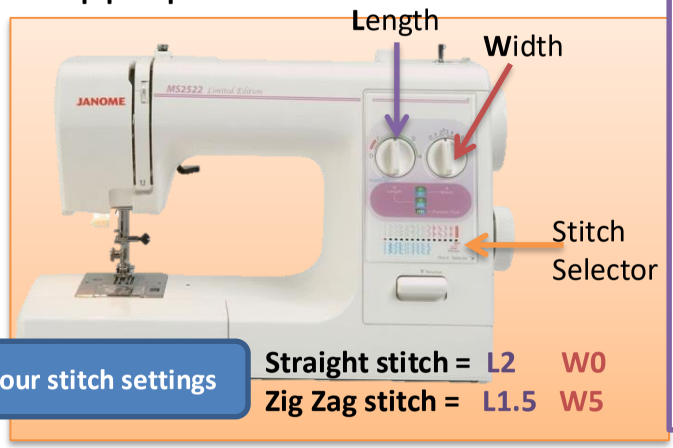
Blanket stitch

Level 4
Use the correct tools and pay attention to accuracy
Level 5
Use a range of tools and components with precision
Level 6
Produce a successful end product and explain any changes you made

Sewing binding…

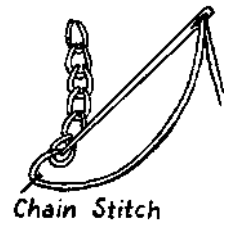


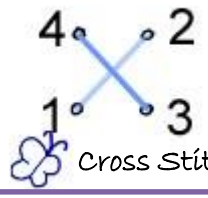
Machine Applique



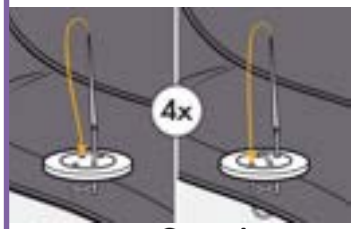
CHECK your stitch settings

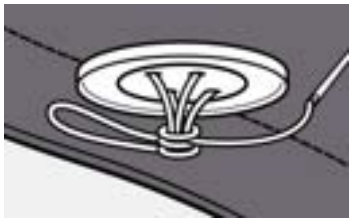
Straight stitch = L2 W0
Zig Zag stitch = L1.5 W5





Hand Embroidery…





Sewing on a button…

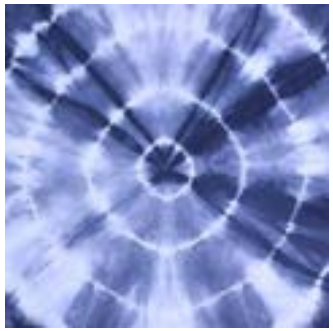
SELF QUIZZING – Apply your knowledge by seeing if you can complete the table below

Sewing machine "H" rule	Reason for rule

Suggested practical task

Look at 5 Textiles items at home to check for decorative techniques. These might be items of clothing, home furnishings or even textiles you may see in shop/ restaurants

List if you think they are embroidery, printing, embellishment dye/paint or applique.



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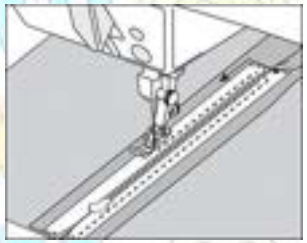
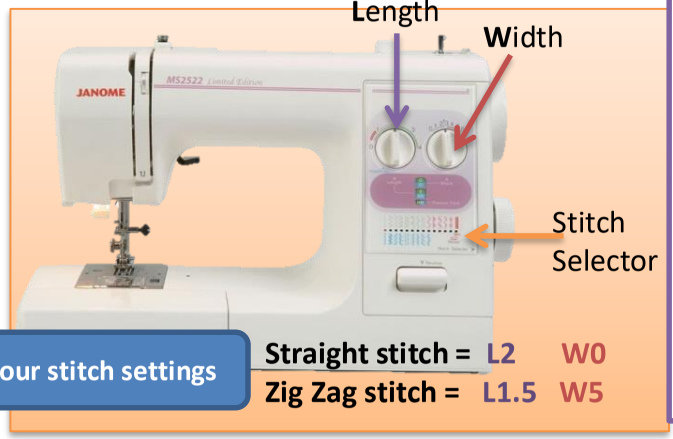


Machine Applique



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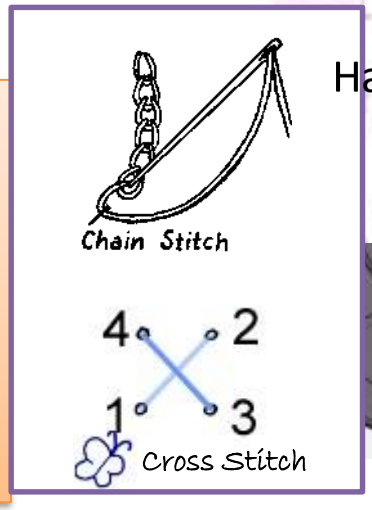

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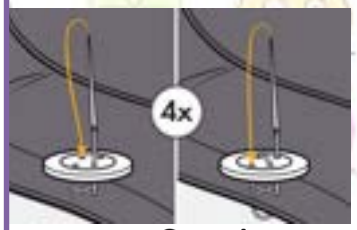

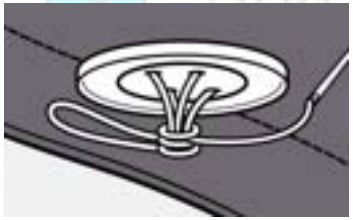

Sewing on a button…