

Monday 6th January	Week A
Monday 13th January	Week B
Monday 20th January	Week A
Monday 27th January	Week B
Monday 3rd February	Week A
Monday 10th February	Week B

Please note: Maths homework will be on an online platform for this term. It will be set and checked weekly separately from the timetable.

Knowledge Organisers 2024-25 Year 7 – Term 3

Complete your homework on the night stated e.g. if it is a Monday Week A you will complete ICT/DT

	Week A	Week B
Monday	ICT/DT	MFL
Tuesday	English	English
Wednesday	Science	Science
Thursday	History	Geography
Friday	RS	Music/Art

Contents

How to...

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Spanish – **Pg 31-32**

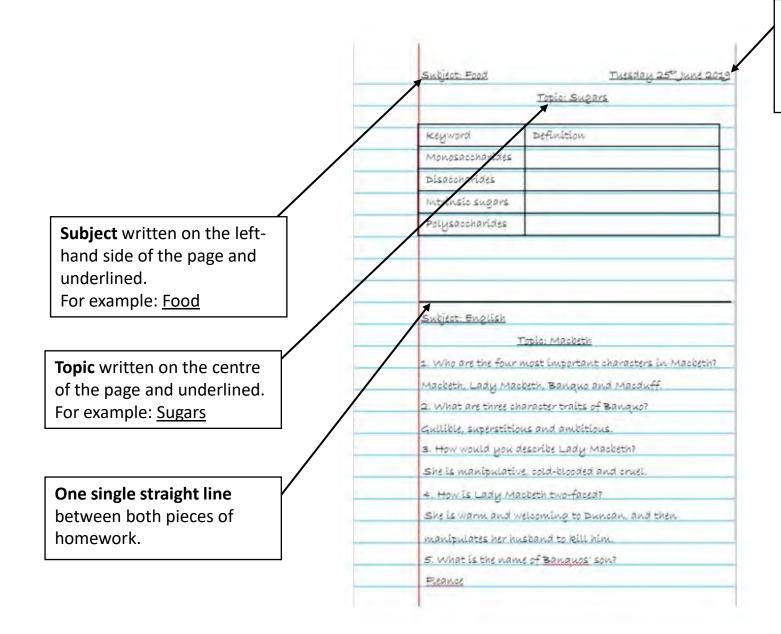
Textiles – Pg 33

This Knowledge Organiser is to help you see the key information for each subject for this term. You can use this to help you both with homework and with revision, supporting your learning at home. In the table below you will find the instructions for each subject to be completed on the correct day.

Subject	Tasks	
Maths	Homework question tasks/sets will be set weekly on an online platform. You will have one	
	week to complete this online, before it is checked for competition and the next set is published.	
Science	For term 2 this will be directed by your classroom teacher. It could involve an online platform	
	too.	
English	Using the separate question booklet, divide your homework book page in half length ways,	
	write the questions out on the left hand side. First, attempt to answer the questions from	
	memory/your own knowledge. Then use your knowledge organiser booklets to check your	
	answers and fill in the missing ones.	
MFL	Find the correct date in the KO and the question booklet. With the list of 10 key words for that	
	week, complete the look – say - cover – write – check method in your homework	
	book. Complete this process for each word/phrase 4 times each.	
Geog/Hist/RS	Same process as outlined for English above. DT have 5 questions and not 10.	
/DT		
ICT	For term 2, continue to use the KO to do revision/key words etc in your homework books.	
Music/Art	For music and art, you will have two practical tasks to complete each term for each	
	subject. These will be found in the question booklets and will be checked by you classroom	
	teacher.	

At the back of this booklet, you will find: Sentence starters, a history chronology, DT sentence starters, a periodic table, maps of the world, subject websites, a RAG sheet and a timetable.

How to present your homework:



Date written fully on the righthand side of the page and underlined. This should be the day you complete the homework.

Home Learning Strategies to help you revise

Brain Dump



Write down everything you know about o certain topic on a page. Use your KO to add extra notes in a different colour.

Mind Map



Condense a topic showing the important links and connectors between key parts. Use your KO to add in extra notes.

Diagram



Draw a clear diagram for a subject including labels and key features. Make sure you use correct vocabulary and spellings.

Vocabulary



Learn the key words associated with a topic and commit the word and spelling to memory. Test yourself or ask someone else to test you.

Retrieval Quiz



Write key questions about a topic as well as the answers. Use the content of the KO to help you. Check to see if you can remember the answers without looking.

Compare



Complete a comparison table showing two different sides of a topic. Can you use it to create an argument for one viewpoint?

Year 7 The Natural World

Content: In this project you will

Knowledge—learn about different styles of drawing

Understand—The processes and techniques artists use to create their work and how to critically analyse artists work.

Skills—observational drawing, illustrative drawing, shading, mark making, and print making showing the influence of other artists in your own work and presentation.



Printmaking is the process of creating artworks by printing, normally on paper. A printing block can be carved from wood, lino, foam or even a potato. Artists use print making so they can reproduce the same image several times. Artists sometimes use print making to create a repeat pattern.















Louis Renard's 'Book of Fantastical Fish' was first published in 1719. This was the first known book of colourful fish illustrations.

The book supposedly shows marine life from the East Indies in 1719 when Europe knew very little about nature in that region. The marine life and fish paintings in the book have received a certain amount of artistic license. A few are even completely fictitious including a portrait of a mermaid.

Louis Renard's created these fish paintings without ever visiting the East Indies. He based the paintings on drawings and scientific notes of other artists.





Dmojo is a street artist from Kuala Lumpar, Malaysia. He uses acrylic paint and spray paint to create his murals. He draws his designs in a sketch book small before creating his murals (wall art). He uses pattern and colour in the background of his work for decoration.





MARK MAKING IDEAS

Mark making is a term used to describe the different lines. patterns, and textures we create in a piece of art. It applies to any art material on any surface, not only paint on canvas or pencil on paper.

Keywords

Natural—existing in or derived from nature; not made or caused by humankind.

Mural-a painting or other work of art executed directly on a wall.

Illustration-a picture illustrating an idea in a book, newspaper or leaflet etc.





Scratch Programming Knowledge Organiser Year 7

What's Scratch?

Scratch is a free graphical programming language that allows you to create interactive stories, games, animation, music, art and presentations.

Where can I find it?

Go to

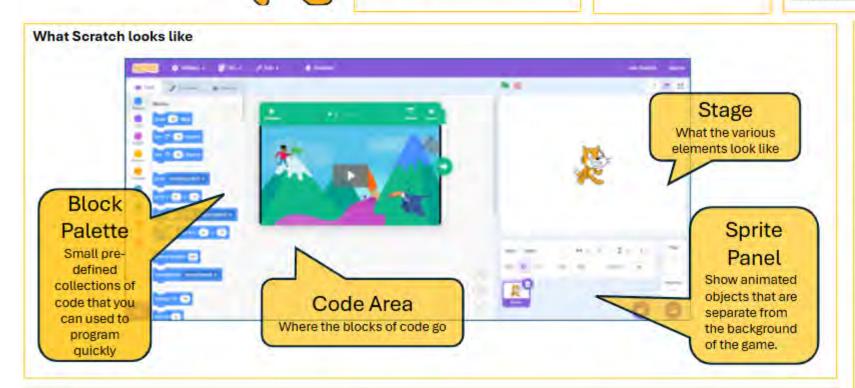
https://scratch.mit.edu or search

"scratch programming"

Learn how to use Scratch online

There are tutorials and projects you can access online. Scan the QR code with a camera to go to the <u>tutorials</u> webpage: https://scratch.mit.edu/projects/editor/? tutorial=all





Blocks

These are small pre-defined collections of code that you can used to program quickly. They help you do different things.



What other blocks are there?

- Motion
- Events
- Operators

Looks

- Control
- Variables

Sound

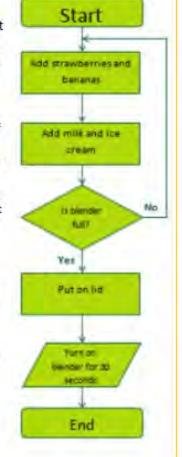
- Sensing
- My Blocks

Algorithms

An algorithm is a set of instructions that need to be followed in order to achieve an outcome.

They can be thought of as a recipe, for example, for making a smoothie, the steps have to be completed in the right order; don't turn on the blender before putting on the lid!

Scratch has preprogrammed block of code that can be placed together to create your algorithm, to create the instructions for your sprite(s) and the background.



The 3 Programming Constructs

Sequence – Instructions that are carried one after the other in order.

Selection – Selection allows us to include more than one path through an algorithm and branch outcomes

Iteration – Iteration is the process of repeating steps or repeating something over and over.

Great to know

Abstraction – Removing unnecessary information. A printed road map for directions will leave things out like houses usually.

Decomposition – Breaking down a problem into smaller, more manageable parts in order to make the problem easier to solve

Scratch Programming Knowledge Organiser Year 7

Coding

Algorithm – A process or set of rules to be followings in order.

Block – A 'chunk' of code that you can change and use to program quickly

Boolean – An expression used in computer programming that can result in either true or false.

Code- Program instructions

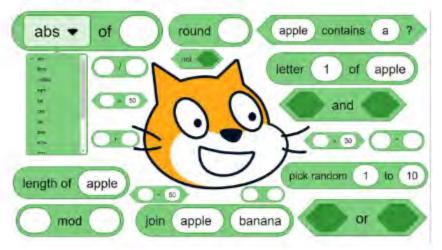
Condition- Also known as IF-ELSE.

Loop– Repeats a specific sequence of programmed instructions.

Sprite – An animated object, separate from the background of the game.

Variable – A value that can change depending on conditions or information passed to the program.

Operators– Symbols used to represent actions, such as (>) greater than



Subroutine – A block of code within a program that can be reused



Playwright	This is the name given to the person who writes the play.		
Performer	A performer is an actor or entertainer who plays a role or performance in front of an audience.	Physical Skills:	Eye contact I deliberately lost eye contact with Character X, showing my submissive nature. While they
Understudy	An actor who studies another's role so that they can take over when needed.	Movement I moved towards Character X _∞ showing the audience	stared at me kept my eyes on the floor, further highlighting, Vocal Skills:
Lighting designer	Responsible for designing the lighting states and, if required, special lighting effects for a performance. The final design will result in a lighting plot which is a list of the lighting states and their cues.	Body language I made sure my body language was open with my chest up and my arms wide and at right angles from my body. This suggests Interaction with other performers	Timing Que group worked very hard on the timing of the line "x y z". I paused to allow the audience to feel how serious the words were to my character and to portray his indecision. Then, as I began to speak, Character X interrupted me. This highlights
Sound designer	Responsible for designing the sound required for a performance. This may include underscoring, intro and outro music as well as specific effects. The final design will result in a sound plot which is a list of the sounds required and their cues.	In order to interact effectively with my cast-mates I Posture I decided that my character's posture would be hunched over with drooping shoulders and head facing down all the time. This shows her feelings of	Intonation (the rise and fall of the voice) I made my intonation higher at the end of the line. This suggests confusion and disbelief. An upward inflection is also typical of Essex or Estuary English, which is appropriate for my character because.
Set designer	Responsible for the design of the set for a performance. They will work closely with the director and other designers so that there is unity between all the designs and the needs of the performance.	Gait (how your character moves) I kept my gait precise with as little arm movement as possible. With an upright stance and high knees my gait shows my character's history of Gesture	Diction (pronunciation / articulation/how clear your words are) I worked hard to make sure my diction was clear. My character is confident and has no problems with articulating himself. I made sure every sound (especially my 't' sounds) was
Costume designer	Designs the costumes for a performance. The costume department of a theatre is often called the wardrobe	I.g. emphasise this feeling I added an aggressive gesture, extending my index finger and moving my hand into Character X's face. This short, stabbing movement tells the	audible so that it was clear to the audience Pace
Puppet designer	Designs the puppets for a performance.	audience	I made sure the pace of the scene was high. I spoke my lines speedily after the cue so that. It added a sense of urgency. This was appropriate for
Technician	A person who works backstage either setting up technical equipment such as microphones or rigging lights before a production or operating technical equipment during a performance.	Stillness I used stillness to focus the movement of Characters X and Y, allowing them to dominate the space. This shows Spatial awareness	Pause paused after Character X's movement to allow the audience to digest what had happened.
Director	In charge of the artistic elements of a production. A director will often have the initial creative idea ('concept') for a production, will work with the actors in rehearsal, and will collaborate with designers and the technical team to realise this idea in performance.	My, character is hyper aware of the space around her. This develops her fear of the action in the scene as she seeks a way out, showing Proxemics (stage spacing) Proxemics were important in this scene. I placed myself upstage right, dividing the stage	Pitch (how high or low you were speaking – squeaky or deep voice) During the argument I made sure my pitch was low. I deepened my voice and slowed my speech to add a threatening edge to my words. This shows General Skills
Stage manager	In charge of all aspects of backstage, including the backstage crew. They will oversee everything that happens backstage before, during and after a performance. During the rehearsal period, the Stage Manager and their team will make sure that all props are found or made, scene changes are rehearsed and smooth, and all other aspects of backstage are prepared. They are also in charge of the rehearsal schedule.	Control I had to depict the control of emotions in this scene. I made sure I stayed still and didn't react to Character X's insults. I kept my face neutral and hands denched. This shows my Facial expression My, facial expression was happy. I curved the corners of my mouth upward into a smile but	Expression of mood I used [other physical/vocal skill] as an expression of the mood of the piece. This highlighted the feelings of uselessness felt by my character and contrasts heavily with Character X, allowing the audience to see Emotional range My character showed a lot of emotional range. At the beginning she tended to be loud and
Theatre manager	Responsible for and manages the front-of- house team who deal with the audience during the production (for example, the box office manager, ushers and similar staff).	didn't show any teeth; I didn't want to openly grin as my character is quite shy. I had my eyes open and moving so that the audience can see that I'm excited, looking around the stage trying to take in every possible moment.	abrasive; always taking risks. By the end she has learned the value of caution. To depict this range I Performer (audience relationship (ensures sustained engagement)

Year 7 D&T - Gumball Machine Project

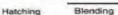


It's better to use materials from renewable resources — ones that are replaced naturally as fast as we use them up. For example, pine from well-managed plantations is quite a sustainable choice. (But if the fimber has to be transported a long way that'll probably one up a lot of fossil fuels.) Natural fibres used for textiles (e.g. cotton) are all renewable.

Using recucled meterials means that fewer new resources are needed, and often less energy is used. For example, recycling old food cans takes much less energy than mining and processing new metal,











Crosshatching Stippling





PINE Pine is a softwood which grows in most areas

Tri-Square

Coping Saw

Tenon Saw

Bench Hook

of the Northern Hemisphere. There are more than 100 species worldwide. Properties. Pine is a soft, while or pale yellow wood which is light weight, straight grained and lacks figure. It resists shrinking and

Analyse the above Gumball Machines using ACCESS FM.

We use ACCESS FM to help us write a specification - a list of requ a design - and to help us analyse and describe an already existing



is for Aesthetics



is for Cost



is for Customer



is for Environment



is for Size



is for Safety



is for Function



is for Material



What does it look like? What is the shape/ colours/ style/theme?

1 km = 1000 m

1 m = 100 cm 1 cm = 10 mm



How much does it cost to make? How much do I need to sell it for?



Who is the product made for? Why



will it appeal to them?



Is this product environmentally friendly? How could it be better?



What are the dimensions of the product? Is this a suitable size? Why?



How has this product been made safe to use? Can the safety be improved?



What does the product do? Does it do it well?



What is this material made from? Is this a good material to use? Why?

Evaluation

Designers evaluate their finished products or prototypes in order to test whether they work well and if the design can be corrected or improved. Whatever you have designed it is important to evaluate your work constantly during the project.



- · General discussion with other pupils, staff and others.
- · Questionnaires / surveys carried out at any time during the project.
- · Your personal views, what you think of existing designs.
- · Most important of all what do you think of your designs, prototypes and finished products?
- · Can you think of any other ways of evaluating your work?

Remember to always suggest improvements when evaluating!

Emergency

Pillar Drill

Target Market

Who is the customer? A target market is the set of customers sharing common needs, wants & expectations that a business tries design a product for.



- Health and safety rules Always listen carefully to the teacher and follow instructions.
- Do not run in the workshop, you could 'bump' into another pupil and cause an accident.
- Know where the emergency stop buttons are positioned in the workshop.
- 4. Always wear an apron as it will protect your clothes and hold loose clothing such as ties in place.
- When attempting practical work all stools should be put away.
- Bags need to be left in the cubicles and not under desks
- 7. Do not use a machine if you have not been shown how to operate it safely by the teacher.







Ragged schools

- Ragged Schools were charitable organisations dedicated to the free education of destitute (poor) children in 19th century Britain
- The schools were developed in workingclass districts.
- They were intended for society's most impoverished youngsters.
- Children attended who were rejected by Sunday School education because of their untidy appearance and often challenging behaviour.
- After visiting a Ragged School, Dickens was appalled by what he saw and wrote a letter to The Daily News newspaper, detailing his account.





Marcus Rashford: free school meals



- In the middle of the Coronavirus pandemic, Rashford began a campaign which resulted in a government announcement that free school meals would be provided to disadvantaged children over the school holidays.
- In the campaign, Rashford drew upon his experience of going hungry as a child and the 'hardships' that his mother went through to put food on the table during his youth.
- Marcus Rashford is a well-known footballer, currently playing at Manchester United. He has also represented England, playing in the World Cup.

Writing an article

Features:

- A clear, original title
- A strapline (secondary heading)
- Engaging introduction (overview)
- Linked paragraphs
- A concluding paragraph



Example of article

Title —

'Children make you laugh so much': three teachers on the joys (and challenges!) of teaching.

Strapline

There's no hiding from the fact that teaching is tough. But for these educators, that can be part of the vocation's beauty.

Introduction —

Today's novice teachers are joining the profession at a time when it's facing huge challenges, from controversy – and negative depictions of teachers – around pay and conditions, to the pressures of Ofsted inspections, and how political and cultural events play our in the classroom.

Poetic Terms:

 $\mbox{\bf Meaning}$ – the main message of the poem

Speaker – the voice of the poem.

Imagery – the words which paint images in the reader's mind.

Simile - indirect comparison (like/as)

Metaphor - direct comparison

Personification – when a non-living object is described as looking like or behaving like a human.

Tone – the feeling/atmosphere of the poem **Structure** – the organisation of the poem, its rhyme scheme, the rhythm.

Stanza – grouped lines in a poem

Form – the type of poem – i.e. sonnet, ode. Caesura – punctuation which occurs midline; slows the rhythm.

Ragged schools

Enjambment - lack of

terminal punctuation, speeding up the poem. End-stopping – punctuation at the end of a line

Metre - number of beats per line

Plosive – sound made by stopping airflow – b,t,k, d, p; it creates a harsh sound.

Onomatopoeia – a word which sounds like the thing it is describing – i.e. bang

Alliteration – the repetition of the same sound Sibilance – the repetition of the 's' sound

Poets

Robert Burns (25 January 1759 – 21 July 1796) was a Scottish poet and lyricist. He is widely regarded as the national poet of Scotland. His poem 'Auld Lang Syne' is often sung to welcome in the New Year. He was a pioneer of the Romantism.

Dame Carol Ann Duffy

(born 23 December 1955) is a Scottish poet and playwright. She appointed Poet Laureate in May 2009. Tupac Shakur is considered to be one of the greatest rappers of all time.. Much of Shakur's music has been noted for addressing contemporary socia I issues that plagued inner cities.

1	Ch. 1- 6	Christmas Eve, afternoon: Pip meets the convict (Abel Magwitch); Pip asked to steal file and "wittles" for them. Joe and Mrs. Joe introduced; guns signal escaped convicts; Pip steals food and suffers from "wild fancies" in his guilt. The soldiers; Magwitch and Compeyson; Magwitch "confesses" to Pip's crime. Pip's guilt; Pumblechook describes Magwitch's "theft".
	Ch. 7- 13	The reader is introduced to Pip's limited education (from Biddy). This is compared with Joe's lack of learning. Miss Havisham wants Pip to visit; Pip sees Estella, Miss Havisham at Satis House: the gothic conventions are prevalent throughout Chapter 8. Estella seen as "a star" is Pip's eyes and she derides him as he "calls knaves, Jacks" demonstrating his poor breeding. Pip lies about Satis House and what he sees. Pumblechook pretends to know; Pip tells Joe the truth. Joe Gargey goes to Satis House and is given twenty-fie guineas for Pip's time, he is now bound into an apprenticeship with Joe which he feels sullen about. Mrs. Joe feels slighted not to see Miss Havisham
	Ch. 14-19	Retrospective narrative reflection on Pip's shame and ingratitude – Juxtaposed with this, Joe's virtues are described. The half-holiday: Joe fights Dolge Orlick and Mrs. Joe is assaulted. Biddy moves in to look after Mrs Joe. Jaggers tells Pip of his "great expectations" and secrecy of benefactor. Pip undergoes transition point in Chapter 19 as he visits Mr Trabb's shop and apparently without "boasting" flaunts his new wealth.
2	Ch. 20-26	Pip lodges with Herbert. Wemmick takes Pip to Barnard's Inn; Pip recognizes Herbert as "pale young gentleman". Herbert tells Miss Havisham's story. Pip takes up rowing and living the life of a 'gentleman' as he spends his fortune. Mr Jaggers flaunts his housekeeper, Molly's wrists in a scene of social power and male dominance. Pip is yet to realise Molly is Estella's mother.
	Ch. 27-33	Biddy writes to Pip asking if Joe can visit Barnard's Inn; he calls Pip "Sir" highlighting Joe's "simple dignity" that does not fit with the figure of the 'gentleman'. Pip reads in local paper that Pumblechook is his "patron". Pip visits Miss Havisham; Orlick is gate-keeper. Pip declares his love for Estella. Pip waits for Estella who is visiting London. Wemmick shows him Newgate (convict motif).
	Ch.	Pip and Herbert accumulate rather large debts and Mrs. Joe dies. Pip comes of age
	34-39	(November) and becomes responsible for his finances; asks Wemmick's advice for Herbert. Pip is to escort Estella and take her to Satis House; quarrels with Miss Havisham and discovers Bentley Drummle as Estella's suitor. He leaves heartbroken. Pip

Plot

	-	
w	Ch. 40-44	The man on the stairs, "Provis" comes to stay; Jaggers confirms his story as Pip's benefactor. Herbert then meets Magwitch/"Provis". Herbert advises Pip to take Magwitch out of the country; they ask him about his life. Pip tells Estella he loves her but Estella is set to marry Bentley Drummle.
	Ch. 45-50	Pip feels he is being watchedHe fears Estella is married but will not make sure. Pip dines with Jaggers; Estella is married. Pip recognizes Molly as her mother and Wemmick tells of Molly's trial. Chapter 49 sees Miss Havisham's confession and repentance; Estella's adoption and the fire. Pip says "I forgive her". Herbert tells of Magwitch's child and Pip knows Estella is his. Magwitch said that Pip reminded him of her.
	Ch. 51-59	Jaggers explains Estella's adoption and advises that Pip keep it secret. Orlick's confession and attempted revenge; Pip rescued by Trabb's boy and Herbert. Magwitch's escape is thwarted; Compeyson drowned and Pip reconciled to his benefactor, Magwitch. Pip's wealth is forfeited to the crown. Magwitch convicted and sentenced; Pip tells him, before his death, of Estella. Pip becomes ill and is arrested for debts but rescued by Joe. Orlick ends up in jail. Miss Havisham's will is read and Pip plans to propose to Biddy. Satis House goes up for auction and Joe marries Biddy. Eleven years later, Pip returns; sees young Pip and meets (widowed) Estella at Satis; "no shadow ofparting".

Pip Pirrip

Characters

The Bildungsroman's protagonist, Pip is an orphan, the apprentice of the gentle blacksmith Joe. When he unexpectedly comes into a fortune, Pip aspires to become worthy of the upper-class Estella. Pip becomes cruelly disloyal to Joe and Biddy, avoiding them because of their class. Eventually, Pip learns to judge people by internal rather than superficial standards and redeems himself.

Miss Havisham

The wealthy an decrepit Miss Havisham was abandoned on her wedding day by her fiancée (Compeyson) and traumatized, so she shuts out the world for over twenty years. In her revenge on men, Miss Havisham adopts and raises Estella to be beautiful and desirable but completely heart-

Estella

The adopted daughter of Miss Havisham, Estella is proud, refined, beautiful, but cold: raised by Miss Havisham to "wreak revenge on the male sex". She initially marries Bentley Drummle -a bad decision.

Biddy

Pip's school friend, Biddy moves into the forge to help out after Mrs. Joe's attack and later becomes a schoolteacher. Humble, kind and moral, she is also sharply perceptive and sees through everyone's pretensions, calling Pip out on his delusions and snobbery long before Pip can

Joe Gargery

Joe is a father figure for Pip whose tender kindness protects Pip from Mrs. Joe's harsh parenting. With no formal education, but a deep sense of integrity and an unfailing moral compass, Joe is loyal, generous, and kind, and acts lovingly towards Pip even when Pip's is ungrateful.

Mrs Joe

Mrs. Joe is fiery, tyrannical, and false, and abuses Pip and Joe. She is obsessed with social status and reputation. Yet, after the attack by Orlick that gives her brain damage, Mrs. Joe's personality changes completely and she becomes patient, compassionate, and docile.

Bentley Drummle

Bentley Drummle studies with Pip. He is a wealthy heir to a baronetcy, upper class according to the old system of inherited rank. Described as "idle, proud...and suspicious," Drummle is Pip's nemesis. He marries Estella.

Provis (a.k.a. Abel Magwitch the convict)

The same escaped convict Pip helps in the novel's opening scenes. Provis' gratitude towards Pip inspires him to devote his lifesavings to him and become his anonymous benefactor. Cruelly swindled by Compeyson, Provis has lived a life in and out of prison. Still, his criminal record is largely the result of unfortunate circumstances, not character, for Provis is kind, good-hearted, and immensely generous.

Herbert Pocket

Pip's best friend, Herbert is compassionate, honest, and unpretentious. He and Pip live together in London where he works in a counting house as a merchant. He cheerfully helps Pip through all of Pip's struggles

Mr Jaggers

A famous lawyer in London, Mr. Jaggers is

Pip's guardian and the middleman be-

tween him and his patron. Mr. Jaggers also

works for Miss Havisham. He is rational,

sharp-minded, and intimidating. He prides

himself on neither expressing nor respond-

ing to human emotion.

Vocabulary

Dilapidated = state of disrepair

Superior = higher in rank, status, or quality.

Ostracised = exclude from a society or group.

Genteel = politeness or respect-

Reticent = not revealing one's thoughts

Prosperous = successful in material terms; flourishing financially

Corrupt = dishonesty for gain

Woebegone = sad or miserable in appearance.

Incongruous = not in harmony or keeping with the surroundings

Themes

Ambition & Self Improvement

Social Class

Crime & Guilt

Innocence & Justice

Familial Connections

Revenge

Redemption

Avarice

Setting

Paradoxical = seemingly absurd or self-contradictory

pathetic fallacy = using the weather to dictate the mood

Impudent = not showing due respect for another person

Benefactor = a person who gives money or other help to a person or cause.

Revenant = a person who has returned, especily supposedly from the dead,

Malignant = vil in nature or

Portentous = done in a pompously or overly salemn manner so as to impress

Year 7 Food Knowledge Organiser

Nutrients

Nutrients are chemical found in food which our bodies need for daily functions.

Macronutrients are nutrients our bodies need in large amounts.







proteins

Fats

Functions: Insulation (keeps you warm), secondary source of energy, dissolves vitamins.

Food sources: oil, meat, fish, coconut oil, butter, margarine, avocados.

Excess (too much): weight gain, coronary heart disease, type 2 diabetes.

Deficiencies (too little): feel the cold, weight loss, vitamin deficiency.

Where does our food come from?

All food must be grown, reared or caught

In the past food was grown, prepared and cooked at home or sold by small-scale producers or merchants.

Some people still grow food at home or on allotments. Food can also be bought from a wide range of sources, including:

- cafes/coffee shops;
- convenience stores;
- farmers markets;
- farm shops;
- markets;

- · on-line retailers;
- restaurants;
- supermarkets;
- takeaway outlets.

Carbohydrates

Functions:

Main source of energy, stores energy for later, builds DNA.

Food sources:

Bread, rice, pasta, flour, bananas, sugar.

Excess (too much):

Weight gain, obesity, type 2 diabetes, tooth decay.

Deficiencies (too little):

Weight loss, lack of energy, severe weakness.

Proteins

Functions:

Growth, repair of cells and wounds, defends the body (antibodies), secondary source of energy.

Food sources:

Meat, chicken, eggs, dairy, beans, legumes, chickpeas, soya beans.

Excess (too much):

Kidney and liver diseases, weight gain.

Deficiencies (too little):

Slow growth rate, swelling.

Where should food be stored in the fridge?

Cheese, dairy and egg-based products

The temperature is usually coolest and most constant at the top of the fridge, allowing these foods to keep best here.

Cooked meats

Cooked meats should always be stored above raw meats to prevent contamination from raw meat.

Raw meats and fish

Raw meats and fish should be below cooked meats and sealed in containers to prevent contamination of salad and vegetables.

Salad and vegetables

These should be stored in the drawer(s) at the bottom of the fridge. The lidded drawers hold more moisture, preventing the leaves from drying out.

Storing foods the correct way will prevent food from being spoilt.

The Eatwell Guide



The Eatwell Guide

Makes up 5 main food groups. Is suitable for most people over 2 years of age.

Shows the proportions in which different groups of foods are needed in order to have a well-balanced and healthy diet.

Shows proportions representative of food eaten over a day or more.

The Water Cycle:

Evaporation

Condensation

Precipitation

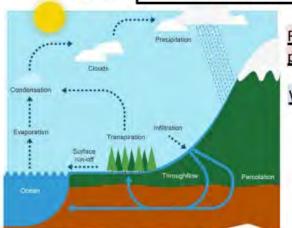
Transpiration

Surface runoff

Throughflow

Infiltration

Year 7 Geography - Term 3 - How do rivers in the UK change the landscape?



and rises.

water

soil.

When sun heats water it

changes into water vapour

As air rises it cools and the

Water droplets that fall to the

ground as rain, hail or snow.

Water soaks into the soil.

evaporated from plants.

When water runs off the surface of the land.

When water flows through the

vapour forms clouds.

When moisture is

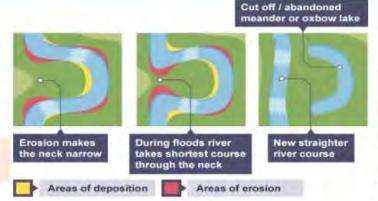
River	Erosion	The wearing away of land.
	Transportation	The movement of material in a river.
processes:	Deposition	The dropping of material by water.

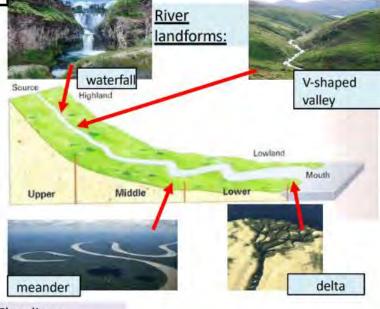
Waterfall Formation: Steep sided gorge a step. Hard rock Soft rock Plunge pool with fallen rocks

1.The soft rock is eroded quicker than the hard rock and this creates

2.As erosion continues, the hard rock is undercut forming an overhang. Abrasion and hydraulic action continue to erode the soft rock to create a plunge pool.

- 3. Over time this gets bigger, increasing the size of the overhang until the hard rock is no longer supported and it collapses.
- 4. This process continues and the waterfall retreats upstream. A steep-sided valley is left where the waterfall once was. This is called a gorge.





Flooding:

Causes		Impacts		
Physical	Human	Social	Economic	Environmental
Heavy rainfall	New buildings	Homes flooded	Jobs lost	Water supply contaminated
Saturated ground	Deforestatio n	Loss of electricity	Businesses closed	Debris left behind

Solutions		
Hard engineering	Soft engineering	
What: man-made structure/barriers	What: not involving man-made structures, more ecological	
e.g. flood walls, dams	e.g. floodplain zoning, catchment management	

Meander Formation:

Was denkst du?	What do you think?
Ich liebe	Hove
Ich mag ♥	Hike
Ich magnicht	I don't like
Ich hasse	1 hate
Meiner Meinung nach	In my opinion
Ich denke, dass	I think that
Ich glaube, dass	I believe that
Ich finde	I find

Beschreib dich	What are you like?
Ich habe er/sie hat	I have He/she has
Haare 💍	hair
lange n	long
kurze 🦱	short
glatte N	straight
lockige	curly
wellige R _	wavy
afro 🤦 🧟	afro
blonde 🔼	blond
hellbraune 🦰	light brown
die Augen 👁 👁	eyes
blaue	blue
braune ***	brown
grüne 👁 👁	green
dunkel/hell	dark/light
schwarze	black
graue	grey
Ich bin	I am
er/ sie ist	He/she is
groß	tall
klein	short
dick	fat
schlank	thin
mittelgroß	medium size

7.2 People around me German Vocab List

Was für eine Person bist du?	What are you like?
/Beschreib dich	/Describe yourself
Ich bin	Tam
nett	Kind
angenehm	Pleasant
froh/glücklich	Нарру
geschwätzig	Chatty
schön	Beautiful
lustig	Fun
stark	Strong
niedlich/süß	Cute
hübsch/gut aussehend	Pretty/Handsome
jung	Young
perfekt	Perfect
schnell	Fast
reich	Rich
klug	Clever
schüchtern	Shy
fleißig	Hard working
traurig	Sad
alt	Old
langweilig	Boring
nervig	Annoying
ernst	Serious
schwierig	Difficult
streng	Strict
hässlich	Ugly
laut	Noisy
unhöflich	Rude
schrecklich	Horrible/Awful
faul	Lazy
glerig	Greedy
sportlich	Sporty

Extra detail	Extra detail
ch trage	l wear
Ich habe	I have
eine Brille	glasses
Piercings	piercings
einen Hijab	a hijab
Kontaktlinsen	contact lenses
Sommersprossen	freckles
eine Narbe	a scar
einen Bart	a beard
einen Schnurrbart	a moustache



Connectives	Connectives		
aber	But		
obwohl	However		
auch	Also		
außerdem	Furthermore		
weil/denn	Because		
und	And		

Was ist deine Nationaltät?	What is your nationality?			
Ich bin	I am	11		
Engländer(in)	English +			
Franzose/Französin	French			
Belgier(in)	Belgian			
Schweizer(in)	Swiss			
Deutscher/Deutsche	German	1		
Spanier(in)	Spanish			
Somalier(in)	Somalian			
Pole/Polin	Polish			
Portugiese(in)	Portuguese			
Bangladescher (in)	Bangladeshi			
Chinese/Chinesin	Chinese	_		
Italiener(in)	Italian	1		
Waliser(in)	Welsh	•		
Pakistani/Pakistanerin	Pakistani	п		
Schotte/Schottin	Scottish			
Ire/Irin	Irish	ě.		
Amerikaner(in)	American			

Intensifiers		
very		
quite		
a bit		
too		
extremely		
really		

People around me! 7.2 Knowledge Organiser

Describe yourself (appearance and personality). Family, friends (describing others), pets,



<u>Pronouns</u>	<u>haben – to have</u>	sein – to be
Ich (I)	Ich habe I have	Ich bin - I am
du (you/singular/fam)	du hast (you have)	du bist – You are
er (he), sie (she)	er hat (he has), sie hat (she has)	er/sie est - He is/she is
wir (we)	Wir haben (we have)	Wir sind – we are
Ihr (you) (pl/familiar)	Ihr habt (you have) (pl)	Ihr seid — you are (pl)
Sie (you/polite) sie (they)	Sie haben (you have) sie haben (they have)	Sie sind – you are sie sind – they are

To say "my" in German we must change how we say it to match the noun (whether it is masculine, feminine or plural). Whether you are male, or female doesn't change which word you use.

Examples:

Mein Vater = my dad Meine Mutter = my mum Meine Eltern = my parents

	Masc	<u>Fem</u>	<u>Neut</u>	<u>PL</u>	
my	mein	meine	mein	meine	
your	dein	deine	dein	deine	
his/her	sein/ihr	seine ihre	sein ihr	seine ihre	

Adjective agreement.

Remember adjectives must agree with the noun. Normally you would add an 'e' to the adjective to make the plural but if the adjective comes after the noun it doesn't agree.

Ich habe lange Haare = I have long hair

Er hat braune Augen = He has brown eyes

But.....

Er ist klein = he is small

Sie ist faul = she is lazy

Mein Name ist/ich heiße - My name is / I am called Sie heißt - she is called Er heißt – he is called Sie heißen – they are called

Enquiry: What was happening in the Islamic World?

Summary

During this topic we are going to be studying what was happening in the Islamic World during the Medieval period. We will be explaining similarities and differences between Medieval life and society in England and Medieval Baghdad.

Key Dates

1	750 – The Abbasid family took control of the Muslim Empire in the east.
2	762 – Baghdad was established as the capital city of the Abbasid Caliphate.
3	793 – Paper arrives in Baghdad from China.
4	800 – Baghdad is the largest city in the world.
5	830 – The House of Wisdom was established.
6	850 – Baghdad has its own hospital.
7	1258 – Baghdad was destroyed by the Mongols.

Key People

8	Ibn Sina	Doctor and scholar known in English as Avicenna (980-1037). Wrote a huge medical encyclopaedia known as the "Canon of Medicine".			
9	Al-Razi	Doctor and scholar known as Rhazes (854- 925). Helped identify the difference between smallpox and measles and influenced the hospital in Baghdad.			
10	Al-Ma'mun	Caliph of the 'Abbasid Dynasty ruled 813 to 817 and he founded the House of Wisdom.			

History – Year 7 Knowledge Organiser Topic 4



Established by the

Key Places

11 Baghdad

	Dagiluad	Abbasid Caliphs and was the capital of the Islamic World. It became a centre of learning during the Golden Age of Islam.
12	House of Wisdom	The Grand Library of Baghdad. Home to academic works gathered from across the known world.
13	Golden Gate Palace	The palace was the Caliph's residence and was located in the centre of the round city of Baghdad.
14	Grand Mosque	The mosque was next to the Caliph's palace so that when people bowed down to pray they were bowing down to the Caliph.

Key Terms

15	Abbasid	A member of the Abbas family, the ruling Caliphs of Baghdad.
16	Anatomy	The scientific study of an animal or plan, or any of its' parts.
17	Arab	Name given to the group of people originating from the Middle East and North Africa
16	Astronomy	The scientific study of space and the universe
17	Caliph	Spiritual leader of Islam, any of the former Muslim rulers of Baghdad.
18	Caliphate	An Islamic state led by a Caliph
19	Golden Age of Islam	A period of cultural, economic, and scientific flourishing in the Islamic World, dated from the 8th century to the 13th century.
20	Scholar	Someone who has excellent knowledge of a particular subject.

Historical Skills Focus

We will be explaining how the Islamic World and England were similar and different			
during the Medieval period.			

Significance: We will be using the 5 R's of significance to explain the reasons why the Islamic World is important.



Remarkable: An event/person that was remarked on by people at the time or since. Reported.



Remembered: People have not forgotten it.



Resulted in change: had consequences for the future. It led to other things happening.



Revealing: tells us a lot about a person's time.



Resonant: An event/person that has an effect on future generations. *People connect with it today*.

SEQUENCES

KEY CONCEPTS

Arithmetic or linear sequences

increase or decrease by a common amount each time.

Geometric series has a common multiple between each term.

Quadratic sequences include an n^2 , It has a common second difference.

Fibonacci sequences

are where you add the two previous terms to find the next term.

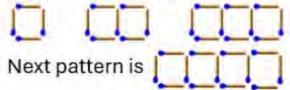
KEY WORDS

Sequence: A list which is in a particular order following a pattern.

Term: Each particular part of a sequence.

Linear sequence: A sequence which is formed by adding or subtracting the same amount each time.

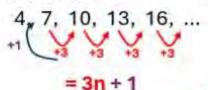
Examples



Sequence = 4, 7, 10, 13,

Term to term rule = +3

Nth term



Tip

If a sequence is decreasing, the 'n' term will be negative.

Eg, 15, 11, 7, 3, ... nth term = -4n + 19

Key Concept

Types of Sequence Sequence as pictures:





Linear sequence:



Fibonacci sequence: (add the previous two terms)

1, 1, 2, 3, 5, 8, ...

Questions

- 1) Find the next two terms and the term-to-term rule
- a) 9, 13, 17, 21, ... b) 7, 12, 17, 22, ... c) 9, 7, 5, 3, ... d) 3, 4, 7, 11, 18
- 2) Find the nth term a) 7, 9, 11, 13, ... b) 8, 13, 18, 23, ... c) 15, 12, 9, 6, ... d) 1, -3, -7, -11, ...

ANSWERS: 1) a) 25, 29 Rule = +4 b) 27, 32, Rule = +5 c) -1, -1, Rule = -2 d) 29, 47, Rule = add previous 2 numbers 2) a) 2n + 5 b) 5n + 3 c) -3n + 18 d) -4n + 5

DECIMALS & FRACTIONS (Multiply & Divide)

KEY CONCEPTS

An improper fraction is when the numerator is larger than the denominator e.g. $\frac{20}{12}$ Converting from a mixed

Converting from a mixed number into an improper fraction:

$$2 \frac{3}{5} = \frac{(2 \times 5) + 3}{5} = \frac{13}{5}$$

A **reciprocal** is the value that when multiplied by another gives the answer of 1.

Eg. $\frac{1}{8}$ is the reciprocal of 8. $\frac{2}{5}$ is the reciprocal of $\frac{5}{2}$

Calculate:

1)
$$1\frac{2}{3} + 2\frac{3}{4}$$
 3) $3\frac{1}{5} \times 1\frac{2}{3}$

2)
$$3\frac{3}{4} - 1\frac{1}{3}$$
 4) $1\frac{3}{5} \div 2\frac{7}{10}$

What's the reciprocal of: 5) 2 6) 9 7) 0.75

Tip

- Add digits when ordering decimals,
- The number of zero's tells you the number of places to move the digits.

Multiply

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

$$=\underbrace{\frac{4}{3}\times\frac{11}{4}}_{x}$$

$$=\frac{44}{12}$$

$$=3\frac{8}{12}$$

Divide

$$2\frac{1}{3} \div 1\frac{3}{5}$$

$$=\frac{7}{3}\div\frac{8}{5}.$$

Find the

reciprocal

of the second fraction....

...and multiply

$$= \frac{7}{3} \times \frac{5}{8}$$

$$=\frac{35}{24}$$

$$=1\frac{11}{24}$$

Key Concept

Multiply/Divide by powers of 10

10 000	1000	100	10	1	• 1 10	100	1000
					•		

Multiplying

X 10	digits move LEFT 1 space
X 100	digits move LEFT 2 spaces
X 1000	digits move LEFT 3 spaces
	-

Dividing

# 10	digits move RIGHT 1 space
√ 100	digits move RIGHT 2 space
+1000	digits move RIGHT 3 space
100	

- 1

Ordering Decimals

0.3, 0.21, 0.305, 0.38, 0.209 Add zero's so that they all have the same number of decimal places.

Examples

0.300, 0.210, 0.305, 0.380, 0.209 Then they can be placed in order: 0.209, 0.21, 0.3, 0.305, 0.38

Multiplying/Dividing by powers of 10 3.4 × 100

100	10	1	1 10
		- 3	4
3	4	0	

Key Words

Fraction
Equivalent
Reciprocal
Numerator
Denominator
Improper/Top
heavy
Mixed number

Key Words

Decimal: A number that contains a point.

Metric measure:

The unit used to measure length, mass etc.

Scale: The conversion to convert between drawings and real life sizes.

RATIOS

KEY CONCEPTS

To calculate the value for a single item we can use the unitary method.

When working with best value in monetary terms we use:

$$Price\ per\ unit = \frac{price}{quantity}$$

In recipe terms we use:

$$Weight per unit = \frac{weight}{quantity}$$

Key Words Ratio Divide Parts

Unitary Best Value Proportion Quantity

KEY CONCEPTS

An amount can be divided into a given ratio.

> Red: Green 1:3

For every 1 red there are 3 greens,

A ratio can be converted into fractions.

> Red: Green 1:3

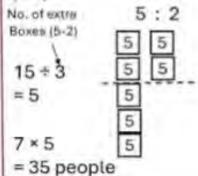
are red and 3 are green.

A woman has £400. She is going to split her money between her two children in the ratio 2:3. How much does each child receive?

Child 1 receives £160, and Child 2 receives £240.

There are boys and girls at a party in the ratio 5:2.

There are 15 more boys than girls. Calculate the number of people at the party.



If 20 apples weigh 600g. How much would 28 apples weigh?

600 ÷ 20 = 30g - weight of 1 apple

30 × 28 = 840g

Box A has 8 fish fingers costing £1.40. Box B has 20 fish fingers costing £ 3.40 Which box is the better value?



$$A = \frac{£1.40}{8}$$
 $B = \frac{£3.40}{20}$
= £0.175 = £0.17

Therefore, Box B is better value as each fish finger costs less.

Examples

The recipe shows the ingredients needed to make 10 Flapjacks.

How much of each will be needed to make 25

flapjacks?

Method 1: Unitary 80 + 10 = B

Ingredients for 10 Flapjacks

30 = 10 = 3 B × 25 = 200g 3 * 25 - 75g

30 g rolled outs

36 g light brown sugar

60 ÷ 10 = 6 36 - 10 = 3.6 6 × 25 = 150g 3.6 × 25 = 90g

60 g butter

30 ml golden syrup.

80 + 2 = 40

30 + 2 = 15 40 × 5 + 200g 15 = 5 = 75g

Method 2: 5 flapjacks

60 + 2 = 30

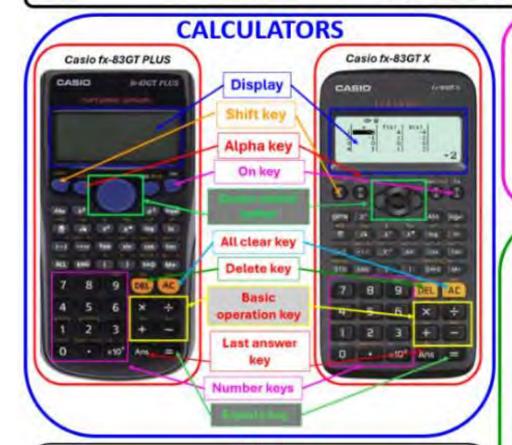
36 + 2 = 18

30 * 5 * 150g 18 = 5 = 90g

- Ann made some cakes. She made vanilla cakes and chocolate cakes in the ratio 2:9. What fraction of the cakes were chocolate?
- Share £25 in the ratio 7:3
- Katy and Becky share some money in the ratio 2:1. Katy receives £10 more than Backy. How much do they each receive?
- 4) Claire and John share some money in the ratio 3:2. Claire receives £18. How much does John receive?

ANSWERS 1) 2 217.50, £7.50 31 £20, £10 41 £12

CALCULATOR SKILLS



- 1) Choose four (4) consecutive numbers (e.g. 1,2,3,4 Keep the numbers in order and create different multiplication equations. Eg. $1 \times 2 \times 3 \times 4 = 24$ $12 \times 3 \times 4 = 144$ etc.
- a) How many different products can you make? b) Try it with a different set of four numbers. c) What do you notice? d) Can you find a set of numbers where all the products are a multiple of 5?

PRIME FACTORISATION

SHIFT - FACT

Use this to find the prime factors of a number. Example - To find the prime factors of 360:

KEY SEQUENCE

360





CALCULATOR SCREEN SHOWS



ENTERING MIXED NUMBERS

EXAMPLE: $1\frac{1}{2} - \frac{3}{4}$

ANSWER: Press





You should see three boxes on the screen

KEY

SEQUENCE



Keys allowed:

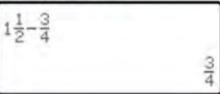
4 5 6 ×

1 2 3

Key found on cursor control button



CALCULATOR SCREEN SHOWS



CANCELLING FRACTIONS

Q. Express the following in its simplest form: 27

KEY SEQUENCE:





PRACTICE QUESTIONS

each box to make these number sentences be true. 1) 6 3 7 = 16

1) $12 - 2 \times 5 = 50$

2) 6 3 7 7 = 27

2)12 - 8 - 5 = 93) $10 \times 8 - 3 \times 5 = 250$

Put brackets in number

sentences to make it true

3) 6 3 7 7 = 9

Key Words

Flat
Sharp
Chord
Solo
Duet
Trio
Ensemble

Middle C

Moderato

Adagio

Allegro

Year 7 Terms 3 & 4 – What Makes A Good Composer?

Musical Elements

Dynamics (volume)

Rhythm (duration of notes)

Tempo (speed)

Context (background info)

Structure (sections)

Melody (organisation of pitches)

Instrumentation (instruments & voices)

Texture (layers)

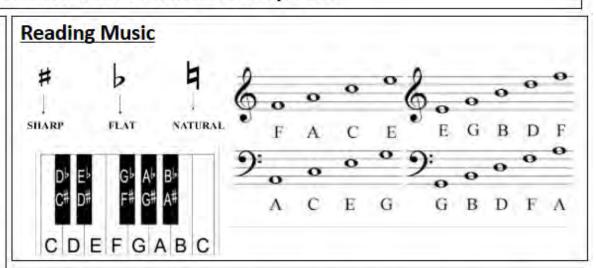
Harmony (chords & key)

Note Durations

- Semibreve (4 beats)
- Minim (2 beats)
- Crotchet (1 beat)
- Quaver (½ beat)
- Semi-Quaver (¼ beat)

Periods of musical History

- Baroque Era 1650-1725
- Classical Era 1725-1810
- Romantic Era 1810-1900
- 20th Century Era 1900 onwards.









Instrument Families

Strings (Violin, Viola, Cello, Double Bass)
Woodwind (Flute, oboe, clarinet, bassoon)

Brass (Trumpet, French Horn, Trombone, Tuba)

Percussion (Timpani, Bass drum, Snare drum, triangle, maracas, bells)
Harpsichord (keyboard instrument from the Baroque era, before piano)

Knowledge Organiser PE Term 3: Movement at joints



Ī	Anatomical Movements		
1	Flexion	Decreasing the angle at the joint.	
2	Extension Extension	Increasing the angle at the joint.	
3	Adduction	Limb moves towards the mid-line of the body.	
4	Abduction	Limb moves away from the mid-line of the body.	

5	Rotation	A circular movement around a fixed joint.
6	Circumduction	When the limb moves in a circle.
7	Dorsi Flexion	Bending the foot up towards the shin.
8	Plantar Flexion	Bending the foot downward towards the ground.

What do the Abrahamic faiths believe? Knowledge Organiser

NEED TO KNOW WORDS	
Omnipotent	Meaning all-powerful
Omnibenevolent	Meaning all-loving
Atonement	To make amends for a wrong
Jesus	Believed by Christians to be God in human flesh
Bible	Meaning 'The books' a collection of scriptures. The Holy Book of Christianity
Heaven	Believed to be the residence of God
Hell	a spiritual realm of evil and suffering
Judgement	The belief that our actions will be judged in the next life
Stewardship	To take care of the world and everything within it
Creed	A statement of beliefs
Holy Trinity	Christians believe God has appeared in three forms which they call persons: The
+	Father, The Son and The Holy Spirit

Christian nature of God.

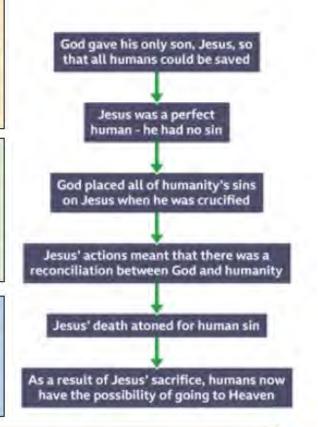
Christians believe that God is one but exists in three different 'persons'. God the Father, the Son and the Holy Spirit - and that these three Persons form a unity. The word Trinity comes from the word 'tri' meaning 'three' and 'unity' meaning 'one'.

Who is Jesus?

Christians believe that Jesus Christ was the Son of God, given as a sacrifice so that humans would have the possibility of eternal life in Heaven. Jesus' crucifixion, resurrection and ascension are key events that shape Christian beliefs.

lesus as the Son of God

Most Christians believe that Jesus, as well as being fully human, is also fully God. Most Christians believe that Jesus is the second person of the Holy Trinity and is the Son of God.



Role of the Bible

The Bible records the teachings of Jesus during his life. These teachings give Christians guidance and instructions on how to live their life. The Sermon on the Mount is an example of a collection of such teachings. Christianity teaches that it is through Jesus' life and death that humans can be saved from sin. The Old Testament contains the Ten Commandments, which are believed to be instructions sent directly from God that tell humans how to live.

(* What do the Abrahamic faiths believe? Knowledge Organiser

NEED TO KNOW WORDS

'the God' - the one and only Allah

God in Islam

Muhammad (pbuh)

A religious, social, and political leader and the founder of Islam.

a monotheistic faith Islam

regarded as revealed through Muhammad as the

Prophet of Allah.

the Islamic sacred book, Qur'an

believed to be the word of

God

"paradise, garden", is the Jannah

final abode of the righteous

the place of punishment for Jahannam

unbelievers and other evildoers in the afterlife

Predestination The belief that Allah knows

> your fate but we still have free will to reach that end

Sunnah the traditions and practices

of the Islamic prophet

Muhammad

Who was the Prophet Muhammad?

The Prophet Muhammad (pbuh) was a merchant born in the city of Mecca. Muhammad was respected as he was a wise and fair businessman. Tradition says Muhammad escaped the busy city during the month of Ramadan and went to the mountains by himself to think. Muslims believe Allah chose Muhammad to be his Prophet because he was a fair and wise man and because he was concerned for the people.

Muhammad as the Seal of the Prophets

Muhammad is the final prophet in Islam, known as the 'Seal of the Prophets'. This means that Muslims regard Muhammad as Allah's final messenger. The Qur'an is formed from the revelations Muhammad received from God through the Angel Jibril. Muslims do not believe that Muhammad was in any way divine, and this is confirmed in the Qur'an, which states: Muhammad is no more than a messenger (Surah 3:144).

Islamic nature of God.

Muslims believe that Allah is One God, indivisible and absolute; nothing comes close to Him as the ultimate source of power and creation. He is totally supreme. There is nothing that can be likened to Him. He is beyond human understanding.

Declaration of Faith

bear witness that there is no god besides Allah

and I bear witness that Muhammad is His servant and messenger.

[Sahih Muslim Book 9, Hadith 50; Sunan Nasai Vol. 1, Book 1, Hadith 148]

Role of the Qur'an

The word Qur'an means 'recitation' and Muslims believe that the Qur'an is the direct word of Allah revealed to Muhammad by the Angel Jibril. Due to this, it is completely different to any other book. It contains teachings and guidance for Muslims on how to live their lives.

Year 7Block 3 Knowledge Organiser Energy

Revision Pgs: 63-68 (66-70 higher)

https://www.bbc.com/bitesize/subjects/zh2xsbk

KPI 8.1: describe examples of energytransfers

KPI 8.3: apply the law of conservation of energy to situations involving energy transfers

Energy Stores

Energy can be stored in objects, or when objects are doing something. It is a quantity measured in joules (J). Examples to know:

- Energy is stored in fuels as chemical potential energy
- Energy is stored in anything elastic when it is stretched, as elastic potential energy
- Energy is stored in any object that has been lifted up, because the object stores gravitational potential energy
- Energy is stored in moving objects as kinetic energy.
- Energy is stored in any object as heat energy. (Obviously, if it is cold, it doesn't store much heat energy!) This is also known as thermal energy.

Energy Transfer

An energy transfer is when energy changes from one store to another. VERYIMPORTANTLY, the **total amount of energy does not change**. Energy cannot be created or destroyed. All that can be changed is how it is stored. This ideas is called **the law of conservation of energy**.

Energy is transferred, so it changes store, in loads of situations. Examples to know:

- When a fuel is burned, the chemical potential energy in the fuel ends up stored as thermal energy in the surroundings;
- When an object falls off a shelf, the gravitational potential energy it stores is transferred (changed) to kinetic energy while it is falling.
- When the object hits the floor, all the gravitational potential energy it
 had to start with ends up stored as thermal energy in the surroundings.
- When a spring that's been stretched is released, the elastic potential energy it stored is transferred to kinetic energy then to thermal energy.

Key Terms	Definitions	
Energy	Energy is a quantity that is stored in many objects and situations. Anything storing energy can do work.	
Work	Work is done when energy changes from one store to another.	
Potential energy	Potential energy is energy stored in objects that don't seem to be doing anything. See the examples.	
Chemical potential energy	Energy stored in fuels (like wood, or the gas werun Bunsen burners on) is called chemical potential energy.	
Elastic potential energy	Elastic objects, like springs or rubber bands, store elastic potential energy when they are stretched.	
Gravitational potential energy	Any object that is not on the ground has gravitational potential energy. This is because they are lifted up in a gravitational field, and could fall down!	
Kinetic energy	Movement energy. Any moving object stores kinetic energy.	
Thermal energy	Also known as heat energy. All objects store some thermal energy, because the particles are moving. The higher the temperature of an object, the more thermal energy it stores.	
Conservation of energy	The law that says energy cannot be created or destroyed. It can only change how it is stored.	

Energy Transfer

This shows how energy changes where it is stored twice while you use a light bulb (lamp):

From chemical potential energy to electrical energy to heat (thermal) energy in the surroundings.







Year 7Block 3 Knowledge Organiser Energy

Revision Pgs: 63-68 (66-70 higher)

https://www.bbc.com/bitesize/subjects/zh2xsbk

Knowledge objective: describe how thermal energy transfers from one place to another

Temperature and Heat

Temperature and heat are linked, but are not the same thing. The heat of a material depends on the **potential energy** of the particles AND the **kinetic energy** of the particles is it made from. What this does mean is that the more heat (thermal energy) a substance stores, the higher its temperature will be. You can increase the heat stored in a substance without increasing its temperature though: just get more of it. This means you have more particles, so there is more thermal energy all together in the substance.

But do not get confused, a cup of tea at 80°C has a higher temperature than a swimming pool at 30°C but because there are many more water particles in the swimming pool so the energy is higher.a

Thermal energy transfer

Thermal energy will always be transferred from hotter objects to cooler objects. This includes hot objects transferring thermal energy to the surroundings (the air, nearby surfaces and so on). You can reduce the amount of thermal energy transferred by **insulating** the hot object.

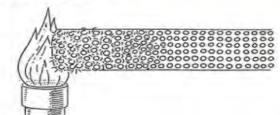
Thermal energy transfer by radiation

All objects give out some infra red radiation, but the hotter they are the more radiation they give out. All objects can also absorb infra red radiation: when they do, they heat up. Radiation can travel through empty space – so this is how the Sun heats up the Earth. The objects don't have to be touching and there are no particles involved.

Key Terms	Definitions	
Temperature	The measure of the average amount of kinetic energy of all the particles in a substance.	
Heat	The energy stored in substances thanks to the energy of their particles. Also called thermal energy.	
Conduction	One way that thermal energy can be transferred. Objects that are touching can transfer thermal energy, from the hotter object to the cooler one.	
Radiation	Another way that thermal energy can be transferred. All objects give out infra red radiation. Hotter objects give out (emit) infra red radiation that is absorbed by cooler objects.	

Thermal energy transfer by conduction

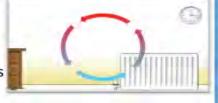
Hot materials can transfer thermal energy to other materials that they are touching. This is called **conduction** of thermal energy. As the diagram



shows, the particles that are heated increase in kinetic energy when they are heated. They bump into neighbouring particles and pass on (transfer) thermal energy. This is why a table feels warm after a hot cup of tea is lifted from it, and the reason why thermal energy can pass through the bottom of a saucepan to cook your dinner.

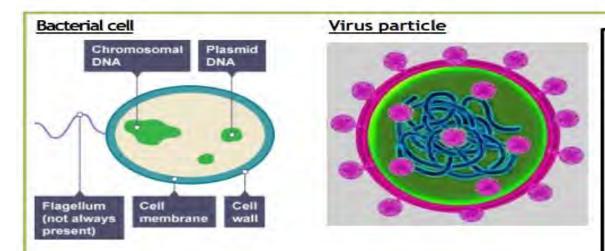
Thermal energy transfer by convection Convection is all about density of a gas or a liquid

Hot air is less dense and therefore rises Cold air is more dense and therefore sinks This creates a convection current



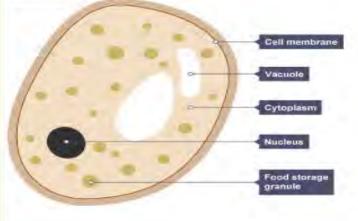
Year 7 Block 3 Biology Knowledge Organiser Microbes

Knowledge objective: describe characteristics of different pathogens, explain the body's defence mechanisms.



- Not all, but many microorganisms are dangerous to humans.
- Microorganisms that cause infectious diseases are called pathogens, or pathogenic microorganisms.
- Bacteria can cause disease if they enter our bodies. They
 reproduce rapidly and can release poisonous chemicals,
 called toxins, that damage our cells. Examples of diseases
 caused by pathogenic bacteria include cholera, tuberculosis
 (TB) and food poisoning.
- Viruses need a host to survive. Viruses that cause disease in humans use human cells as hosts. They cause disease symptoms by reproducing inside cells, and bursting the cell from the inside. This releases them, so they can be passed onto other host cells or other people (e.g. by coughing or sneezing out mucus that contains the viruses).
- Fungi can also cause disease, by growing on living tissue (for example, athlete's foot is caused by a fungus).

Yeast cell	(fungus)



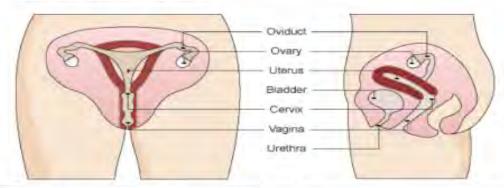
Bacteria	Fungi	Viruses
Unicellular organisms	Can be uni- or multi- cellular	Smaller and more simple than cells
Smaller and more simple than animal and plant cells	More similar to our cells than bacteria, larger	A protein coat surrounding some genetic material
Have not nucleus	Unicellular examples include yeast	Require a host cell to reproduce
Often have a flagellum for moving	Multicellular examples include mushrooms	

Year 7 Block 3 Biology Knowledge Organiser Reproduction

Revision guide Pgs: 14-16 (15-16 higher)

https://www.bbc.com/bitesize/subjects/z4882hv

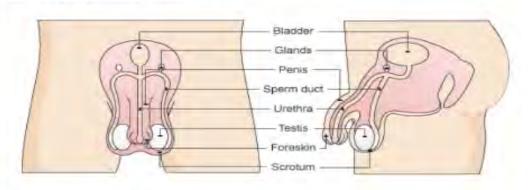
Female reproductive system



Parts of Female Reproductive System	Functions of the part	
Ovary	The organ where eggs (ova) are produced and where they mature ready for release each month	
Oviduct	The small tube leading from each ovary to the uterus – the egg travels along here and fertilisation happens here	
Uterus	The organ where an embryo grows into a foetus and eventually a baby	
Uterus lining	The wall of the uterus	
Cervix	ervix A ring of tissue between the uterus and vagina; this helps keep a foetus in place in tuterus during pregnancy	
Vagina	The organ that is entered by the penis during sexual intercourse; this is also part of the birth canal	

Knowledge objective: label the parts of the male and female reproductive system, and describe their function.

Male reproductivesystem



Parts of Male Reproductive System	Functions of the part	
Testes	The organ where sperm cells are made	
Scrotum	The skin that holds the testes	
Sperm ducts	The tubes that carry sperm from the testes to the urethra	
Glands	These add liquids, including nutrients for the sperm, to the sperm cells from the testes to make semen	
Urethra	The tube that carries either urine or semen out of the body through the penis	
Penis	The organ that enters the vagina during sexual intercourse	
Foreskin	The skin that protects the end of the penis	

Year 7 Block 3 Biology Knowledge Organiser Reproduction

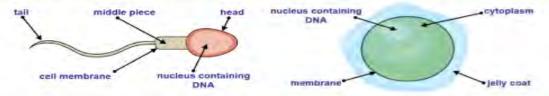
Revision guide Pgs: 14-16 (15-16 higher)

https://www.bbc.com/bitesize/subjects/z4882hv

Knowledge objective: describe the processes of menstruation and fertilisation, and identify the stages of gestation and birth

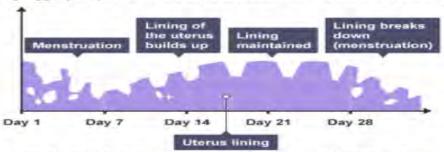
Fertilisation

Fertilisation is when a sperm cell and an ovum fuse. Sperm cells are released into the female reproductive system during sexual intercourse (ejaculation). Only one sperm cell breaks through the cell membrane and enters the ovum, and only the head enters. The nuclei fuse together, putting the mother and father's genetic information together. The fertilised ovum is nowan embryo.



The menstrual cycle

The menstrual cycle prepares the female body for pregnancy by causing eggs (ova) to mature and be released. It lasts for 28 days.



On about day 14, the mature egg cell is released from the ovary. This is called ovulation. If the egg cell does not meet with a sperm cell in the oviduct, the lining of the uterus begins to break down and the cycle repeats.

Key Terms	Definition	
Fertilisation	When the sperm and the egg fuse	
Gestation	The time it takes for the baby to develop in the womb. This is 40 weeks in humans.	
Birth	When the baby leaves the womb.	
Menstrual cycle	A series of events that prepares the female body for pregnancy.	
Menstruation	When the lining of the uterus is removed from the body. Also known as the period.	
Foetus	The name given to the baby developing in the womb.	

Gestation

After fertilisation of an ovum, a woman is pregnant. The embryo grows as cells divide and travels to the uterus. Ciliated cells in the oviduct help it to move to the uterus.

The embryo implants into the uterus wall, where is gets oxygen and nutrients from the mother's blood. As it grows bigger and cells become specialised, we call it a foetus. It grows a placenta and umbilical cord.

At the placenta, the foetus gets oxygen and nutrients from the mother's blood (but their blood does NOTmix). The foetus gets rid of waste like carbon dioxide into the mother's blood too.

Birth

After about 40 weeks of pregnancy (for humans), the foetus is ready to be born.

- The muscles in the wall of the uterus contract (contractions)
- These contractions get stronger and faster this is 'labour'
- After some time of labour, the amnioticsacbreaks, which releases the fluid (the 'waters break')
- Contractions push the baby headfirst through the birth canal through the cervix and out through the vagina

Year 7 Block 3 Biology Knowledge Organiser Microbes

Direct transmission of pathogens

Direct contact e.g. shaking hands or kissing

Sexual contact

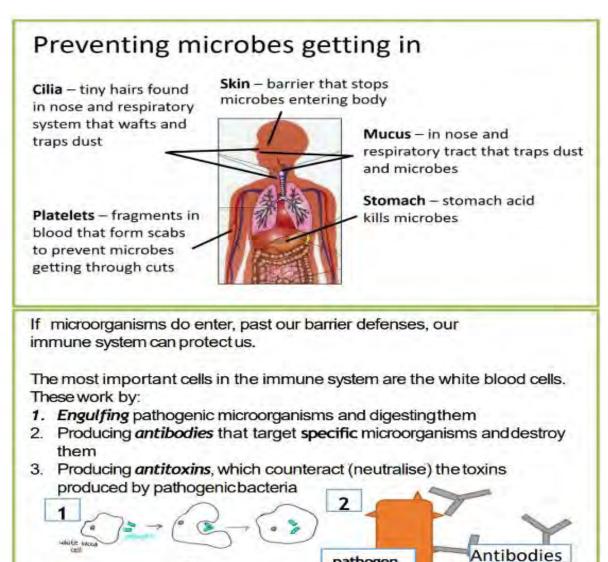
From mother to foetus over the placenta

Indirect transmission of pathogens

A vector carries the pathogen e.g. mosquitos carry the pathogen that causes malaria

Droplet infection: droplets of mucus containing a pathogen are sneezed or coughed out by an infected person, and breathed in by someone else. We can also say the pathogen is airborne.

Waterborne - the pathogen infects water and moves between people when they drink the water



Antitoxins

pathogen

7.3 My life at school Knowledge Organiser



Llevar is a regular verbs which follow the pattern below. The verbs "jugar" is irregular but an important verb.

Pronouns	llevar- to wear
Yo (I)	Llevo – I wear
tú (you)	Llevas – you wear
el (he), ella (she),	Lleva - He/she wears
nosotros (we)	Llevamos – we wear
vosotros (you) (pl. or formal)	Lleváis – you wear(pl. or formal)
Ellos/ellas (they)	Llevan – they wear

Jugar – to play

Yo juego- I play Tu juegas – you play Él/ella juega – he/she plays Nosotros jugamos –we play Vosotros jugáis – you (pl) play Ellos/ellas juegan – they play

<u>Comparisons</u>

más - more Juán es más interesante que Pablo menos - less Pablo es menos interesante que Juan tan...como - as...as Pablo es tan interesante como Juan

<u>Superlative</u>

El/la más — the most Juan es el más inteligente El/la menos — the least María es la menos simpática

Opinion phrases help to make our work more interesting – have a look at the list on your vocabulary list. Try to use a range of different ones in your work e.g. Me gusta (I like)/Pienso que (I think that)/ En mi opinión (in my opinion).

Time phrases help to make our work more detailed by telling us when things happen have a look at the list on your vocabulary list e.g. Normalmente (normally), raremente (rarely), dos veces a la semana (twice a week).

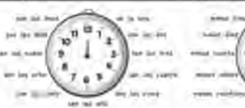
7	Cuál es tu asignatura	What is your favourite
	avorita?	subject?
n:	El inglés	English
1	El español	Spanish
10	El francés	French
7	El teatro	Drama
3 1	El dibujo	Art
1	El deporte	PE
	a informática	Computer Science
_1	La música	Music
1	a técnología	Technology
I	La geografía	Geography
1	La historia	History
ı	La religión	RE
1	La educación personal y social	PSHE
1	as matemáticas	Maths
. 1	Las ciencias	Science
ı	as humanidades	Humanities

¿Que Piensas?	What do you think?
Es	It is
No es	It isn't
Interesante	Interesting
Práctico	Practical
Útil	Useful
Fácil	Easy
Dificil	Difficult
Aburrido	Boring
Emocionante	Exciting
(in)cómodo	(un) comfortable
Caro	Expensive
Barato	Cheap
De moda	Fashionable
Pasado de moda	Unfashionable

7.3 My life at school

	¿Cómo es tu uniforme escolar?	What is your school uniform like?	
	Lievo	I wear.	
56.	Una chaqueta	Blazer	
-	Un jersey	Jumper	
111	Una camisa	Shirt	
Ť	Una camiseta	T-shirt	
Î.	Una corbata	Tie	
M	Una falda	Skirt	
M	Unos calcetines	Socks	
ï	Unos pantalones	Trousers	
40	Unos zapatos	Shoes	
ĭ	Unas medias	Tights	

Verbos en el colegio	Verbs at school	
Estudiar	To study	
Escuchar	To listen	- 1
Charlar	To chat	
Trabajar	To work	
Pasar	To spend	
Jugar	To play	
Descansar	To rest	
Relajar	To relax	



¿Cómo es tu profe?	What is your teacher	
	like?	
Amable	Kind	
Agradable	Pleasant	
Aburrido/a	Boring	
Asqueroso/a	Disgusting	
Cómodo/a	Comfortable	
Contento/a	Нарру	
Dificil	Difficult	
Divertido/a	Fun	
Enfadado/a	Angry	
Estricto /a	Strict	
Feo/a	Ugly	
Fuerte	Strong	
Grande	big	
Guapo/a	Handsome	
Horrible	Awful	
Emocionante	Exciting	
Joven	Young	
Limpio/a	Clean	
Maduro/a	Mature	
Pequeño/a	Small	
Perfecto/a	Perfect	
Rápido/a	Fast	
Rico/a	Rich	
Ruidoso/a	Noisy	
Sabio/a	Wise	
Serio/a	Serious	
Sucio/a	Dirty	
Tímido/a	Shy	
Trabajador/a	Hard working	
Triste	Sad	
Viejo/a	old	

The Six R's









REFUSE

REPAIR



REDUCE





REUSE RECYCLE

Natural Fibres- These come from plants or animals. Examples include Wool, Cotton.

Synthetic Fibres-

These come from chemical substances. Examples include Polyester, Lycra

Year 7 Textiles Knowledge Organiser



Textiles Hierarchy of Key words

Plain seam
analyse
sustainable
embellishment
Woven/ bonded/ knitted
Free machine
embroidery
develop

Tier 3
'Academic' keywords.

Health & Safety rules

1.	Bags must be kept in the cubes
2.	Do not run
3.	Hair must be tied back
4.	Only one person to use a sewing machine at a time
- 6	Chaire must be traked in and get an acceptable

- 5. Chairs must be tucked in and sat on correctly
- 6. Always listen to the teacher and follow instructions
- 7. No food or drink in the textiles room
- 8. Use all equipment respectfully and as you have been shown how to

Pictorial Instructions- how to sew on a button (practice and take photos)



Equipment	Use
Bobbin	A bobbin is a cylinder, to which cotton thread is wrapped around. It is found in the bottom part of a sewing machine, which is called the bobbin holder.
Thread	Cotton thread is used to attach fabric together by using a sewing machine or a hand needle. It is positioned on the thread spool when being used on a sewing machine.
Fabric scissors	Fabric scissors are used to cute fabric ONLY! They should not be used to cut paper.
Pins	Pins are used to position and secure fabric in to place before sewing fabric together.
Measuring Tape	It is a flexible ruler that can be used for body measurements, tailoring and dressmaking. It is flexible to measure fabric and curves of the body.

Valuab most le	Complementary colours contrast environment fastening
Tier 2 Valuable keywords used in most lessons every lesson.	compare embroidery equipment iron
s used in y lesson.	context appliqué effect improve
Basi in alm	colour design shape machine
Tier 1 Basic keywords used in almost every lesson	pattern line tone thread Fabric sew

Use these in your writing and speaking

Use connectives to link each paragraph!	Explain an idea: Although Except Unless However Therefore	Sequencing: Firstly Secondly Next Finally Since
Adding to: Furthermore Also As well as Moreover	Cause and effect: Thus So Therefore Consequently	Whereas Instead of Alternatively Otherwise Then again
To empathise: Above all Ultimately Especially Significantly	To compare: Likewise Equally In the same way Similarly	Give examples: Such as For example In the case of As revealed by For instance

DESCRIBE



I believe that... I think that...

The main idea is...

EXPLAIN



This means that...

Therefore...

This maybe because...

JUSTIFY



This is positive because...

This is negative because...

It is useful/not useful because...

ANALYSE



One strength is...

One weakness is...

One argument is...

EVALUATE



One advantage is...
One disadvantage is...

The best option is...

COMPARE AND CONTRAST



One similarity is...

One difference is...

On the other hand...

Sentence starter phrases

Most people would agree...

Only a fool would think...

We all know...

A sensible idea would be...

The fact is that...

Surely you would agree that...

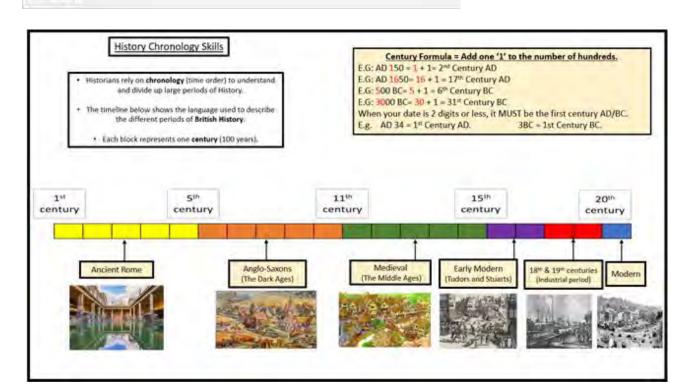
Without a doubt...

I am certain that...

Some people might argue...

However...

Also...



Use these in your writing and speaking in DT



Design and Technology Keywords

Food and Nutrition	Design and Technology	Textiles
Caramelisation	Carbon footprint	Plain seam
Aeration Amino acids Plasticity Shortening	Planned Obsolescence Iterative Design Tolerance	analyse sustainable embellishment
Denaturation Coagulation	Technology Push Anthropometrics	Woven/ bonded/ knitted
Gelatinisation	Consumer Social Footprint	Free machine function
Emulsification Pasteurisation	Ergonomics Forming Processes	embroidery develop
Unsaturated Protein Radiation Saturated Carbohydrates	Aesthetics Target Market Properties Deciduous	Complementary colours contrast environment fastening
Carbohydrates Conduction Deficiency Digest Convection	Coniferous Automation Functionality	compare embroidery equipment
Cross-contamination Micro-organisms	Primary Source Sustainability Continuous Improvement	context appliqué effect improve
Flavour Claw grip Texture Aroma	Cost Customer Materials Annotation	colour design shape machine
Nutrients Energy Appearance Bridge hold	Product Safety Design Environment	pattern line tone theme Fabric
Mix Smell	User Prototype	thread sew







Sentence Starters - DT

I have designed...because

My project was about...

I found... during my research

My design is suitable for...

I have learnt how to...

The most enjoyable part of my project was....

The area I found the most challenging was...

Equipment I have used include...

I would improve my work by...

I am pleased with my finished product because...

Sentence Starters- Food and Nutrition

In order to work hygienically/safely I made sure I

I worked safely when in the kitchen by...

If I could improve any skill, I would improve...because...

Overall, I am happy/unhappy with my progress/dish because....

The texture of my dish is... this is because...

Sentence starters- Textiles

I have designed....

The context of my design is...

My research is useful because...

By researching, I am able to.....

By researching I have found out....

I researched into....

My design is suitable for.....

My design is based upon...

I have planned to..

The order I will work in is...

The most enjoyable part of m project was...

The area I found most challenging was...

I am most pleased with...

I am pleased with my finished project

because...

Equipment I used was...



The periodic table of the elements

1	2			Key			H Hydrogen					3	4	.5	6	7	4 He return 2
7 Li 10 10 3	9 Be beryllum 4	relative atomic mass atomic symbol nerve atomic (proton) number					,				11 B toron 5	12 C anton	14 N ntrogen 7	16 0 0 0 0 0 0 8	19 F Morre 9	20 Ne neon 10	
23 Na modern 11	24 Mg magnestum 12											27 Al ***********************************	28 Si #kon 14	31 P phosphoros 15	32 \$ **** 16	35.5 CI chierem 17	40 Ar ***********************************
39 K poznaturi 19	40 Ca caldum 20	45 Sc standam 21	48 Ti 99mim 22	51 V stredum 23	52 Cr Gramum 24	55 Mn 25	56 Fe	59 Co	59 Ni nicial 28	63.5 Cu 29	65 Zn arc 30	70 Ga odian 31	73 Ge germanium 32	75 As mente 33	79 Se seisram 34	Br browne 35	84 Kr krypton 36
85 Rb 100 37	88 Sr strontum 38	89 Y ymun 39	91 Zr zroonium 40	93 Nb nkbum 41	96 Mo rodybarum 42	[98] Tc technetium 43	101 Ru oznam 44	103 Rh modum 45	106 Pd potadure 46	108 Ag 47	112 Cd connum 48	115 In In Indum 49	119 Sn 50	122 Sb artimory 51	128 Te tellurum 52	127 1 lodne 53	131 Xe 2010n 54
133 Cs 55	137 Ba berum 56	139 La* lastrarum 57	178 Hf Instrum 72	181 Ta sensium 73	184 W targaten 74	186 Re menum 75	190 Os 36	192 Ir maum 77	195 Pt platnum 78	197 Au gat 79	201 Hg 180	204 TI trafficm 81	207 Pb lesset 82	209 Bi 83	[209] Po potentian 84	[210] At 85	[222] Rn mdon 86

The relative atomic masses of copper and chlorine have not been rounded to the nearest whole number.

^{*} The elements with atomic numbers from 58 to 71 are omitted from this part of the periodic table.







These websites will help you with homework, reading around the subject and revision

English

https://www.sparknotes.com/ - Macbeth, A Christmas Carol, An Inspector Calls
https://app.senecalearning.com/ - Macbeth, A Christmas Carol, An Inspector Calls,
Power and Conflict Poetry

<u>https://www.bbc.com/bitesize</u> - *Macbeth, A Christmas Carol, An Inspector Calls*

Maths

https://corbettmaths.com/

https://vle.mathswatch.co.uk/vle/

https://www.mathspad.co.uk/

Science:

https://www.bbc.com/bitesize

https://www.senecalearning.com/

https://www.memrise.com/

Geography

Time for Geography - videos (mainly focused on physical processes)

Bitesize

Cool Geography

History

Seneca Learning

BBC bitesize - use Edexcel resources for GCSE.

Art Websites

https://www.tate.org.uk/

https://www.bbc.co.uk/bitesize/subjects/z6f3cdm

https://www.incredibleart.org/

Computer Science and IT.

www.mrahmedcomputing.co.uk

Drama

https://youtu.be/VeTpob9LBM8

https://youtu.be/wISEU13mRBE

https://www.bbc.co.uk/bitesize/guides/zsf8wmn/revision/1

DT:

http://www.mr-dt.com/

http://technologystudent.com/

https://www.senecalearning.com/

<u>PE</u>

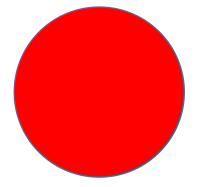
https://www.bbc.com/bitesize/examspecs/ztrcg82

https://sites.google.com/view/ocrgcseperevision/home

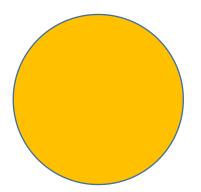
<u>RS</u>

KS3 https://www.bbc.co.uk/bitesize/subjects/zh3rkgt

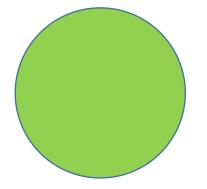




I don't understand the learning in this lesson and would like some help



I am not confident with the learning in this lesson so might need some extra help.



I am confident with the learning in this lesson and can work independently

<u>Timetable</u>

Monday	Tuesday	Wednesday	Thursday	Friday
:				
	Monday	Monday Tuesday	Monday Tuesday Wednesday	Monday Tuesday Wednesday Thursday