

Year 8

Knowledge Organiser

Spring 2022 - 2

Self Quizzing Question Stems

Knowledge

Can you list 3...?
Can you recall...?
How did ___ happen?
How is...?
How would you describe/explain?
What is...?
When did...? (When did it happen?)
Which one?
Who were the main...?
How would you show...?
Why did...?

Application

How would you use...?
What examples can you find...?
How would you solve ___ using what you've learned?
How would you organise ___ to show...?
How would you show your understanding of...?
What approach would you use to...?
What other ways would you plan to...?
What would happen if...?
What faces would you select to show...?

Synthesis

Do you agree with the actions/outcomes?
What is your opinion of...?
How would you prove?...disprove...?
Can you assess the value or importance...?
Would it be better if...?
Why did the characters choose to...?
What would you recommend...?
How would you rate...?
How could you determine...?
What choice would you have made...?
Why was it better that...?

Comprehension

Explain what is happening?
How would you classify...?
Which is the best answer?
Can you tell me in your own words?
What can you say about...?
How would you compare/contrast...?
How is ___ alike? How is it different?
What facts or ideas show...?
What is the main idea of...?

Analysis

What are the parts or features of ...?
How is ___ related to ...?
Why do you think...?
What is the theme...?
What motive is there...?
Can you list the parts...?
What inference can you make...?
What conclusions can you draw...?
Can you identify the different parts of...?
What evidence can you find...?
Can you distinguish between...?

Evaluation

What changes would you make to solve...?
How would you improve...?
What would happen if...?
Can you elaborate on the reason...?
Can you give an alternative...?
Can you invent...?
How could you change or modify the plot?
What way would you design...?
Suppose you could ___ what would you do?
Can you predict the outcome if...?
Can you construct a model of...?



Can I write in paragraphs?

The TIPTOP rule

You move onto a new paragraph when you change time, place, topic or person.

1. I always start an essay with an **introduction** which addresses the question.
2. I finish an essay with a **conclusion** to summarise the main points of my argument and to address the question again.
3. I use **connectives** in each paragraph to link my ideas and to put them in a logical order.

- | | | |
|----------------|------------|-------------|
| ○Furthermore | ○But | Meanwhile |
| ○Whereas | ○Since | Nonetheless |
| ○Nevertheless | ○Yet | However |
| ○Alternatively | ○Therefore | Although |
| ○Consequently | ○Besides | Moreover |

Have I used the correct grammar?

I am aware that I must use language that is appropriate to my reader.

- ❖ No slang *that lesson was bangin'*
- ❖ No informal language *I'm gonna do my homework now*
- ❖ **Other things to consider:**
 - ✓ I am clear about the purpose of this piece of writing
 - ✓ I know who my audience is
 - ✓ I will use a suitable layout and text type



literacy mat

My work

I am proud of my work because...

- I have written clearly so that my reader can understand my writing easily.
- I have checked my **spelling** and corrected any errors.
- I have used full sentences with a subject and a verb.
- I have used correct **punctuation** and **grammar**.
- I have paragraphed my work using **TIPTOP**.
- My writing is suitable for the person I am writing for.

Can I spell familiar words accurately?

Common contractions

We must use an apostrophe to replace any letter(s) we have left out.

11 o'clock	I'd	They're	Who'll
Aren't	I'll	Wasn't	Who's
Can't	I'm	We'd	Why'd
Couldn't	Isn't	We'll	Why'll
Didn't	It'd	We're	Why's
Doesn't	It'll	Weren't	Won't
Don't	It's	What'd	Wouldn't
Hadn't	Mightn't	What'll	You'd
Hasn't	Mustn't	What's	You'll
Haven't	Shan't	When'd	You're
He'd	She'd	When'll	
He'll	She'll	When's	
He's	She's	Where'd	
How'd	Shouldn't	Where'll	
How'll	They'd	Where's	
How's	They'll	Who'd	

Can I use different sentence types?

Simple sentences: contains a subject and a verb and can contain an object

- Sarah likes to read in the library.
- Tom enjoys reading at home.

Compound sentences: joins two simple sentences using the connectives: *for, and, nor, but, or, yet, so.*

- Sarah likes to read in the library but Tom prefers to read at home.

Complex sentences: A complex sentence contains a conjunction such as *because, since, after, although, or when.*

- Because Robert felt tired, he only studied for an hour.
- Although the rain had stopped, the pitch was still water-logged.
- Paul enjoys Music, however, he is more proficient in Art.

Homophones

I have checked that I have not mixed up my homophones.

Affect/effect	Meat/meet
Bare/bear	One/won
Brake/break	Passed/past
Buy/by	Peace/piece
For/four	Practice (n)/practise (v)
Flour/flower	Read/red
Grate/great	Sea/see
Hair/hare	Sight/site
Hole/whole	Son/sun
Hour/our	To/too/two
Knight/night	Wait/weight
Know/no	Weak/week
	Wear/where

What traffic light am I?
Is my punctuation accurate?

L iteracy mat

Basics:

- Every sentence must start with a capital letter.
- Every sentence must finish with some form of punctuation: .?!
- Proper nouns need capital letters. These are **unique** people, places or things *e.g. there are many cities so 'city' doesn't take a capital letter. However there is only one London, therefore it takes a capital letter.*
- When writing titles of works such as books, films or plays:
 - Capitalise the first word
 - Capitalise any main/important words
 - Don't capitalise minor words such as 'and', 'of' or 'the' *e.g. The Sound of Music, The Wizard of Oz, Harry Potter and the Goblet of Fire*
- When writing speech:
 - ✓ Go to a new line when a different person speaks *e.g. "Good morning" said the Headteacher.*
 - "It's the afternoon!" replied the student.*
 - ✓ Each person's speech is marked with speech marks *e.g. "Walk on the left" said Mr Mathews.*

Can I spell accurately?

- Sound out the word
- Think about how it looks
- Think about a similar word
- Is there a memory sentence for this word? (e.g. big elephants cannot always use small exits)
- Find the word in a list -
 - Key words list
 - Frequently used words list
 - Your own word bank
- Look it up in a dictionary/spellchecker
- Ask a friend or teacher
- To learn it: look, cover, write, check
- Once you've solved it, add the correct spelling to your own word bank.

Can I use punctuation?

The Apostrophe

I always aim to use apostrophes correctly.

There are two main reasons why we use apostrophes: for **possession** and to **replace a letter or letters**

Note: Apostrophes are NEVER used to denote plurals

Full stop	.	indicates that a sentence has finished
Comma	,	indicates a slight pause in a sentence, separates clauses in a complex sentence and items in a list
Question mark	?	goes at the end of a question
Exclamation mark	!	goes at the end of a dramatic sentence to show surprise or shock
Apostrophe	'	shows that letter(s) have been left out or indicates possession
Speech marks	" "	indicate direct speech, the exact words spoken or being quoted
Colon	:	introduces a list, a statement or a quote in a sentence
Semicolon	;	separates two sentences that are related and of equal importance
Dash / hyphen	-	separates extra information from the main clause by holding words apart
Brackets	()	can be used like dashes, they separate off extra information from the main clause
Ellipsis	...	to show a passage of time, to hook the reader in and create suspense

Apostrophe for Possession

(To show that something belongs to another)

If a single thing/person owns anything, add an apostrophe + 's'.

- The dog's bone
- The boy's homework
- Jones's bakery
- Yesterday's lesson

However, if it is plural (more than one), an apostrophe comes after the 's'.

- The dogs' bones
- The boys' homework
- Joneses' bakeries (lots of Jones families)
- Many websites' content is educational

There/ their/ they're

Note: special care must be taken over the use of **there**, **their** and **they're** as they sound the same but are used quite differently:

- ❖ **There** shows position *Your seat is over there*
- ❖ **Their** shows that 'they' own something *Their blazers are navy blue*
- ❖ **They're** is short for **they are** as in *They're revising every day*

ITS

Note: **its**, which shows that something owns something (like our, his etc), **does not** take an apostrophe: *the dog ate its bone and we ate our dinner*

Your/ you're

Note: special care must be taken over the use of **your** and **you're** as they sound the same but are used quite differently:

- ❖ **Your** is possessive as in *this is your pen*
- ❖ **You're** is short for **you are** as in *you're coming over to my house*

Week	AO	Key Learning – Cityscape Ceramics (Karen Stamper)	Disciplinary literacy in Art and Design	Definition	Resources
1	1 and 3	Mixed Media concertina Cityscape outcome. Re-introduction to ceramics and planning for ceramic piece using templates. Continue with concertina in lesson time	Cityscape	a view of a city, especially a large urban centre.	 
			Clay	clay has a plasticity when wet and has an ability to harden when dried or fired.	
2 & 3	2	Slab-building - Place guide sticks the thickness of the desired slab on each side of the clay ball. Make sure the guide sticks are positioned so that a rolling pin can ride on both of them. Start from the centre of the ball of clay and roll away from you with enough pressure to begin flattening the clay. Roll only to the edge of the clay. Return to the center and roll towards you using the same pressure. Repeat these steps, gradually increasing the pressure until the rolling pin rides directly on the guide sticks. Turn the slab over several times as you work to avoid having it stick to the board.	Ceramic	Are made from clay which are permanently changed when heated in a kiln at approx. 1000°	
			Slab building	Flat pieces of rolled clay used to create structures	
			Texture	The feel, appearance, or consistency of a surface or substance.	
			maquette	a small model or study in three dimensions for either a sculptural or an architectural project.	
4	2	Apply oxide with a brush and rub off with a clean damp sponge. Staff will then apply a transparent glaze. Continue with concertina.	“Score and slip”	Marks are scored onto the surface of the clay. Slip is watery clay (like cream) used to stick clay together.	
			Greenware	Finished clay pieces that are not yet fired	
5	2, 4	Complete template, concertina and photograph outcome	Bisque	A firing that gives the clay durability while leaving it porous enough to absorb glaze	
			Oxide	Raw or plain oxides are metal elements that are combined with oxygen. They are ground to a powder and one of their uses in pottery is as a colorant.	
6	1-4	DIRT – Dedicated Improvement and Reflection Time.	Kiln	An oven used to bake or “fire” clay.	
			Glaze	Provide hard and protective surfaces to the clay. Can be decorative and or see through	

[A short film - Karen Stamper](#)
[Karen Stamper](#)
karenstampercollage.com

[Ceramics - Ceramics - GCSE Art and Design Revision - BBC Bitesize](#)

Part	Key Learning
1	<ul style="list-style-type: none">• Data privacy, also called information privacy, is the aspect of information technology (IT) that deals with the ability an organization or individual must determine what data in a computer system can be shared with third parties.• The Data Protection Act 1998 was a United Kingdom Act of Parliament designed to protect personal data stored on computers.• A security hacker is someone who explores methods for breaching defenses and exploiting weaknesses in a computer system or network.
2	<ul style="list-style-type: none">• In computing, a denial-of-service attack (DDOS) is a cyber-attack in which the perpetrator seeks to make a machine or network resource unavailable to its intended users by temporarily or indefinitely disrupting services of a host connected to the Internet.• The Computer Misuse Act (CMA) criminalizes those who access data or modify information that's held on a computer system without the consent of the owner or the required permissions.• Malware is any software intentionally designed to cause damage to a computer, server, client, or computer network. A wide variety of malware types exist, including computer viruses, worms, Trojan horses, ransomware, spyware, adware, rogue software, wiper and scareware.

Part	Key Learning	Disciplinary Literacy
1	<p>Introduction to '<i>Frankenstein is the famous story of a young man who thinks he can change the world by making better human beings. Instead he creates a living monster with a mind of its own....</i>'</p> <p>You will be studying the play text in Your English lessons and will be bringing the play to life in your drama lessons.</p> <p>Drama Skills you will cover; Improvising a scene, Characters in freeze frame, planning a horror script, Learning lines from the Play text, creating your own scene and character lines.</p>	Physical Interpretation of Character Vocal Interpretation of Character Artistic Intention Movement techniques Gesture
2	<p>Ensemble performance Using the prologue and mime.</p> <p>Group work and improvisation</p> <p>Gesture – the actions used by an actor to show what the character is feeling or what they are doing.</p> <p>Facial expressions – changes made to the face to show how the Character is feeling.</p> <p>Body Language – the emotion shown by an actors movement or position of their body.</p> <p>Posture – the position that a character is sitting or standing in. It helps to show their emotions.</p>	Ensemble performance Mime Improvisation Gesture Facial expressions Body Language Posture
3	<p>Practical Lessons to examine the relationship between Characters within the scene R.5, R.</p> <p>To understand how language can create a character in a play R.6</p> <p>Physical Interpretation of Character: Facial expressions, Gait (walk), Posture, Body Language, Gesture</p> <p>Vocal Interpretation of Character: Volume/Projection, Pitch, Pace, Pace, Accent</p> <p>Artistic Intention of your ability to physical interpret your character and portray this physically changing your body language, facial expression and voice.</p>	Facial expressions Gait (walk) Posture Body Language Gesture Volume/Projection Pitch Pace Pace Accent Hot seating
4	<p>To develop depth and understanding of characters and the ethical and moral dilemmas at the heart of Frankenstein.</p> <p>To develop an understanding of character through Hot Seating</p> <p>Hot-seating</p> <p>Hot-seating is when you are asked questions in character and you have to answer them in character.</p> <p>We use hot seating in Drama as it helps to understand your character and their background and get you to think about who they are.</p> <p>Open ended questions are better to ask as it draws out more information.</p>	Resources Frankenstein: Plot, Character & Themes BBC Teach - YouTube Mary Shelley's 'Frankenstein': The Genre - YouTube What a script should look like: https://www.theschoolrun.com/play-script How to sketch a simple set design: https://www.youtube.com/watch?v=Uf_Yu3mnAhl
5	<p>Group work choose of scenes to work with Practically;</p> <p>To learn how language can be used for dramatic effect – Add Language to your chosen scene</p> <p>To learn how sentence structure can create drama</p>	
6	<p>Rehearsal of chosen scenes</p> <p>Tips for learning lines</p> <p>Read the lines aloud, Little and often, Record yourself saying the lines then listen back, Walk around a while you are practicing your lines (this will also help you to develop character), Learn the line which is said before yours so you can use it as a prompt, Listen to what the other characters are saying so the lines make more sense</p>	

Part	Key Learning SharePoint	Disciplinary Literacy
1	<p><u>Gothic conventions</u></p> <ul style="list-style-type: none"> • Gloomy/ dark settings (castle, forest, abandoned house etc) • An isolated protagonist (main character is physically or emotionally alone) • Intense emotions (love, hate, fear etc) • Damsel in distress (female character needs rescuing physically or emotionally) • Foreboding/ominous predictions (curses, bad omens) • Supernatural beings (vampire, ghost, werewolf) • Deceptive villain (often handsome and alluring, may pose as victim, has fatal flaws and redeeming qualities) • Duality (things have two sides to them, good and evil, life and death, sanity and madness etc) 	<p><u>Tier 3 vocabulary:</u></p> <ul style="list-style-type: none"> • Alliteration: The repetition of identical consonant sounds, most often the sounds beginning words, in close proximity. Example: pensive poets, nasty nattering name callers • Allusion: A reference to something or quotation that the poet thinks the reader will recognize. • Anaphora: Repetition of the same word or phrase at the beginning of a line. • Assonance: The repetition of identical vowel sounds in different words in close proximity. Example: deep green sea. • Caesura: A short but definite pause used for effect within a line of poetry. Can be created with full stop, comma, dash. • Consonance is the repetition of consonant sounds in words where main vowels differ. Example: shadow meadow; pressed, passed; • Couplet: two successive rhyming lines. Couplets end the pattern of a Shakespearean sonnet. • Enjambment: A line having no end punctuation but running over to the next line. • Extended Metaphor: an extended comparison of two things that uses a number of examples to prove the similarity • Hyperbole (overstatement) and litotes (understatement): Hyperbole is exaggeration for effect; litotes is understatement for effect, often used for irony. • Imagery: Images are references that trigger the mind to fuse together memories of sight (visual), sounds (auditory), tastes (gustatory), smells (olfactory), and sensations of touch (tactile). • Juxtaposition: Placing of two contrasting things or ideas close together for emphasis. Example: The icy wind warmed his heart. • Metaphor: A comparison between two unlike things, this describes one thing as if it were something else. Does not use "like" or "as" for the comparison (see simile). • Meter: The number of feet within a line of traditional verse. Example: iambic pentameter. • Onomatopoeia: A blending of consonant and vowel sounds designed to imitate the activity being described. Example: buzz, slurp. • Oxymoron: Placing of two contrasting things or ideas next to each other for effect. Example: dead smile , joyous pain. • Personification: Giving human characteristics to non-human things. • Repetition: Repeating a word or idea throughout a poem to emphasise it and create a symbol/motif (a idea repeated throughout) • Rhyme: The repetition of identical concluding syllables in different words, most often at the ends of lines. Example: June--moon. • Rhyme scheme: The pattern of rhyme, usually indicated by assigning a letter of the alphabet to each rhyme at the end of a line of poetry. • Semantic field: A group of words connected by topic or theme, that links the main idea of the poem together. • Simile: A direct comparison between two dissimilar things; uses "like" or "as" to state the terms of the comparison. • Sonnet: A closed form consisting of fourteen lines of rhyming iambic pentameter. • Shakespearean or English sonnet: 3 quatrains and a couplet, often with three arguments or images in the quatrains being resolved in the couplet. Rhyme scheme: abab cdcd efef gg • Stanza: A group of poetic lines corresponding to paragraphs in prose; the meters and rhymes are usually repeating or systematic. • Syntax: Word order and sentence structure. • Truncated line: A line stopped missing syllables, halting the rhythm.
2	<p><u>How do you read a poem?</u></p> <ol style="list-style-type: none"> 1. Look at the title, are there any clues as to what the poem could be about? What associations from the words can you make? 2. Read the poem through once and decide the mood/tone conveyed. 3. Read the poem through again and pick out words/phrases – what are their connotations? 4. Read through the poem again and look out for linguistic devices – what are their significance? 5. Read through the poem again and look for any patters in rhyme or rhythm - what could this add to the meaning of the poem? 6. Why do you think they poet wrote the poem? What is the message? 	
3	<p><u>What to look for with the structure of the poem:</u></p> <ul style="list-style-type: none"> • Meter - The number of beats and bars in lines that helps to produce a rhythm in a poem, or the rhythmic measure of a line. How many syllables does each line have? Why? How does changing the meter affect the meaning of the poem or the way it is read? Common types of meter or elements of meter are iambic pentameter, dactyls, trochees, spondees and more. • Rhyme - Where words which sound similar to each other are used closely together to link ideas and sounds. <ul style="list-style-type: none"> ➢ End rhyme - When you rhyme the final words of lines of poetry. ➢ Internal rhyme - The rhyming of two words within the same line of poetry. ➢ Half rhyme - This is where only part of a word rhymes with another word. There are two different types: Assonance and Consonance... Assonance is when you rhyme vowel sounds in different words (like moon and spook). Consonance is when you rhyme consonant sounds in different words (like blank and think) 	
4	<p><u>How to write about a poem:</u></p> <ul style="list-style-type: none"> ❖ WHAT is the poet saying/suggesting? WHAT is the big idea the poet is trying to convey? ❖ HOW do you know this? HOW does the poet use language or structural devices to convey their idea? ❖ WHY has the poet used that device? WHY has the poet tried to convey that idea? <p>Helpful analytical vocabulary: suggests, symbolizes, juxtaposes, alludes to, implies, highlights, establishes a sense of, signifies, conveys, conjures up an image of, give the impression of, has connotations of, personifies, compares, embodies</p>	

Part	Disciplinary/Literacy	Key Learning
1 and 4	<p>Resources: Items that you need to live, food, fuel, water.</p> <p>Fossil fuels: Fuel created from the remains of dead plants and animals such as coal and oil.</p> <p>Renewable energy: Energy from sources that will not run out such as solar and wind power.</p>	<p>Humans need resources to live, many of these are natural resources like fresh water from rivers used for drinking and growing crops. Soil is also important for growing crops. Coal, oil and gas are all used for energy.</p> <p>The problem is that these resources are not evenly spread out and some areas have more than others. People living in north Africa for example have little water which leads to water insecurity. Countries in the Middle East, such as Kuwait have a large reserves of oil. Many LIC countries have few natural resources or cannot extract them making them poor.</p> <p>Energy is an important resource; everyone needs a source of fuel for heating and cooking. As the population grows the demand for energy increases. In HIC's this is in the form of electricity and gas from fossil fuels. In LIC countries this can often be in the form of firewood. These energy resources produce carbon dioxide, a green house gas causing climate change. Also, these sources are running out and alternatives are needed. Renewable energy sources will not run out, produce less waste and so cause less damage to the environment, although residents living close to windfarms do complain that they spoil the view and can be noisy.</p>
2 and 5	<p>Raw materials: Resources that are natural such as metals, crops and trees.</p> <p>Manufactured: Products that are made from raw materials like mobile phones.</p> <p>E –waste: This is the waste created when we throw away electronic products from flat screen TV's to mobile phones.</p>	<p>Our mobile phones, as well as tablets and even electric cars need Coltan. Coltan can store a large amount of electrical charge making it idea for rechargeable batteries. 80% of the global supply of this mineral comes from the Democratic Republic of Congo (DRC). Due to conflict in the area, the trade in coltan is controlled by rebels who use the profits to buy weapons. Many children work in the mines in very poor and dangerous conditions.</p> <p>Mobile phones are manufactured in countries such as China. Many of the factories do not pay their workers well and conditions in factories are very poor, just like sweatshops in the fashion industry. Employees have to work for long hours in poor conditions, there are many stories of people falling asleep whilst at work. Often they will sleep at the factory in small rooms with many bunk beds crammed into the room. They get few breaks during their day and get low pay.</p> <p>We all want the latest tech, this means we often throw away our old phones. Sometimes they are recycled but eventually this e-waste will find it's way to LICs and NEEs such as Nigeria where all the components will be stripped out and valuable metals like gold, silver and copper taken for recycling. However this often creates health risks for the workers. Often the plastic and waste is burnt creating toxic fumes.</p>
3 and 6	<p>Natural resources: Materials or substances that are produced by the environment.</p> <p>Exports: These are goods produced in one country and sold to another.</p> <p>Deforestation: The clearance of large areas of forest.</p>	<p>Russia is the largest country in the world and is probably richer in natural resources than any other country in the world. It has abundant supplies of Oil (6% of the worlds deposits), and one-third of the world's Natural Gas deposits.</p> <p>Russia's raw materials provide significant inputs for an industrial economy. The abundance of oil and natural gas has made Russia virtually self-sufficient in energy and a large-scale exporter of fuels. The UK, for example, imports gas from Russia.</p> <p>Russia possesses rich reserves of metals like iron ore, platinum and gold, and even has diamond mines. The forests of Siberia contain an estimated one-fifth of the world's timber, mainly conifers. This mean that it exports a lot of timber. However this affects the environment as Russia has suffered from deforestation losing the equivalent of 25 million football pitches of forest in 20 years. There is a lot of wealth inequality in Russia with owners of companies linked to raw materials being very wealthy. The Chelsea football club owner Roman Abramovich main source of income is the Sibneft oil company, he is thought to be worth \$14.1 billion (£10 billion). However the average wage in Russian is \$11,260 (£8,000). The average UK wage is £30,378.</p>

Part	Disciplinary/Literacy	Key Learning: Did People power Win the War?
1 and 4	<p>Appeasement – To give in or reduce tension.</p> <p>Treaty of Versailles – The Peace treaty that ended WW I.</p> <p>Phoney - Fake</p>	<p>Appeasement and the outbreak of WW II</p> <p>In the 1930s the prospect of a new war with Germany seemed increasingly likely after Hitler came to power in Germany in 1933. Britain however was reluctant to go to war again after the huge damage caused in WW I. Instead the Prime Ministers of the 1930 Stanley Baldwin and Neville Chamberlain followed a policy called appeasement. This was an attempt to make Germany more peaceful by negotiating and talking through Germany’s issues. As a result of this policy Germany was allowed to break important parts of the Treaty of Versailles.</p> <p>Appeasement was a failure. Hitler increased his territorial demands and was able to link with Austria, rebuild its army and takeover Czechoslovakia largely unopposed by Britain. Finally, following the invasion of Poland in September 1939 Britain reluctantly declared war on Germany. However it was difficult for Britain to assist Poland that was quickly overwhelmed. Instead the British, French and Germans played out a quiet start to the conflict in what became known as the “phoney” war.</p>
2 and 5	<p>Miracle – Highly unlikely without the intervention of God.</p> <p>Heralded – Widely reported.</p> <p>Imminent – At any moment.</p>	<p>Dunkirk and the Battle of Britain</p> <p>The early stages of WW II are remembered as a series of setbacks for Britain as Germany unleashed a new style of warfare known as Blitzkrieg or lightning war in the west. The fall of France in May and June 1940 is widely regarded as one of the worst military defeats in history but Britain was able to avoid an even bigger disaster by rescuing much of the British Expeditionary Force from the French town of Dunkirk in action that widely regarded as a “miracle” at the time. The media were desperate for a good news story and the success of Operation Dynamo was heralded as a great achievement despite the clear military failures.</p> <p>With the Battle of France over the battle of Britain would begin and last much of the summer of 1940. It was fought in the skies above southern England as the German Airforce (the Luftwaffe) attempted to destroy the RAF as a prelude to invasion. Dog fights (desperate battles between air-craft) became a common sight in the skies as the “few” pilots fought to defend Britain from what seemed like imminent invasion. In the end bravery, technological know-how and excellent leadership allowed the RAF to inflict a defeat on Nazi forces for the first time and allowed Britain to stay in the war.</p>
Part 3 and 6	<p>Rationing – A way of dividing food so everyone had a similar amount depending on their need.</p> <p>Firestorm – A deadly inferno, created by concentrated bombing.</p> <p>Evacuated – Removed safely.</p>	<p>Plymouth in WW II and the Home Front</p> <p>The Second World War was also defined by the way civilians became targets in what became known as the home front. The “Blitz” was the regular nightly bombing of British cities such as London, Manchester, Birmingham and Glasgow. For a while Plymouth was the main target for the Luftwaffe and the city still bears the scars as much of the city centre was destroyed. Air raid shelters were built and rationing was introduced throughout Britain but there was little defence from the night time raids that attempted to lay waste to whole cities using a tactic of coventration. So called after the city of Coventry was destroyed using a firestorm created by the dropping of bombs.</p> <p>Many children and vulnerable people were evacuated out of major cities and were found new homes in the safer countryside. This had a dramatic and lasting effect on many of the people who experienced it even if for many it didn’t last long. Many people became determined to rebuild Britain better once the war was over. Plymouth was an important city during the war and was targeted by German attacks regularly including the often forgotten Battle of Cawsand Bay when German fighter bombers targeted shipping in Plymouth Sound. Plymouth was also an important staging ground for the D-day landings and the invasion of Normandy was rehearsed all around the Devon coastline, infamously the disaster Exercise Tiger was covered up as 749 mostly American servicemen lost their lives.</p>

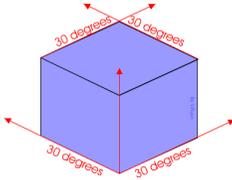
Topic/Skill	Definition/Tips	Example
Solve	To find the answer/value of something Use inverse operations on both sides of the equation (balancing method) until you find the value for the letter.	Solve $2x - 3 = 7$ Add 3 on both sides $2x = 10$ Divide by 2 on both sides $x = 5$
Inverse	Opposite	The inverse of addition is subtraction. The inverse of multiplication is division.
Rearranging Formulae	Use inverse operations on both sides of the formula (balancing method) until you find the expression for the letter.	Make x the subject of $y = \frac{2x-1}{z}$ Multiply both sides by z $yz = 2x - 1$ Add 1 to both sides $yz + 1 = 2x$ Divide by 2 on both sides $\frac{yz + 1}{2} = x$ We now have x as the subject.
Substitution	Replace letters with numbers. Be careful of $5x^2$. You need to square first, then multiply by 5.	$a = 3, b = 2$ and $c = 5$. Find: 1. $2a = 2 \times 3 = 6$ 2. $3a - 2b = 3 \times 3 - 2 \times 2 = 5$ 3. $7b^2 - 5 = 7 \times 2^2 - 5 = 23$
Quadratic	A quadratic expression is of the form $ax^2 + bx + c$ where a, b and c are numbers, $a \neq 0$	Examples of quadratic expressions: x^2 $8x^2 - 3x + 7$ Examples of non-quadratic expressions: $2x^3 - 5x^2$ $9x - 1$
Factorising Quadratics	When a quadratic expression is in the form $x^2 + bx + c$ find the two numbers that add to give b and multiply to give c .	$x^2 + 7x + 10 = (x + 5)(x + 2)$ (because 5 and 2 add to give 7 and multiply to give 10) $x^2 + 2x - 8 = (x + 4)(x - 2)$ (because +4 and -2 add to give +2 and multiply to give -8)

Subject: Music**Term: Spring 2****Year Group: 8**

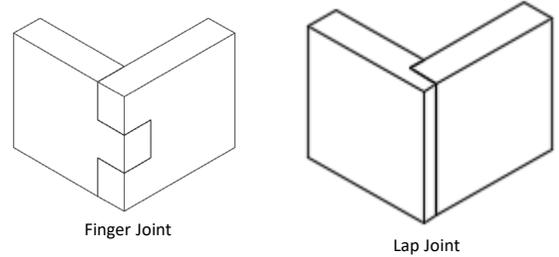
Week beginning	Subject Topic	Key Learning points/big questions	Independent/Home learning	Linked Assessment	Resources
28/2/22	To understand the different types of entertainment there were before Films were invented and to start to learn a piece of film music on the keyboard.	To be aware how Moving Pictures was born and to choose and start to learn a piece of film music on the keyboard	Knowledge organiser	Half Term Assessment	Lesson 1 Power point on Sharepoint
3/3/22	To understand how a musician /orchestra was used in the late 1920's to play along to a film and to recognise, understand and be able find Flat and Sharp notes on the keyboard.	To appreciate how film music is starting to develop To be able to play pieces using flats and sharps and by using suitable fingers you will be able to keep the piece flowing.	Knowledge organiser		Lesson 2 Power point on Sharepoint
7/3/22	To understand how music was used with animation films when they were produced in 1947 and to continue to practise your keyboard piece	To appreciate the impact music had in animation films and how it is used To understand what the term Mickey-Mousing means and how it is used	Knowledge organiser		Lesson 3 Power point on Sharepoint
14/3/22	To understand how music was used in films with special effects and to continue to practise your keyboard piece	You can appreciate the impact music had within films which are new with special effects and to analyse some of the techniques used when writing music for films	Knowledge organiser		Lesson 4 Power point on Sharepoint
21/3/22	To be able to understand the following and how they are used in Music. :- Semitone Ties Chords To prepare for you assessment next lesson	Using Musical elements students will learn how to compare and contrast different pieces of film music. They will also continue to develop their practical and performance skills in preparation for their assessment next lesson	Knowledge organiser		Lesson 5 Power point on Sharepoint
28/3/22	Assessment				

Part	Key Learning	Disciplinary/Literacy
1	How to protect against unwanted pregnancy	<p>The contraceptive pill – a tablet containing two hormones: progesterone and oestrogen that control the female monthly cycle and prevents pregnancy from occurring.</p> <p>Contraceptive Injection – the hormones are delivered underneath the skin in a liquid form and gradually become absorbed into the blood stream over weeks.</p> <p>Contraceptive Implant – is a small flexible plastic rod that's placed under the skin in your upper arm by a doctor or nurse.</p> <p>It releases the hormone progestogen into your bloodstream to prevent pregnancy and lasts for 3 years.</p> <p>Femidom – the female equivalent of the male condom. It is used to create a physical barrier so that sperm cannot fertilise any egg that may have been released.</p> <p>Condom – used to create a physical barrier so that the sperm are unable to fertilise any egg that may have been released.</p> <p>Coil/IUD - An IUD is a small T-shaped plastic and copper device that's put into your womb (uterus) by a doctor or nurse.</p> <p>It releases copper to stop you getting pregnant, and protects against pregnancy for between 5 and 10 years.</p>
2	How to deal with peer pressure in an intimate relationship	<p>Risky behaviour – something you do that may have many negative consequences or results.</p> <p>Coercion – when you feel you have to do something so that you avoid a negative experience</p>
3	What are the choices for a pregnant teenager?	<p>Adoption – when you have the child and then they are looked after full time by someone else. You may, or may not have direct contact with your child.</p> <p>Foetus – a scientific term to describe the unborn offspring of (in this case) a human)</p> <p>Abortion – when you stop the foetus inside from developing full-term and it is removed either a medical or surgical abortion.</p> <p>Medical Abortion – taking medication to end the pregnancy.</p> <p>Surgical Abortion – having a surgical procedure to remove the foetus and end the pregnancy</p>

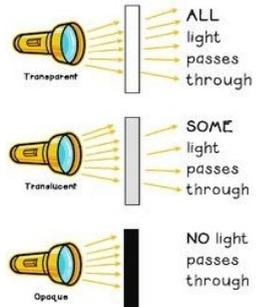
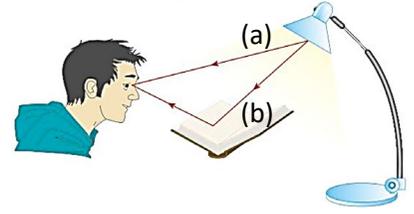
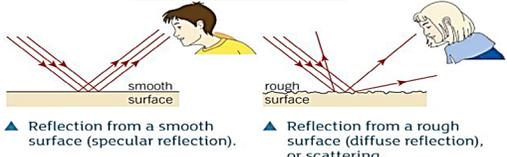
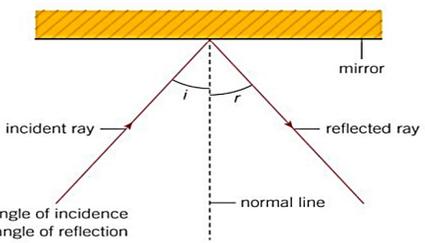
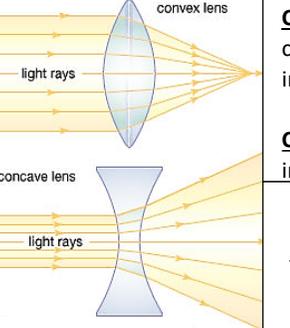
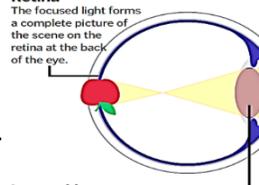
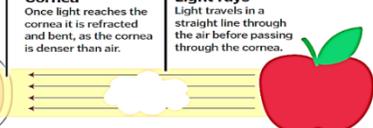
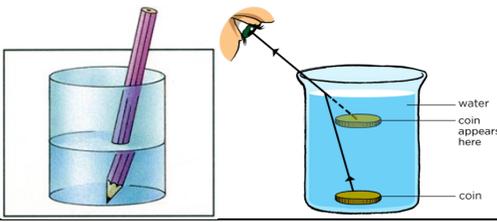
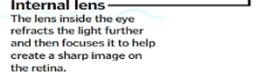
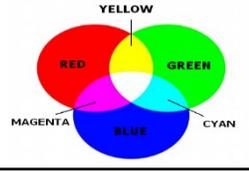
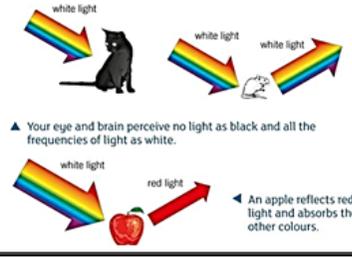
Part	Key Learning	Disciplinary/Literacy
1	<p><u>Sublimation Printing</u> A sublimation printer and associated heat press, allows the user to 'sublimate' shapes, patterns and images, on to the surface of materials, such as polypropylene and textiles. It is a straightforward process, whereby a design is produced using CAD software. The design is printed using a sublimation printer, which is very similar to a regular ink jet printer, with the exception that it has been adapted for sublimation ink cartridges. The printed image, is placed on the surface to be sublimated, between the top and bottom plate of a heat press. Pressure and heat is applied (according to the manufacturers recommended time and temperature), turning the printed image into a gas. The gas penetrates the surface of the material and solidifies, produces a permanent image. Once cool, the printed product can be removed.</p>	Sublimation Natural fibre Synthetic Fibre
2	<p><u>Computer Aided Design (CAD)</u> Computer Aided Design (CAD) is a vital tool for a Product Designer. CAD software allows a designer to quickly produce 3D images/designs. The design can then be rotated, colour rendered and analysed/evaluated. Then it can be improved. Software such as SketchUp, provided by Google, is ideal for a young designer or a professional.</p>	Computer Aided Design
3	<p><u>Dyeing Fabrics</u> There are several different ways of dyeing fabrics - Stock or yarn - dyes the fibres before they become fabrics - Piece - dyes pieces of fabric - Garment - dyes clothing once it is made Dyeing usually takes place in large vats before being heated and dried.</p>	Mordant Resist dye
4	<p><u>Sewing Machines</u> Home sewing machines are designed for one person to sew individual items while using a single stitch type at a time. In a modern sewing machine, the process of stitching has been automated so that the fabric easily glides in and out of the machine without the inconvenience of needles, thimbles and other tools used in hand sewing. Early sewing machines were powered by either constantly turning a handle or with a foot-operated treadle mechanism. Electrically-powered machines were later introduced.</p>	Bobbin Presser foot
5	<p><u>Plain seams</u> Two pieces of fabric are joined together with a running stitch allowing for a seam allowance, which must be measured correctly to the desired width otherwise the garment being sewn will be the wrong size or shape, and needs neatening to prevent fraying (achieved by overlocking or pinking shears)</p>	Raw edge Pinking shears Seam allowance
6	<p><u>Patchwork</u> Patchwork or "pieced work" is a form of needlework that involves sewing together pieces of fabric into a larger design. The larger design is usually based on repeating patterns built up with different fabric shapes (which can be different colours). These shapes are carefully measured and cut, basic geometric shapes making them easy to piece together.</p>	Measuring tape Tailors chalk

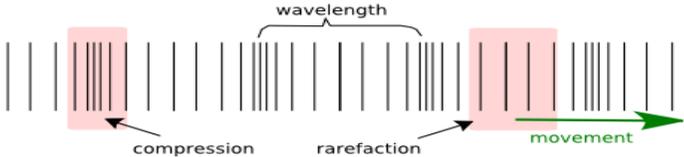
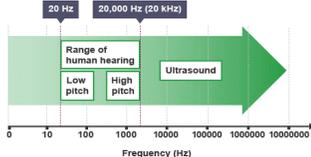
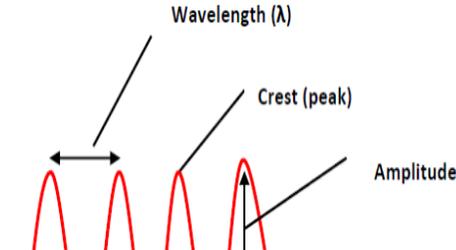
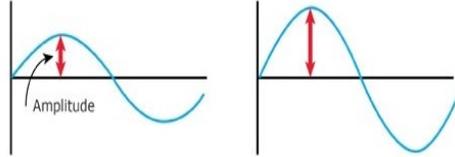
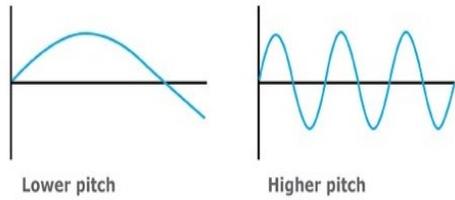
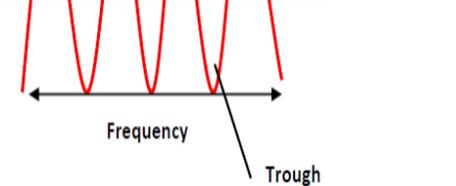
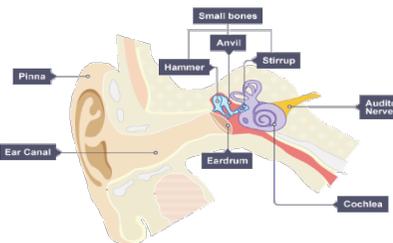
Part	Key Learning	Disciplinary/Literacy
1	<p><u>Isometric Drawing</u></p> <p>Isometric drawing is way of presenting designs/drawings in three dimensions. In order for a design to appear three dimensional, a 30-degree angle is applied to its sides. The cube opposite, has been drawn in isometric projection. In early meetings with a client, the designer can display 3D drawings of this type in order to ascertain if the design is developing the way the client wants.</p>	 <p>Parallel Isometric</p>
2	<p><u>Design Specification</u></p> <p>The specification is probably the easiest section of a design project, if all the research has been carried out. The specification draws on the information collected and presented during the research section. The specification is a number of straightforward statements, made clearly outlining the nature of the project to be designed and manufactured. If the research section has not been completed fully, the specification will also be lacking.</p>	<p>Client Consumer Design brief</p>
3	<p><u>Sewing patterns</u></p> <p>A pattern is a collection of shapes (similar to a template) that are attached to the surface of the material to aid shaping it. For example, a tailor making a garment could use a pattern to mark the required shapes for the garment onto a piece of fabric to then be cut out and assembled.</p>	<p>Grain line Seam allowance Pattern markings</p>
4	<p><u>Thermochromic inks</u></p> <p>Inks and dyes are used on almost every product and packaging. The role inks / colour plays can be crucial to the success or failure of a product. Thermochromic inks can change from colourless to colourful OR colourful to colourless very quickly. Although thermochromic inks were introduced in the 1970s, they are used extensively today. For example, in the food industry, on packaging they can convey the freshness of a product.</p>	<p>Smart materials Stimuli</p>
5	<p><u>Stencilling</u></p> <p>Stencilling produces an image or pattern by applying pigment to a surface under an intermediate object with designed gaps in it which create the pattern or image by only allowing the pigment to reach some parts of the surface.</p>	<p>Bridges Islands</p>
6	<p><u>Testing against the specification</u></p> <p>Designers will have written a design specification, developed from the design brief and based on the results of completed research. This is where a specific list of criteria is written that a designer can follow as a set of rules. During the iterative design process, this specification should be referenced to and designs evaluated against it to ensure the final solution is the best fit.</p>	<p>Criteria Iterative</p>

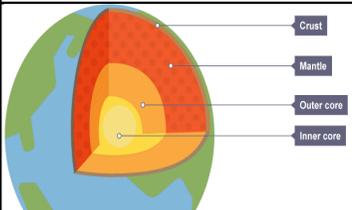
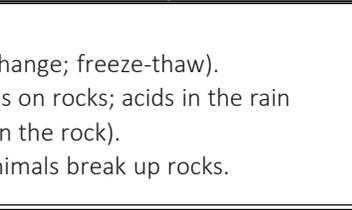
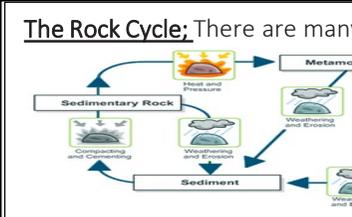
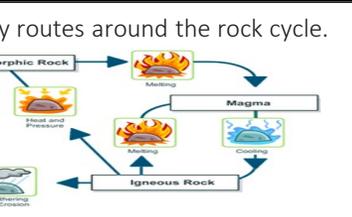
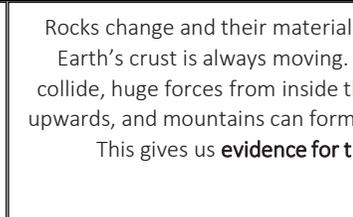
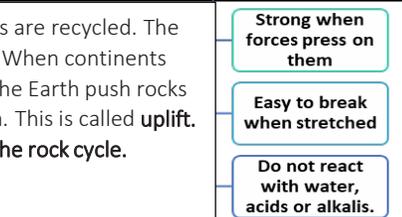
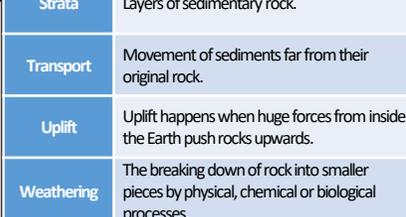
Part	Key Learning	Disciplinary/Literacy	Resources
1	<p>Balanced meal planning - The body needs food for growth and repair of body cells, energy, warmth, protection from illnesses and keeping the body working properly. The Eatwell guide shows how eating different foods can make a healthy and balanced diet. It divides foods into groups and shows how much of each food group is needed for a healthy diet. The main nutrients in food are carbohydrate, protein and fats. These are called macronutrients. Vitamins and minerals are called micronutrients. A diet refers to the foods you eat. To have a healthy diet it must contain a good balance of all the necessary nutrients. If too much of one nutrient is eaten then the diet becomes unbalanced and possibly unhealthy.</p>	<p>Multicultural made up of or include more than one ethnic group or culture.</p> <p>Balanced diet - a diet consisting of a variety of different types of food and providing adequate amounts of the nutrients necessary for good health.</p>	 <p>SCAN ME</p>
2	<p>Stir fry is a traditional Chinese method of cooking that cooks food quickly, keeping vegetables crunchy and conserving nutrients, especially vitamin C. Stir frying involves using a wok on a very high heat. High risk foods such as chicken, beef, prawns and rice can be incorporated into stir fried dishes. In order to keep food safe high risk foods should be prepared on the correct coloured chopping boards – red for raw meat and blue for raw fish. High risk foods should be stored in the fridge at 5C prior to cooking. High risk food should be cooked to 75C or above to ensure bacteria is killed during the cooking process. Once cooked the food should be served immediately or quickly cooled to 5C within 90 minutes and stored in the fridge.</p>	<p>High risk - Foods that are ready to eat, foods that don't need any further cooking, and foods that provide a place for bacteria to live, grow and thrive</p> <p>Wok - a bowl-shaped frying pan used typically in Chinese cooking.</p> <p>Cross contamination - the process by which bacteria or other microorganisms are unintentionally transferred from one substance or object to another, with harmful effect.</p>	 <p>SCAN ME</p>
3	<p>Savory rice – Rice is classified as a cereal grain. When rice is harvested the grains of rice are milled. For brown rice the outer husk is removed and the bran layer remains. For white rice the outer husk is removed and the bran and germ – this process is called polishing. Rice is usually boiled or steamed. It can be fried, but does need to be boiled first. There are many different types of rice including short grain, long grain, arborio and brown rice. Cooked rice is classed as a high risk food because it contains a toxin producing bacteria called bacillus cereus. Rice should be cooled down to 5C within 90 minutes and stored in the fridge. Rice should be reheated to 121C to ensure any toxins are killed.</p>	<p>Bacillus cereus - A toxin producing bacteria.</p> <p>Toxin - A harmful substance produced within living cells or organisms.</p>	
4	<p>Fruit crumble - Some foods are seasonal. This means they are only available at certain times in the year. Choosing seasonal foods has many advantages including they will likely to be locally grown and will support local farmers. The food miles will be low and they tend to be cheaper. The seasons (autumn, summer, spring and winter) allow different foods to be grown, reared and caught throughout the year.</p> <p>Dietary fibre is found in the cell walls of fruits, vegetables and cereals. Fibre is important as it keeps the digestive system healthy by helping food waste travel through the body more easily. If you don't eat enough fibre it can cause constipation which can eventually lead to cancer of the bowel. Fibre can reduce your chances of getting heart disease and type 2 diabetes. Adults should eat 30g of fibre a day.</p>	<p>Fibre - includes the parts of plant foods your body can't digest or absorb. Unlike other food components, such as fats, proteins or carbohydrates – which your body breaks down and absorbs</p> <p>Seasonality - the times of year when the harvest or the flavour of a given type food is at its peak.</p> <p>Stewing – cooking fruit with a very small amount of water that turns to steam.</p>	
5	<p>Thai curry – A Thai curry dish is made from curry paste, coconut milk or water, meat, seafood, vegetables or fruit, and herbs. Meat and seafood are sources of protein. Protein is one of the five nutrients and is an essential part of your diet. It is needed for growth, repair, maintenance and energy. Protein is made up of amino acids. High biological value proteins contain all the essential amino acids. They are mainly from animal sources – meat, fish, milk and eggs. Low biological value proteins are missing one or more essential amino acid. Such as nuts, peas and beans.</p>	<p>Amino acids – the building blocks of protein.</p>	
6	<p>Chilli - is made using minced beef. Minced meat is cut up or ground into small pieces to break down the muscle fibres in the meat to tenderise it. Meat is an excellent source of high biological value protein. Protein is needed for growth and repair of body cells. The fat content varies in different cuts of meat. Meat contains saturated fat which can cause heart disease. Lean mince contains less fat or visible fat can be trimmed from other meat cuts such as bacon. Meat is high in iron.</p>	<p>Minced– Cut up or ground into very small pieces</p> <p>Tenderise - A process to reduce the toughness of meat fibers in a cut of meat. Tenderizing breaks down the meat fibers and softens the meat, making it easier to chew.</p>	

Part	Key Learning	Disciplinary/ Literacy	Resources
1	<p>Timber is the term given to natural and manufactured wood used in products because timber comes from the natural source of trees. It's recyclable, renewable and reusable. There are two categories of natural wood; hardwoods and Softwoods. These names reflect the cell structure of the tree the wood comes from and not the strength or hardness of the wood.</p> <p>Hardwoods come from deciduous trees which can take hundreds of years to mature. For this reason, the timber from these trees is generally more expensive.</p> <p>Softwoods come from coniferous trees. These trees grow quickly, making softwood a highly sustainable readily available and less expensive than hardwoods. Softwoods absorb moisture more easily than hardwoods, so they're more likely to rot, this means they are most suitable for use in products designed to be used indoors. Softwoods aren't available in as many colours as hardwoods, but can easily be stained or painted to make them look like a more expensive hardwoods. Softwoods are commonly used in the construction industry as they are cheap and readily available.</p> <p>Pine is one of the most common softwoods. It has a straight grain and is a light yellow colour. Pine is easy to work and is used in interior construction, such as joinery and window frames, and for making low-cost furniture. If its surface is treated, pine can be used outside too, however it can be knotty and prone to splitting.</p>	<p>Hardwoods Softwoods Manufactured Timber Recyclable Renewable Reusable Sustainable Pine Plywood Veneer Laminated</p>	
2	<p>Manufactured boards use natural timber waste that is processed to form sheets. Manufactured boards are used to produce cheaper and lower quality products than those made with natural timber. Waste wood or low grade or recycled timber is used to give the product a natural pale brown finish. A veneer can be added to cover the rough finish of the manufactured timber and give the appearance of a better quality wood. A veneer is a thin slice of high quality wood that is bonded to the surface of a cheaper material to enhance its appearance.</p> <p>Plywood is a laminated board. Layers of wood veneers are glued at 90 degree angles to each other so the grain direction alternates. This makes plywood strong even when thin and means that it's stable in all directions. A layer of higher quality outer material is applied on the top and bottom to improve the appearance. Because of its stiffness and stability, plywood is often used for furniture, shelving and flooring.</p> <p>Manufactured boards have many advantages over natural timber. They can be produced using lower grade timber, making them more environmentally friendly. Manufactured boards have consistent properties throughout the board, making them more stable, less likely to warp or deform, and suited to high volume production. They are also manufactured in larger sheets than natural timber.</p>		
3-6	<p>Be able to use and name the following tools:</p>  <p>Be able to identify, describe and make a finger joint and a lap joint</p>  <p>Joints in wood provide a variety of levels of strength and structure. Joints are often glued with PVA to make them secure and permanent.</p> 	<p>Dimension Working Drawing Try Square Rule Tenon Saw Bench Hook Bench Vice Chisel Coping Saw Lap Joint Finger Joint</p> <p>Evaluate Criteria Specification</p>	  

Part	Key Learning	Disciplinary/Literacy	Resources
1	<p>Ferrous metals contain iron and may rust. Iron and steel can corrode – this is known as rust Rust is a compound called iron oxide and is formed when iron and oxygen react in the presence of moisture or water. Most ferrous metals are magnetic.</p> <p>Non-ferrous metals such as Aluminium don't contain iron. They are often more expensive than ferrous metals owing to their desirable properties which include: Lightweight, good conductivity, ductile and malleable and resistant to corrosion.</p> <p>Designers and engineers need to communicate sizes of components on an orthographic drawing. To avoid any confusion when reading these, it is important that sizes of parts are clearly labelled.</p> <p>To make sure of this, a standard, common method is used to show the sizes of an object. These standard 'rules' must be followed when recording sizes. In the UK, we follow the rules outlined in British Standards 'BS 8888'.</p>	Ferrous Non Ferrous Corrosion Hardness Toughness Malleability Oxide Orthographic Dimension	
2	<p>Marking out consists of transferring the dimensions from an orthographic drawing to a workpiece in preparation for the next step, machining or manufacture. The use of marking out is to provide guide lines to work to, to control the size and shape of a component, and to position and size any features, such as holes, required in the component.</p> <p>An orthographic drawing represents a three-dimensional object using several two-dimensional views of the object. It is also known as an orthographic projection. Orthographic projections are working drawings in either a first or third angle (we use third angle in the UK) projection and show each side of a design without perspective. They are essentially a 2D drawing of a 3D object. They are used to show an object from every angle to help manufacturers plan and carry out production.</p>	Scriber Centre punch Steel rule Radius Diameter Circumference	
3	<p>Steel can be joined by using a technique called brazing. A high temperature is needed for this and a brazing hearth is normally used. Brazing gives a permanent joint that is ideal for most metalworking projects in schools and colleges. In industry this technique is used on products such as bicycle frames where there is a need for a certain amount of flexibility in the joint.</p> <p>In simply terms, two steel parts are joined by heating them to a 'red' heat/colour and followed by applying a brazing rod to the joint. The brazing rod melts at a lower temperature than the steel and so it melts to form a molten liquid. This liquid brazing rod then flows along the joint between the two steel parts, aided by capillary action, filling any gaps and creating a strong and permanent joint.</p>	Capillary action Annealing Ferrous Brazing Flux Oxidation	
4	<p>Plastic dip coating provides a cost effective finish to metals. This type of coating offers surface protection combined with a decorative appeal, due to the vast range of colours that are available. Further to this, in many cases a powder coating improves the functionality of the product. Bike frames and car wheels are often powder coated as they spend the majority of their time outdoors and in conditions that will cause them to corrode/rust..</p>	Dip coating Corrosion Polymer Plastic	
5	<p>Structures All forms of civil engineering, mechanics or architecture requires the designers and engineers to have an understanding of materials, forces and structures. The complex world of making structures relies on understanding the mathematics of forces. Tensile strength, compression, torsion, load are all things that need to be considered when creating the built environment around us. As well as forces, understanding what properties a material possesses is vital to the functionality of a structure.</p>	Tension Tensile strength Compression Torsion Load	
6	<p>Engineers research An engineer uses science, technology and maths to solve problems. We can see engineering everywhere in the world around us, improving the ways we work, travel, communicate, stay healthy, and entertain.</p> <p>Today, the field of engineering offers more career choices than any other discipline! In the past, there were four major engineering branches: mechanical, chemical, civil and electrical. Today, the number of available engineering careers/degrees is vast.</p>	Mechanical Chemical Civil Electrical	

Part	Key Learning			Disciplinary/Literacy												
1	Light travels in straight lines. Seeing luminous objects (a); light travels directly to the eyes. Seeing non-luminous objects (b); light reflects off the book and into your eye.	<p>TRANSPARENT, TRANSLUCENT & OPAQUE</p>  <p>Transparent: ALL light passes through</p> <p>Translucent: SOME light passes through</p> <p>Opaque: NO light passes through</p>	Light can travel through gas (air), some liquids (water) and some solids (glass). It can also travel through a vacuum. Light travels as a wave at a speed of ~ 300 million m/s.	<table border="1"> <thead> <tr> <th>KEYWORD</th> <th>DEFINITION</th> </tr> </thead> <tbody> <tr> <td>Concave</td> <td>A lens that is thinner in the middle and that spreads out light rays (diverging).</td> </tr> <tr> <td>Convex</td> <td>A lens that is thicker in the middle and that bends light rays towards each other (converging).</td> </tr> </tbody> </table>	KEYWORD	DEFINITION	Concave	A lens that is thinner in the middle and that spreads out light rays (diverging).	Convex	A lens that is thicker in the middle and that bends light rays towards each other (converging).						
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3	<p>THE LAW OF REFLECTION; light is reflected at equal angles.</p>  <p>$i = \text{angle of incidence}$ $r = \text{angle of reflection}$</p>		<p>CONVEX LENS: found in cameras, telescopes, glasses and contact lenses. They produce real images (camera) and virtual images (magnifying glass).</p> <p>CONCAVE LENS: found in door spyholes. Only produce virtual images.</p>	<table border="1"> <tbody> <tr> <td>Filter</td> <td>A piece of material that allows some radiation (colours) through but absorbs the rest.</td> </tr> <tr> <td>Image</td> <td>The point from which rays if light entering the eye appear to have originated.</td> </tr> <tr> <td>Incident ray</td> <td>Incoming ray from a source of light.</td> </tr> </tbody> </table>	Filter	A piece of material that allows some radiation (colours) through but absorbs the rest.	Image	The point from which rays if light entering the eye appear to have originated.	Incident ray	Incoming ray from a source of light.						
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4			<p>HOW DO WE SEE?</p> <p>The image is inverted as light travels in straight lines. But the brain flips the image so you see the image the right way up.</p>	<table border="1"> <tbody> <tr> <td>Inverted</td> <td>Upside down</td> </tr> <tr> <td>Luminous</td> <td>Object that gives out light.</td> </tr> <tr> <td>Non-luminous</td> <td>Objects that produce no light.</td> </tr> </tbody> </table>	Inverted	Upside down	Luminous	Object that gives out light.	Non-luminous	Objects that produce no light.						
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5	Your eye detects three primary colours: red, blue and green. Mixing two primary colours makes a secondary colour.	<p>Retina The focused light forms a complete picture of the scene on the retina at the back of the eye.</p> 	<p>Cornea Once light reaches the cornea it is refracted and bent, as the cornea is denser than air.</p> <p>Light rays Light travels in a straight line through the air before passing through the cornea.</p> 	<table border="1"> <tbody> <tr> <td>Photoreceptor</td> <td>A specialised cell (in the eye) that is sensitive to light.</td> </tr> <tr> <td>Prism</td> <td>A triangular shaped piece of glass used to produce a spectrum of light.</td> </tr> </tbody> </table>	Photoreceptor	A specialised cell (in the eye) that is sensitive to light.	Prism	A triangular shaped piece of glass used to produce a spectrum of light.								
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6	<p>happens when light travels from one medium (material) to another. Refraction explains why the pencil appears to be bent in water or why the coin looks closer to the surface that it actually is.</p> 	<p>Internal lens The lens inside the eye refracts the light further and then focuses it to help create a sharp image on the retina.</p>  <p>Primary and Secondary Colours</p> 	<p>LIGHT AND COLOUR Objects look different colours as they absorb and reflect different light into the eyes.</p>  <p>▲ Your eye and brain perceive no light as black and all the frequencies of light as white.</p> <p>▲ An apple reflects red light and absorbs the other colours.</p>	<table border="1"> <tbody> <tr> <td>Reflected ray</td> <td>The outgoing ray that has been reflected from a surface.</td> </tr> <tr> <td>Reflection</td> <td>The change in the direction of light when it hits a boundary and bounces back.</td> </tr> <tr> <td>Refraction</td> <td>Change in the direction of light going from one material into another.</td> </tr> <tr> <td>Spectrum</td> <td>A band of colours produced when light is spread out by a prism.</td> </tr> <tr> <td>Specular reflection</td> <td>Reflection from a smooth surface.</td> </tr> <tr> <td>Virtual (image)</td> <td>An image that cannot be focused onto a screen, unlike a real image which can be put on a screen.</td> </tr> </tbody> </table>	Reflected ray	The outgoing ray that has been reflected from a surface.	Reflection	The change in the direction of light when it hits a boundary and bounces back.	Refraction	Change in the direction of light going from one material into another.	Spectrum	A band of colours produced when light is spread out by a prism.	Specular reflection	Reflection from a smooth surface.	Virtual (image)	An image that cannot be focused onto a screen, unlike a real image which can be put on a screen.
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6	<ol style="list-style-type: none"> The vibrations in the air enter the pinna, travel down the ear canal and make the eardrum vibrate. These vibrations are passed through the three small bones (called ossicles) to a spiral structure called the cochlea. Signals are passed from the cochlea to the brain through the auditory nerve. Our brain interprets these signals as sound. 	 <table border="1"> <thead> <tr> <th colspan="2" data-bbox="1069 1136 1508 1172">Comparing light and sound waves</th> </tr> <tr> <th data-bbox="1069 1172 1508 1208">Similarities</th> <th data-bbox="1069 1208 1508 1243">Differences</th> </tr> </thead> <tbody> <tr> <td data-bbox="1069 1243 1508 1322">Both transfer energy</td> <td data-bbox="1069 1243 1508 1322">Travel as different type of wave</td> </tr> <tr> <td data-bbox="1069 1322 1508 1410">Both have a range of frequencies and wavelengths</td> <td data-bbox="1069 1322 1508 1410">Sound waves need particles to carry energy but light waves do not</td> </tr> <tr> <td data-bbox="1069 1410 1508 1428">Travel in waves</td> <td data-bbox="1069 1410 1508 1428">Different speeds – light travels up to a million times faster (300 000 000 m/s) than sound</td> </tr> </tbody> </table>	Comparing light and sound waves		Similarities	Differences	Both transfer energy	Travel as different type of wave	Both have a range of frequencies and wavelengths	Sound waves need particles to carry energy but light waves do not	Travel in waves	Different speeds – light travels up to a million times faster (300 000 000 m/s) than sound																						
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2	<p>How do we know about the layers of the Earth? Scientists study shockwaves from earthquakes. 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Properties	<ul style="list-style-type: none"> • Made up of crystals • Not porous • Hard and durable 	<ul style="list-style-type: none"> • Made up of separate grains • Porous • Most are soft 	<ul style="list-style-type: none"> • Made up of crystals • Not porous 																																											
4	<p>Properties of ceramics</p> <ul style="list-style-type: none"> • Hard • Brittle 	<p>Properties of ceramics</p> <ul style="list-style-type: none"> • Solid at room temperature • Very high melting points • Electrical insulators 	<p>Properties of ceramics</p> <ul style="list-style-type: none"> • Strong when forces press on them • Easy to break when stretched • Do not react with water, acids or alkalis. 	<p>Properties of ceramics</p> <ul style="list-style-type: none"> • Solid at room temperature • Very high melting points • Electrical insulators 	<p>Properties of ceramics</p> <ul style="list-style-type: none"> • Solid at room temperature • Very high melting points • Electrical insulators 																																									
5	<p>Weathering:</p> <ol style="list-style-type: none"> Physical (temperature change; freeze-thaw). Chemical (when rain falls on rocks; acids in the rain reacts with substances in the rock). Biological (plants and animals break up rocks). 		<p>Weathering:</p> <p>Rocks change and their materials are recycled. The Earth's crust is always moving. When continents collide, huge forces from inside the Earth push rocks upwards, and mountains can form. This is called uplift. This gives us evidence for the rock cycle.</p>	<p>Weathering:</p> <p>Rocks change and their materials are recycled. The Earth's crust is always moving. When continents collide, huge forces from inside the Earth push rocks upwards, and mountains can form. This is called uplift. This gives us evidence for the rock cycle.</p>	<p>Weathering:</p> <p>Rocks change and their materials are recycled. The Earth's crust is always moving. When continents collide, huge forces from inside the Earth push rocks upwards, and mountains can form. This is called uplift. This gives us evidence for the rock cycle.</p>																																									
6	<p>The Rock Cycle: There are many routes around the rock cycle.</p> 	<p>The Rock Cycle: There are many routes around the rock cycle.</p> 	<p>The Rock Cycle: There are many routes around the rock cycle.</p> 	<p>The Rock Cycle: There are many routes around the rock cycle.</p> 	<p>The Rock Cycle: There are many routes around the rock cycle.</p> 																																									

My Diary :

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	28/02/2022	01/03/2022	02/03/2022	03/03/2022	04/03/2022	05/03/2022	06/03/2022
2	07/03/2022	08/03/2022	09/03/2022	10/03/2022	11/03/2022	12/03/2022	13/03/2022
3	14/03/2022	15/03/2022	16/03/2022	17/03/2022	18/03/2022	19/03/2022	20/03/2022
4	21/03/2022	22/03/2022	23/03/2022	24/03/2022	25/03/2022	26/03/2022	27/03/2022
5	28/03/2022	29/03/2022	30/03/2022	31/03/2022	01/04/2022	02/04/2022	03/04/2022
6	04/04/2022	05/04/2022	06/04/2022	07/04/2022	08/04/2022		

My Homework

Week

28/02/2022

07/03/2022

14/03/2022

21/03/2022

28/03/2022

04/04/2022

My Reading Record - To be completed at the end of each DEAR session

Date	Book Title	Pages	Main Events
28/02/2022			
01/03/2022			
02/03/2022			
03/03/2022			
04/03/2022			
07/03/2022			
08/03/2022			
09/03/2022			
10/03/2022			
11/03/2022			
14/03/2022			
15/03/2022			
16/03/2022			

My Reading Record - To be completed at the end of each DEAR session

Date	Book Title	Pages	Main Events
17/03/2022			
18/03/2022			
21/03/2022			
22/03/2022			
23/03/2022			
24/03/2022			
25/03/2022			
28/03/2022			
29/03/2022			
30/03/2022			
31/03/2022			
01/04/2022			
04/04/2022			
05/04/2022			
06/04/2022			

My Reading Record - To be completed at the end of each DEAR session

Date	Book Title	Pages	Main Events
07/04/2022			
08/04/2022			

