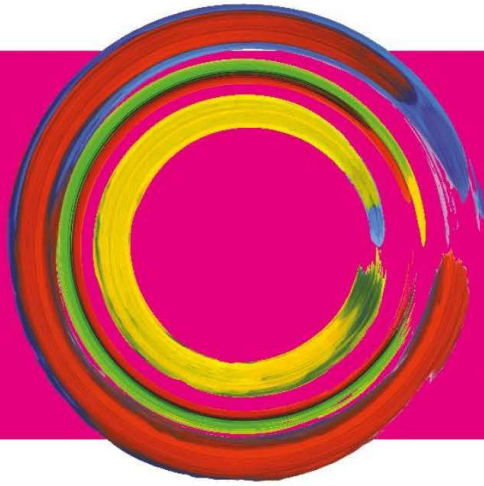




THE BOURNE ACADEMY KNOWLEDGE ORGANISER

everyone is a learner, everyone is a teacher



Year 7
Autumn Term 2026-27

Ambitious
Self Confident
Physically Literate
Independent
Resilient
Emotionally Literate

Name:
House:

The Bourne Academy

Knowledge Organiser – Year 7 Autumn Term

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Excellence at The Bourne Academy: Using your Knowledge Organisers'

'Don't just practise until you get it right practise until you can't get it wrong.' - Daniel Willingham

Routines for Excellence

- You will get out your TBA Knowledge Organiser Booklet at the start of every lesson along with your Knowledge Organiser practise exercise book
- Your teacher will set you sections of the Knowledge Organiser to learn, off by heart, in every lesson.
- Your teacher will set you quizzes to test your knowledge every lesson.
- Your teacher will regularly set you questions that require you to APPLY your knowledge
- Your TBA Knowledge Organisers are saved on Show My Homework and on TBA website

How to revise with your Knowledge Organisers'

Self-quizzing

Look/read, cover, write and then **green pen check** your answers to show you where your 'knowledge gaps' are. Repeat until you have mastered the knowledge...until you can't get the knowledge wrong



Look/Read



Cover



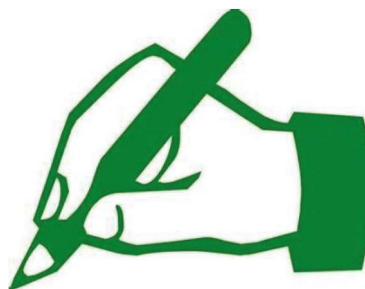
Write



Check

Low-stakes testing

Your teachers will always have a '**Do now**' activity on the board at the start of lesson. Do as much as you can from memory. Use your Knowledge Organiser to **green-pen check** what you have accurately remembered. **Then green pen correct**. Repeat, each time **checking** and **correcting** until you have mastered your knowledge gaps.



HOW DO WE REVISE WITH OUR KNOWLEDGE ORGANISERS?

RECORD IT

Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want.



TEACH IT

Teach someone your key facts and then get them to test you, or even test them.



FLASH CARDS

Write the keyword/date on one side and the explanation on the other. Ask someone to quiz you on either side.



BACK 2 FRONT

Write down the answers and then write what the questions the teacher may ask to get those answers.



HIDE AND SEEK

Read through your Knowledge Organiser, put it down and try to write out as much as you can remember. Then keep adding to it until it is full.



SKETCH IT

Draw pictures to represent the facts or dates. It could be a simple drawing or something that reminds you of the answer,



POST ITS

Using a pack of post it notes, write out as many of the keywords or dates as you can remember in 1 minute.



PRACTICE

Some will remember knowledge by simply writing the facts, over and over again.

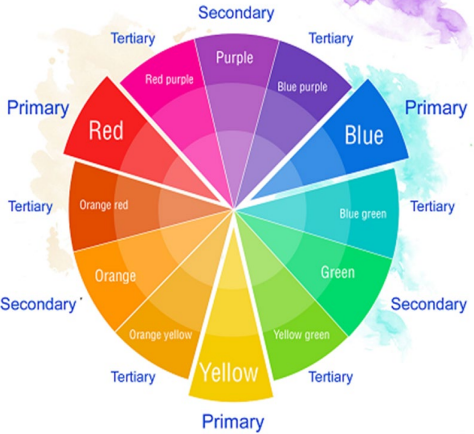


READ ALOUD

Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts - it really helps you remember.





A. The Colour Wheel	B. Colour Theory	C. Mixing Colours
 The Colour Wheel is the tool to helping you understand colour theory. Artists use the wheel to see which colours are harmonious and which are complementary.	Colour Theory is a set of rules for colour mixing and colour combinations to make an artwork eye catching. Primary Colours are a set of three colours that cannot be created by mixing other colours. They are red, blue, and yellow. Secondary Colours are colours created by mixing two primary colours. Tertiary Colours are colours resulted by mixing a primary colour with a secondary colour.	When mixing secondary colours, equal amounts of primary colours should be added together. When mixing tertiary colours, equal amounts of primary and secondary colours should be added together. When all three primary colours are mixed, a neutral colour is made: a brown-grey colour.
D. Key Words		
The Colour Wheel: a simple Colour Wheel is made up of 12 colours, including 3 primary colours, 3 secondary colours and tertiary colours. Hue: another term for colour. The pure colour. Tint: the pure colour, mixed with white. Tone: the pure colour, mixed with grey. Shade: the pure colour, mixed with black.		Complementary colours are opposites on the 'Colour Wheel'; each primary colour is opposite a Secondary colour. These colours bring out the intensity in each other. They have high contrast and high impact together. Harmonious colours sit beside each other on the 'Colour Wheel' and work well together.



E. Definitions

a) Line – a mark made using a drawing tool or brush. They can be thick or thin, horizontal, vertical, curved, etc.

b) Shape – an area that is enclosed by line(s); two-dimensional or flat.

c) Form – an area that is three-dimensional and includes height, width and depth (as in a cube, a sphere, a pyramid, or cylinder).

d) Texture – how something feels. There are two types of texture: actual (tactile) texture and visual texture (that can be created).

e) Pattern – a design in which lines, shapes, forms or colours are repeated. The part that is repeated is called a motif.

f) Tone – refers to the light and dark values used to make an object look realistic. Shading is used to create shadows and create 'form'.

g) Surface – the surface affects how a colour is reflected or scattered, depending upon its texture.

h) Composition – refers to the arrangement or placement of things within an artwork.

i) Media – the material and tools used by an artist to create an artwork, e.g. "pen and ink" where the pen is the tool and the ink is the material.

j) Expression – the ability to show emotion or create a mood or feeling within a piece of art.

k) Contrast – refers to the arrangement of opposite elements and effects, e.g. light and dark colours, smooth and rough textures.

l) Proportion – refers to the dimensions of a composition and relationships between height, width and depth. Proportion also describes how different parts of a piece of art relate to each other.

m) Perspective – refers to the representation of three-dimensional objects or spaces in two-dimensional artworks. Artists use perspective techniques to create an impression of depth.

n) Mark making – describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat.

o) Vibrant – refers to the intensity of colour, they are bright and strong.



1. Why do Art in school? Consider why we study Art. Write a paragraph explaining why it is important and what the benefits are. Consider the impact on your knowledge, skills, and understanding in a broad context. Does all art have to be aesthetically pleasing?	3. Colour Theory: What do you know about Complementary colours, and where are they found on the colour wheel? Can you list different examples of where you have seen complementary colours used in advertising? Think about logos and packaging. Make a series of developmental sketches before creating your own logo for a sports or clothing brand using only complementary colours.	5. Artists and their practice: What is Sgraffito? Can you find a contemporary artist that uses this practice to create work that often contains 'heart' shapes? Look at the work of Vincent Van Gogh. What was Van Gogh trying to achieve with his use of line in his pen and ink drawings, and with his brush strokes and application of paint in his paintings? Look at the work of Georges Seurat. What was Seurat's unique style of applying paint called? What was he trying to achieve through this style of painting? What is Fauvism? Who were the Impressionists and what were they trying to 'capture' in their work? Who painted the 'Rouen Cathedral' series and why; can you name another famous series of paintings by this artist?
2. Visual Elements in Art, Craft and Design: What is a tonal drawing or painting? Can you list 5 different methods of shading? Can you name 3 famous contemporary artists that use graphite pencils? What is the name of the method used to obtain surface texture through rubbing? Collect rubbings of 5 different objects with different surface textures in your home. Write a definition for 'pattern'. What is Perspective in art? What is the difference between one-point and two-point perspective? Make a drawing of your room using one-point perspective.	4. Colours and their meanings: We see colours in everything around us, every moment of the day, but do you ever stop to think about the impact each of those colours is having on you? Whether it's the calming effect of blue skies and fields of green, or the saliva-inducing red and yellow of your local fast-food chain, each colour has a meaning and taps into emotions. There's a whole science (and art) in the meanings of colours. It's essential to be aware of these colour meanings to help you choose your colours wisely and tap into the magical power of colour symbolism. Create lists of meanings and emotions for each of the following colours: Black, Yellow, Red, Grey, White, Blue, Purple, Pink, Green, Brown, Orange. e.g. Yellow = joy, White = purity.	



1. Online Safety

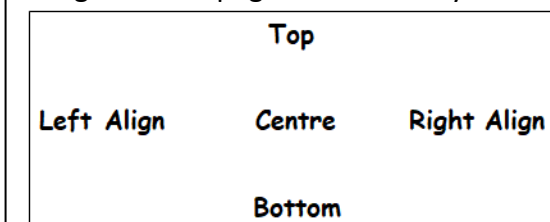
- a) **Personal Information** is something you should not give out (such as where you live).
- b) **Cyberbullying** is taken very seriously and can be evidenced, even if posts/messages deleted.
- c) **Password** should be long and hard to guess.
- d) **Malware** can damage computer or files on it.
- e) **Trustworthiness** is how much you can trust information is correct and not biased.
- f) **Digital Footprint** is the information people can find about you on the web.
- g) **Encryption** scrambles data so it is unreadable.
- h) **Phishing** is when someone tricks you into giving personal information through fake messages or sites.
- i) **Reporting** is telling a trusted adult or service about something upsetting or unsafe online.
- j) **Privacy Settings** help control who can see your information, posts, and activity online.
- k) **Two-Factor Authentication** adds extra security by needing a second step to log in.

2. Digital Literacy

- a) **Microsoft Word** 
Word Processing software
e.g. for creating letters, essays.
- b) **Microsoft PowerPoint** 
Presentation software
e.g. teacher lesson slides, business meetings.
- c) **Microsoft Excel** 
A spreadsheet software used to calculate data
e.g. budgets, tracking grades.
- d) **Microsoft Outlook** 
Used for emailing and organising schedule on calendar. Email etiquette means those messages should be polite and professional.
- e) **Web Browser** 
Software used to access the internet
e.g. Microsoft Edge, Google Chrome.
- f) **Website**  YouTube
Set of web pages under a single domain name
e.g. <https://www.youtube.com>.

3. Microsoft PowerPoint

- a) **Theme** is a particular colour scheme, design or style consistent throughout all pages.
- b) **Transitions** change how the presentation goes from one slide to the next slide.
- c) **Animations** reveal or move text and images within a slide.
- d) **User** is the person using the program.
- e) **Automatic** means performing without user input, e.g. the images automatically appear.
- f) **Manual** means it controlled by the user, e.g. mouse click to transition to the next slide.
- g) **User Interface** is how the user controls the program (such as an interactive menu).
- h) **Hyperlinks** can be added to help the user navigate between pages or another website.
- i) **Alignment** is the position of the text or images on the page and how they are lined up.





4. Responsible Use of IT

- a) Acceptable use policy** is a set of rules for using school technology safely and responsibly.
- b) Copyright** means you must not copy or use others' work without permission or credit.
- c) Digital footprint** is the record of what you do online, including posts, searches, and clicks.
- d) Email etiquette** means using polite, clear, and respectful language when writing and replying to emails.

5. Hardware and Software

- a) Hardware** is the physical parts of a computer you can touch, like a keyboard or monitor.
- b) Software** is the programs and apps that tell the computer what to do.
- c) Hardcopy** is a printed version of digital work, like on paper from a printer.
- d) Softcopy** is a digital version of a file that you view on a screen, not printed.
- e) Peripherals** are external devices connected to a computer, like a keyboard or printer.

6. Input Devices

- a) Input device** is used to enter data into a computer, like a keyboard or mouse.
- b) Output device** shows or gives results from a computer, like a monitor or printer.
- c) Keyboard** lets you type letters, numbers, and commands into the computer.
- d) Mouse** moves a pointer and selects things on the screen.
- e) Microphone** records sound as input for the computer to process.
- f) Scanner** copies physical images or documents into the computer as digital files.

7. Output Devices

- a) Output device** shows or gives results from a computer, like a monitor or printer.
- b) Monitor** displays images, videos, and text from the computer.
- c) Printer** produces a paper copy of digital documents or pictures.
- d) Speakers** output sound such as music, speech, or alerts from the computer.

8. Storage Devices

- a) Storage device** saves data or files for use now or later.
- b) Hard drive** is a storage device inside computers for storing large amounts of data.
- c) SSD (solid state drive)** stores data like a hard drive but is faster and has no moving parts.
- d) USB flash drive** is a small, portable device used to store and transfer files.
- e) SD card** is a tiny storage card used in cameras, phones, and tablets.
- f) Cloud storage** saves your files online so you can access them from any device.
- g) Optical disk** is a CD, DVD, or Blu-ray used to store music, videos, or data.
- h) External hard drive** connects to a computer for extra or backup storage.
- i) ROM** stores permanent instructions the computer needs to start up.
- j) RAM** is temporary memory the computer uses while it is on and working.



1. Online Safety

a) Online Predators

Not everyone you encounter online will be who they say they are. Write down three pieces of advice to give someone to reduce the chances of them interacting with someone who is pretending to be someone else.

b) Social Media

List at least three tips you could suggest to a year 7 student just starting to use social media.

c) Identity Theft

What do scammers do in order to 'steal' someone's identity? Write down three ways a scammer could try and steal someone's identity.

d) Malware

For each of the following types of malware, write down a description of what it is, and one way to avoid it:

- i) Virus
- ii) Trojan
- iii) Ransomware
- iv) Spyware

2. Digital Literacy

a) Microsoft Word Challenge

Start a new document in Microsoft Word.

- i) Add a title named 'Microsoft Word Challenge'. Format the title so it is centre aligned, bold, underlined, and font size is 16.
- ii) Insert a header and add a date in the header which automatically puts in the right date.
- iii) Insert a footer adding automatic page numbering, which is centre aligned.
- iv) Pick one of the four topics in the left column (1. Online Safety) and type up your answer. Font should be size 12 and 'justify' aligned.

b) Microsoft PowerPoint Challenge:

Start a new presentation in Microsoft PowerPoint. Your challenge is to:

- i) Add a title named 'Microsoft PowerPoint Challenge' (font size 40, choose any colour)
- ii) Add three blank slides. In the 'view' tab, use the 'slide master' option to apply any theme across all slides.
- iii) Insert hyperlinks so all the pages are linked together. Choosing an online safety topic create a presentation with your response.

3. History of Computing

a) Pioneers:

Below are four pioneers of computing. For each pioneer, answer the four questions listed below.

- Charles Babbage
- Alan Turing
- Ada Lovelace
- Tim Berner-Lee

- i) When were they born?
- ii) When did they die, or are they still alive?
- iii) What are they famous for?
- iv) What did they achieve or what was their influence on computing?

b) Computing Timeline:

Open: Student Resources → ! IT → Scholars Challenges → 'History of Computing Timeline'

The presentation contains some key events in the history of computing. They are deliberately scrambled up. Research online to find out what happened and what year it took place to create your timeline. Add your own ideas for key events from the history of computing.



Introduction to Dance

1. The Six Basic Dance Actions

a. Gesture	b. Turn	c. Jump	d. Travel	e. Balance	f. Fall
					

2. Warm up and Cool down

a. Warm up	A warmup is done at the start of every dance lesson to prepare both the body and mind for exercise and prevent injuries. The warm up usually consist of pulse raisers, mobilisation and stretches.
b. Cool down	A cool down is done at the end of a dance lesson to prevent injury and allow the heart rate to slow down to pre-exercise rate. The cool down usually consists of walking and stretches.

3. Keywords

a. Counts	A measure of beats in the music which typically total to 8.
b. Stimulus	Inspiration for an idea or dance.
c. Focus	Use of eyes to enhance a performance.
d. Choreography	The art of creating movement.
e. Movement Memory	The automatic recall of learned movement material, without conscious thought.



The Nutcracker

4. Key Information

Choreographer	Matthew Bourne
Year of release	1992
Style of dance	Contemporary
Story	Nutcracker! follows Clara's bittersweet journey from a darkly comic Christmas Eve at Dr. Dross' Orphanage, through a shimmering, ice-skating winter wonderland to the scrumptious candy kingdom of Sweetieland, influenced by the lavish Hollywood musicals of the 1930's.

5. Keywords

a) Dynamics	The quality or speed in which movement is performed.
b) Actions	What a dancer does.
c) Freeze Frame	A frozen or still position/picture.
d) Transition	Links between dance phrases or sections.

6. The Frozen Lake

We're suddenly transported to a crystalised kingdom of snow and ice, all blue skies and fluffy white clouds and winter chill. The music is lighter, brighter, more positive and upbeat and the stage is soon filled with pure-white costumes, including woolly hats and scarves. The only hint of pink comes from Princess Sugar in her candy-floss coloured dress and sparkling tiara.



7. Dynamics

Dynamics are used to reflect the idea and theme of choreography and the flow and speed of the music. They also make the dance more exciting when a variety of dynamics are used.

Examples of dynamics are:

- Fast
- Sharp
- Slow
- Smooth
- Fluid

In the Frozen Lake scene the dynamics are fluid, smooth and slow.



1. Choreographic Devices

Device	Definition	Effect on Performance
a. Canon	Dancers perform the same movement one after another	Creates visual interest and shows clear structure
b. Unison	Dancers perform the same movement at the same time	Shows group cohesion and power
c. Repetition	Movement or phrase is repeated	Highlights key moments, strengthens theme
d. Retrograde	Performing a movement or phrase in reverse	Can show contrast, reversal, or storytelling
e. Accumulation	Gradually adding movements one at a time	Builds complexity and structure

2. Performance Skills

Skill	Why it Matters
a. Facial Expression	Communicates emotion and character
b. Timing and Musicality	Matches movement with the music accurately
c. Focus and Eye Line	Directs audience attention and enhances presence
d. Spatial Awareness	Ensures safe and effective movement in group dances
e. Projection	Increases confidence and impact of performance

3. Dance Appreciation

- a. Mood & Atmosphere: The icy setting and soft lighting create a magical but cold tone, showing Clara's emotional isolation.
- b. Movement Style: Fluid, sweeping movements with smooth transitions reflect a dreamlike and gentle quality.
- c. Use of Space: Wide movements and levels create an illusion of skating or gliding across a frozen surface.
- d. Dynamics: Soft, sustained, and flowing – contrasting with earlier sharper sections of the performance.



Knowledge Organiser: Year 7 Autumn Term – Drama

1. Drama Technique	Definition
a) Still image	A frozen picture that communicates meaning to an audience. Performers use facial expressions, body language and gestures to show characters, relationships, and emotions.
b) Role play	Actors take on the role of a character within a scene/performance.
c) Thought tracking	The thoughts and feelings of a character being told directly to the audience during a still image.
d) Direct address	This technique is when a character speaks directly to the audience about their thoughts and feelings. The other characters are unaware of what this character is saying.
e) Physical theatre	This is a where the cast make the scenery, set, and props out of their bodies to help tell the story on stage.
f) Narration	A character speaks directly to the audience to describe or narrate parts of his/her own story, or about the events happening onstage.
g) Improvisation	Improvisation is work that has not been scripted, the dialogue, characters and actions are made up as you go along.
h) Mime	Communicating action, character or emotion without words.
i) Formation	Where the actors are standing on stage
j) Direct address	Characters speaking to the audience about how they feel or what is happening in the scenario
k) Alter ego	Direct address to the audience explaining different sides of a story or idea.



Knowledge Organiser: Year 7 Autumn Term – Drama

2. Drama Skills	Definition	
a) Facial expressions	A facial expression conveys an emotion that tells us about the character and the way they react to the situation.	
b) Body language	Body language is communication coming from movement or position, particularly facial expressions, gestures and posture. Body language is also known as non-verbal communication.	
c) Vocal skills	There are a range of vocal skills for performers to utilise when performing. Performers vocal skills convey an emotion that tells us more about the character and how they are feeling/react to certain situations.	
3. Vocal skills		
a) Pitch	b) Pace	c) Tone
High, Low, Squeaky, Husky, Deep, Croaky, Gravelly	Fast, Slow, Halting, Abrupt, Stuttering, Hesitant, Controlled	Gentle, Sarcastic, Forceful, Cold, Angry, Persuasive, Proud, Warm, Cheeky, Anxious, Enthusiastic, Timid, Cautious, Nervous, Joking, Sensitive
4. Facial Expressions		
a) Eyebrow	b) Eyes	c) Emotion
Raised, Lowered, Furrowed, Inquisitive, Frown.	Wide, Glaring, Squinting, Teary, Hopeful, Suspicious, Tightly	Happy, Cheerful, Upset, Hurt, Rejected, Smug, Defiant, Distressed, Thoughtful, Sly, Seductive, Distraught, Spiteful, Aggressive, Friendly.
5. Body Language		
a) Gesture	b) Gait	c) Mannerisms
Clenched Fists, Pointing, Open handed, Closed, Strong, Measured, Hesitant, Energetic.	Rapid, Sluggish, Gentle, Smooth, Direct, Rushed, Purposeful, Hasty.	Twitchy, Decisive, Indecisive, Formal, Jerky, Secretive, Wild, Controlled, Dismissive, Aggressive, Nervous, Informal.



1. Higher Order Thinking – How to devise from a stimulus.

a) Stimulus.

Pick a song, photograph or a poem that will be the starting point for a devised performance.

b) Research.

Research the themes which link to your chosen stimulus as well as the Social, Historical, Cultural and Ethical aspects.

What style will your piece be?

1. Naturalistic
2. Non-Naturalistic

c) Creative Intentions.

What are your creative intentions for the piece? What do you want your audience to feel? Is there a specific message?

d) Target Audience.

Who is your performance aimed at? What age group? Mixed gender? School children? Adults?

2. Problem Solving – The Design Aspect

What is your estimated budget to put on your performance? You will need to research average budgets in the industry to assist you with the planning of the next phase.

When in the planning/design phase of your performance, both lighting and sound are important aspects.

- a) **Lighting Design** – Design 5-10 different lighting states that will enhance your performance. Do you have a spotlight? Any colours? Red, Blue, Green, or White?
- b) **Sound Design** – Would any specific sounds or music help to support your creative intentions?
- c) **Costume** – Design the costumes for your main characters. What is your rationale behind the costumes? Why did you choose certain items? How much would the costumes cost? Add this to your budget.

What is your estimated total cost? Are you within budget?

3. Describe and Explain

What? How? When? Why?
Example?

Social

Historical

Cultural

Ethical

4. Analyse and Develop

Giving feedback to your actors as a director is a vital part of creating a performance.

How do you decide what is a good idea?

How do you select material that is of a high standard and how do you reject certain material?



1. Language terminology	Definition	Example
a) Simile	Comparison of one thing to another, usually using 'like' or 'as'.	Fear settled round him <u>like</u> a dark, stifling blanket.
b) Personification	Giving an object human characteristics.	The flowers were begging for water.
c) Repetition	Repeating a key word or phrase that has already been said.	He was <u>fearful</u> . Extremely <u>fearful</u> .
2. Structural Terminology	Definition	
a) Narrator	The speaker telling the events of a story.	
b) Foreshadowing	A warning or hint at a future event.	
c) Foreboding	A feeling that something bad will happen.	
d) Pathetic Fallacy	When nature, including weather, is described in a way that reflects the mood or emotion of the story or character.	
e) Suspense	A feeling of excited or anxious uncertainty about what may happen next.	
f) Cliffhanger	A section of a story that ends with unanswered questions.	
3. Plot Twists	Definition	
a) Unreliable Narrator Twist	The narrator's reliability is questioned as readers discover differences between their perspective and the actual events of the story.	
b) Foreshadowed Twist	Foreshadowed twists are hinted at throughout the story, preparing readers for an unexpected revelation later. Clues and symbols foreshadow the twist without entirely giving away the surprise.	
c) Character Identity Twist	This twist involves the revelation that a character is not who they initially appear to be. This could include secrets about their past, hidden motivations or even a completely different identity.	
d) Supernatural Twist	This twist involves the sudden and unexpected intervention of a divine or supernatural force to resolve a seemingly unsolvable problem or conflict.	
e) Unexpected Ending Twist	This twist involves the end of the story differing from the expected outcome. Often revealing a hidden truth or changing the reader's perception of the story.	



4. Punctuation	Symbol	Definition
a) Full stop	.	Used to mark the end of a sentence.
b) Exclamation mark	!	Used at the end of a sentence to show shock or surprise.
c) Question mark	?	Used at the end of a sentence to show that something is being asked.
d) Apostrophe	'	Used to show contraction (eg. doesn't) or possession (Jennifer's pen).
e) Comma	,	Used to separate items in a list or between a main and subordinate clause.

5. Sentence Types	Definition	Example
a) Simple sentence	One main clause which contains a verb and makes complete sense.	English is my favourite subject.
b) Compound sentence	Two or more main clauses joined by a coordinating conjunction .	Everyone was busy so I went for a walk on my own.
c) Complex sentence	One main clause and at least one subordinate clause .	As it was Saturday , I decided to start a new book.

6. Word Classes	Definition	Example
a) Concrete Noun	A word which names a person, place or thing.	Sam, teacher, park, cake.
b) Verb	A doing or being word. Used to show an action.	They jumped . He is tired.
c) Adjective	A word that describes the noun.	A blue car. A big city. The happy couple.
d) Adverb	A word that describes the verb.	He is running quickly . They always wear a tie.
e) Preposition	Used to show location, time or direction.	Before school, she placed the bike inside the shed.

7. Clauses and Conjunctions	Definition
a) Main Clause	A clause that makes sense on its own- it must have a subject and a verb.
b) Subordinate Clause	A clause that does not make sense on its own. It adds information to a main clause.
c) Coordinating Conjunction	Used to join two main clauses. For example: and, or, so, yet.
d) Subordinating Conjunction	Used to connect main and subordinate clauses. For example: although, when, if, despite.



1. Extended vocabulary	Definition
a) Exposition	The beginning of a narrative where the readers learn the characters and setting.
b) Anti-climax	A disappointing end after drama and tension has been built up.
c) Resolution	The point of the plot where any conflict is resolved and it becomes more stable.
d) Denouement	The final stage of a narrative where the loose ends are tied up and a resolution is achieved.
e) Entrapment	Noun – the state of being caught or being trapped.
f) Lamentable	Adjective– something being very bad or being full of sorrow or grief.
g) Mournfully	Adjective – expressing sorrow.
h) Sinister	Adjective – the impression that something harmful or evil is happening.
i) Vengeful	Adjective – seeking to harm someone in return for what they have done.
j) Wretched	Adjective – in an unhappy or miserable state.
k) Ephemeral	Adjective – lasting for a short time.

2. Authors	Additional reading
a) Ray Badbury	A Sound of Thunder (1952)
b) Kate Chopin	The Story of an Hour (1894)
c) Charlotte Perkins-Gilman	The Yellow Wallpaper (1892)
d) Robert Louis Stevenson	The Body Snatcher (1884)
e) Charles Dickens	The Signalman (1866)
f) Chimamanda Ngozi Adichie	Cell One (2007)
g) Penelope Lively	The Darkness Out There (1984)

3. Extended writing	Tasks
a) Research	Research Freytag’s Pyramid and think about how one of the short stories above meets the criteria for it.
b) Research	Research Aristotle and Greek tragedies – what was important about how they were structured?
c) Writing	Plan and write your own short story titled ‘The Splintered Academy’.



(1) Key Word	Definition
a) Kneading	Working dough to stretch the gluten and trap air for structure.
b) Fermentation	When yeast feeds on sugar to produce carbon dioxide and make dough rise.
c) Gluten	A protein in wheat flour that gives bread elasticity and structure.
d) Proving	Allowing dough to rest and rise before baking so it becomes light and airy.
e) Contamination	When harmful bacteria are spread from one food or surface to another.
f) Cross-Contamination	Transfer of bacteria between raw and cooked foods.
g) Bacteria	Microscopic organisms that can cause food poisoning if not controlled.
h) Macronutrients	The organs responsible for gas exchange in mammals, birds, reptiles, and amphibians.
i) Micronutrients	Vitamins and minerals needed in small amounts for health.
j) Personal Hygiene	Actions that keep the body clean to prevent the spread of bacteria in food.

(3) Health and Safety

Food safety is vital in all catering environments.

- Wash hands, tie back hair, and wear a clean apron.
- Store high-risk foods (meat, dairy, fish) below **5°C**.
- Cook foods to **75°C** to destroy bacteria.
- Keep raw and cooked foods separate to avoid cross contamination.
- Follow colour-coded chopping boards:

Red: Raw meat / **Blue:** Raw fish / **Green:** Salad & fruit / **Yellow:** Cooked meat / **Brown:** Vegetables / **White:** Bakery & dairy

(4)

FOOD BACTERIA

Bacteria need **warmth, moisture, food** and **time** to grow.

The **DANGER ZONE** is between **5°C** and **63°C**

COMMON BACTERIA

Salmonella
Found in raw poultry and eggs.

E. coli
Found in undercooked meat.

Listeria
Found in chilled foods past use-by dates.

PREVENTION

Cook food properly, store correctly, and keep kitchens clean.

COOK PROPERLY
Cook food until it's piping hot throughout.

STORE CORRECTLY
Keep fridge at 5°C or below.

KEEP KITCHENS CLEAN
Wash hands, surfaces and utensils regularly.

AVOID CROSS-CONTAMINATION
Keep raw and ready-to-eat foods separate.

FOOD POISONING SYMPTOMS

Symptoms usually start a few hours to a few days after eating contaminated food.

Vomiting

Stomach cramps

Diarrhoea

Fever

Safe food. Healthy you!

Follow the rules, stop the bugs!

(2) Bread Making

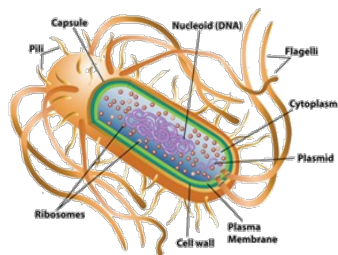
Bread is made from **flour, yeast, salt and water**. The process involves: Mixing and kneading the dough to develop gluten. Leaving the dough to **prove** so yeast produces gas and makes it rise. **Baking** the dough to set the structure, kill yeast, and create a golden crust. The golden colour and aroma form through the **Maillard reaction** when proteins and sugars react under heat.



1.The Science of Food Poisoning

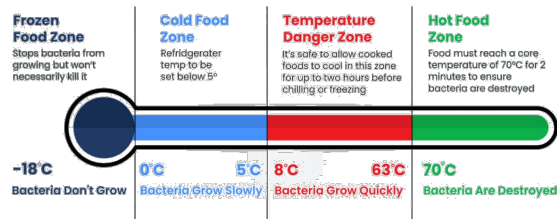
Food poisoning occurs when harmful bacteria contaminate food and multiply to dangerous levels. Bacteria grow best when they have warmth, moisture, food and time. The danger zone is between 5°C and 63°C. High risk foods include cooked rice, poultry, meat, dairy products and seafood. Vulnerable groups such as young children, elderly people and pregnant women are more likely to become seriously ill from food poisoning.

Structures of Salmonella Bacteria



Scholar Question: Why are some groups of people more at risk from food poisoning than others?

Temperature Danger Zone Chart

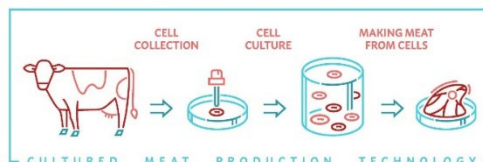
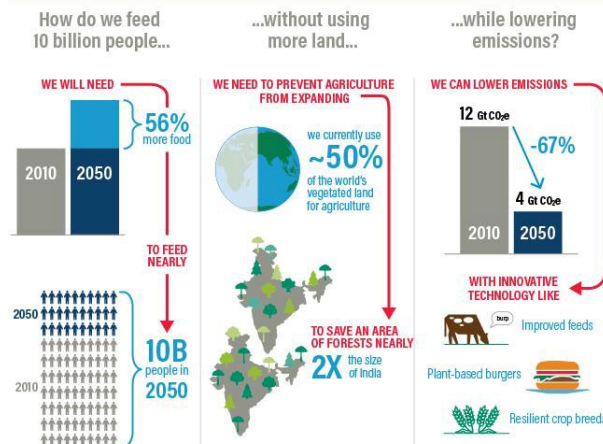


- ✓ The temperature danger zone is between 8°C and 63°C, when it is easiest for harmful bacteria to grow in food
- ✓ Minimise the time that food spends at these temperatures in order to keep food safe.
- ✓ Refrigerated food needs to be kept at 8°C or below
- ✓ Hot food needs to be kept at 63°C or above

2.The Future of Food

Scientists are developing new ways to produce food more sustainably. These include vertical farming, lab grown meat and plant based alternatives. These technologies aim to reduce land use, water consumption and greenhouse gas emissions while feeding a growing global population. Some people support these developments, while others believe traditional farming should remain the main source of food.

CREATING A SUSTAINABLE FOOD FUTURE BY 2050



Scholar Question: Should lab grown meat become a common food source in the future? Explain your answer.

3.Professional Kitchen Standards

Professional kitchens must follow strict hygiene, safety and organisational standards to protect customers and maintain a good reputation. Chefs are responsible for preventing cross contamination, monitoring food temperatures, cleaning equipment correctly and following food safety laws. Businesses can be inspected by Environmental Health Officers (EHOs) at any time. Poor standards can lead to food poisoning outbreaks, fines, closure of premises and loss of customers.

Scholar Question: Is a Food Hygiene Rating of 3 good enough for a restaurant? Explain your answer.

4.Food Hygiene Ratings

The Food Hygiene Rating Scheme scores food businesses from 0 to 5 based on hygiene standards, food safety practices and management systems. A rating of 5 means hygiene standards are very good, while a rating of 0 means urgent improvement is required. Customers often use these ratings to decide where to eat.

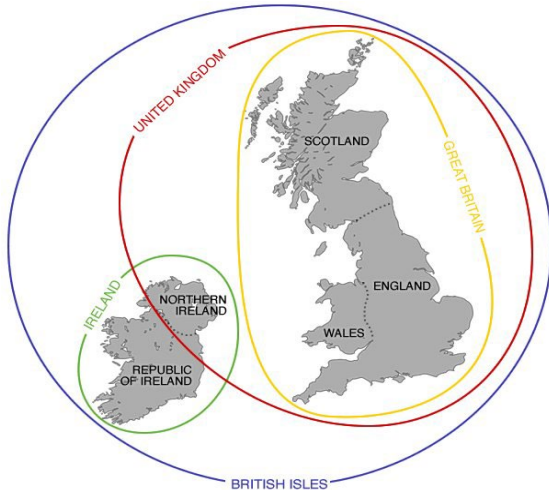
5.The Role of an Environmental Health Officer

Environmental Health Officers inspect food businesses to ensure food is safe to eat. They check food storage temperatures, cleaning procedures, staff training records, pest control measures and food safety documentation. Their role helps protect public health and maintain standards across the hospitality industry.

Scholar Question: Which area do you think is most important for an EHO to inspect and why?



1. What is the difference between the UK and Great Britain?



2. What are the continents?

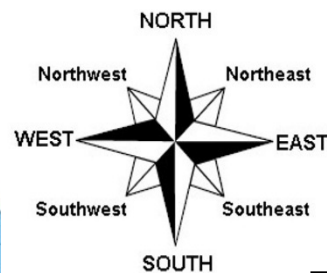


4. What is longitude and latitude?

Latitude: horizontal lines around the globe. Either North or South of the Equator.

Longitude: vertical lines around the globe. Either West or East of the Prime Meridian.

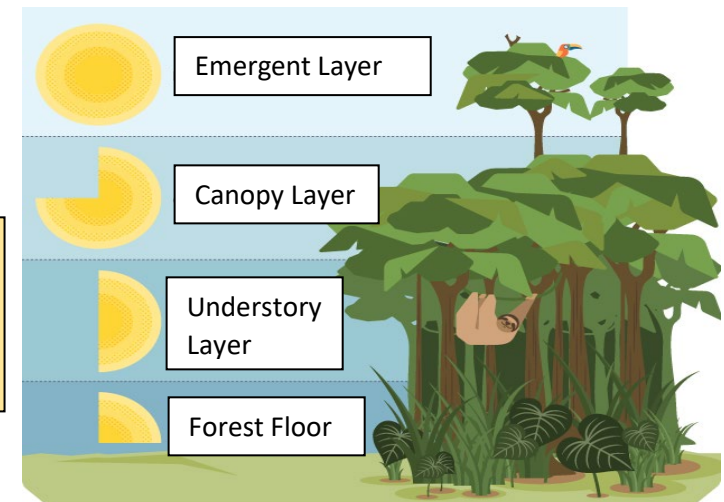
3. How can we use direction?



6. Fragile Environments – Tropical Rainforests

5. Fragile Environments – Coral Reefs

- Coral reefs are underwater structures made from calcium carbonate.
- Corals are formed by POLYPS (tiny animals) – small anemone like creatures that settle on bare surfaces.
- They are colourful because many different algae reflect different colours in the sunlight.
- They need shallow water to allow sunlight to penetrate. They need lots of sunlight – hence they are found in the tropic regions.
- They need clear water to allow light to penetrate.





7. Where is Thailand located?



8. What is globalisation?

Globalisation describes the process by which country's governments, their people, and their cultures have become merged together through communication, transportation, and trade.

Part of this process is **TNC's**. This stands for Trans-national corporations. In other words, companies found in **multiple countries**. E.g. McDonalds.

9. Who are the Kayan women?

The Kayan women are part of the Kayan tribe, found in Northern Thailand.

They are known for their dress and the brass coils they wear around their necks and ankles. These coils are called wangs, and they start wearing them when they are 5 years of age.

Tourists now visit the village to see this culture.



10. What happened at Maya Bay?

The Department of National Parks, Wildlife and Plant Conservation (DNP) claim that the 5 month ban for tourists visiting Thai island Koh Tachai has allowed for an **80 to 90-percent recovery** of wildlife and coral reefs.

The ban started in **2016**. The authority is hoping for same results in Maya Bay.

11. Why is there deforestation?

HEP – Hydroelectric power. Building dams across large rivers, to get cheaper electricity.

Plantations. Growing various crops for money.

Roads & Mining. Roads are being built through the rainforest to get easier access to the mines.

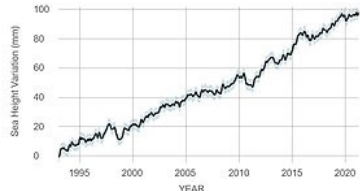
Population Increase. More people, means more houses are needed.

Logging. Cutting down trees to sell wood for furniture.

12. What is sustainable tourism?

Tourism that increases benefits for the environment and local people and minimises the negative impacts.



Place - when you locate a place you need to discuss its relationship to other places. Task: Complete a CLOCC description of a city using the map in your planner. 1)	Inequality - this is experienced in Favelas. Question: How would the following changes alter people's quality of life? 2)	Time - when you look at any: graph, chart or the formation of a feature you need to consider how a factor has changed over time. 3)										
C - Continent - Angkor Wat is located in SE Asia. L - Latitude - It exists at 10 degrees north of the equator. O - Surrounding oceans include the Indian Ocean and Arabian Sea. C - Country Angkor Wat is located in Cambodia C - Capital The Capital of Cambodia is Phnom	1. Clean water supply 2. Access to a free health centre 3. Affordable public transport 4. Democracy 5. Non corrupt police 6. Access to secondary education	<table><tr><th>Month</th><th>Temperature</th></tr><tr><td>January</td><td>14 degrees</td></tr><tr><td>February</td><td>19 degrees</td></tr></table> Task: create a dataset and draw a graph to SATELLITE DATA: 1993-PRESENT Data source: Satellite sea level observations. Credit: NASA's Goddard Space Flight Center RATE OF CHANGE ↑ 3.4 millimeters per year 	Month	Temperature	January	14 degrees	February	19 degrees				
Month	Temperature											
January	14 degrees											
February	19 degrees											
Enquiry - there will be opportunities for you to carry out enquiry. This means to make a decision. Task: Choose a debate and back it up with evidence 4)	Scale - we will be looking at things at a small scale and a large scale and sometimes both. Task: choose a feature/concept that we have studied and describe it on a small scale and a large scale 5)	Sustainability - “meeting our needs, without compromising needs of the future generations” Question: Consider the sustainability of dams in the rainforest 6)										
A. The Canyon Skywalk, a beauty spot or a crime? B. Why doesn't everyone see the effects of sea level rise C. Can you commit a crime against the environment? D. What is the relationship between development and environmental damage? E. What is your place in the world? F. The needs of the many outweigh the needs of the few, discuss.	 On a smaller scale, Lake Baikal keeps the surrounding area's climate milder in the winter. If we consider a larger scale, Lake Baikal stores 374 Gt of methane. If this was released it would have catastrophic effects for worldwide global warming 	<table><tr><th>Advantages</th><th>Disadvantages</th></tr><tr><td>>Crops are irrigated using water stored behind dams</td><td>>Animals that migrate up and downstream to breed/feed can no longer pass</td></tr><tr><td>>Dams produce renewable electricity</td><td>>Displaces thousands of people who live in the land that will be flooded</td></tr><tr><td>>Dams prevent the loss of life caused by flooding</td><td>>There is a loss of biodiversity along the river</td></tr><tr><td>Crops are irrigated [watered] using water stored behind dams</td><td></td></tr></table>	Advantages	Disadvantages	>Crops are irrigated using water stored behind dams	>Animals that migrate up and downstream to breed/feed can no longer pass	>Dams produce renewable electricity	>Displaces thousands of people who live in the land that will be flooded	>Dams prevent the loss of life caused by flooding	>There is a loss of biodiversity along the river	Crops are irrigated [watered] using water stored behind dams	
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A. Historical Skills Keywords		
1	AD	Anno Domini – After the birth of Jesus.
2	BC	Before Christ – Before Jesus was born.
3	Decade	A period of 10 years.
4	Century	A period of 100 years.
5	Millennium	A period of 1000 years.
6	Chronology	Putting events in time order.
7	Time periods	Separate division of time.

B. Migration Keywords		
8	Migration	Movement from one place to another.
9	Social	To do with people and society. Social reason why people migrate include: being closer to family, wanting a better life for themselves and family.
10	Economic	To do with money, jobs, employment. People may migrate to get better jobs and earn more money.
11	Political	To do with politics, government and laws. People may migrate to live in a democracy or avoid war.

C. Migration Timeline		
12	800,000 BC	The first humans arrive in the British Isles.
13	500 BC	Arrival of the Celts from Europe.
14	43-410 AD	Romans arrive and rule for hundreds of years.
15	450 AD	Arrival of Angles and Saxons from Denmark and Northern Germany.
16	800 AD	First Viking raids begin. In 1016, a Viking, Canute, becomes king of England.
17	1066	Normans conquer England. First Jews arrive from Europe.
18	1290	After decades of discrimination, the Jews are expelled . They are not allowed to return until 1656.
19	1572	St Bartholomew's Day massacre in France – leads to Huguenots arriving in England.
20	1620	The Mayflower arrives in the 'New World' (modern day USA), with Puritan settlers from England.
21	1845-52	Irish potato famine leads to widespread migration of Irish families into the UK.
22	1948	SS Empire Windrush arrives from the West Indies. This is seen as the start of modern day mass migration into the UK.
23	1968	'Rivers of Blood' speech . Conservative politician, Enoch Powell makes a controversial speech about immigration.
24	2016	The UK votes to leave the European Union . Many state that immigration was a main reason for wanting to leave.



D. Norman Conquest - Key Individuals

1	Edward the Confessor	Saxon King of England for 24 years who had no children to take over the throne when he died in 1066.
2	Harold Godwinson	An English Nobleman, Earl of Wessex, who served as a powerful leader of England. Brother in law to Edward, he claimed the throne after he died.
3	William of Normandy	A Norman and Duke of Normandy in France. Experienced leader and fighter. Cousin of Edward who also claimed the throne after he died.
4	Harald Hardrada	A Viking. King of Norway. One of the most feared warriors in Europe. He claimed the throne based on an agreement in 1038.
5	Edgar Atheling	Strongest claim to the throne but just nine years old so could not rule.

E. Norman Conquest Keywords

6	Norman Conquest	A period between 1066-1088, where William of Normandy and his Normans invade, conquer and rule England.
7	Anglo-Saxons	People who settled in Britain after the Romans left and lived in England when the Normans invaded.
8	Homage or Oath	To promise to give allegiance to someone (e.g. King) publicly.
9	Feudal System	Social structure of Medieval England that William used to keep control and loyalty of his people.
10	Noble	Barons, Earls or other rich landowners who pledge their loyalty to William in the Feudal System.
11	Cavalry	A soldier mounted on a horse.
12	Motte and Bailey	The first castle created by William. It was made out of wood and had a higher Motte part and a low Bailey part.
13	Rebellion	An act of resistance to the government or King.
14	Heir	The next in line to the throne.

F. Norman Conquest - Key Events

A. The Battle of Stamford Bridge – 25 September 1066

300 Viking longboats carried Harold Hardrada's army from Norway to England. Godwinson's army marched quickly north to meet the Viking threat and after marching 210 miles in 5 days, caught Hardrada by surprise and defeated him.

B. The Battle of Hastings – 14 October 1066

William of Normandy's army of 10,000 soldiers arrived at Pevensey on 29 September. Godwinson marched south and placed his army at the top of **Senlac Hill**. During the battle, William faked a retreat which encouraged the Saxons to run down the hill exposing Godwinson's army. Godwinson was killed and William of Normandy is crowned King of England on 25th December 1066.

C. The Harrying of the North 1069-70

Rebellions in the North of England lead to the Harrying of the North where William devastates the North in an effort to stop rebellions, over 10,000 die and large areas of land are destroyed.

D. The Domesday Book – 1085

The Domesday Book was a complete written record of property ownership across England and was completed in less than a year. At the time it was called the Winchester Book, but later became better known as the Domesday book.



AO1: Demonstrate knowledge and understanding of the key features of the periods studied.

1.1 Chronology

- Create an A3 timeline of Britain that spans from the fall of the Roman Empire c500AD until the Reformation in 1517 to include 10 major events and all the kings of England.

1.2 Historical Terminology

- Define the following words: Apprentice, Baron, Bishop, Chivalry, Feudal System, Guild, Magna Carta, Monastery, Serf, Squire

1.3 Key Features (Historical Knowledge)

- Identify FIVE turning points (important events) in during the Middle Ages in Britain.

AO2: Explain and analyse historical events and periods studied using historical concepts.

2.1 Change & Continuity

- Make a list of FIVE things that changed and FIVE things that essentially stayed the same from the Medieval period of 500 to 1500 AD in England.

2.2 Cause and Consequence

- Explain THREE reasons why the Vikings invaded and colonised England from 789 to 1042 AD.

2.3 Significance

- Research and evaluate the impacts of Alfred the Great and Richard the Lionheart. Who had the most significant impact on England?

AO3: Analyse, evaluate and use primary sources to make judgements.

3.1 Valid inferences

- What can you infer from this scene from the Bayeux Tapestry created in 1077 about the Battle of Hastings?



3.2 Nature, Origin, Audience, Purpose

- What is the nature, origin, audience and purpose of the Bayeux Tapestry?

3.3 Usefulness

- What would the strengths and limitations of the Bayeux Tapestry to a historian studying Norman Conquest be?

AO4: Analyse, evaluate and make judgements about interpretations.

4.1 Identifying views

- Explain the view given by John D Clare about life in Middle Ages England?

4.2 Analysing interpretations

- What evidence can you use to counter this interpretation?

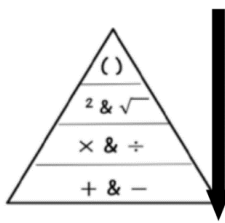
4.3 Evaluating Interpretations

- How far is his interpretation a valid view considering its origins and agenda?

“Even in the summer, people did not work all the time in the medieval times. In fact, they had many holy days – more than one hundred a year!”

From a school textbook, *The Middle Ages*, by John D Clare

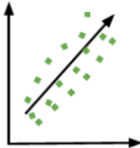
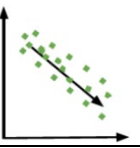
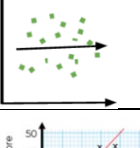
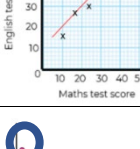
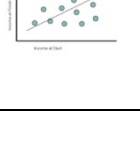


1. Order of Operations			2. Worked Examples	
Keyword	Definition	Example	a. Brackets & Multiplication	Calculate $3 \times (7 - 3)$ $= 3 \times 4$ $= 12$
a. Equal	Having the same value	$3 + 2 = 5 \times 1$		
b. Priority	Something that is done before another thing.	Indices have priority over adding	b. Multiplication, Division & Subtraction	Calculate $4 \times 6 - 8 \div 2$ $= 24 - 8 \div 2$ $= 24 - 4$ $= 20$
c. Indices	A small, raised number next to a normal letter or number to show how many times it has been multiplied by itself.	$4^2 = 4 \times 4$ $h^3 = h \times h \times h$	c. Multiplication, Addition & Subtraction	Calculate $2 + 3 \times 5 - 4$ $= 2 + 15 - 4$ $= 17 - 4$ $= 13$
d. Subtract	Taking away one number from another	$6 - 5 = 1$	d. Indices, Multiplication & Subtraction	Calculate $6^2 - 2 \times 5$ $= 36 - 2 \times 5$ $= 36 - 10$ $= 26$
e. Brackets	A pair of symbols used to group calculations together	$(9 - 1) \div 2$	Sparx independent practice codes:	M521 M135 M928 M347 M187 M354
f. Negative	A value less than zero.	-3		
g. Square Root	A value that, when multiplied by itself 2 times, gives that number	$\sqrt{9} = 3$		
h. Order of operations	The order of operations should be completed in the following order of priority : First work out anything in brackets . Then calculate any indices or roots . Next, multiplication or division , complete left to right. Finally, addition or subtraction , complete left to right.			



1. Postive and Negative Numbers			2. Worked Examples		
Keyword	Definition	Example	Operation	Rules	Examples
a. Negative number	A number less than zero	-8 or (-8)	a. Addition	When adding a positive number, go up When adding a negative number, go down	$2 + 5 = 7$ $-2 + 5 = 3$ $2 + -5 = 2 - 5$ $= -3$ $-2 + -5 = -2 - 5$ $= -7$
b. Difference	How many numbers are between two numbers. To find the difference, subtract the smaller number from the larger number	The difference between 5 and -2 is 7 $5 - -2 = 7$	b. Subtraction	When subtracting a positive number, go down When subtracting a negative number, go up	$4 - 3 = 1$ $-4 - 3 = -7$ $4 - -3 = 4 + 3$ $= 7$ $-4 - -3 = -4 + 3$ $= -1$
c. Ascending order	Sorting by size, starting with the smallest.	$-8, -4, 1, 7$	c. Multiplication	Positive $\times$ positive = positive Positive $\times$ negative = negative Negative $\times$ positive = negative Negative $\times$ negative = positive	$2 \times 4 = 8$ $2 \times -4 = -8$ $-2 \times 4 = -8$ $-2 \times -4 = 8$
d. Descending order	Sorting by size, starting with the biggest.	$6, 2, -3, -7, -9$	d. Division	Positive $\div$ positive = positive Positive $\div$ negative = negative Negative $\div$ positive = negative Negative $\div$ negative = positive	$30 \div 6 = 5$ $30 \div -6 = -5$ $-30 \div 6 = -5$ $-30 \div -6 = 5$
e. Absolute value	The distance a number is away from 0.	The absolute value of -5 is 5	Sparx independent practice codes:		M527, M106, M228
3. Using a number Line					
A number line can be used to position numbers and perform calculations.		When subtracting, move to the left When adding, move to the right <i>smaller</i> <i>larger</i> -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10			



1. Bivariate Data		
Keywords	Definition	Example
a. Variable	A value that can be measured and changed	The number of ice creams sold is a variable The temperature outside is a variable
b. Positive Correlation	As one variable increases (goes up), the other variable increases (goes up)	 As the temperature outside increases, the number of ice creams sold increases
c. Negative Correlation	As one variable increases (goes up), the other variable decreases (goes down)	 As the age of the car increases, the value of the car decreases
d. No correlation	One variable has no impact on the other variable	 A score in a maths test does not impact a score in an art test
e. Line of best fit	A straight line showing the general direction of points on a scatter graph	 You can use the line of best fit to make estimates.
f. Outlier	A point on the graph that does not fit with the trend of the data.	 The point circled is an outlier
Sparx independent practice codes:	Univariate data M769, M596, M648, M210, M493, M945, M450	
	Bivariate Data M328, M934, M841, M940, M127, M287, M440, M899, M597, M644, M460, M738, M574, M165, M140, M183	



2. Factors and Multiples

Keywords	Definition	Example
a. Integer	A whole number	10 is an integer
b. Factor	A number multiplied by another to make the desired number	5 is a factor of 30 because $5 \times 6 = 30$
c. Multiple	The result of multiplying a number by an integer	The first four multiples of 4 are: 4, 8, 12, 16
d. Prime number	An integer with exactly two factors: 1 and itself	5 is a prime number because it can only be divided by 5 and 1
e. Lowest Common Multiple (LCM)	The smallest number that is a multiple of each number	The LCM of 3 and 4 is 12 3, 6, 9, 12 4, 8, 12, 16
f. Highest Common Factor (HCF)	The largest number that divides exactly into each number	The HCF of 6 and 15 is 3 Factors of 6: 1, 2, 3, 6 Factors of 15: 1, 3, 5, 15
g. Product of Prime Factors	Find which prime numbers multiply together to make a number	$36 = 2 \times 2 \times 3 \times 3$
Sparx independent practice codes:		M823, M227, M698, M322, M108, M365



1. Keywords			2.Worked Examples																				
a. Quantitative data	To do with amounts; easily measured or counted, eg. amounts of items, values, etc.	Number of trees, distance travelled	a. For each of the following state whether the data collected would be qualitative or quantitative. i. What is your favourite season? ii. How many minutes does it take you to get to school? iii. How long did you spend doing your homework yesterday? iv. What is your favourite film? Answers i. qualitative iii. quantitative ii. quantitative iv. qualitative. b. Which response has the highest frequency? <table><tr><th>Response</th><th>Tally</th><th>Frequency</th></tr><tr><td>Maths</td><td></td><td>3</td></tr><tr><td>English</td><td> </td><td></td></tr><tr><td>Science</td><td> </td><td></td></tr><tr><td>History</td><td></td><td>10</td></tr><tr><td>Computing</td><td></td><td></td></tr></table> Answer: First complete the table Then identify the response with the highest frequency which is History c. Decide whether each of the statements below are true or false i. 5, 3, 5, 4, 3, 5 The mode is 5 ii. 4, 3, 9, 5, 3 The median is 9 iii. 10, 3, 1, 5, 4 The range is from 6 iv. 4, 3, 1, 4 The mean is 3 Answers: i. True ii. False iii. False iv. False			Response	Tally	Frequency	Maths		3	English			Science			History		10	Computing		
Response	Tally	Frequency																					
Maths		3																					
English																							
Science																							
History		10																					
Computing																							
b. Qualitative data	Data collected, concerning opinions, feelings, attitudes, or sensory observations.	Eye colour, car colour, mood																					
c. Discrete data	Information measured in units that cannot be split.	Shoe sizes, number of pets,																					
d. Continuous data	Numerical data that can take any value within a given range.	Height, mass, time.																					
e. Mean	The "central" value of a set of numbers.	What is the mean of 2, 7 and 9? $2 + 7 + 9 = 18$ mean = $18 \div 3$ mean= 6																					
f. Mode	The mode is the value that occurs most often.	1,2,2,2,3,4,8,10 The mode is 2.																					
g. Median	The middle value when a list of values are put in size order.	10, 11, 13, 15, 16 The median of this list of numbers is 13																					
h. Frequency Table/ Tally chart	A table used for counting and comparing.	<table><tr><th>Response</th><th>Tally</th><th>Frequency</th></tr><tr><td>0</td><td> </td><td>4</td></tr><tr><td>1</td><td> </td><td>4</td></tr><tr><td>2</td><td> </td><td>4</td></tr></table>	Response	Tally	Frequency	0		4	1		4	2		4									
Response	Tally	Frequency																					
0		4																					
1		4																					
2		4																					
i. Bar charts	Used to compare discrete data. It is a graph drawn using rectangular bars to show how large each value is.																						
j. Pie Charts	Used to represent groups of data by being divided into sectors, where each sector shows the relative size of each value.																						
Sparx Independent Learning			M460 M738 M574 M165 M140 M183 M328 M934 M841 M940																				



1. Mathematical vocabulary		2. Mathematician Research	
Define each of the following words. Give an example of each.	a.Ordinal Number b.Cardinal Number c. Monomial	Who are they? What are they famous for? What contributions have they made to maths?	Emmy Noether
3. Watch	a. BBC. The Story of Maths. The Language of the Universe - YouTube (56 mins, 15 secs)		
4. Thinking Mathematically			
a. Shapes and products The coloured shapes stand for eleven of the numbers from 0 to 12. Each shape is a different number. A x = B x = C x = D x = E x = F x = G x = H x = i. Can you work out what they are from the multiplications below? ii. Can you create your own version of coloured shapes and products? iii. Will it work for division? Addition? Subtraction?		b. Frequency Analysis In any language some letters tend to appear more often than others. Which letters do you think are the most common in the English language? i. Is the frequency of letters in the following sentence representative? <i>The quick brown fox jumps over the lazy dog.</i> ii. Conduct a mini-investigation comparing different texts to draw a conclusion about this.	
c. Forwards add Backwards The number 747 can be formed by adding a 3-digit number with its reversal: 621+126=747, for example. i. Can you find the other two ways of making 747 in this way? ii. Which other numbers between 700 and 800 can be formed? iii. Can you explain how you know you have found all the possible numbers? iv. How many numbers can be formed between 300 and 400? 800 and 900?... v. The number 1251 can be formed by adding a 3-digit number with its reversal. vi. Which other numbers between 1200 and 1300 can be formed from a number plus its reversal? And between 1900 and 2000?...		5. Short Problems a. A quiz has twenty questions with 7 points awarded for each correct answer, 2 points deducted for each wrong answer and 0 for each question omitted. Jack scored 87 points. How many questions did he omit? b. In how many whole numbers between 100 and 999 is the middle digit equal to the sum of the other two digits? c. On Brian’s 14th birthday, his father was 41. Brian noticed that his age was the reverse of his father's age. How old will Brian be the next time his age is the reverse of his father's age? d. Using each of the number cards 1 to 9 once and once only, find two whole numbers, one of which is double the other. How many solutions can you find?	



1. Elements of Music – Keywords in Music

a) Pulse	Steady beat, like a heartbeat.
b) Rhythm	A pattern of note durations.
c) Pitch	How high or low a note is. (Example: The piano played a high-pitched note).
d) Tempo	The speed of the music (Example: The tempo of the music was fast/slow).
e) Dynamics	How loud or quiet the notes are played. (Example: Make sure the dynamics for this melody are played loudly/quietly).
f) Melody	The main tune of a piece of music.
g) Harmony	The sound when notes are played together.
h) Texture	How many layers are in the music (thick or thin).

2. Note Durations – Lengths of notes

Note Name	Kodaly	Symbol	Note Duration
Minim	Two /		2 beats
Crotchet	Ta		1 beat
Quaver	Te		½ a beat
Minim Rest (Silence)	Moo		2 beats
Crotchet Rest (Silence)	Ma		1 beat

3. Notation

Music is written on 5 lines. Notes move in steps (line – space – line) from bottom to top.

Lines: E G B D F

Spaces: F A C E



4. Keyboard basics

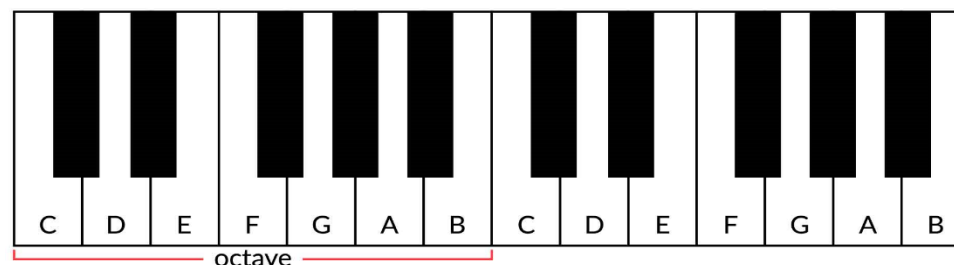
The keyboard is made up of repeating patterns of **12 notes**.

The white notes are A – G.

The black notes are sharps **#** and flats **b**

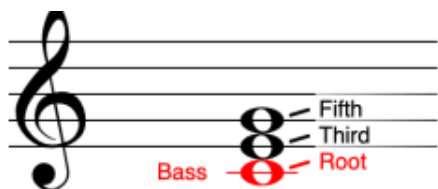
Middle C is the starting reference point.

An **octave** is the interval between 8 white notes.

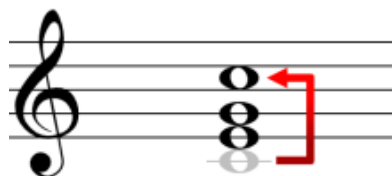




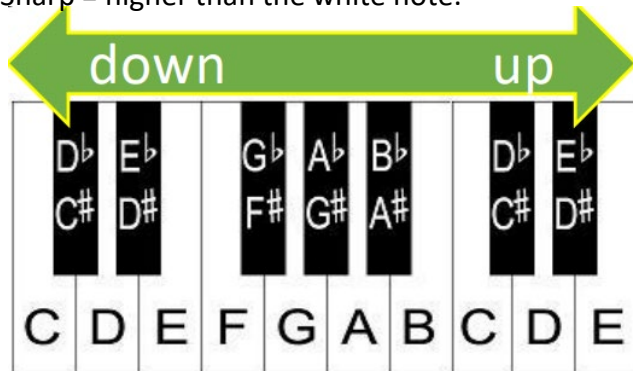
C Major in root position is called this because the note of C is at the bottom of the chord



C Major in 1st position is called this because the note of C is at the top of the chord



C Major in 2nd position is called this because the note of C is in the middle of the chord

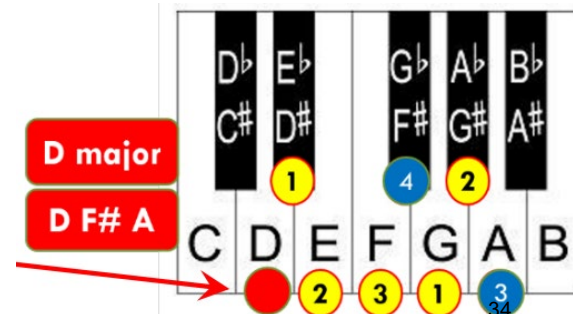


Major chord= Happy
4 then 3 semitones

Minor chord = Sad
3 then 4 semitones

Semitone = the next note, counting white AND black

The bottom note of the chord = the root. The root gives its name to the chord.





1. Warm-Ups

A series of physical movements that prepare the body for exercise or competition. It can increase the temperature of the muscles, build up the heart rate, and improve oxygen consumption and blood flow. It can also decrease stiffness, enhance coordination, activate the core, and prevent or reduce injuries.

Four Part Warm-up

a. Mobilisation	b. Pulse Raiser	c. Stretches	d. Practice Movements
Making the joints ready for exercise e.g. neck circles	Increases heart rate and blood flow e.g. jogging	Static (whilst still) or dynamic (whilst moving)	Rehearsing skills used in the main activity e.g. passing a football

2. Cool-downs

A session of light exercise that follows demanding physical activity; the session will usually include gentle cardiovascular exercise and stretching activities. It can bring body temperature and heart rate down, help remove lactic acid and prevent injury.



1. Higher Order Thinking	2. Research
a) Compare the use of multi-skills in two different sports of your choice. b) Justify why agility is more important than balance in some sports and the opposite in others. c) Evaluate a professional athlete's performance and identify which multi-skills make them successful and why.	a) Watch the video by on the 'components of fitness' by scanning the QR code and complete the tasks.  b) Write down at least one sport that would require each of the different components of fitness from the video. Justify why you have chosen each sport. a) Research and complete the 'ruler drop test' for reaction time. Can you then think of a way to improve your reaction time score?
3. Application	4. Analysis
a) Watch a sport of your choice. Write a post game report talking about the different multi-skills that were demonstrated. Highlight both the strengths and weaknesses. b) Create a game for a primary school student to develop their throwing and catching skills. Your game needs to be able to develop their technique.	You have four weeks to learn a new physical skill such as juggling. Keep a weekly journal tracking your progress. In your journal you should talk about your successes, areas for improvement and the changes you have made to your technique. Use different feedback such as peers and video to help you to master the new skill.



E. Key Words

1. **Siddhartha** – the first Buddha
2. **Meditate** – Buddhists sit silently or chant to think deeply or focus their minds
3. **Renounce** – give up something, e.g., chocolate
4. **Golden Mean** – striking the perfect balance in life
5. **Temple** – Buddhist Holy Building
6. **Sangha** – Buddhist community
7. **Tripitaka** – Holy Book
8. **Karma** - destiny or fate, following as effect from cause.
9. **Samsara** – the cycle of greed, ignorance and hatred
10. **Nirvana** – Idyllic place with no suffering
11. **Reincarnation** – Rebirth of a soul into a new body
12. **Enlightenment** – gaining spiritual knowledge or insight. The ultimate goal.

F. Siddhartha

- Siddhartha grew up in a luxurious palace and lived a life of indulgence
- A Monk predicted he would become a holy man, which worried his father
- Siddhartha married Yasdohara and they had a son
- He was not satisfied as he not seen outside the palace walls
- He convinced his servant Channa to help him escape from the palace
- Outside the place he saw suffering for the first time
- He saw four sightings: an old man, a sick man, a corpse (dead body) and a holy man
- He decided to renounce his life of luxury and wealth and focus on his spiritual side, so tried to give up food
- He realised that focusing too extremely on one area alone was not healthy, and needed to find a healthy balance, the golden mean.
- He sat in the shade of a Bodhi tree and mediate all night.
- Although he faced temptations whilst meditating, he fought them and after felt that he had recognised the causes of suffering.
- He was then known as the Buddha, the enlightened one.

G. How do Buddhist worship? Buddhists say you need to apply this approach to life. In order to live life to the full you need to be focused, calm and train your mind. This helps you be more aware of yourself and those around you. For Buddhists, this is happens through worship, known as Puja. Worship is a way of showing respect and gratitude to the Buddha for his inspiration and his teachings. It is something to feel and enjoy. Puja is a way of sharing and celebrating together.

H. How do Buddhists reach Nirvana? Buddhists must act positively towards others in order to create good karma. Good karma will help them avoid the never-ending cycle of life involving greed, hatred and ignorance known as samsara. If they can strike up a balance of living a good and healthy life, which Buddhists recognise as the golden mean. They can have a chance to achieve enlightenment and reach nirvana.

I. Buddhists beliefs on the afterlife

Buddhists believe if you create good karma,
You will escape the cycle of samara,
Achieve Nirvana,
Finding the golden mean meant
Buddhists could reach eternal enlightenment



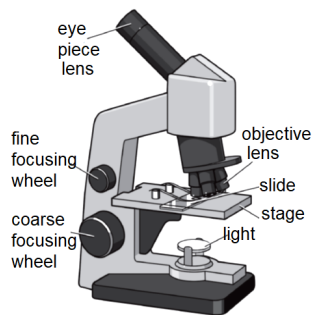
A. Key Words Monotheism – one God Polytheism – many Gods Torah – Holy Jewish Book Synagogue – Jewish Holy Building Shabbat – Day of spiritual renewal and rest. Kosher – means ‘fit’ or ‘proper’. Foods that are permitted. Covenant – an agreement or promise between two parties, e.g., God and Noah, Abraham & Moses	B. Key Figures – Abraham (Father of the People) <i>Genesis 12</i> As an older man Abram was asked to leave his home and obey God. He believed in only one God, not many like everyone else. As a result, he was promised this land and that his descendants would become a great nation. He and his family settled in Canaan and were known as Hebrews. At an older age his wife had a son, Isaac. Abraham was asked to sacrifice Isaac but was stopped at the last minute.	C. Key Figures – Moses <i>Exodus 1:22-2:10</i> Moses was a Hebrew and Hebrews were being treated terribly by the Egyptians. His mother tried to keep him safe, by hiding him next to a river. He was found and saved by the Princess, the Pharaoh’s daughter. He disagreed with the poor treatment of the Hebrews and asked the Pharaoh to free them, which he refused. Moses killed a slave master, who was beating a Hebrew and fled to the desert, where he had an encounter with a burning bush. He believed that God spoke to him and told him to return to Egypt, where he would send 10 plagues. After the plagues, Moses and the Hebrews escaped across the red sea. He later received the 10 commandments
D. The Story of Hanukah The festival of Hanukkah reminds Jews of a time 2500 years ago when Antiochus, a Syrian king, tried to make the Jewish people worship Greek gods. A statue of Antiochus was built in the Jewish temple and the Jews were ordered to bow down before him. The Ten Commandments forbid Jews to worship statues or idols and so they refused. A small group of Jews called the Maccabees, (led by Judah Maccabee) rebelled. After a three-year war they recaptured Jerusalem from the Syrians. But the temple was all but destroyed. The Maccabees had to clean and repair the Temple, and when they were finished, they rededicated it to God. They did this by lighting the lamp (Menorah) - which was a symbol of God's presence. Only one small jar of oil was found, enough for one day, but miraculously the lamp stayed alight for eight days.		



Challenge Tasks	Research Challenge	Wider Links Challenge
1. Create 10 true or false statements on today's topic 2. Transform your learning into a series of images using up to 5 words 3. Plan an alternative lesson about what we have learnt today 4. Construct a timeline showing your learning through today's lesson 5. Produce a summary of today's lesson – then reduce the number of words used to a single sentence or three bullet points 6. Turn today's learning outcomes into questions 7. Select 5 key terms that you have used today and create a summary using all of the terms 8. Create 5 questions your teacher might ask about today's learning 9. Use a thesaurus to add more ambitious vocabulary into your work 10. If today's lesson were an album, what would it be called? What songs would be on it?	Buddhism A. Research the Dalai Lama (Buddhism) B. Research Thich Nhat Hanh (Buddhism) C. Research Mahaprajapati Gotam (Buddhism) D. Find out what the three Universal truths are E. Find out what the four noble truths are F. Find out what the eightfold path is Judaism G. Research Elie Wiesel (Judaism) H. Research Connie Ten Boom (Judaism) I. Research Eva Corr (Judaism) J. Find out what Shabbat is and what it involves K. What does a Bar mitzvah involve? L. What do KIDDUSHIN mean and what is involved?	I. Describe how today's learning relates to another of your subjects II. Describe the impact of today's learning on your wider outlook III. Explain how you might use today's learning outside of school IV. Use the internet to find any examples of Judaism or Jewish influence in the news V. Use the internet to find any examples of Buddhist influence in the news



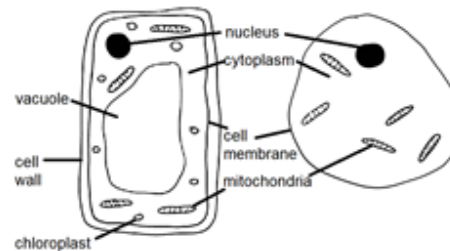
(1) Keyword	Definition
a) cell	The basic building block of life.
b) cell membrane	Controls the movement of substances in and out of the cell.
c) cell wall	Provides support to the cell and is made of a tough fibre called cellulose.
d) chloroplasts	Photosynthesis takes place in the chloroplast.
e) cytoplasm	Jelly-like substance where chemical reactions take place.
f) mitochondria	The site of aerobic respiration in the cell.
g) organ	Different groups of specialised cells working together – example heart.
h) nucleus	Carries genetic information and controls the cell.
i) specialised cell	A cell that is adapted to perform a particular function.
j) vacuole	Contains cell sap.
k) tissue	Something made from just one type of specialised cell.



(2) Microscope

A light microscope uses light and a series of lenses to produce a magnified image of an object.

Magnification is a measure of how much bigger an object appears under a microscope than in real life.



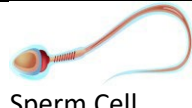
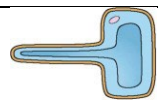
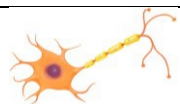
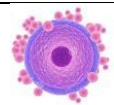
(3) Plant and animal cells

Plant and animal cells contain smaller structures called organelles which help it to carry out its function.

Some organelles are found in both animals and plants – but not all.

(4) Specialised cells

A specialised cell is a cell that is adapted to carry out a particular function.

 Red Blood Cell	Carries blood around the body. No nucleus.	 Sperm Cell	Long tail for swimming. Lots of mitochondria
 Root Hair Cell	Takes in water from the soil. Large surface area.	 Nerve Cell	Carries signals around the body. Very long and thin.
 Egg Cell	Lots of mitochondria.	 Palisade Cell	Contains lots of chloroplasts for photosynthesis.



(1) Key Word	Definition
a) Anomaly/ anomalous	A piece of data that doesn't fit the pattern.
b) Conclusion	Identifies what we have learned in the investigation.
c) Control variable	What you keep the same in an investigation.
d) Dependent variable	What you measure or observe in an investigation.
e) Independent variable	What you change in an investigation to see how it affects the dependent variable.
f) Method	A clear list of instructions that let you carry out an experiment
g) Observation	Information gathered by your senses
h) Prediction	A sensible guess as to what will happen in an experiment.
i) Risk	How likely something is to be harmful.

(2) How to write a method

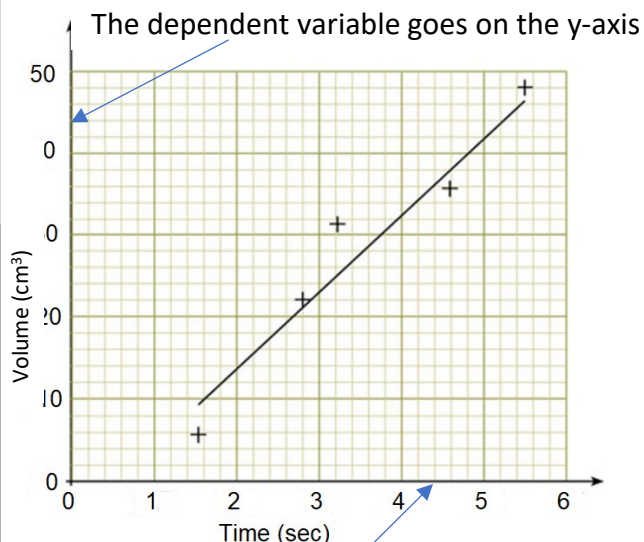
1. Write short, numbered sentences to describe each step.
2. Name each piece of equipment that you use.
3. Give the quantities (how much) of each chemical you use.

(3) How to draw a Table of Results

Temperature of water (°C)	Amount of Salt (g)	Amount of Salt (g)	Amount of Salt (g)	Average (g)
35	3	3	4	3.5
45	5	4	7	4.5

1. Always use a ruler and a pencil to draw the table.
2. The independent variable goes in the left-hand column and the dependent variable goes on the right-hand columns.
3. Do not include anomalies (values that don't fit the pattern) in the average.
4. To find the average, add all the values in horizontal line together and then divide by the number of values.

(4) How to draw a graph



The independent variable goes on the x-axis

Graph Check List

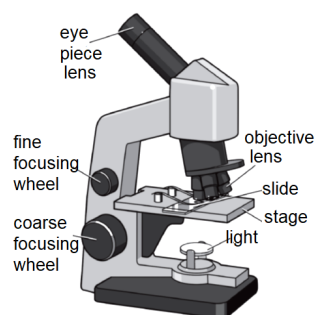
1. Use a sharp pencil
2. Use a ruler
3. Draw two axes
5. Label the axis
6. Add the units to the axis label
7. Draw a line of best fit if applicable
8. Add a title and underline it.



(1) Key Word	Definition	(2) What is a force?
a) Balanced Forces	When the two forces acting on an object are equal in size but act in opposite directions.	A force can be a push, a pull, or a twist. You can't see forces – you can only see the affect they have. When a force is applied to an object it can lead to: • A change in speed (acceleration). • A change in the object's direction of movement. • A change in the object's shape (squash or stretch the object). Forces can also be divided into two types: • Contact Forces, which act between two objects that are touching. Examples include friction and air resistance. • Non-contact Forces, which act between objects that are not touching. Examples include gravity, weight and the magnetic force.
b) Contact Force	A force acting between two objects that are touching.	
c) Force	A push, a pull, or a twist on an object.	
d) Mass	Mass is a measure of the amount of matter or 'stuff' in an object.	
e) Newton (N)	We measure force in newtons (N).	
f) Non-contact Force	A force acting between two objects that are not physically touching.	
g) Normal Force	The force that supports the weight of an object on a surface. It stops us from falling through walls!	
h) Resultant Force	An unbalanced force with more force in one direction than another/the overall force after the difference between two or more forces is worked out	
i) Speed	Speed is a measure of how fast an object moves.	
j) Unbalanced Forces	When the two forces acting on an object are not the same size.	
k) Velocity	Velocity is speed in a particular direction.	(3) Balanced and Unbalanced Forces If the forces acting on an object are equal, we say that the forces are balanced. If the forces on an object are balanced, the object will either be stationary (not moving) or moving at a constant speed. If the forces are not equal, we say they are unbalanced. If the forces on an object are unbalanced, the object will be speeding up (accelerating), slowing down (decelerating), or changing direction.
l) Weight	Weight is the force acting on an object due to gravity, measured in newtons (N).	

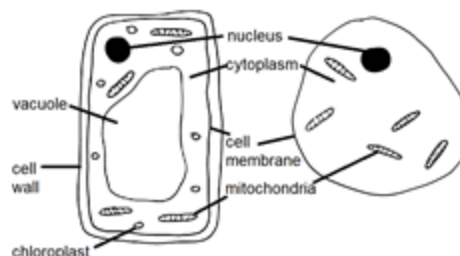


(1) Keyword	Match The Definitions to Key Words
a) cell	Contains cell sap.
b) cell membrane	Something made from just one type of specialised cell.
c) cell wall	A cell that is adapted to perform a particular function.
d) chloroplasts	The site of respiration in the cell.
e) cytoplasm	Provides support to the cell and is made of a tough fibre called cellulose.
f) mitochondria	Carries genetic information and controls the cell.
g) organ	Controls the movement of substances in and out of the cell.
h) nucleus	The basic building block of life.
i) specialised cell	Jelly-like substance where chemical reactions take place.
j) vacuole	Respiration takes place in the chloroplast.
k) tissue	Different groups of specialised cells working together – example heart.



(2) Microscope

- Work out the total magnification of the microscope if the objective lens has a magnification of 300x and the eyepiece lens has a magnification of 10x.
- Describe, in detail, how you would observe an object under a microscope.

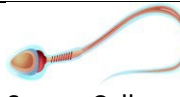
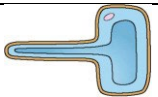
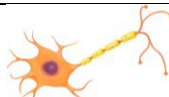


(3) Plant and animal cells

- Describe the differences between animal and plant cells.
- Describe the function of the mitochondria within both cells.
- Describe the function of the chloroplast.

(4) Specialised cells

- Research and state how cardiac, xylem and phloem cells are adapted to their function.

 Red Blood Cell	Carries blood around the body. No nucleus.	 Sperm Cell	Long tail for swimming. Lots of mitochondria
 Root Hair Cell	Takes in water from the soil. Large surface area.	 Nerve Cell	Carries signals around the body. Very long and thin.
 Egg Cell	Lots of mitochondria.	 Palisade Cell	Contains lots of chloroplasts for photosynthesis.



(1) Key Word	Match The Definitions	(2) How to write a method	(4) How to draw a graph														
a) Anomaly/ anomalous	A clear list of instructions that let you carry out an experiment	a) Write a method on how to make a cup of tea. b) State the independent, dependent and control variables when making a cup of tea? c) How would you ensure that the results collected are accurate and precise?	The dependent variable goes on the y-axis The independent variable goes on the x-axis a) Using the data in section 3 (to the right), and the data you inserted into the table, draw a graph of results. b) Draw a line of best fit of your results. c) What is the dependent, independent and control variables in this investigation? d) How much salt would you expect to dissolve in water of the following temperatures? i. 40°C ii. 50°C														
b) Conclusion	What you measure or observe in an investigation.																
c) Control variable	What you change in an investigation to see how it affects the dependent variable.	(3) How to draw a Table of Results															
d) Dependent variable	A sensible guess as to what will happen in an experiment.	<table><tr><th>Temperature of water (°C)</th><th>Amount of Salt (g)</th><th>Amount of Salt (g)</th><th>Amount of Salt (g)</th><th>Average (g)</th></tr><tr><td>35</td><td>2</td><td>4</td><td>4</td><td>?</td></tr><tr><td>45</td><td>4</td><td>?</td><td>8</td><td>6</td></tr></table>		Temperature of water (°C)	Amount of Salt (g)	Amount of Salt (g)	Amount of Salt (g)	Average (g)	35	2	4	4	?	45	4	?	8
Temperature of water (°C)	Amount of Salt (g)	Amount of Salt (g)	Amount of Salt (g)	Average (g)													
35	2	4	4	?													
45	4	?	8	6													
e) Independent variable	A piece of data that doesn't fit the pattern.	a) Redraw the table b) Calculate the average of the results in the table above for 35°C. c) Calculate the missing value for the second value of 45°C. d) Add another row to the table for 55°C. Insert the following results into the table and calculate a mean. 9 g, 10 g, 12 g. e) Add another row to the table for 65°C. Insert the following results into the table and calculate a mean. 14g, 16 g, 16 g. f) Why do units not get inserted into the table? g) What variable is placed in the first column of the table? Why?															
f) Method	Information gathered by your senses																
g) Observation	How likely something is to be harmful.																
h) Prediction	What you keep the same in an investigation.																
i) Risk	Identifies what we have learned in the investigation.																



(1) Key Word	Match the Definition with the Key Words.	(2) What is a force?
a) Balanced Forces	The force acting on an object due to gravity, measured in newtons (N).	a) Give an example of: i. A push force ii. A pull force iii. A twist force b) Give 3 examples of contact forces. c) An object is sat on the desk. Describe all the forces acting on that object. d) What would you need to do if you wanted a stationary object to accelerate? e) Give 3 examples of non-contact forces. f) The moon is held in orbit due to a non-contact force. What is that force, and why is that force greater on the sun?
b) Contact Force	When the two forces acting on an object are equal in size but act in opposite directions	
c) Force	A force acting between two objects that are not physically touching.	
d) Mass	A measure of how fast an object moves.	
e) Newton (N)	A measure of speed, but in a particular direction.	
f) Non-contact Force	When the two forces acting on an object are not the same size.	
g) Normal Force	A measure of the amount of matter or 'stuff' in an object.	
h) Resultant Force	Single force which can replace all the forces acting on an object and have the same effect. We find it by adding the forces together.	
i) Speed	A push, a pull, or a twist on an object.	
j) Unbalanced Forces	The force that supports the weight of an object on a surface. It stops us from falling through walls!	
k) Velocity	A force acting between two objects that are touching.	(3) Balanced and Unbalanced Forces a) Describe whether the forces acting on an object are balanced or unbalanced if the object is accelerating. g) Describe whether the forces acting on an object are balanced or unbalanced if the object is decelerating. h) Describe the changes in balanced and unbalanced forces for a skydiver as they jump out of a plane.
l) Weight	A unit used in Science as a measure of force.	



Unit 0: Introducing myself and saying how I am

a	¿Cómo te llamas?	<i>What is your name?</i>
b	¿Cómo estás hoy?	<i>How are you today</i>
c	¿Qué tal?	<i>How's it going?</i>
d	Me llamo	<i>I am called</i>
e	Estoy bien gracias	<i>I am well thank you</i>
f	Hola	<i>Hello</i>
g	Buenos días	<i>Good morning</i>
h	Buenas tardes	<i>Good afternoon</i>
i	Buenas noches	<i>Good evening/night</i>
j	Adiós	<i>Goodbye</i>
k	De nada	<i>You're welcome</i>
l	Gracias	<i>Thank you</i>
m	Mucho gusto	<i>Nice to meet you</i>
n	vale	<i>OK</i>
o	hoy estoy	<i>today I am</i>
p	fenomenal	<i>great</i>
q	muy bien	<i>very well</i>
r	bien	<i>well</i>
s	regular	<i>so-so</i>
t	(muy) mal	<i>feeling (very) bad</i>
u	fatal	<i>feeling awful</i>
v	pero estoy	<i>but I am</i>
w	porque estoy	<i>because I am</i>
x	aburrido/a	<i>bored</i>
y	cansado/a	<i>tired</i>

z	emocionado/a	<i>excited</i>
aa	enfadado/a	<i>angry</i>
ab	enfermo/a	<i>ill/sick</i>
ac	estresado/a	<i>stressed</i>
ad	feliz	<i>happy</i>
ae	nervioso/a	<i>nervous</i>
af	tranquilo/a	<i>calm</i>
ag	triste	<i>sad</i>
ah	bastante	<i>quite</i>
ai	un poco	<i>a little</i>
aj	muy	<i>very</i>

Unit 1: Talking about my age

a	¿Cuántos años tienes?	<i>How old are you?</i>
b	Tengo	<i>I have</i>
c	Tiene	<i>He/she has</i>
d	Mi hermano	<i>My brother</i>
e	Mi hermana	<i>My sister</i>
f	y	<i>and</i>
g	año	<i>year</i>
h	años	<i>years</i>
i	un(o)	<i>1</i>
j	dos	<i>2</i>
k	tres	<i>3</i>
l	cuatro	<i>4</i>
m	cinco	<i>5</i>
n	seis	<i>6</i>



o	siete	7
p	ocho	8
q	nueve	9
r	diez	10
s	once	11
t	doce	12
u	trece	13
v	catorce	14
w	quince	15
x	dieciséis	16
y	soy hijo único	<i>I am an only child (m)</i>
z	soy hija única	<i>I am an only child (f)</i>
Unit 2: Saying when your birthday is		
a	¿Cuándo es tu cumpleaños?	<i>When is your birthday?</i>
b	¿Cuándo es su cumpleaños?	<i>When is his/her birthday?</i>
c	soy de...	<i>I am from...</i>
d	Mi amigo	<i>My friend (m)</i>
e	Mi amiga	<i>My friend (f)</i>
f	se llama	<i>is called</i>
g	mi cumpleaños es el	<i>my birthday is the</i>
h	su cumpleaños es el	<i>his/her birthday is the</i>
i	primero	<i>first</i>
j	diecisiete	17
k	dieciocho	18

o	veintidós	22
p	veintitrés	23
q	veinticuatro	24
r	veinticinco	25
s	veintiséis	26
t	veintisiete	27
u	veintiocho	28
v	veintinueve	29
w	treinta	30
x	treinta y uno	31
y	enero	<i>January</i>
z	febrero	<i>February</i>
aa	marzo	<i>March</i>
ab	abril	<i>April</i>
ac	mayo	<i>May</i>
ad	junio	<i>June</i>
ae	julio	<i>July</i>
af	agosto	<i>August</i>
ag	septiembre	<i>September</i>
ah	octubre	<i>October</i>
ai	noviembre	<i>November</i>
aj	diciembre	<i>December</i>



Unit 3: Saying where I live and where I am from

a	¿Dónde vives?	<i>Where are you from?</i>
b	¿Dónde vive?	<i>Where does he/she live?</i>
c	¿De dónde eres?	<i>Where are you from?</i>
d	¿De dónde es tu amigo?	<i>Where is your friend from?</i>
e	(yo) Vivo en...	<i>I live in</i>
f	(tú) Vives en...	<i>You live in</i>
g	(él/ella) Vive en...	<i>He/she lives in</i>
h	...un piso	<i>...a flat</i>
i	...una casa	<i>...a house</i>
j	...una aldea	<i>...a village</i>
k	...un pueblo	<i>...a town</i>
l	...una ciudad	<i>...a city</i>
m	...bonito/bonita	<i>...pretty</i>
n	...feo/fea	<i>...ugly</i>
o	...grande	<i>...big</i>
p	...pequeño/pequeña	<i>...small</i>
q	...en un edificio antiguo	<i>...in an old building</i>
r	...en un edificio moderno	<i>...in a modern building</i>
s	...en el centro	<i>...in the centre</i>
t	...en el campo	<i>...in the countryside</i>
u	...en la montaña	<i>...in the mountains</i>
v	...en la costa	<i>...on the coast</i>
w	...en la ciudad	<i>...in the city</i>
x	...en las afueras	<i>...on the outskirts</i>
y	...junto al mar	<i>...by the sea</i>
z	...en el norte de	<i>...in the north of</i>

aa	...en el este de	<i>...in the east of</i>
ab	...en el sur de	<i>...in the south of</i>
ac	...en el oeste de	<i>...in the west of</i>
ad	...Inglaterra	<i>...England</i>
ae	...España	<i>...Spain</i>
af	...Gales/Escocia	<i>...Wales/Scotland</i>
ag	...Irlanda	<i>...Ireland</i>
ah	...los Estados/Unidos	<i>...The USA</i>
ai	Soy de...	<i>I am from...</i>
aj	Es de...	<i>He/She/It is from...</i>
ak	...Barcelona	<i>...Barcelona (Spain)</i>
al	...Bilbao	<i>...Bilbao (Spain)</i>
am	...Cádiz	<i>...Cádiz (Spain)</i>
an	...Madrid	<i>...Madrid</i>
ao	...Bogotá	<i>...Bogotá (Colombia)</i>
ap	...La Paz	<i>...La Paz (Bolivia)</i>
ar	...Santiago	<i>...Santiago (Chile)</i>
as	...Quito	<i>...Quito (Ecuador)</i>
at	...Londres	<i>...London</i>



Key Grammar

1. Personal Pronouns – A word that replaces a name or a noun in a sentence (i.e. I, you, he, she, it, we and they). The personal pronouns in Spanish are as follows. *In Spanish it is very rare to use personal pronouns with verbs, the ending is enough to tell you who the verb relates to.*

		English	Spanish
Singular	1 st person	I	yo
	2 nd person	you	tú
	3 rd person	he/she/it	él/ella
Plural	1 st person	we	nosotros/as
	2 nd person	you	vosotros/as
	3 rd person	they	ellos/ellas

2. Conjugation of key irregular verbs- the change that takes place in a verb to express tense, mood etc.

In Spanish you change verbs according to who is the subject of the verb.

Personal Pronoun	Ser=to be	Estar = to be (for emotions/location/condition)	Tener = to have (also used for age)
yo (I)	soy=I am	estoy=I am	tengo=I have
tú (you sing.)	eres=you are	estás=you are	tiene=you have
él/ella (he/she)	es=he/she/it is	está=he/she/it is	tiene=he/she/it has
nosotros (we)	somos=we are	estamos=we are	tenemos=we have
vosotros (you pl)	sois=you (pl) are	estáis=you(pl)are	tenéis=you (pl) have
ellos/ellas (they)	son=they are	están=they are	tienen=they have

N.B. In Spanish it is very rare to use personal pronouns with verbs, the ending is enough to tell you who the verb relates to.

3. Adjective agreement

- In Spanish, some adjective endings change depending on who it describes.
- This only applies to adjectives which finish in an “o” in the masculine form. - > Mi hermanoo está contentoo/Mi hermanaa está contentaa
- Adjectives that end in an “e” do not change according to the gender of the noun it describes. -> Mi hermano está tristee/Mi hermanaa está tristee
- All adjectives add an “s” when describing a plural noun or more than one noun. – Mis hermanos estáns tristes



1. Grammatical vocabulary		2. Spanish Cultural Research			
i.	Define what an infinitive.	i.	Who is she?		Frida Khalo
ii.	Find out how you recognise them in Spanish and what they look like in English.	ii.	What is she famous for?		
		iii.	Where did she come from?		
3. Dictionary skills	Find out the following information about a bilingual Spanish dictionary. a. What is the difference between the two halves of the dictionary? b. How does the dictionary tell us the different word types? c. When looking up the Spanish version of a noun, how does the dictionary tell us the gender of the noun?				
4. Key Verbs	Look up the following verbs in the present tense – fill in the blanks				
	Personal pronoun	Tener – to have		Ser – to be	
	Yo (I)	<u>tengo</u>	<u>I have</u>	<u> </u>	<u> </u>
	Tu (you sing)	<u> </u>	<u> </u>	<u>eres</u>	<u>you are</u>
	él/ella (he/she)	<u> </u>	<u> </u>	<u> </u>	<u>está</u>
	nosotros (we)	<u> </u>	<u> </u>	<u> </u>	<u>he/she/it is</u>
	vosotros (you pl)	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	ellos/ellas (they)	<u> </u>	<u> </u>	<u> </u>	<u> </u>
5. Understanding grammar	Find the answers to the following questions a. What is the difference between the two different forms of “to be” in Spanish? b. Why are there two forms of “you” related to verbs in Spanish? What is the difference? c. Which of the above verbs would you use to tell someone your age?				
6. Translations	Translate the following into Spanish.				
	a. Are you from Havana, in Cuba?		<u> </u>		



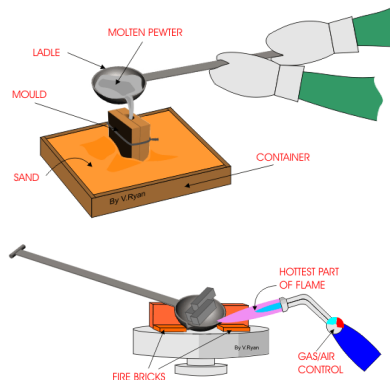
1. Pewter Casting

Casting is a **manufacturing process** used for making 3D shapes out of metal.

Metal is placed into a ladle and heated to its **melting point** using a gas torch.

When the metal reaches its melting point it becomes a liquid. Then it is poured into a **mould**: it goes through the **sprue** and into the **cavity**.

When the metal has cooled the mould is opened and the shape is released.



2. Metals

There are three main groups of metals:

Ferrous metals contain iron. They are magnetic and will rust (corrode). Types of ferrous metals include mild steel.

Non-ferrous metals do not contain iron. They are non-magnetic and will not rust (corrode). Types of non-ferrous metals include aluminium.

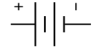
Alloys are a mix of metal. This means alloys have improved properties and are suitable for a range of different products. Types of alloys include **pewter**, which is used in casting.

3. Electronics

Different components have different functions:

Input Components : The input is what sets an electrical circuit in action. It allows the first signal to be sent.

Output components : The output is what the circuit results in and ultimately does.

Batteries  Store and release electrical energy.

Resistors  Reduced the flow of electrical current.

Switches  Makes or breaks an electrical circuit.

LED  Emits light when an electrical current runs up its Anode and down its Cathode.

4. Product Analysis

A product analysis looks at current products and assesses whether they are successful or require improving.

When carrying out a successful product analysis you always ask yourself the following questions in relation to the product you are looking at....

- 
1. Who is the product designed for? How do you know this?
 2. How has the designer made the product easy to use?
 3. What features does the product have which makes it a good product?
 4. What features does the product have which could make it hard to use?
 5. What materials have been used and why?
 6. How would you improve the product?



5. Timbers

Hardwoods are durable and often used in expensive furniture. Hardwoods tend to have a close grain so look aesthetically better. They grow slowly. Example= Oak, Mahogany, Teak and Beech.

Softwoods are cheaper than hardwoods. They grow quickly. IKEA use softwood from sustainable forests, meaning that for every tree cut down they plant one in its place, a softwood tree takes 2—30 years to grow. This is better for the environment. They have very visible grain. Examples= Pine and Spruce.

Manufactured boards are timber sheets which are produced by bonding wood layers or wood fibres together. They are manmade. Examples are Plywood and MDF.

6. Sustainability

Reduce Using less materials and energy. Reducing the amount of packaging in products.

Reuse Designing reusable products that do not need to be thrown away straight after use.

Recycle Recycling products into new materials to be used again. Choosing recyclable materials.

Sustainability is about designers and manufacturers working together to minimise the impact products have on the environment. It is about being environmentally friendly.

7. New and Digital Technologies

CAD stands for **Computer Aided Design**. CAD software allows designers and engineers to design and model their products on computers. Designs are more easily to edited.

CAM stands for **Computer Aided Manufacture**. CAM processes include Laser Cutting, 3D Printing and Robotics. It is quicker, more accurate and creates intricate items.

8. Quality Control is when engineers and designs make regular checks to ensure what they are doing is correct.

Quality control checking reduces mistakes, waste materials and wasted time.

9. Working safely

PPE stands for **Personal Protective Equipment**.

PPE you will wear:

- An apron
- Safety goggles
- Leather Gloves

10. Design Communication

It is important all ideas are communicated clearly through drawings and annotation.

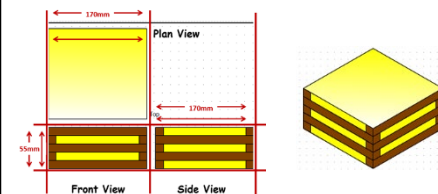
Annotation is the labelling of your work to fully explain it.

Types of drawing include:

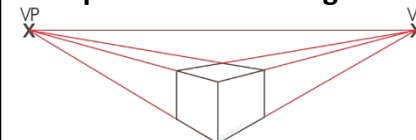
Isometric 3D drawing:



Orthographic 2D drawing:



Perspective 3D drawing:



Free hand sketching:





11. Project Tools and Equipment

Wire Cutters



Metal Vice



Soldering iron



Hacksaw



Soldering iron Holder



File



Wet sponge



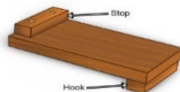
Engineer's Square



Solder sucker



Bench Hook



Solder



Tenon Saw



12. Material Properties

Material properties are the characteristics of materials and the way they perform.

Durable: Withstands wear and tear over time.

Hard: Withstands scratching.

Tough: Withstands sudden impact.

Strength to Weight ratio: Strong but still lightweight.

Ductile: Can be stretched.

Conductor: Allows passage of heat or electricity.

Insulator: Does not conduct heat or electricity.

Corrosion resistance: Resistance to rust and UV light.

Malleable: Can be shaped, pressed and moulded.

13. Engineering Sectors

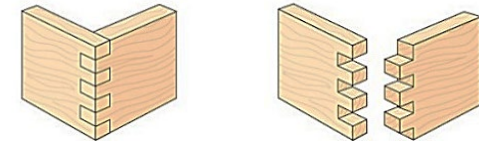
Sectors are different job areas within engineering. This includes:

Electrical, Mechanical, Automotive, Aeronautical, Architectural and Design Engineering.

Each sector carries out different engineering tasks.

14. Joining Materials

Comb joints are used in furniture construction, especially when making drawers. They provide extra strength to the corner of wooden products. Comb Joints interlock to fit components together.



PVA adhesive is used to join timbers. The glue takes 24 hours to fully dry before joints are secured.

Soldered or welded joints are used for metal components. They heat two metal components and join them with a filler metal that hardens and holds them together.

15. Materials

Timbers: MDF, Pine, Ply, Oak

Polymers: Acrylic, Rubber, HIPS

Metals: Aluminium, Mild Steel, Pewter.



1. Higher Order Thinking: Putting knowledge into context.

Pick an everyday object or product. Now keeping that object or product in mind, pick one of the questions below to discuss it in more depth. Each question is worth 6 marks.

Workshop tools and processes:

Research using the internet or think back to workshop skills you have learnt. Can you discuss any ways the product could be manufactured? What tools and processes could be used?

Material properties:

Identify which properties are required for this product to function at its best? Evaluate why these properties are important in helping the product perform well?

Sustainability and Renewable Energy:

Discuss how could you make the product more environmentally friendly? Explain what you could change?

Aesthetics:

Is the product visually appealing? Will it appeal to its user? Discuss how could you develop the product to be aesthetically pleasing and suitable for its target user group?

2. Challenge Tasks: Research, Report, Create.

- 1) Design a solution to help a football coach carry 12 drinks bottles easily.
- 2) Research smart materials and suggest ways smart materials can improve everyday products in your home.
- 3) Design a top tips/ health and safety poster for your current TED project.
- 4) How can Coca Cola become a more sustainable company? Write to them highlighting ways they can be more environmentally friendly.
- 5) Research and discuss the life cycle of a plastic bottle. Create a poster.
- 6) How can everyday products be made easier to use for people with mobility problems. Redesign items in your home to make them more ergonomic and easier to use.
- 7) Research different Engineering jobs. Create a skills list for at least 5 job sectors.

3. Visit, Watch, Do.

Visit this link to a sketch-a-day YouTube channel. Pick a video tutorial and develop your drawing skills by following the instructions and demos.

<https://www.youtube.com/channel/UCBtSgEZk914z5InEsU2J3w>

4. Analyse and Develop



1. Who is the product designed for? How do you know this?
2. How has the designer made the product easy to use?
3. What features does the product have which makes it a good product?
4. What features does the product have which could make it hard to use?
5. How would you improve the product? Why would you make that change?

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