BOURNEMOUTH SCHOOL

Year 9

Knowledge Organiser 2

Autumn Term: 2024-25

Name: Master Copy

Registration Form: 9.Master

✓Hard Work ✓Discipline ✓Smart Appearance ✓Respect

Bournemouth School

Knowledge Organiser: Year 9 Autumn Term 2

'Knowledge is power' by Francis Bacon

A knowledge organiser provides you with all the most important knowledge you need for each unit of study this half term. Your aim is to transfer all of this information into your long-term memory so you can use it in your lessons and further expand your understanding of this work.

How to use your knowledge organiser (KO):

1. Ensure you have your KO and Homework Learning journal with you at all times in school and when you need to do your homework at home.
2. In lessons when you have covered information that appears on your KO, your teacher will ask you to put a tick next to that section. This means that is now added to what you must learn for homework.
3. Initially, follow your homework timetable to decide what to revise each evening.
4. There are 4 strategies that you can use to revise. They are progressively more challenging so always start with the first in the list.
    a. **Look Cover Write Check**
        i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.
        ii. LOOK carefully at the subject and section of your KO you want to revise and try to remember as much as you can. Remember this should be a ticked section.
        iii. Now COVER this information so you can't read it.
        iv. WRITE out what you can remember word for word in your Homework Learning Journal.
        v. CHECK what you have written by comparing it to your KO. Tick each correct word in green pen and correct any errors you have made.
        vi. Repeat this process until you are confident you can remember everything you need.

        AIM:

        You should be able to repeat the information by rote
    b. **Self or peer quizzing**
        i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.
        ii. Write out a list of questions you could ask either yourself or a friend about this section of the KO. Write these in your Homework Learning Journal.
        iii. If you are working on your own, cover the KO and write a full answer to each question.
        iv. If you are working with a partner swap books and copy down their questions and have a go at answering them.
        v. Now uncover the KO and with a green pen correct your work.

        AIM:

        You should be able to repeat the information by rote but with a good understanding

    c. **Playing with words and sentences**
        i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.

ii. You now want to check how well you have learnt the information in your KO.
iii. Definitions – look at words that are used in this section. Can you write a definition in your own words?
iv. Rephrasing – can you rewrite the sentences or explanations in your own words?
v. Summary – can you summarise the main points of this section of the KO?
vi. Synonyms – can you write synonyms for key words and ideas?
vii. New Sentences – can you write a sentence that includes the key vocabulary or definitions that you have learnt?

AIM

You should be able to use the information in your KO in a flexible and confident way in your writing.

d. Think it, Link it

i. This is a technique to use towards the end of the half term when you are revising all of the KO.
ii. Think of the links or connections between different sections of your KO.
iii. Write these out in your own words in your Homework Learning Journal.
iv. Think about the links between a particular section of your KO and what you have learnt in your lessons. Can you expand on this section by linking it to your wider knowledge?
v. Write this out in your Homework Learning Journal.

AIM

You should be able to link your homework and your lessons to show a confident understanding of the work covered.

Homework Learning Journal

1. Always write the subject and the date when you start your homework.
2. Always write the strategy that you are going to use for your homework.
3. Always use a ruler to underline titles and dates.
4. Use a blue or black pen to complete your homework or a pencil if you need to draw.
5. Use a green pen to complete corrections of your work.
6. **You are expected to complete half a side of your Homework Learning Journal each evening as a minimum.**

Checking:

Your tutor will check your Homework Learning Journal at least once a week. If they are concerned that you aren't doing your homework properly they will offer support and guidance. If you don't respond to this guidance you will be added to the afterschool 'Success club' where a member of staff will help you complete your homework.

DO NOW tasks:

At the start of every lesson you should expect a Do Now task. This is a low stakes retrieval quiz on what you have learnt so far. If you have completed your homework this should be easy. The aim is to get 100% in each of these. If you miss this target occasionally, don't worry. If it happens regularly your teacher will ask your tutor to have a chat and offer you support.

Maths:

Your teacher will set you tasks to complete on Dr Frost Maths. This will be set every week on a Monday and will be collected in and checked on a Friday. If this has not been completed you will be issued a Detention on a Wednesday Lunchtime.

How long should I spend on my homework?

Key Stage 4					
Week 1					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
5 mins	MFL	MFL	Physical Activity	MFL	MFL
10	Maths	English		Maths	English
10	Biology	RS		Chemistry	Physics
10	Option C	Option D		Option A	Option B
55	Reading / Revision	Reading / Revision		Reading / Revision	Reading / Revision
Week 2					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
5 mins	MFL	MFL	Physical Activity	MFL	MFL
10	Maths	English		Maths	English
10	Biology	RS		Chemistry	Physics
10	Option C	Option D		Option A	Option B
55	Reading / Revision	Reading / Revision		Reading / Revision	Reading / Revision

- You should spend about 35 minutes revising your KO each day.
- You should spend 25 minutes either reading or revising each day.
- This timetable is a guide. If you want to spend longer revising one subject that you find more difficult and less time on one you find easy, that is your choice.
- We would like you to spend one evening involved in a physical activity. This might be a sports club, a run, a game of football with friends or just a nice walk with the dog. Ask your PE teacher if you need guidance with this. It doesn't have to be on a Wednesday.

- Masks are used for different reasons and can be divided into masks that are used for **ritual reasons**, for **protection**, **disguise** and **entertainment.**

- Mod roc is another name for plaster impregnated gauze strips , and it can be used to make sculpture.

Annotating your work **Use these heading to explain each piece of work you have done in your book**		Tick
What?	**What is it?** Explain the piece of work you are annotating Examples: This is a first-hand drawing that I made of a …This is a series of photographs I took of… This is a collection of visual research about… This is information I gathered about… This is a copy that I made of a piece of artwork by… This is a mood board of…to show ideas relating…	
Why?	**Why did you make it?** Explain how this piece helped you in your project. Examples: to get ideas about… to get me thinking about… to show what I have learned about… to explore the ideas of… to examine the shape/form/line/texture/pattern of… to analyse the style of… to try out the technique of… to practice… to develop my skills in…	
How?	**How did you make it?** Explain how you created the piece of work Examples: I drew it using… I painted it with… I constructed it from… I built it up by collaging… I photographed/drew it from life… I drew/painted it from a photography… I gathered the images from the internet… I researched the information on a site called…	
Quality	**How good is it?** What are you pleased with? What could you improve? Examples: I am pleased with the way I… one good element of the work is… the best feature of this work is… a section of this work that is particularly successful is…I'm not happy with… one area I could improve is… the least successful part of the work is… I wish that I had…	
Learning	**What did you learn?** What have you found out? What are the next steps? Examples: I improved my skills in… I got better at working in the style of… I have a better idea of… I have a clearer understanding of… I feel more confident about… Next I will try… To follow this up, I will… To build on this piece of work I hope to…	

Painting your mask… Top tips

- When painting your masks whether it is the Mod Roc or Clay, it is always best to paint a base layer colour.
- Practice a range of techniques, **dry brushing**, **tissue and paint**, **foil and paint**, **sgraffito**, **stencilling** before applying them to your mask.

Types of paint

- **Acrylic**

Acrylic paints are extremely versatile, and ideal for fine brushwork, glazing, staining, water media techniques. This smooth paint has excellent pigment quality, colour strength, and durability.

- **Watercolour**

The paint has colour pigment suspended in water until the water dries and stains the surface. The paint brushes with fluidity and transparency and is built up in layers from light to dark.

- **Gouache**

Gouache is a water-soluble and opaque paint so the white of the paper surface does not show through.

Painting techniques

- **Dry brush-** The dry brushing painting technique uses a thin layer of paint that's roughly brushed over a surface to give rough textured surface. Ensure you have applied a base layer as it may show through depending on the amount of paint added.

- **Tissue and paint-** Add tissue and smooth or scrunch, then paint on top.

- **Foil and paint-** Foil can add a metal type effect, you can paint over to create a tarnished appearance.

- **Sgraffito**, is the process of scratching through a surface to reveal the colours underneath.

- **Stencilling** a thin sheet of card, plastic, or metal with a pattern or letters cut out of it, used to produce the cut design on the surface below by the application of ink or paint through the holes

B1b- Cell division and cell transport

Mitosis – cell division		✓
Stage	Description	
1	Number of sub-cellular structures (organelles e.g. ribosomes and mitochondria) increases. The DNA replicates to form two copies of each chromosome.	
2	One set of chromosomes is pulled to each end of the cell. Nucleus divides.	
3	Cytoplasm and cell membrane divide forming 2 identical daughter cells.	

Large organisms = small surface area: volume ratio ☐

Small organisms = large surface area: volume ratio

Adaptations to maximise diffusion		✓
Thin walls	Creates a short diffusion distance	
Good blood supply	Maintains concentration gradient	
Increased surface area	Maximises rate of diffusion	

Transport across membranes				✓
Process	Definition	Diagram (to be drawn in class)	Examples	
Diffusion	The passive movement of particles resulting in a net movement from an area of higher concentration to an area of lower concentration. Occurs in solutions and gases.		Movement of oxygen and carbon dioxide in gas exchange (lungs and leaves)	
Osmosis	The diffusion of water from a dilute to concentrated solution, across a partially permeable membrane		Movement of water across cell membranes into and out of cells	
Active transport	The movement of particles from a low concentration to a high concentration, using energy from respiration		• Absorption of mineral ions into plant root hairs • Absorption of sugar molecules from the gut into the blood	

GCSE BUSINESS *Business in the real world* 3.1.3 Setting Business Aims and Objectives

What are business aims and objectives?		✓
Aim	The general goal of a business	
Objective	A specific target that is set for a business to achieve	

Purpose of setting objectives	✓
1. Helps with decision making	
2. Potential investors understand the direction the business is heading in.	
3. Provides a target	
4. Motivates all employees	

Use of objectives in judging success	✓
Once a business has set objectives, it can check back after a period to monitor if these have been achieved, this is a way of measuring success.	
e.g. A business can measure the number of employees to assess if it has met its objective of growth *OR* Track share price or dividends paid if their objective s shareholder value.	

Role of objectives in running a business	✓
A business can have a variety of different objectives:	
1. Survival	
2. Growth (domestic and international markets)	
3. Increased market share	
4. Social and ethical	
5. Customer satisfaction	
6. Increased shareholder value	
7. Maximise profit	

Changing Objectives		✓
Factors affecting objective choice	**Changing over time**	
1. Size of the business	1. Survival to growth	
2. Level of competition in the market	2. Reflect new legislation	
3. Type of business	3. Changes in the economic environment	
4. Stakeholder views	4. Changes in environmental expectations	

Definitions		✓
Private sector organisation	Organisations owned by individuals	
Public sector organisation	Organisations owned and run by the government	

Bournemouth School – Knowledge Organiser – Year 9

BUSINESS STUDIES

Main stakeholders of a business

1. Employees
2. The government
3. Suppliers
4. Community
5. Customers
6. Shareholders

Definitions

Key term	Definition
Stakeholder	Any individual or group of individuals who can be impacted by a businesses actions.

Objectives of stakeholders

Stakeholder group	Typical objectives
Employees	1. Secure jobs 2. High earnings
Owners/Shareholders	1. High dividend payments 2. Share prices
Local Community	1. Local job creations 2. Minimise local environmental impact
Government	1. Tax paid, 2. Growth
Suppliers	1. Fast payment 2. Growth
Customers	1. Quality 2. Customer service

Impact of business activity on stakeholders

Stakeholder	Impact
Employee	Employment opportunities Earnings
Local Community	Employment Investment in facilities Pollution
Suppliers	On time payments, Price negotiations & Abuse of power
Shareholders	Performance impacts share price and dividends
Government	Tax avoidance

Impact and influences stakeholders have on businesses

1. Negotiation:
Employees can demand better pay.
Suppliers can negotiate better terms and conditions

2. Direct Action:
Customers can stop buying products if they are unhappy
Employees can strike

3. Refusal to cooperate:
Local councils can refuse to cooperate if they feel a business is unethical for example they can refuse planning permission

4. Voting:
Owners such as shareholders can vote during AGM's to influence the objectives of a business.

Why is location important?

Cost: Rent varies according to location, London will have much higher rent costs than south wales.

Sales: Location can impact whether or not a business will get enough sales

Image: For some businesses, where they are located will have a big impact on their image for example a tourist shop in central London compared to on the outskirts of London

Location factors

Factor	Explanation
Proximity to market	A business will want to know where their customers are located and that they can reach them easily.
Availability of raw materials	Some businesses rely on raw materials, being close to these will reduce uncertainty and costs.
Availability of labour	Businesses may need to be located near highly skilled workers or highly populated areas for large numbers of employees.
Competition	Some businesses may want to be far from their competitors where as other may want to challenge their competitors by locating closer to them.
Costs	Location decision are often affected by costs and the amount of money the business can afford.

Factors influencing the location decision of a business

Five key factors that influence a location decisions:

1. Proximity to the market
2. Availability of raw materials
3. Availability of labour
4. Competition
5. Costs

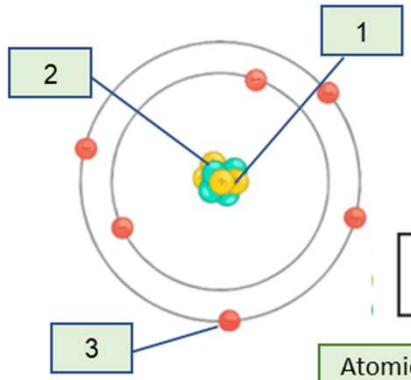
Nature of the business can influence location

Retail: Want to be located as close to customers as possible
Service: Can be located anywhere as they may be able to offer their service remotely such as web designers. Taxi driver needs to be located close to customers
Manufacturing: Cheap rent due to size of land required. Good infrastructure for transportation.

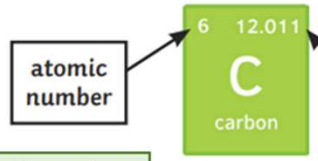
Chapter 1 – Atomic Structure and the Periodic Table

Keyword	Learn	✓
Atom	The smallest part of an element that can exist.	
Element	A substance made up of only one type of atom.	
Compound	A substance made up of two or more types of atom, chemically combined in fixed proportions.	
Mixture	A substance made up of two or more different elements or compounds, not chemically combined together.	
Filtration	The process of separating insoluble solids from liquids using filter paper and a filter funnel.	
Evaporation	The process of removing a solvent by heating so that it changes state into a gas.	
Crystallisation	The process of obtaining crystals of a solid solute from a solution.	
Distillation	A technique used to obtain pure solvent from a solution by evaporating and condensing the solvent.	
Chromatography	A technique used to separate a mixture of soluble substances.	
Rf Value	Rf = Distance moved by substance / Distance moved by solvent	
Solute	The substance that is dissolved in a solution	
Solvent	A substance that dissolves a solute, making a solution.	
Solution	A mixture formed by a solid or gas (solute) dissolving in a solvent.	
Saturated	A solution in which no more solute can dissolve at that temperature.	
Isotope	An atom of an element with the same number of protons (atomic number) but different number of neutrons.	

Atomic Structure



	Particle	Relative Mass	Charge
1	proton	1	+1
2	neutron	1	0
3	electron	Very small	-1



atomic number

mass number

Atomic number = number of protons

Mass number = number of protons + number of neutrons

The Periodic Table

MODERN PERIODIC TABLE

- Elements ordered by atomic number
- Metals on left; non-metals on right
- Elements organized into groups (vertical columns) based on number of electrons in outer shell
- Elements organised into periods based on number of electron shells
- Group 1 = alkali metals
- Group 7 = halogens
- Group 0 = noble gases
- Centre block - transition metals

MENDELEEV'S PERIODIC TABLE (1869)

- Elements ordered by atomic mass
- Elements in groups with other elements having similar properties
- Left gaps to make elements fit the pattern.
- Predicted properties of missing elements, which were later discovered, matching his predictions

Key Equation

$$\text{relative atomic mass } (A_r) = \frac{\text{sum of (isotope abundance} \times \text{isotope mass number)}}{\text{sum of abundances of all isotopes}}$$

Bournemouth School – Knowledge Organiser – Year 9

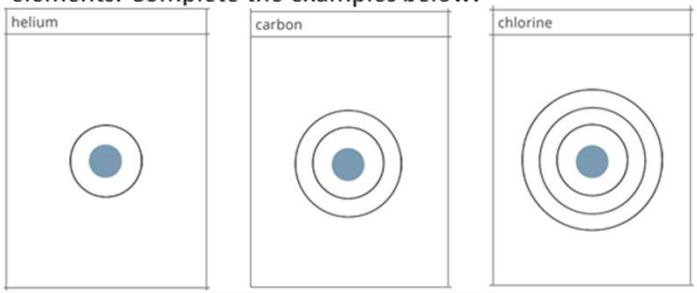
CHEMISTRY

Chapter 1b – Atomic Structure and the Periodic Table

Keyword	Learn	✓
Physical Property	A characteristic of a substance that can be observed or measured without changing the identity of the substance. Examples are: melting and boiling point, density, hardness, colour, electrical conductivity.	
Chemical Property	A characteristic of a substance that may be observed when it takes part in a chemical reaction. Examples are: reactivity, flammability, toxicity.	
Metal	Element that forms positive ions by losing one or more electrons to get a stable, full outer shell.	
Non-metal	Element that forms negative ions by gaining one or more electrons to get a stable, full outer shell.	
Ion	A charged particle formed when an atom gains or loses electrons to form a full outer shell. The number of protons is different to the number of electrons in an ion, which makes them charged.	

Electron Configuration

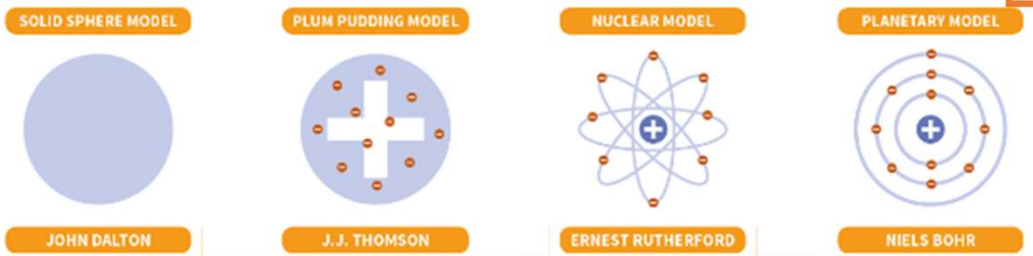
You need to be able to draw the arrangement of electrons of the first 20 elements. Complete the examples below:



Answers:
He = 2; C = 2,4;
Cl = 2,8,7

Electrons are found in shells. A maximum of 2 in the innermost shell, which is filled first, then 8 in the second and third shells.

Development of the Atomic Model



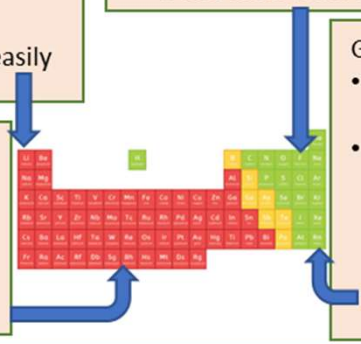
JOHN DALTON	J.J. THOMSON	ERNEST RUTHERFORD	NIELS BOHR
Atom is a solid sphere.	Atom is a ball of positive charge with negatively charged electrons scattered throughout.	• Mass and positive charge concentrated in nucleus • Electrons orbit nucleus • Mostly empty space	Electrons orbit in shells at fixed distances from nucleus.

Trends in the Periodic Table

GROUP 1 (Alkali Metals)
- Reactivity increases down the group
- Outer shell electrons are further from the nucleus as atomic radius increases
- Attraction between nucleus and outer shell electrons becomes weaker
- Outer shell electrons are more easily lost

GROUP 7 (Halogens)
- Reactivity decreases down the group
- Outer shell electrons are further from the nucleus as atomic radius increases
- Attraction between nucleus and outer shell electrons becomes weaker
- Outer shell electrons are less easily gained

TRANSITION METALS
- Harder & denser than Group 1 metals, with higher melting & boiling points
- Less reactive than Group 1 metals



GROUP 0 (Noble Gases)
- Unreactive due to full outer shell of electrons
- Boiling point increases down group because number of electrons increases, so attraction between atoms gets stronger

Neutrons

James Chadwick discovered the neutron.
This explained the existence of isotopes. Atoms of the same element could have the same number of protons (atomic number) but a different atomic mass due to a different number of neutrons.

2.2 Programming Fundamentals

Keyword	Definition / Example	✓
Array	A data structure that stores a collection of values with the same data type under one name/identifier. Each value is called an element and is accessed by an index position.	

1D array	A row of data values stored under one name.
	`names = ["Bob", "Tom", "Fred"]`
	`print(names[2]) #Outputs Fred`	

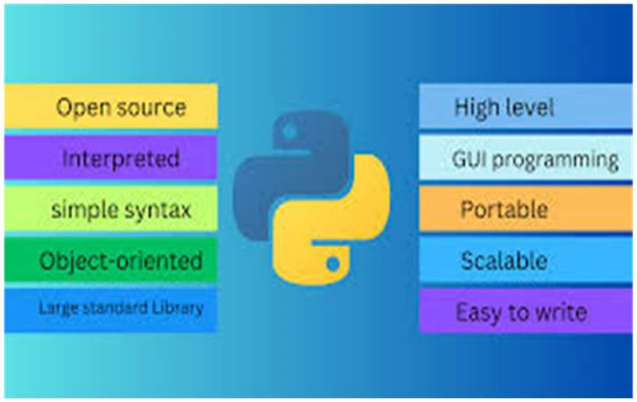
2D array	Represents a table structure with rows and columns.
	Python
	`class = [["Bob", "Tom", "Fred"],`
	`["Joe", "Shirley", "Steven"]]`
	`print(class[1][0]) #Outputs Joe`
	OCR Ref.
	`class = [["Bob", "Tom", "Fred"],`
	`["Joe", "Shirley", "Steven"]]`
	`print(class[1,0]) #Outputs Joe`	

Iteration	Used to repeat sections of code a number of times.	

Keyword	Definition / Example	✓

Iteration – count controlled	FOR loops are used when we know the exact number of iterations we wish to make. They are count-controlled.
	Python
	`#Outputs 1-10`
	`for count in range (1,11,1):`
	`print(count)`
	OCR Ref.
	`//Outputs 1-10`
	`for count = 1 to 10 step 1`
	`print(count)`
	`next count`	

Iteration – condition controlled	WHILE loops are used when the we do not know the exact number of iterations needed and this varies according to some condition. They are condition controlled.
	Python
	`continue = "Y"`
	`while continue == "Y":`
	`continue = input("Continue?")`
	OCR Ref.
	`continue = "Y"`
	`while continue == "Y"`
	`continue = input("Continue?")`
	`endwhile`	



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Year 9 'Power & Conflict (2)' Knowledge organiser

Poem	Themes	✓	Content	✓	First class quotations	✓	Context	✓
Poppies	Loss, family, suffering, motherhood		Focuses on a mother's perspective of waiting for her son to come back from war and remembering his childhood.		"All my words flattened, rolled, turned into felt" "Like a treasure chest"		Weir was a textile designer. Conflict is ambiguous to give a timeless relevance to families left behind.	
Kamikaze	Patriotism, honour, nature, memories		Follows the journey of a pilot going into battle, his decision to return home, and how his family shun him afterwards.		"Dark shoals of fish flashing silver" "A shaven head full of powerful incantations"		Cowardice was a great shame in wartime Japan, it brought rejection from society.	
The Emigree	Identity, memory, childhood, displacement		A female is forced to leave her country for political or social reasons. Her positive memories of home cannot be lost.		"I comb its hair and love its shining eyes" "I am branded by an impression of sunlight"		Published in 1993, still topical. Country is not specified, gives the poem a timeless relevance.	
Ozymandias	Nature, decay, pride, leadership		The narrator meets a traveller who tells him about a decayed stature that he saw in a desert. Human power is temporary.		"Look on my works, ye mighty, and despair" "The lone and level sands stretch far away"		Romantic poetic, interested in nature and emotion. Inspired by the French revolution, opposed the oppressive monarchy.	
Prelude	Nature, fear, childhood, experiences		A boy confidently steals a boat, rows across a lake, sees a looming mountain ahead and gets scared, scared by the experience.		"An act of stealth/ and troubled pleasure" "Upreared its head"		Part of a 14 book epic poem. Orphaned at 13, lived with family in the Lake District who treated him badly, became suicidal.	
Storm on the Island	Nature, fear, politics, community		The community prepares for a violent storm and describe the various sounds and sights during it.		"Exploding comfortably" "Spits like a tame cat turned savage"		Published during The Troubles in Northern Ireland. STORMONT is the name of the Northern Irish parliament.	
London	Corruption, inequality, poverty, loss of innocence		Narrator describes a walk around London, he is saddened by the sights and sounds of poverty.		"Mind-forged manacles" "Every black'ning church appals"		Blake had radical political views, he believed in social and racial equality. From a collection focusing on lost innocence.	
My Last Duchess	Pride, control, jealousy, status		Shows a visitor around his art collection and points out a portrait of his dead wife. He was annoyed by her "flirtatious" behaviour.		"As if she ranked / My gift of a nine-hundred-years old name" "I gave commands; then all smiles stopped"		Based on the Duke of Ferrara (1533-1598) whose wife died suspiciously. He is the inspiration for Browning's poem.	
Checking Out Me History	Protest, identity, pride, culture		Represents the voice of a man who was frustrated by the Eurocentric history curriculum that he was taught at school.		"Dem tell me wha dem want" "I carving out me identity"		Born in British Guyana, moved to England when grown up. His poems challenge racism and prejudice.	
Tissue	Nature, control, identity, fragility		Explores the paradox that although paper is fragile, temporary and ultimately not important, we allow it to control our lives.		"The sun shines through their borderlines" "Let the daylight break through capitals and monoliths"		Taken from a collection that questions how well we know the people around us ("The Terrorist At My Table")	

Bournemouth School

Year 9 'Paper 1 (Dystopian)' Knowledge organiser

Contained narrative plan	✓
Establish a thread	
Drop the reader into the setting	
Zoom in on a character	
Shift to another time or place	
Return/ zoom in on the character again	
Zoom out and close the narrative	
Motif will run throughout	

Opening hooks	Effect	✓
Action	Throws the reader into chaos, could create disorientation.	
Question	Involves the reader from the start.	
Dialogue	Gives insight into the character's issues.	
Something unexpected	Creates a puzzling effect, intrigues the reader.	
A contrast	Forces the reader to consider deeper ideas.	
Character description	Allows connection with key characters.	
Setting description	Orientates the reader to the surroundings, creates atmosphere.	
Humour	Immediately engages the reader.	

Techniques	Definition	✓
Motif	A dominant of recurring idea in a piece of writing.	
Tense	Expresses time of action (past, present, future)	
Fragmented sentence	A sentence missing either its subject or main verb.	
In media res	Starting in the middle of the action.	
Symbolism	Using words, images, people, locations or abstract ideas to represent something beyond the literal meaning.	
Assonance	Repetition of vowel sounds in words that are close together.	
Atmosphere	The main tone/ mood of a piece of writing.	

Ending type	Definition	✓
Cyclical narrative	Where the ending resumes back to the beginning.	
Plot twist	Complete change in direction.	
Epiphany	Sudden moment of realisation for the character.	
Cliff hanger	The reader is unclear at the end.	
Resolved	The strands of the plot are brought together and completed.	
Converging storylines	Two or more different storylines converge at the end.	
Deus ex machina	Where a seemingly unsolvable problem is suddenly solved by a new character/ place/ object/ unexpected occurrence.	
Repeated motif or symbol	Ending with zooming back in on the motif that runs throughout.	

Glossary		
Key term	**Meaning**	✓
Convincing	Believable as true.	
Compelling	Powerful/ interesting.	
Cacophonic	A harsh mixture of sounds.	
Bobsled	A mechanically steered sled.	
Laceration	Deep cut or tear in skin.	
Foible	A weakness/ eccentricity in someone's character.	
Salvo	A simultaneous release of weapons in battle.	
Interlude	An interval.	
Contretemps	Dispute/ disagreement.	
Pneumatic	Operated by air or gas under pressure.	
Aural	Related to hearing.	
Tympanic	Related to the ear drum.	
Endeavouring	Try hard to do something.	
Terrestrial	On or relating to Earth.	

Bournemouth School – Knowledge Organiser – Year 9

ENGLISH

Name: Date:

Year 9 Health and Safety and Hygiene

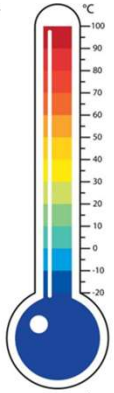
- Good food safety and hygiene practices are essential to reduce the risk of food poisoning.

Food poisoning
Food poisoning can be caused by:
- bacteria, e.g. through cross-contamination from pests, unclean hands and dirty equipment, or bacteria already present in the food, such as salmonella;
- physical contaminants, e.g. hair, plasters, egg shells, packaging;
- chemicals, e.g. cleaning chemicals.

Bacterial contamination is the most common cause.
Microorganisms occur naturally in the environment, on cereals, vegetables, fruit, animals, people, water, soil and in the air. Most bacteria are harmless but a small number can cause illness.
Harmful bacteria are called pathogenic bacteria.
The process of food becoming unfit to eat through oxidation, contamination or growth of micro-organisms is known as food spoilage.

Bacterial growth and multiplication
Most bacteria, including those that are harmful, have four requirements to survive and grow:
- food;
- moisture;
- warmth;
- Oxygen

Temperatures to remember
To reduce the risk of food poisoning, good temperature control is vital:
- 5-63°C – the danger zone where bacteria grow most readily.
- 37°C – body temperature, optimum temperature for bacterial growth.
- 0-5°C – operating range of your fridge
- 75°C – if cooking food, the core temperature, middle or thickest part should reach at least this temperature.
- 75°C – if reheating food, it should reach at least this temperature. Remember to reheat food only once!
- 18 Degrees C correct temperature for a freezer.



Allergen and food intolerance awareness
There are 14 ingredients (allergens) that are the main reason for adverse reactions to food. Cross-contamination of food containing these allergens must be prevented to reduce the risk of harm. They must also be labelled on pre-packaged food and menus so that consumers can make safe choices. The 14

Celery (and celeriac)	Milk
Cereals containing gluten	Molluscs
Crustaceans	Mustard
Eggs	Nuts
Fish	Peanuts
Lupin	Sesame
	Soybeans
	Sulphur dioxide

Where should food be stored in the fridge?

Cheese, dairy and egg-based products
The temperature is usually coolest and most constant at the top of the fridge, allowing these foods to keep best here.

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

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

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

Key terms
Allergens: Substances that can cause an adverse reaction to food. Cross-contamination must be prevented to reduce the risk of harm.
Bacteria: Small living organisms that can reproduce to form colonies. Some bacteria can be harmful (pathogenic) and others are necessary for food production, e.g. to make cheese and yogurt.
Cross-contamination: The transfer of bacteria from one source to another. Usually raw food to ready-to-eat food but can also be the transfer of bacteria from unclean hands, equipment, cloths or pests. Can also relate to allergens.
Food poisoning: Illness resulting from eating food which contains food poisoning micro-organisms or toxins produced by micro-organisms.
High risk ingredients: Food which is ready to eat, e.g. cooked meat and fish, cooked eggs, dairy products, sandwiches and ready meals. These are usually moist high protein foods but can include those kept warm on hotplates like Gravies, soups and stews.

High risk food
Bacteria easily multiply on foods known as 'high-risk food'. These are often high in protein or fat, such as cooked meat and fish, dairy foods and eggs. Cooked pasta and rice are also regarded as high risk foods if they are not cooled quickly after cooking and stored below 5°C.

Moisture
Bacteria need moisture to survive. Dried foods, such as powdered milk, cereals or dried egg do not support bacterial growth, if properly stored. However, if moisture is added, any bacteria still alive can quickly begin to multiply.

Time
When bacteria spend enough time on the right types of food, at warm temperatures, they multiply and cause illness. They multiply by Binary Fission.
Reheat food only once and eat leftovers within 48 hours.

Getting ready to cook
- Remove blazers/jumpers and roll up long sleeves.
- Tie up long hair and tuck in ties or head coverings.
- Thoroughly wash and dry hands.
- Put on a clean apron.

Use-by-date
You've got until the end of this date to use or freeze the food before it becomes too risky to eat. These are usually high risk foods.

USE BY:
25/08/20
KEEP REFRIGERATED

Best-before-date
You can eat food past this date but it might not be at its best quality.

BEST BEFORE:
25/08/21
STORE IN A COOL DRY PLACE

Food poisoning Bacteria e.g.
Salmonella
Listeria
E-Coli
Campylobacter
Bacillus Cereus
Staphylococcus aureus
Clostridium perfringens
These are all Pathogenic bacteria.

People at risk
Elderly people, babies and anyone who is ill or pregnant needs to be extra careful about the food they eat.

Why clean?
To remove grease, dirt and grime, and prevent food poisoning and pests. Dirty surfaces and equipment encourage flies etc

Chopping boards- White- Dairy and Bakery.
Red – raw meat Blue- Raw Fish
Yellow- Cooked Meat
Brown- Vegetables
Green- Fruit

Knife Safety- Different knives are used to cut and chop all sorts of foods, it is imperative to use the right knife for the right job and to ensure the correct hold, either the bridge or the claw.
Paring Knife-Fruit and Vegetables
Palette knife- spreading mixtures
Table knife- spreading and mixing liquid into dry mixtures.
Filleting knife – flexible blade to cut flesh from fish bones.
Chef's Knife- cutting meat etc
Serrated edge carving knives- cutting bread etc

Symptoms of food poisoning
The symptoms of food poisoning include:
- nausea;
- vomiting;
- stomach pains;
- diarrhoea.

Health and Safety- Before using electrical equipment- Ensure all plugs are secure and cables are intact. Food processors, blenders and deep fat fryers should be on a level surface, do not over fill them. Do not allow cables and leads to become a trip hazard.
Do not allow electrical components near to water, only wipe these parts down with a damp cloth. Be careful of sharp blades when cleaning them.
When using hand held electric whisks ensure loose garments and hair are tied away.

avoir	to have	
J'ai	I have	
Tu as	You have	
Il/Elle a	He/She has	
Nous avons	We have	
Vous avez	You have	
Ils/Elles ont	They have	

être	to be	
Je suis	I am	
Tu es	You are	
Il/Elle est	He/She is	
Nous sommes	We are	
Vous êtes	You are	
Ils/Elles sont	They are	

faire	to do/make	
Je fais	I do/make	
Tu fais	You do/make	
Il/Elle fait	He/She does/makes	
Nous faisons	We do/make	
Vous faites	You do/make	
Ils/Elles font	They do/make	

aller	to go	
Je vais	I go	
Tu vas	You go	
Il/Elle va	He/She goes	
Nous allons	We go	
Vous allez	You (pl) go	
Ils/Elles vont	They go	

Verb endings in the simple future		For example
Je	**-ai**	Je manger**ai**
Tu	**-as**	Tu manger**as**
Il/Elle/On	**-a**	Il/Elle/On manger**a**
Nous	**-ons**	Nous manger**ons**
Vous	**-ez**	Vous manger**ez**
Ils/Elles	**-ont**	Ils/Elles manger**ont**

The simple future:

It is used to describe what will happen in the future "I will eat".

To form it, use future stem plus appropriate ending e.g je manger**ai** – *I will eat*.
For **–er** and **–ir** verbs, the future stem is the infinitive.
For **–re** verbs, drop the –e from the infinitive.
e.g. boir**e** -> Je boir**ai** – *I will drink*

Mots essentiels	Essential words	
alors	so/then	
au moins	at least	
chaque	each	
d'abord	first	
de bonne heure	early	
deux fois par semaine	twice a week	
donc	so	
ensuite	then	
finalement	finally	
où	where	
à l'avenir	in the future	
quand	when	

Picture description		
Sur la photo	On the photo	
Je peux voir	I can see	
On peut voir	We/you can see	
Il y a	There is/are	
À gauche	On the left	
À droite	On the right	
Au centre	In the centre	
À l'arrière plan	In the background	
Au premier plan	In the foreground	
Il est en train de ...	He is in the middle of	
Ils sont en train de ...	They are in the middle of	

Simple future verb forms for irregular verbs		
Irregular future stems + same endings		
avoir	aur-	
être	ser-	
aller	ir-	
faire	fer-	

Les parties du corps Parts of the body		
La bouche	mouth	
Le bras	arm	
Le corps	body	
Le dos	back	
L'épaule (f)	shoulder	
Le front	forehead	
Le genou	knee	
La jambe	leg	
La main	hand	
Le nez	nose	
Les oreilles (fpl)	ears	
Le pied	foot	
La tête	head	
Le visage	face	
Les yeux (mpl)	eyes	
J'ai mal à	I have a pain in	

Manger sain Eating healthy		
les boissons gazeuses	fizzy drinks	
les céréales (fpl)	cereals	
les chips (fpl)	crisps	
l'eau (f)	water	
les pommes de terre	potatoes	
les gâteaux (mpl)	cakes	
les légumes (mpl)	vegetables	
la nourriture salée	savoury food	
La nourriture sucrée	Sweet food	
les oeufs (mpl)	eggs	
le pain	bread	
le poisson	fish	
les produits laitiers	dairy products	
la viande	meat	

Pour être en forme – In order to keep fit		
Je ferai du sport	I will do sport	
Je ferai trente minutes par jour	I will do 30 mins exercise a day	
J'irai au collège à vélo	I will go to school by bike	
Je jouerai au foot	I will play football	
Je mangerai équilibré	I will eat a balanced diet	
Je marcherai jusqu'au collège	I will walk to school	
Je ne boirai jamais de boissons gazeuses	I will never drinks fizzy drinks	
Je ne jouerai plus à des jeux vidéo	I won't play video games anymore	
Je ne mangerai plus de frites/hamburgers	I will not eat chips/hamburgers anymore	
Je ne prendrai pas le bus	I will not take the bus	
Je prendrai les escaliers	I will take the stairs	
Je prendrai des cours d'arts martiaux	I will take martial arts lessons	

Le sport et le fitness		
Pour arriver en forme, il faut…	In order to get fit, you must…	
avoir un bon programme	have a good schedule	
bien manger	eat well	
bien dormir	sleep well	
être motivé	be motivated	
faire du sport tous les jours	do sport every day	
jouer dans une équipe	play in a team	

Le sport et le fitness		
le sport diminue le stress	sport decreases stress	
C'est bon pour le moral	is good for morale	
C'est important pour la vie	is important in life	
ça me fatigue	it makes me tired	

On joue au paintball		
Qu'est-ce qui s'est passé?	What happened?	
Tu es touché?	Have you been hit?	
Où est-ce que tu es touché?	Where have you been hit?	
le terrain	grounds	
les billes (fpl)	paintballs	
le casque	helmet	
le matériel	Materials/equipment	
les règles	rules	

YEAR 9 GEOGRAPHY

Development Dynamics 2: India

1. How significant is India as a country?

Site – The actual location of a settlement on the Earth, composed of the physical characteristics of the landscape.
Situation - The location of a place relative to its surroundings and other places.

- India is an example of an **emerging** country.
- It has one of the **fastest growing economies 7%** and is predicted to have the **second largest economy by 2050.**
- The **location** of India encourages its growth, it can easily trade with Europe and South East Asia.
- India is the worlds most populated country **1.42 Billion.**
- **Politically** It is the worlds largest democracy.
- It was once **colonised** by Britain.
- There are **four** major religions with **Hinduism** being the largest.
- India has the worlds largest film industry **(Bollywood).**
- It has a wide range of **Biodiversity**. Including Tigers and Elephants.

2. How is India Globalised?

Globalisation has increased India's exports and output.

- GDP: 1.2 trillion in 1991, compared to 9.2 trillion in 2019.
- **Unemployment: 20% in 1991, 8.5% in 2019**
- Poverty: 36% in 1991, 21.9% in 2019.
- Recent economic policies in India have encouraged **Foreign Direct Investment (FDI)** by the government supporting a market economy. Most has come from major Transnational Companies (TNCs).
- **Shipping, containerisation** and **aircraft technology** have accelerated globalisation and reduced transports costs.

3. How do TNC's operate in India?

Many transnational corporations (TNCs) have set up factories and offices in India.
The country is an attractive location to TNCs because the population is well educated, and employees will work for lower wages than people in many other countries.
Companies like Hyundai and Honda manufacture cars in India. Companies like Microsoft, Ford and Virgin Media have call centres in India.
Three types of outsourcing have occurred in India:

- **Call centres-** Most Indian call centre employees are graduates earning £3000 a year (20% of what BT has to pay in the UK)
- **Software development-** Universities such as Bangalore provide technically qualified graduates who enable BT to develop and support its broadband.
- **Company administration-** e.g. accounting

4. What impacts have these changes had on the people and environment of India?

Not only has the population structure changed since 1950, *WHERE* people are living in India has also changed over time.
In 1960, 18% of India's population was urban. By 1990, this had risen to 26% and in 2022 to 36%.
The main cause of this is a result of **push** (rural poverty) and **pull** (increase in jobs) factors, leading to **rural-urban migration,** consequently increasing **urbanisation**.
As a result, economic growth within India is mainly urban, with wealth being concentrated within its cities.
This leads to the positive multiplier effect.
Invest → Growth of industry → workforce increases → people move there → services open → demand for workers.

Environmental degradation has occurred in for main ways:

- Air pollution
- Water pollution
- Deforestation and desertification
- Greenhouse gases and climate change

4. What are the positives and negatives of Top Down development?

Top-down development involves:
decision-makers – usually governments or **Transnational Companies (TNCs**) experts who plan changes.
Top-down development schemes: are large and expensive often involve loans from **Inter-Governmental Organisation (IGOs)** – i.e. government banks.

The **Sardar Sarovar Dam** was funded by the World Bank, Japanese banks and the Indian government.

The winners are:

- India's cities – hydroelectric power (HEP) and the provision of water.
- Farmers – **irrigation** water for crops.

The losers are:
Local residents – villages and farmland have been flooded by the dam.
Western India – religious and historic sites have been flooded.

5. How can bottom up development help India?

Bottom-up development involves:
experts working with communities to identify their needs
non-governmental organisations **(NGOs),** e.g. charities.
They are **small-scale** and **inexpensive**
bring **social** and ec**onomic benefits** to local communities.

Biogas plants are an example of bottom-up development in India.
Biogas plants are pits that are filled with dung which ferments to produce methane.

The benefits are:

- Cooking with gas is smoke-free, reducing respiratory illnesses.
- Girls have more time to go to school rather than collecting fuelwood.
- Slurry produced is a nutrient rich fertiliser.
- Larger plants can be used to generate electricity.

6. India, which way next?

Geopolitical influence – When a country becomes a major international player in the world market having established good trading relationships.

India's role is increasing in Asia, and globally:

- Globally, India belongs to the **G20** group of the world's largest economies.
- Original founder of the BRICS nations.
- India can help resolve global problems (e.g. climate change).
- At COP28 in 2023, India introduced two initiatives — the 'LiFE' movement and the "green credit" initiative
- India now supports investment through the **World Bank** in developing countries.
- It is an important member of the **United Nations** and is one of the largest contributors to UN peace keeping missions.
- Despite rapid economic growth, India has not invested enough in its own **infrastructure**.
- India's government does not receive enough tax revenue (from TNCs) owing to tax free incentives to develop its infrastructure (transport, piped water and sewage treatment).

Bournemouth School – Knowledge Organiser – Year 9

GEOGRAPHY

Wo hast du gewohnt? Where did you stay?	
Ich habe … gewohnt	*I stayed*
in einem Hotel	*in a hotel*
in einem Ferienhaus	*in a holiday home*
in einer Pension	in a B&B
in einem Wohnwagen	*in a caravan*
in einer Jugendherberge	*in a youth hostel*
auf einem Campingplatz	*on a campsite*
bei Freunden	*with friends*
Ich habe…übernachtet	*I stayed*

Was hast du gemacht? What did you do?	
Ich habe viele Sachen gemacht.	*I did lots of things*
Ich habe/Wir haben…	*I/we*
Musik gehört.	*listened to music*
Volleyball gespielt.	*played volleyball*
einen Bootsausflug gemacht.	*did a boat trip*
viele Souvenirs gekauft.	*bought lots of souvenirs*
viel Fisch gegessen.	*ate lots of fish*
die Kirche gesehen.	*saw the church*
ein Buch gelesen.	*read a book*
Sehenswürdigkeiten besichtigt	visited the tourist sights
Freunde/Familie besucht	visited friends/family
Ich bin zu Hause geblieben.	*I stayed at home*

Wohin bist du gefahren? Where did you go?	
Ich bin … gefahren	*I travelled*
nach Deutschland	*to Germany*
nach Wien	*to Vienna*
Wie bist du gefahren?	*How did you travel?*
mit dem Auto	*by car*
mit dem Reisebus	*by coach*
mit dem Schiff	*by ship*
Ich bin geflogen.	*I flew*
Ich bin zu Fuß gegangen.	*I walked*
Mit wem bist du gefahren?	*Who did you travel with?*
mit Freunden	*with friends*
mit meiner Familie	*with my family*

Was hast du noch gemacht? What else did you do?	
Ich bin … gegangen	*I went*
an den Strand	*to the beach*
in die Stadt	*into town*
windsurfen	*windsurfing*
kitesurfen	*kitesurfing*
schwimmen	*swimming*
Ich bin …gefahren	*I travelled*
Ich bin Ski gefahren	I went skiing
Ich habe Snowtubing gemacht.	*I went snowtubing*
Ich habe Eistennis gespielt.	*I played ice tennis*

High frequency words	
nur	*only*
dort	*there*
zu	*too*
nicht	*not*
gar nicht	*not at all*
sehr	*very*
ungefähr	*about*
viel	*a lot/much*
viele	*many*

Wann war das? When was it?	
in den Ferien	*in the holidays*
im Sommer/ Winter	*in the summer/ winter*
letzten Sommer/ Winter	*last summer/ winter*
heute	*today*
gestern	*yesterday*

Wie ist/war das Wetter? What is/was the weather like?	
Wie ist/war das Wetter?	*How is/was the weather?*
Es ist/war…	*It is/was*
sonnig/kalt/heiß	*sunny/cold/hot*
wolkig/windig/ neblig	*cloudy/windy/foggy*
Es regnet/schneit	*It is raining/snowing*
Es donnert und blitzt.	*There is thunder and lightening.*
Es hat geregnet/ geschneit	*It rained/snowed.*
Es hat gedonnert und geblitzt	*There was thunder and lightening.*

gehen - to go		
ich gehe	I go	
du gehst	you go	
er/sie/es geht	he/she/it goes	
wir gehen	we go	
ihr geht	you go	
Sie/sie gehen	you(form)/ they go	

haben - to have		
ich habe	I have	
du hast	you have	
er/sie/es hat	he/she/it has	
wir haben	we have	
ihr habt	you all have	
Sie/sie haben	you (form)/ they have	

sein - to be		
ich bin	I am	
du bist	you are	
er/sie/es ist	he/she/it is	
wir sind	we are	
ihr seid	you all are	
Sie/sie sind	you (form) /they are	

Meinungen - opinions		
Meiner Meinung nach (V2)	In my opinion	
Es ist/war …….	It is/was …….	
Ich finde/fand	I find/found	
Ich denke/dachte	I think/thought	
Ich glaube/ glaubte	I believe/believed	
Es macht Spaß	It is fun	
Es hat Spaß gemacht	It was fun	

Strong verbs in German change the vowel in the "du & er/sie/es/man" forms only		
fahren = fährst/fährt	to travel	
tragen – trägst/trägt	to wear	
essen = isst/isst	to eat	
sehen = siehst/sieht	to watch	
lesen – liest/liest	to read	
Verbs with a stem ending in –d or –t add an extra "e" in these forms		
arbeiten = arbeitest/arbeitet	to work	
finden – findest/findet	to think/find	

To talk about actions in the past use the perfect tense. You need a form of haben or sein (for movement verbs) plus a past participle (ge+verb stem+t)		
Ich habe/er, sie hat/wir haben: **gespielt/gelernt/ gemacht/gekauft** some past participles are irregular **getragen/ gesehen/gelesen**	I/he, she/we played/learnt/ did/bought/ wore/saw/read	
Ich bin/er, sie ist/wir sind: some past participles are irregular **gefahren/gegangen/ geschwommen/geblieben**	I/he, she/we travelled/went/ swam/stayed	

To talk about how you travel or who you travel with use:

mit + mode of transport/person –

"mit" always takes ***DATIVE CASE***

Masc: der changes to ***dem***

Fem: die changes to ***der***

Neut: das changes to ***dem***

mit dem Bus/mit meinem Bruder

mit der Straßenbahn/mit meiner Familie

The imperfect tense is sometimes used to talk about the past. Usually used for formal situations. Three key verb are often used in the imperfect to DESCRIBE things in the past		
Es war **Ich war**	It was I was	
Es hatte **Ich hatte**	It had I had	
Es gab	There was	
Es war sehr touristisch – it was very touristy **Die Stadt hatte einen Marktplatz – the town had a market place** **Es gab keinen Bahnhof – there was no station**		

The Role of Colours in Poster Design

Colours speak volumes. A vibrant red can ignite passion, a deep blue can evoke tranquillity, and a refreshing green can bring peace. Psychologists have long studied color theory, examining how different shades impact our minds and emotions.

Warm colours

Warm colours, such as red, orange, and yellow, are often ***associated with energy, joy, and optimism***

Cool colours

On the other hand, cool colours like blue, green, and purple often ***symbolize peace, calm, and harmony.***

Cultural impact

However, colour perception isn't purely psychological; it's also cultural. For example, white represents purity in Western cultures, while in some Asian cultures, it symbolizes mourning.

Aesthetics and readability

Color combinations also significantly impact a poster's aesthetics and readability. **Complementary colours** create a vibrant look with high contrast, **analogous colours** offer a rich, monochromatic look, while triadic colours provide a balanced and harmonious contrast.
Designers often adjust these schemes, ensuring the right balance between visual appeal and readability

Film Color Palettes and Schemes

A film colour palette is a set of colours that a filmmaker uses to create a specific mood or tone. It can consist of two or more colours that work together to create a cohesive look and feel. Filmmakers use color palettes to help tell their story and convey their message. For example, a filmmaker might use a muted color palette to create a sense of nostalgia or a bright and vibrant color palette to create a sense of excitement.

Keyword	Principles of Design – read, cover, write, review	tick
Colour theory	Color theory is the collection of rules and guidelines which designers use to communicate with users through appealing color schemes in visual interfaces.	
Colour wheel	A color wheel is a tool that helps you to combine appropriately the colors, and its represented by a circle formed by primary, secondary, and tertiary colors.	
RGB	RGB Color model stands for Red, Green, and Blue and is mainly used for electronic displays including computers and smartphones, and is based on the additive color model of light waves.	
CMYK	CMYK Color model stands for Cyan, Magenta, Yellow, and Key (Black). CMYK is subtractive and is used for printing.	
Monochromatic	The monochromatic scheme as the name says combine different shades from one color to create an attractive design.	
Complimentary	A complimentary colour scheme uses colours opposite each other on the colour wheel to create a high contrast aesthetic.	
Analogous	Analagous colours are next to each other on the colour wheel. They are often found in nature, for example in the changing colours of autumn leaves progressing around the colour wheel. An analogous colour scheme is characterised by a lack of contrast, unlike a complementary colour scheme	
Hue	Hue either refers to is a pure colour or the dominant colour. If black is added to a hue it becomes a shade and if white is added it becomes a tint.	
Saturation	Saturation refers to the intensity of a colour. Highly saturated colours appear more vibrant and bold, whereas less saturation appears dull.	

Bournemouth School: History Department: Knowledge Organiser: Year 9: Autumn 2: Hitler's Rise to Power

Timeline of key events:

August 1914: WWI starts and Hitler joins the German army
1918: Hitler awarded the Iron Cross for bravery in WWI
Sept. 1919: Anton Drexler founds DAP
Feb. 1920: Twenty Five Point Programme written declaring the main policies of the Nazi Party
1921: SA formed by Ernst Rohm
1923: Hyperinflation
Nov. 1923: The Munich Putsch; the failed attempt by Nazi party to overthrow the regional government of Bavaria and national government of Germany by force
April 1924: Hitler sentenced to 5 years in Landsberg Prison (released after only 9 months)
1924: Ban on Nazi Party lifted
1926: Bamberg Conference
1928 Election: Nazis won 12 seats in the Reichstag
29 Oct. 1929: Wall Street Crash; more than 16 million shares were traded in panic selling, triggering further sales and leading to a world economic crisis
1928-30: Muller government
1930-May 1932: Bruning government
Sept 1932 Election: Nazis win 107 seats in the Reichstag
1932: Presidential Election: Hindenburg wins, but Hitler polls 13.4m votes
July 1932 Election: Nazis win 230 seats in the Reichstag
November 1932 Elections: Nazis win 196 seats in the Reichstag
30 January 1933: Hitler appointed Chancellor of Germany by Hindenburg

Key terms/definitions

Term	Definition	✓
Balanced budget	When a nation does not spend more than it earns	
Bamberg Conference	Nazi Party meeting where Hitler strengthened his power and reorganised the Nazi party	
Centre Party (ZP)	A Catholic Party occupying the middle ground in political views	
Charisma	A quality in leadership which arouses loyalty and enthusiasm for a public figure	
Civil Servants	Citizens who work for and are paid by the government	
Communist	Supporter of communism: a political idea where workers have power and wealth is shared	
DAP	German Workers Party; the early Nazi Party, established by Anton Drexler in 1919	
Fuhrer	Leader; title given to Hitler to define his role of absolute authority	
Fuhrerprinzip	The idea that the Nazi Party and Germany should have one leader, obeyed by all	
Gaultier	The leader of branches of the Nazi Party (Gaue; single called Gau)	
General Elections	Elections held for the German people to choose deputies to sit in the Reichstag	
Great Depression	Slump in the economy in the 1930s which led to high unemployment	
Heil Hitler	Raised arm salute to Hitler	
Hitlerjugend	Hitler Youth movement, set up for the young in Germany, to convert them to Nazi ideas	
Indoctrination	Converting people to a set of ideas using education and propaganda	
Informant	Person who gives information to the authorities about the activities of other people	
Left wing	People who favour socialism and /or communism	
Manifesto	A public declaration of the policy of a political party	
Mein Kampf	Book containing autobiography/political views of Hitler written in 1924 in Landsberg Prison	
NSDAP	National Socialist Party or Nazi Party	
Presidential Election	Elections held for the people of Germany to choose the President of the Weimar Republic	
Political Intrigue	Trickery and secret deals used in politics instead of open political debate	
Propaganda	Use of a variety of means including newspapers, broadcasts and education to accept political ideas without question	
Querfront	'Cross front': bringing together different strands of left & right-wing parties to rule Germany	
RFB	Red Front Fighters; Communist private army (militia)	
Right Wing	People who favour groups that are nationalistic, patriotic and sometimes racist	
SA	Sturmabteilung; paramilitary storm troopers of the Nazi Party	
SS	Schutzstaffel: originally Hitler's bodyguard, they became the most powerful troops in Nazi Germany and were responsible for concentration camps and the Final Solution	
Stock market	The place where stocks and shares are traded; Wall Street in New York was the most important Stock Market in the world in the 1920s	
Taxes	Money paid by workers to the government to fund public works, schools, unemployment benefits etc	
Treason	The act of betraying your country; considered to be one of the most serious criminal acts	
Unemployment	The number of people who are without a job in a country	
Unemployment benefit	Money given to the unemployed by the government (unemployment insurance)	

Bournemouth School – Knowledge Organiser – Year 9

HISTORY

Bournemouth School: History Department: Knowledge Organiser: Year 9: Nazi control of Germany 1933-9

1. Keeping Control by using Terror			2. Keeping Control by using propaganda		
Method	**Description**	✓	**Method**	**Description**	✓
SS	Led by Himmler, oversaw the terror state including concentration camps		**Ministry of Propaganda**	Led by Joseph Goebbels, oversaw all censorship and propaganda	
Concentration Camps (from Feb 1933)	Used to imprison the Nazi's enemies: different categories		**Censorship**	Anti-Nazi papers closed, Radio controlled, pre-publication censorship, Jazz music banned, book burnings	
Gestapo 1933	Secret Police, had power to arrest and send to camps without trial		**Propaganda**	Spread Nazi message through: Posters, films, rallies (Nuremburg), architecture, theatre, literature, 1936 Olympics (4x Gold medals for Jesse Owens, pause on anti-Semitism)	
Night of the Long Knives (30th June 1934)	Also known as 'Operation Hummingbird' or the 'Blood Purge'; this event saw the purging of Hitler's military and political rivals in the SA in order to win the support of the army				

3. Keeping control of the Law			4. Keeping control of the churches		
Method	**Description**	✓	**Method**	**Description**	✓
Nazi Socialist League for the Maintenance of Law	All judges had to join this organisation and swear an oath of loyalty.		**Catholic Church**	Concordat signed with Catholic Church 1933. Hitler agreed to allow Catholic schools, if the church stayed out of politics	
German Lawyer's Front 1933	All lawyers had to join and swear oath, 100,000 members by end of 1933		**Protestant Church**	All Protestant churches merged in 1933 under Bishop Muller, Nazification of the churches – swastikas in church etc.	
People's Court 1934	Cases of treason tried and defendants summarily executed.		**Faith Movement**	Rival church set up in 1933 to worship traditional volk images – worship of the soil, crops etc	

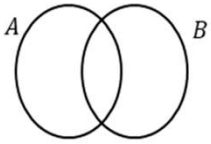
5. What opposition did Hitler face from churches?	✓	6. What opposition did Hitler face from the youth?	✓	7. What opposition did Hitler face from ordinary Germans?	✓
1. **Catholic Church**: Catholic schools shut, 400 priests sent to camps, vocal opposition from Cardinal Galen. Pope Pius XI issued an encyclical in 1937: 'With burning anxiety', read out by priests in Catholic churches. This showed resistance to Nazi attempts of control but was met with retaliation 2. **Protestant Church** : "Confessional Church" led by Father Niemoller. Emergency Pastor's League 7000 members		1. **Edelweiss Pirates:** attacked Hitler Youth, listened to swing and jazz music. 2,000 members by 1939. Tended to be working class youths. 'Navajos' in Cologne, 'Kittelbach Pirates' in Dusseldorf and 'Roving Dudes' in Essen. Not considered a serious threat by Nazi authorities. 2. **Swing Youth:** they listened to Swing music (hated by the Nazis) and danced. Mainly from the middle classes. Rebelled against the order and discipline of the Nazis.		1. Genuine support as result of Germany's economic recovery 1933. 2. Many were happy to see Germany restored, Versailles reversed, army rebuilt. 3. Many were happy that Communists had been imprisoned. 4. Army: In 1938, 16 Generals were removed, including Blomberg, Fritsch and von Brauchitsch who were critical of Hitler's foreign policy. 5. Three failed assassination attempts by 1939	

Keyword		Definition	Example(s)
Combinations		The number of ways of combining objects, found by multiplying the number of options for each choice	*Choose 2 students from a class of 30.* $\frac{30 \times 29}{2} = 435$
Estimating		Rounding values to 1 or 2sf to simplify a calculation	
Factor		A number that divides exactly into a given number	8 *is a factor of* 24
Multiple		A number in the given numbers times table	18 *is a multiple of* 6
Prime Factor Tree		Breaks up a number into products of its prime factors	12 → 4, 3 → 2, 2, 3
Prime Factor Decomposition		A number written as a multiplication of its prime factors, normally written in index form.	$140 = 2^2 \times 5 \times 7$
HCF (highest common factor)		The largest number that divides into 2 numbers with no remainder	*HCF of 20 and 28* 4
LCM (lowest common multiple)		The smallest number that 2 numbers divide into exactly	*LCM of 20 and 28* 140
Standard form		A number written in the form $A \times 10^n$, where $0 < A \leq 10$ and n is an integer	$0.00284 = 2.84 \times 10^{-3}$
Surd		An irrational number, written exactly using square or cube roots	$\sqrt{5}, \sqrt[3]{8}$
Rational		A number that can be expressed in the form $\frac{a}{b}$	$\frac{6}{7}, 1.5, 0.\dot{6}$
Irrational		A non-terminating decimal with no recurring pattern	$\pi, \sqrt{2}, 3\sqrt{5}$
Rationalising a denominator		Multiplying $\frac{a}{\sqrt{b}}$ by $\frac{\sqrt{b}}{\sqrt{b}}$ to attain an integer denominator of b	

Keyword		Definition	Example(s)
Identity		The ≡ symbol shows an identity. In an identity the two expressions are equal for all values of the variables.	$2(x+5) \equiv 2x+10$
Equation		An equation is only true for certain values of the variable. An equation has an equals sign, the variable and numbers. It can be solved to find the value of the variable.	$2y - 4 = 9y + 1$
Consecutive integers		Numbers one after the other in order.	$2, 3, 4,$ or $-8, -7, -6$
Expression		An expression contains letter and/or number terms but no equals sign	$2ab$ $2ab + 3b$ $2ab - 7$
Term		Separate parts of expressions, equations, formulae and identities separated by addition or subtraction	Within $2ab + 3b - 7$ there are 3 terms
Coefficient		The numerical value in an algebraic term	3 is the coefficient in $3x^2$
Formula		A formula has an equals sign and letters to represent different quantities.	$A = \pi r^2$
Subject of a formula		The subject of a formula is the letter on its own, on one side of the equals sign.	s is the subject of $s = ut + \frac{1}{2}at^2$
The nth term		The nth term of a sequence tells you how to work out the term at position n (any position). It is also called the general term of the sequence	
u_n		u_n denotes the nth term of a sequence,	u_1 is the first term, u_2 is the second term, and so on.
Arithmetic sequence		Terms increase by a fixed number called the common difference. General form $An + B$	$3, 7, 11, 15, \ldots$ nth term = $4n - 1$
Geometric sequence		Terms increase by a constant multiplier called the ratio. General form $a \times r^n$ or $a \times r^{n-1}$	$2, 6, 18, 54, \ldots$ nth term = $2 \times 3^{n-1}$
Quadratic expression		A quadratic expression contains a term in n^2 but no higher power of n General form $an^2 + bn + c$	$3, 8, 15, 24, \ldots$ nth term = $n^2 + 2n$
Expand		Remove brackets by multiplying terms	$2(2x+1) \equiv 4x+2$
Factorise		Arrange an expression into a product of its factors by placing terms in brackets.	$4x + 2 \equiv 2(2x+1)$

After completing a Prime Factor Decomposition for numbers A and B:

$HCF = A \cap B$
$LCM = A \cup B$



Surd Laws

- $a\sqrt{b} \times c\sqrt{d} = ac\sqrt{bd}$
- $\frac{a\sqrt{b}}{c\sqrt{d}} = \frac{a}{c}\sqrt{\frac{b}{d}}$
- $\sqrt{a^2} = \sqrt{a}^2 = a$

Standard form operations

- $(A \times 10^n) \times (B \times 10^m) = (AB) \times 10^{n+m}$
- $(A \times 10^n) \div (B \times 10^m) = \left(\frac{A}{B}\right) \times 10^{n-m}$
- $(A \times 10^n) \pm (B \times 10^n) = (A \pm B) \times 10^n$

note the powers must be the same

Index Laws

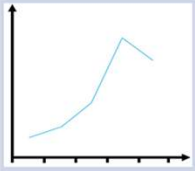
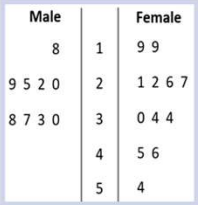
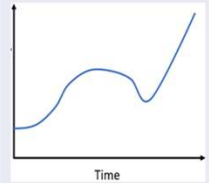
- $x^a \times x^b = x^{a+b}$
- $x^a \div x^b = x^{a-b}$
- $(x^a)^b = x^{ab}$
- $x^0 = 1$
- $x^{\frac{1}{a}} = \sqrt[a]{x}$
- $x^{-a} = \left(\frac{1}{x}\right)^a$

Bournemouth School – Knowledge Organiser – Year 9

MATHEMATICS

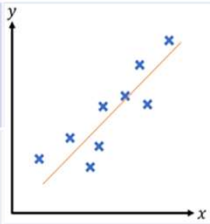
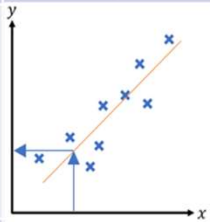
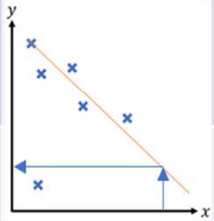
Year 9 – Maths – Autumn 2 – Units 1 & 2

Year 9 – Maths – Autumn 2 – Unit 3

Keyword	Definition	Example(s)
Qualitative	Describes a characteristic of the data	*Colour, Brand*
Quantitative	Data counted or measured in numerical values	*Height, Weight*
Discrete	Data that takes fixed values	*Shoe size, Year*
Continuous	Data that can take any value	*Foot length, Time*
Frequency polygon	Used for grouped data with even class-widths. Plot midpoint against frequency	
Pie chart	Shows portions of a whole, split into sectors	
Stem-and-leaf diagram	Simplifies writing long lists of numbers by using common digits as a stem. Must have a key.	
Median	The middle piece of data when in order of size, found using $\frac{n+1}{2}$.	*Find the median of the males:* 29
Range	A measure of spread. Difference between largest and smallest.	*Find the range of the males* 20
Time-series	A graph that shows how data varies over time	

Pie chart

$$Sector\ angle = \frac{f}{\Sigma f} \times 360$$

Keyword	Definition	Example(s)
Scatter graph	Displays bivariate data. Used to show if there is a relationship.	
Line of best fit	Drawn on a scatter graph to show the trend and predict data values.	
Correlation	A description of the relationship of bivariate data.	*Positive, negative, no*
Interpolation	Predicting within the range of data.	
Extrapolation	Predicting outside of the range of data	
Anomaly	A piece of data that does not fit the trend.	
Mode	The most common piece of data.	*Find the mode of* *2, 6, 3, 6, 4* *= 6*
Mean	The sum of all the pieces of data, divided by how many there are	*Find the mean of* *2, 6, 3, 6, 4* *= 4.2*

Mean from grouped data $= \frac{\Sigma fx}{\Sigma f}$

Mean from individual data $= \frac{\Sigma x}{f}$

Bournemouth School

music department

Year 9

Autumn term 2

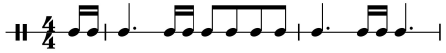
The Baroque Period

Dynamics

Terraced dynamics – music which has blocks of both loud and soft dynamic and no gradual changes

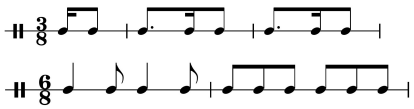
Rhythm

Allemande – a dance with a moderate tempo and 2 semiquaver upbeat



Courante – a dance in triple time

Gigue – a dance in compound time with characteristic dotted and quaver rhythms



Sarabande – a slow dance in triple time often with emphasis on the second beat via the use of a dotted rhythm.

Texture

Basso Continuo – a part in the texture played by a melodic bass instrument and a chordal instrument which fills out the harmonies

Canon – strict imitation of a melodic line at a set distance of time

Concertante – group of solo instruments within a concerto grosso

Imitation – when one melodic part copies the music of another whilst the first part continues their melody

Melody dominated homophony – a texture with a melody part and an accompaniment

Monophonic – a texture with a single melodic line and no accompaniment

Polyphonic – a texture in which many melodies (ie 2 or more) are played at the same time.

Ripieno – orchestral/ accompanying group of instruments within a concerto grosso

Structure and Form

Aria – literally song – songlike music in opera which often tells us how the character is feeling. In the Baroque period an aria was commonly in ternary form, and the singer would ornament the melody on the second A section

Chorus – a piece in an opera which is sung by the choir or chorus of singers

Concerto Grosso – a multimovement piece for a small group of soloists and an orchestra

Dance suite – a collection of dances designed to be performed together. In the Baroque period, this commonly went Allemande, courante, sarabande, gigue

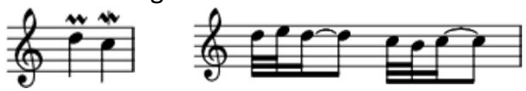
Opera – a play in which much of the action is sung rather than spoken. Accompanied by an orchestra. First developed in Italy in the Baroque Period

Recitative – a section in an opera which includes speech like rhythms and is sung in a declamatory style. Often has a sparse accompaniment. Moves the action on

Ritornello Form – literally a little return. Often used for the first movement of a concerto grosso. There is a returning theme played by the ripieno group which is separated by solo episodes played by the concertino group.

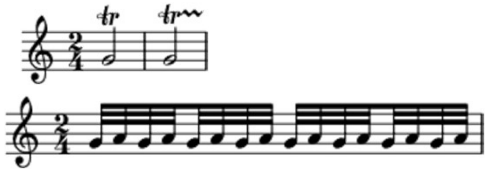
Melody

Mordent – ornament in which the main note is played, followed qucily by the one above and then the main note again.



Ornamented – refers to the fact a Baroque melodies were often embellished by the performer with ornaments such as trills and mordents

Trill – rapid alternation of the written note and the one above



Bournemouth School music department

Year 9

Autumn term 2

The Baroque Period

Instrumentation/ Sonority

Harpsichord – a keyboard instrument commonly found in the Baroque period where the strings are plucked not struck. Has little ability to sustain notes, and has no capability to vary the dynamics. Often used to play the basso continuo

Lute – a family of plucked string instruments which resemble a guitar, but have a body which has a rounded back (shaped like half a pear). Can be used as a continuo instrument, especially in vocal music

Viol – a family of string instruments which preceded the violin family and were still in use in the early Baroque period. Unlike the violin family, they have frets on the finger board.

Tonality

Major key – music composed primarily using the notes of a major scale

Minor key – music composed primarily using the notes of the minor scale

Harmony

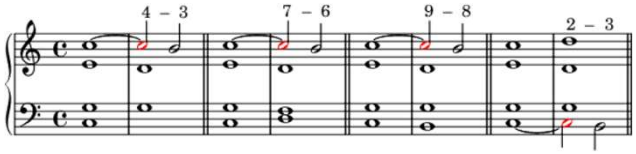
First inversion chord – a chord which has the 3rd (middle note) of the triad in the bass

Root position chord – a chord which has the 1st or root note of the triad in the bass

Second inversion chord – a chord which has the 5th (top note) of the triad in the bass

Seventh Chord – a triad which has the seventh note above the root added to it eg G-B-D-F. The seventh is dissonant with the root, and creates a need to resolve

Suspension –prepared dissonance - a chord which has one note from the previous chord held into the new chord creating a dissonance which is then resolved downwards by step



This QR code will take you to a Spotify playlist with audio examples for the Baroque period unit. You will find it helpful to listen to these as you learn.

Keyword	Learn	✓
Post-16 opportunities	Education or training beyond Year 11.	
County Lines	Where illegal drugs are transported from one area to another, often across police and local authority boundaries, usually by children or vulnerable people who are coerced into it by gangs.	
Disenchantment	A feeling of no longer believing in the values of society	
Trap House	Abase used for drug operations, usually a person's home who has been bribed or threatened into the situation.	
Identity	Refers to our sense of who we are as individuals and as members of social groups.	
Healthy lifestyles	Have a combination of a balanced diet, good sleep habits, daily exercise and hobbies for relaxation.	
Free Sugar	Any sugar added to a food or drink. Or the sugar that is already in honey, syrup and fruit juice. These are free because they're not inside the cells of the food we eat.	
Endorphines	Are a type of "feel-good" brain chemical. They act as natural pain and stress relievers.	

County Lines – the risks

A criminal record, prison, addiction, isolation from society and family.
Any rewards are ultimately outweighed by the risks.
Remember these gangs prey on vulnerable people and have only their interests at heart.

Tips for a healthy lifestyle:

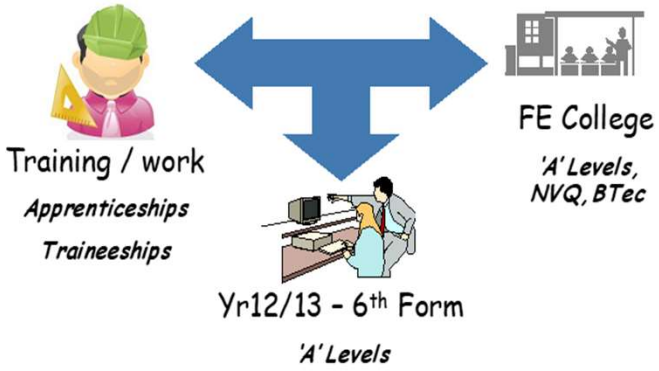
Relaxing –
Try hobbies out, then do what you enjoy.
Hobbies that calm are good.
Hobbies that offer challenge and development are good.

Sleep –
Get at least 7-9 hrs
No devices or social media before bed.
Establish a relaxed routine
Sleep in a cool dark room

Exercise –
Daily exercise is good.
Participate in team sports.
Skill development, challenge and shortterm rewards are best.

Diet –
Eat 5 portions of fruit and veg a day.
Base meals on starchy carbohydrates (potatoes, bread, rice, pasta – even better if wholegrain).
Have some 'dairy' choosing lower fat & sugar options.
Eat some beans, pulses, fish, eggs, meat and other proteins (2 portions of fish per week, one should be oily).
Choose unsaturated oils and spreads.
Drink 6-8 cups/glasses of fluid a day.
Avoid free sugars.

Post-16 and the law: You may leave school at the end of June 2026 when you are 16 years old BUT you must remain in education or training until you are 18.



3.1.1.1 The structure and function of the Musculo-skeletal System (KO 2 of 3)

How do MUSCLES WORK?

Muscles can only PULL they cannot push. This means that they must work in pairs to allow parts of the body to move back and forth. THESE PAIRS ARE CALLED **ANTAGONISTIC PAIRS.**

Antagonistic Pairs

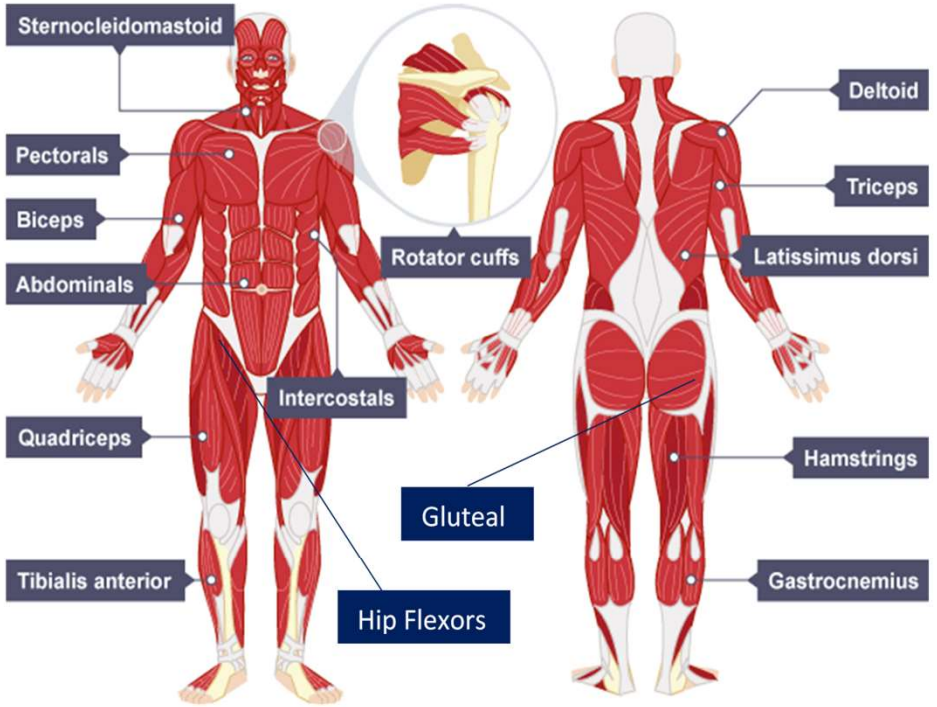
- A muscle must work in partnership with another muscle to allow movement to occur.
- The muscle that causes the movement (the pulling muscle) is called the **AGONIST** or **PRIME MOVER**. When this muscle contracts in becomes shorter.
- During this time the other muscle within this partnership is relaxing. This muscle is called the **ANTAGONIST** and is lengthening while it relaxes.

EXAMPLES:

When we flex our elbow, the biceps are the **agonist** and the triceps are the **antagonist**. However, these roles are reversed when the elbow extends, with the triceps becoming the **agonist** and the biceps becoming the **antagonist**.

When dorsiflexion occurs in our ankle the tibialis anterior is the **agonist** and the gastrocnemius is the **antagonist**. However, these roles are reversed when plantar flexion occurs at the ankle, with the gastrocnemius becoming the **agonist** and the tibialis anterior becoming the **antagonist.**

Muscles of the human body



Antagonistic Pairs	
HAMSTRINGS	QUADRICEPS
GASTROCNEMIUS	TIBIALIS ANTERIOR
BICEPS	TRICEPS
HIP FLEXORS	GLUTEALS
DELTOID	LATISSIMUS DORSI

Muscle Name	Movement when the agonist
Sternocleidomastoid	Lifts rib cage up and out when exercising
Pectorals	Lifts rib cage up and out when exercising
Intercostals	Lifts rib cage up and out
Triceps	Elbow extension
Biceps	Elbow flexion
Abdominals	Assists with exhaling
Quadriceps	Knee flexion
Hamstrings	Knee extension
Hip flexors	Hip flexion
Gluteal muscles	Hip Extension
Rotator cuffs	Shoulder rotation/Circumduction

Types of Muscle Contraction

Isotonic Contractions

These contractions occur when there is movement of the body. The ends of the muscles move closer together to cause the movement.

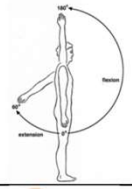
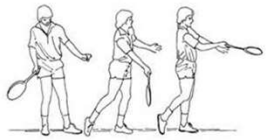
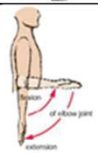
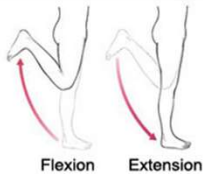
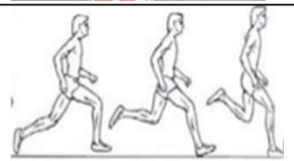
Isotonic Concentric Contraction occurs when the muscle shortens e.g. biceps contracting concentrically during the upwards phase of a bicep curl / triceps contracting concentrically during the upwards phase of a press-up

3.1.1.1 The structure and function of the Musculo-skeletal System (KO 3 of 3)

Isometric Contractions
Takes place when the body is being held in the same position. The length of the muscle stays the same.

Isotonic Eccentric Contraction occurs when the muscle lengthening (antagonist) is under tension. An eccentric contraction provides the control of a movement on the downward phase and it works to resist the force of gravity e.g. biceps contracting eccentrically when lowering the weight in a bicep curl.

Tibialis Anterior	Dorsiflexion
Gastrocnemius	Plantar Flexion
Latissimus Dorsi	Shoulder adduction
Deltoid	Shoulder Abduction

Types of movement at a joint		Sporting Examples	
Flexion and extension at the shoulder - The **Deltoid** causes flexion at the shoulder (upwards) - The **Latissimus dorsi** causes extension at the shoulder (downwards)		**Flexion and extension at the shoulder** • **Badminton – smash if flexion at the shoulder, forehand high serve is extension at the shoulder**	
Flexion and extension at the elbow - The **Biceps** cause flexion at the elbow (upwards) - The **Triceps** cause extension at the elbow (downwards)		**Flexion and extension at the elbow** • **Push up – upwards is extension, downwards is flexion** • **Football throw-in – releasing the ball is elbow extension**	
Flexion and extension at the knee - The **Hamstrings** cause flexion at the knee (heel to buttock) - The **Quadriceps** cause extension at the knee (leg down)		**Flexion and extension at the knee** • **Running – heel lift in recovery leg is flexion, extension in drive leg when contacting the ground**	
Flexion and extension at the hip - The **Hip Flexors** cause flexion at the hip (leg up) - The **Gluteal muscles** cause extension at the hip (leg down)		**Flexion and extension at the hip** • **Squats – upward phase is extension, downwards phase is flexion** • **Running – drive leg moving backwards is hip extension, recovery leg coming forward is hip flexion**	
Plantar Flexion and Dorsiflexion at the ankle - The **Tibialis Anterior** causes dorsiflexion at the ankle (toes up) - The **Gastrocnemius** cause plantar flexion at the ankle (toes down)		**Plantar Flexion and Dorsiflexion at the ankle** • **Take off in long jump – plantar flexion** • **Vertical jump – prep is Dorsiflexion, execution is plantarflexion** • **Drive leg pushing off the ground is plantar flexion**	

Practical work vocabulary – the words have the same meaning in all three science subjects. You are expected to know these definitions in the exams. Learn the spellings and definitions.

Vocabulary taught in Topic 1 - Energy		
Vocabulary	**Learn**	✓
Data	Information, either qualitative or quantitative, that has been collected	
Fair Test	A fair test is one in which only the independent variable has been allowed to affect the dependent variable	
Interval	The quantity between readings	
Reproducible	If the investigation is repeated by another person, or by using different equipment or techniques, and the same results are obtained	
Resolution	This is the smallest change in the quantity that can be measured by the measuring instrument	
Variables	These are physical, chemical or biological quantities or characteristics	
Categoric variables	These have values that are labels, e.g. names of plants or types of material	
Continuous variables	These can have values that can be given a magnitude either by counting or by measurement	
Control variable	This is one which may, in addition to the independent variable, affect the outcome of the investigation and therefore has to be kept constant or at least monitored	
Dependent variable	The variable of which the value is measured for each and every change in the independent variable	
Independent variable	The variable for which values are changed or selected by the investigator	

Vocabulary taught in Topic 5a – Forces		
Vocabulary	**Learn**	✓
Accuracy	A measurement result is considered accurate if it is judged to be close to the true value	
Measurement error	The difference between a measured value and the true value	
True value	This is the value that would be obtained in an ideal measurement	
Calibration	Marking a scale on a measuring instrument.	
Systematic error	These cause readings to differ from the true value by a consistent amount each time a measurement is made.	
Zero error	Any indication that a measuring system gives a false reading when the true value of a measured quantity is zero, eg the needle on an ammeter failing to return to zero when no current flows.	
Hypothesis	A proposal intended to explain certain facts or observations	
Prediction	A prediction is a statement suggesting what will happen in the future, based on observation, experience or a hypothesis	

Vocabulary taught in Topic 3 – Particle Model of Matter		
Vocabulary	**Learn**	
Anomalies	These are values in a set of results which are judged not to be part of the variation caused by random uncertainty	
Random Error	These cause readings to be spread about the true value, due to results varying in an unpredictable way from one measurement to the next. Random errors are present when any measurement is made and cannot be corrected. The effect of random errors can be reduced by making more measurements and calculating a new mean	
Range	The maximum and minimum values of the independent or dependent variables; important in ensuring that any pattern is detected.	
Precision	Precise measurements are ones in which there is very little spread about the mean value. Precision depends only on the extent of random errors – it gives no indication of how close results are to the true value	
Repeatable	A measurement is repeatable if the original experimenter repeats the investigation using same method and equipment and obtains the same results.	
Sketch graph	A line graph, not necessarily on a grid, that shows the general shape of the relationship between two variables. It will not have any points plotted and although the axes should be labelled they may not be scaled	

Vocabulary taught in Topic 8 - Space		
Vocabulary	**Learn**	✓
Evidence	Data which has been shown to be valid	
Validity	Suitability of the investigative procedure to answer the question being asked	
Valid conclusion	A conclusion supported by valid data, obtained from an appropriate experimental design and based on sound reasoning	

Prefix	Abbreviation	Power of ten
Giga–	G	10^9
Mega–	M	10^6
Kilo–	k	10^3
Centi–	c	10^{-2}
Milli–	m	10^{-3}
Micro–	μ	10^{-6}
Nano–	n	10^{-9}

Keyword	Learn	✓
Energy store	Name the different stores: kinetic, chemical, thermal (internal), gravitational potential, magnetic, electrostatic, elastic potential and nuclear	
Energy transfer	Can be done by waves (light and sound), electrical and work.	
System	An object or a group of objects that interact	
Principle of conservation of energy	Energy can be transferred from one store to another, but energy cannot be created or destroyed	
Kinetic energy	The amount of energy stored in a moving object	
Gravitational potential energy	The amount of energy stored in an object raised above the ground	
Elastic potential energy	The amount of energy stored in a stretched spring	
Spring constant	The force needed to stretch a spring 1 metre	
Work	1 joule of work is done when a force of 1 N causes an object to move 1 m	
Power	The rate at which energy is transferred (or rate at which work is done)	
Specific heat capacity	The amount of energy required to raise the temperature of 1 kg of a substance by 1°C	
Dissipate	To scatter in all directions or to use wastefully	
Thermal conductivity	The higher the thermal conductivity of the material the more the material allows heat to conduct through,	
Efficiency	The proportion of energy that is usefully transferred	
Non-renewable energy resources	Coal, Oil, Gas and Nuclear. These will run out, because there are finite reserves, which cannot be replenished.	
Renewable energy resources	Solar, Wind, Hydroelectric, Wave, Tidal, Geothermal, Biomass/fuel. These will never run out. They are replenished as they are used.	

Quantity	Unit	Symbol
Energy	joule	J
Work	joule	J
Power	watt	W
Mass	kilogram	kg
Extension	metre	m
Height	metre	m
Force	newton	N
Temperature	degrees Celsius	°C
Speed	metres per second	m / s
Spring constant	newtons per metre	N / m
Gravitational field strength	newtons per kilogram	N / kg
Specific heat capacity	joules per kilogram per degree Celsius	J / kg°C

Equations

Kinetic energy = ½ x mass x speed² $E_k = \frac{1}{2} \times m \times v^2$

Elastic potential energy = ½ x spring constant x extension² $E_e = \frac{1}{2} \times k \times e^2$

Gravitational potential energy = mass x gravitational field strength x height $E_p = m \times g \times h$

Work = force x distance moved in the direction of the force $W = F \times s$

$Power = \frac{Energy\ transferred}{Time}$ $P = \frac{E}{t}$ OR $Power = \frac{Work\ done}{Time}$ $P = \frac{W}{t}$

$Efficiency = \frac{Useful\ output}{Total\ input}$

Bournemouth School – Knowledge Organiser – Year 9

PHYSICS

Synagogue: Jewish place of worship.

Minyan: a group of 10 adults required for a Jewish religious service.

Menorah: a candle stick holding 7 or 9 candles

Star of David: symbol of Judaism, the shape of King David's shield.

Aron Hakodesh/Ark: The holiest part of the synagogue which contains the Torah scrolls.

Ner Tamid: eternal light/ a light that is kept burning above the ark

Bimah: A raised platform from where the Torah is read.

Orthodox	Reform
The person leading the service will face the Ark.	Worship is more likely to take place on Shabbat and festivals, not every day and The person leading the service will face the congregation/
The service will be held in Hebrew.	Reform synagogues will use Hebrew and the language of the country they are in
Men and women sit separately to worship	Men and women sit together to worship The person leading the service will face the congregation.
Orthodox rabbis are male	Women can be Rabbis.
Covering your head for worship is a sign of respect to G-d. Men are likely to cover their head using a skull cap called a kippah.	Most men will wear head coverings, some women may also chose to wear a kippah or a hat
Women will cover their heads if they are married, often with a hat or scarf.	

Amidah: central prayer of Jewish worship- the "standing prayer".

Shabbat: the Jewish holy day of the week; starting shortly before sunset on a Friday until night time of Saturday.

Shabbat at the synagogue	Shabbat at home
-The congregation stands when the Ark is opened: a reminder of how the Jews stood at the bottom of Mount Sinai when Moses returned with the 10 Commandments. -Torah passes through the synagogue, many Jews touch it with their Siddur or the tzizit on their tallit and then touch their lips. In Ezekiel Jews are told G-d's words should be on their lips and sweet like honey.	-Everything is prepared before Shabbat begins. Many types of work are not allowed on Shabbat, so it needs to be done prior to sunset. -Two candles are placed on the table. They represent the commandments to "remember" and "observe" Shabbat. -Two loaves of challah bread. These represent the food provided for Jews whilst they wander in the wilderness. -Wine or grape juice. Drinking Shabbat wine symbolises joy and celebration

Worshipping at home

Mezuzah: A mezuzah is a little box which contains scripture and is nailed to the doorframe of a Jewish house. A Jew will touch the mezuzah as a reminder to follow G-d's commandments .

Prayer: Jews are required to pray 3 times a day, for many Jews it would not be possible to go to the synagogue every time. Many women only attend synagogue on Shabbat, so it is important they are able to also worship at home. And G-s omnipresent- everywhere!

Study of scripture: **Tenakh**- The Written Law- Jewish sacred scriptures. A collection of 24 books. INCLUDES THE TORAH. **Talmud**- The Oral law- a commentary on the Torah by early Rabbis on how to interrupt laws for everyday life.

How is a baby welcomed into Judaism?

Brit Milah: ceremony of male circumcision; removal of the foreskin for religious reasons. The formal naming of the baby boy will take place here.

Mohel: a trained circumciser.

Sandek: "Companion of the child".

Brit Bat: daughter's covenant. They might light candles or was the baby's feet, name the baby. They might also name the baby at a Shabbat Tora service at the synagogue.

Redemption of the first born son: Some Orthodox Jews give a small amount of money 31 days he is born to redeem him.

How do Jews celebrate coming of Age?

- **Bar Mitzvah:** Ritual for boys at age 13. Son of the Commandment.
- **Bat Mitzvah :** Ritual for girls at age 12. Daughter of the Commandment.

Bar Mitzvah	Bat Mitzvah
-It will take place of the first Shabbat after his 13th,he will read the Torah in the normal synagogue service. -His Father gives thanks to G-d for bringing his son to maturity and declares he is responsible for his own actions -He will have lessons at the synagogue to prepare, especially in helping him understand Hebrew. -He will wear a tallit for the first time. -Sweets are thrown to represent blessings. -There is a celebratory meal in honour of the Bar Mitzvah boy.	-In Reform Judaism a Bat Mitzvah is very similar to Bar Mitzvah. A girl will read from the Torah or may recite the Eishet Chayil in Hebrew. The will also attend synagogue in order to prepare. -In Orthodox Judaism women don't take a lead role in synagogue services, so instead they may have a family meal with small religious gifts.

How to Jews celebrate a marriage and why?

- **Betrothal/ Kiddushin:** the period of time before the wedding/ engagement.
- **Ketubah:** Jewish marriage contract. It is a contract of the husband's duties to the wife.
- **Chuppah:** Jewish wedding canopy. Symbolises the home the couple will make together.
- The bride circles the groom 7 times: Symbolises the bride and groom make space for each other every day.
- The groom breaks a glass under his heel: Shows regret for the destruction of the temple.
- Mazel Tov: Hebrew phrase meaning "Good Luck"/ "Congratulations".
- Wedding reception - lots of music and dancing: Twedding dance is called the Hora.

How to Jews mourn the dead?

When a death is announced Jews will make a small tear in their clothes to follow the example of Jacob and as a sign of the grief and sorrow.

"Jacob tore his clothes…and observed mourning for his son" Genesis 37:34)

Burial takes place as ASAP. A simple coffin is used to show equality in death.

Shiva is an intense period of mourning that lasts for 7 days, after the burial.

The same prayer is recited throughout the 12 month mourning period- The Kaddish. It praises G-d and asks for peace.

Mourners leave pebbles at the grave to represent the permanence of memory.

The dietary laws of Judaism.

Dietary laws/ Kashrut: rules that deal with foods permitted to be eaten, food preparation & food combinations. Most strictly followed by Orthodox Jews.

Kosher: permitted food, food that meets the requirements of Jewish law.

This will include certain meat, which has been slaughtered in a specific way. Eg. Beef and chicken.

Trefah: foods which are forbidden, means "torn".

Certain meats are forbidden eg. Pork, shrimp and shellfish

Meat and milk CANNOT be mixed. Some Jews will have two lots of utensils etc.

" You shall not boil a kid in its mother's milk"

How do Jews celebrate Rosh Hashanah and Yom Kippur?

Rosh Hashanah: the Jewish New Year	Yom Kippur: the Day of Atonement.
Special prayers of forgiveness are said in the month leading up to Rosh Hashanah, as well as acts of charity. *To atone/ make up for any wrong doing in order to be judged well by G-d.*	10 Day after Rosh Hashanah. No work is to be done. *It is the Sabbath of Sabbaths.*
The shofar is blown daily in the synagogue in the month before Rosh Hashanah and 100 times on Rosh Hashanah. *Wakes Jews up (spiritually) and calls them to repent.*	Jews fast for 25 hours. *On this days Jews are expected to practice "self denial".*
Sweet food such as apples and honey are eaten. *Desire for a sweet new year.*	Jews wear white. *A sign of purity.*

How do Jews celebrate Pesach/ Passover? The Jewish festival which remembers the Jewish Exodus (escape) from slavery in Egypt. Seder plate below.

Shank bone- sacrifice of lamb for blood on door posts. Bitter herbs- bitterness and hardness of slaves. Charoset- paste that symbolizes the paste used to create the monuments in slavery. Egg- Offering used in the Temple. Parsley- back breaking work of slaves.

Expressions of frequency		
Todos los días	Every day	
Dos o tres veces a la semana	Twice or three times a week	
A veces	Sometimes	
De vez en cuando	From time to time	
Nunca	Never	

¿Qué haces con tu móvil?		
Chateo con mis amigos	I chat with my friends	
Comparto mis vídeos favoritos	I share my favourite videos	
Descargo aplicaciones	I download apps	
Hablo por Skype	I talk on Skype	
Juego	I play	
Leo mis mensajes	I read my messages	
Mando mensajes	I send messages	
Saco fotos	I take photos	
Veo vídeos o películas	I watch videos or films	

La música		
el rap	rap	
el rnb	RnB	
el rock	rock	
la música clásica	classical music	
la música pop	pop music	
escucho rap	I listen to rap	

Opiniones de la música		
la letra	the lyrics	
la melodía	the melody	
el ritmo	the rhythm	
mi canción favorita	my favourite song	
mi cantante favorito	my favourite singer	

La televisión		
Mi programa favorito es...	My favourite programme is...	
un concurso	a game/quiz show	
un programa de deportes	a sports programme	
un reality	a reality show	
un documental	a documentary	
una telenovela	a soap	
una comedia	a comedy	
una serie policíaca	a crime series	
las noticias	the news	

Las opiniones		
me gusta	I like (singular)	
me gustan	I like (plural)	
no me gusta	I don't like (singular)	
no me gustan	I don't like (plural)	
me gusta(n) mucho...	I like...a lot	
no me gusta(n) nada...	I don't like at all	

Los adjetivos		
divertido/a	fun	
informativo/a	informative	
aburrido/a	boring	
emocionante	exciting	

Describing a photo		
En la foto	In the photo	
Hay	There is/are	
Puedo ver	I can see	
A la izquierda	On the left	
A la derecha	On the right	
En el centro	In the centre	

Al cine		
una comedia	a comedy	
una película de acción	an action film	
una película de animación	an animated film	
una película de aventuras	an adventure film	
una película de ciencia ficción	a science-fiction film	
una película de fantasía	a fantasy film	
una película de superhéroes	a superhero film	
una película de terror	a horror film	

Hacer in the preterite tense		
hice	I did	
hiciste	you did	
hizo	he / she / it did	
hicimos	we did	
hicisteis	you (pl) did	
hicieron	they did	

Intensifiers		
muy	very	
bastante	quite	
un poco	a bit	
demasiado	too	

En clase		
¿Cómo se dice...?	How do you say...?	
¿Qué significa...?	What does...mean?	
¿Cómo se escribe...?	How do you spell...?	

The present tense

Use the present tense to talk about what you usually do. See the endings for regular verbs below.

-ar verb endings present			
Take off the –ar and add the following endings:			
-o		**-amos**	
-as		**-áis**	
-a		**-an**	

-er verb endings present			
Take off the –er and add the following endings:			
-o		**-emos**	
-es		**-éis**	
-e		**-en**	

-ir verb endings present			
Take off the –ir and add the following endings:			
-o		**-imos**	
-es		**-ís**	
-e		**-en**	

Present tense ir (to go)		
voy	I am going	
vas	You are (s) going	
va	He/she is going	
vamos	We are going	
vais	You are (pl) going	
van	They are going	

-ar verb endings preterite			
é		**amos**	
aste		**asteis**	
ó		**aron**	

-er / ir verb endings preterite			
í		**imos**	
iste		**isteis**	
ió		**ieron**	

Common irregular verbs (preterite)		
jugué	I played	
fui	I went	
fue	it was	

Common irregular verbs (present)		
hago	I do	
tengo	I have	
soy	I am	
estoy	I am	
juego	I play	

The near future:

It is the equivalent of 'I am going to do' in English.

Form of 'ir' + a + infinitive
e.g. Voy + a + jugar

Common verbs		
voy a jugar	I am going to play	
voy a comer	I am going to eat	
voy a ver	I am going to watch	
va a ser	It is going to be	

Year 9 Spanish - Half-Term 2

Tick	Hardwood	Uses	Advantages	Disadvantages
	Oak	• High quality furniture • Whisky barrels • Boat building	• Compressive strength • Hard • Durable	• It is rarer • Expensive • Fairly difficult to work with
	Mahogany	• Window frames • Jewellery boxes • Older furniture	• Fairly easy to work with • Finishes well • Aesthetically pleasing due to the reddish colour	• Issues sourcing due to being grown in tropical forests • Expensive
	Beech	• Toys • Tools • Cooking implements	• Tough • Hard • Does not splinter easily	• Very difficult to work with • Not resistant to moisture
	Balsa	• Modelling • Raft building • Surf boards	• Extremely easy to work with/soft • Lightweight • Buoyant	• Soft • Weak

Tick	Softwood	Uses	Advantages	Disadvantages
	Cedar	• Sheds • Boats • Fences	• Natural oils make it resistant to water and fungal growth • Durable • Low density	• Not as strong as pine
	Pine	• Construction • Inexpensive furniture	• Easy to work with • Durable • Lightweight	• Knots weaken the timber • Can warp and crack easily

Tick	Manmade board	Uses	Advantages	Disadvantages
	Plywood	• Building and construction • Flooring	• Strong • Flat • Resistant to warping and cracking	• Expensive • Splinters easily • Susceptible to water damage
	MDF	• Inside of cabinets and storage units • Insides of flat pack furniture	• Very easy to machine and cut • Smooth surface (ideal for painting) • Cheap	• Poor aesthetics • Weak • H&S precautions needed when working with it for a long time

GCSE Design Technology:
CORE 1.13 Materials Properties

What is a mechanical property?
Elements of a material that resist deformation from external forces in a particular way.

Tick	Property	Definition
	Strength	Withstands forces by squashing (compressive strength) or stretching (tensile strength).
	Elasticity	Can return to its original shape once the deforming force has been removed.
	Plasticity	(plastics only) Ability to permanently deform without breaking when heated.
	Malleability	(metals only) Ability to deform in all directions without fracture.
	Ductility	To be drawn out, bent or twisted without fracture.
	Hardness	Resists deformation, indentation or penetration.
	Toughness	Withstands sudden shock or stress.
	Brittleness	Inability to withstand sudden shock or stress.
	Durability	Withstands deterioration over a long period of time.
	Stability	Resists changes in shape over time.
	Stiffness	Resists bending.

GCSE Design Technology:
CORE 1.14 Influences in designing and making

Tick	Criteria	Definition/ description
	Fairtrade Foundation	Tackles poverty and injustice across the world. It ensures farmers are paid a fair price and has better working conditions and tries to prevent child labour.
	Carbon Offsetting scheme	When companies or individuals reduce their carbon footprint through ways such as planting trees, encouraging staff to cycle to work, car sharing etc.
	Product disassembly	When a product an be taken apart so that individual parts can be recycled or reused.
	Disposal of waste	This is governed by laws at international, European, national and local levels to ensure that collection, transportation and disposal of waste has the least amount of impact on the environment.
	Human capabilities	When a design meets the needs of the user and operates within their capabilities.
	Cost of materials	Refers to all aspects i.e. the initial cost of the raw material, the costs of maintenance, transportation, recycling and disposal.
	Manufacturing capability	Considers the machinery/equipment available to manufacture and then the costings available to actually make the product.
	Modular	A design featuring parts of standard sizes so that they can be constructed in different ways.
	Consideration of 'green designs'	Global warming and rising energy costs have led to designers thinking about environmental factors when designing products without compromising function, quality or performance.

Timetable

	1Mon	1Tue	1Wed	1Thu	1Fri	2Mon	2Tue	2Wed	2Thu	2Fri
Reg										
1										
2										
Break										
3										
4										
Reg										
Lunch										
5										
6										