

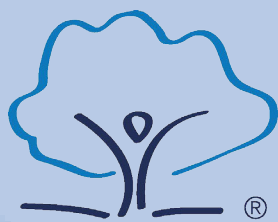
Year 9

Knowledge Organiser

Term 1 and 2



North Oxfordshire Academy
The best in everyone™
Part of United Learning



North Oxfordshire Academy

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North Oxfordshire Academy Values

We believe that, of the United Learning Values, the three that best define North Oxfordshire Academy are **Respect, Ambition and Determination**. Our mission, our vision and our values have been arrived at after consultation with staff and students at North Oxfordshire Academy.

Our Mission:

We exist to provide our students with the best life chances in Oxfordshire.

Our Vision:

To be an academy where students receive a world class education in character and academics leading to happiness and fulfilment in life.

Respect

- Respect for others
- Respect for ourselves
- Respect for our environment

Ambition

- Aiming to achieve the highest possible outcome
- Aspiring to achieve the best possible jobs, college and university places
- Offering leadership opportunities for all

Determination

- Not giving up during adversity
- Embracing the challenges of learning at a higher level
- Support each other to achieve

Student Equipment

Ready to Learn?

- | | |
|-----------------------|--|
| • 2 pens (black/blue) | • Non-permanent whiteboard pen |
| • 1 Green pen | • Knowledge Organiser – Given by school |
| • 1 pencil | • 1 scientific calculator (Must be a Casio FX85) |
| • 1 rubber | • Home Learning book – Given by school |
| • 1 ruler | • A school bag |

Home Learning Book

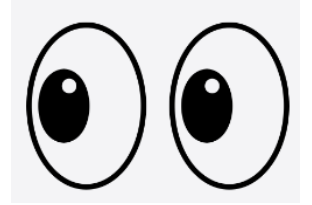
- The Home Learning book should be in the student's bag at all times
- Clearly date and title (including subject title) each piece of home learning in the Home Learning book
- Underline with a ruler after each completed piece.
- Use both sides of the page and don't leave empty spaces.
- The back pages of the Home Learning book are to be used as your reading log

Using Knowledge Organisers to self-quiz

Your child will be issued with a Knowledge Organiser each term with all subjects in one booklet. Subject Knowledge Organisers can also be found on the academy website.

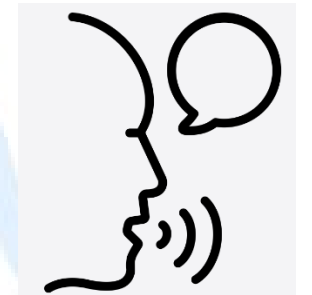
LOOK

- Read the definition of the first key word in your head.



SAY

- Cover it up and say in back to yourself, repeat with all four words.
- Uncover the words and check you said it correctly.



COVER

- Cover up all four words.



WRITE

- Write out the definitions for all four words from memory.



CHECK

- Uncover the definitions and green pen to correct.



Home Learning

Students will receive a homework timetable for core subjects at the start of the year so that they can plan and organise their homework each evening.

This will also be on the academy website. Home Learning will be published on TEAMS and you will be able to see all your home learning in the Assignments tab.

There are Home Learning Clubs every day that all students are welcome to attend should they need access to computers or learning support.



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sparx

 **SENECA**



Arbor


unifrog

Term 5

Term 6

Term 3

Term 4

Term 1

Term 2

Year 9 2024-2025



Key to Chameleon PDE themes

- Keeping safe
- Online life & media
- Emotional & mental health
- Health & fitness
- Relationships
- Sexual health
- Future choices & money
- Values, rights & responsibilities
- Personal skills development

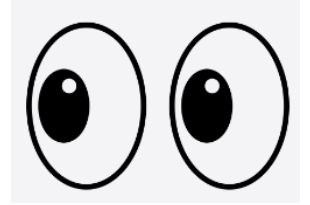


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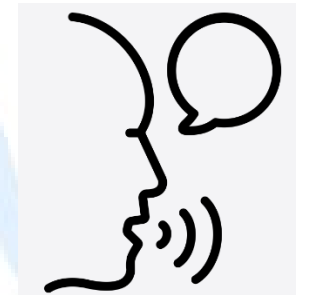
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Sentence Stems: Year 5 to Year 9



Listen and Mark

Pay close attention to others and point out important moments.

- I notice you used the word ____, which made me wonder ____.
- When you said ____, it made me think about ____.
- Did anyone notice what ____ said about ____? This seems important because ____.

Introduce and Invite

Begin your contribution and encourage others to participate.

- I think that ____ because ____.
- ____, what do you think?
- We should discuss ____ because ____.

Challenge and Verify

Disagree and ask others to prove or clarify information.

- You said ____ . How do you know?
- I think you said ____ . Is that right?
- I disagree with what you said about ____ because ____.

Defend and Unpack

Defend your perspective and explain your thought process.

- I understand your perspective, but have you thought about ____?
- I actually think this because, firstly, ____ . (Secondly, Thirdly).
- Actually, [evidence] suggests that ____.

Build and Support

Add to others' ideas and bolster points by giving evidence.

- You said ____, and I want to add that by saying ____.
- ____ supports the idea that ____.
- The points made by ____ and ____ link together because ____.

Summarise and Map

Draw together big themes and track the discussion.

- Our main findings were ____.
- On the whole, we believe that ____.
- Initially, we thought ____, but we eventually decided ____.



Sentence Stems: Year 10 to Year 13



Listen and Mark

Pay close attention to others and point out important moments.

- I notice you used the word / phrase ____, which implies ____.
- When you said ____, it anchored the idea that ____.
- Did anyone notice what ____ said about ____? This seems important because ____.

Introduce and Invite

Begin your contribution and encourage others to participate.

- I suggest that ____ because ____.
- ____, what is your perspective on ____, and why?
- We should discuss ____ because ____.

Defend and Unpack

Defend your perspective and explain your thought process.

- I understand your perspective on ____, but have you thought about ____?
- I actually think this because _____. (Furthermore, finally).
- Actually, [evidence] suggests that ____.

Build and Support

Add to others' ideas and bolster points by giving evidence.

- Your point about ____ implies ____, and I would like to further this by saying ____.
- ____ supports the idea that ____.
- Drawing upon points made by ____ and ____, we can conclude that ____ because ____.

Challenge and Verify

Disagree and ask others to prove or clarify information.

- You said ____ . How do you know?
- I think you said ____, which implies that you believe ____ . Is that right?
- I disagree with what you said about ____ because ____.

Summarise and Map

Draw together big themes and track the discussion.

- Our main findings were ____.
- On the whole, we believe that ____.
- Initially, we thought ____, but we eventually decided ____.



Year 9

Term 1

Contents

Art

Drama

DT

English

Food

Geography

History

Maths

Music

PE

Science

Spanish

Year 9 Term 1 & 2: Unit 1 Icons

The Formal Elements

Line: a line is a path traced by a moving point

Shape: these are two dimensional areas, shapes are always flat

Form: a form has height, width and depth, a form always has three dimensions

Value: how light or dark shading/colours are

Texture: the way a surface looks or feels

Space: artists use space to create the illusion of depth

Colour: the spectrum of light captured by our eyes

PORTRAIT:

A portrait is a representation of a particular person. A self-portrait is a portrait of the artist by the artist

TERMINOLOGY

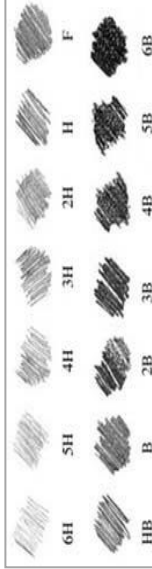
COSTUME: what a person is wearing

EXPRESSION: the emotion/feeling as described by facial expression

POSE: how the person is positioned, sitting/standing/hidden/covered/relaxed/still/in motion

BACKGROUND: icons/symbols used to indicate who the person is

Pencil grades, from soft to hard



Colour Theory

Primary colours: Red, Yellow and Blue.

Secondary colours: Green, orange and purple

These are the colours formed by mixing the primary colours

Tertiary colours: These are the colours formed by mixing a primary and a secondary colour

Analogous colours: Any three colours which are side by side

Complementary colours: Any two colours which are directly opposite each other on the colour wheel

Warm colours: Red through to yellow-green

Cool colours: Green through to red-violet

IDENTITY:

who a person is, or the qualities of a person or group that make them different from others:

ICONOGRAPHY:

The term comes from the Greek word ikon meaning image. An icon was originally a picture of Christ on a panel used as an object of devotion in the orthodox Greek Church from at least the seventh century on. Hence the term icon has come to be attached to any object or image that is outstanding or has a special meaning attached to it.

An iconography is a particular range or system of types of image used by an artist or artists to convey particular meanings. For example in Christian religious painting there is an iconography of images such as the lamb which represents Christ, or the dove which represents the Holy Spirit.

Year 9 Term 1 & 2: Artists

Shepard Fairey
(1989 – present)



Kehinde Wiley (2000 – present)



Kara Walker (1994 – Present)

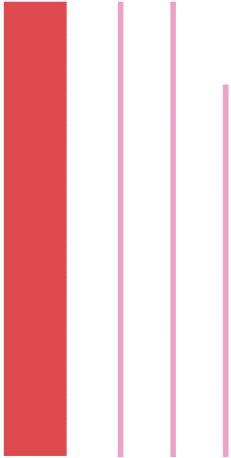


Frida Kahlo (1930 – 1953)



VISUAL HIERARCHY

The principle of visual hierarchy refers to guiding the eye on the page so that it attends to design elements in the order of their importance.



Hierarchy Example

You'll probably see this last.

First, you'll read this.

Then, you'll read this.
And then this.

Year 9: Key Words

Expression	Hierarchy
Identity	Background/Foreground
Costume	Portrait
Culture	Iconography
Pose	Lighting
Grid Method	Emotion

Plot

DNA is about a group of teenagers who could be described as a 'gang', who think they have accidentally killed one of their classmates. When they realise their terrible mistake, they try to cover it up, but inadvertently implicate an innocent man in the process (a postman with bad teeth). There are times throughout the play that the group could admit to what they did, but instead they weave a darker, more complex set of lies which results in the murder of Adam.

Characters

Phil	Meaning / Cold Group leader, the one that comes up with the plan.
John Tate	Controlling / Manipulative Starts as the leader but authority is weak and leaves the play early.
Leah	Insecure / Loyal Moral character who worries about the groups actions.
Mark	Cruel / Malicious Acts as a narrator, with Jan, and helps with the cover up.
Jan	Bullying / Intimidating Acts as a narrator with Mark and helps with the cover up.
Danny	Ambitious / Fearful More worried about becoming a dentist than Adam's wellbeing.
Richard	Insecure / Confident Unhappy with the cover up but goes along with it.
Cathy	Volatile / Sadistic She helps to kill Adam, is remorseless.
Brian	Nervous / Vulnerable Weakest member of the group, bullied into covering up the incident and has a breakdown as a result.
Lou	Unsuspecting / Spineless Follows who is in charge, worries about getting caught.
Adam	Victimised / Eager Bullied by the group and is killed by the group.

Themes in DNA

POWER

The ability to influence the behaviour of others. social group in order to be liked or respected by them

PEER PRESSURE - A

feeling that one must do the same things as other people of one's age and social group in order to be liked or respected by them.

ANTI-SOCIAL BEHAVIOUR

Acting in ways that cause harm or nuisance to others.

BULLYING

Repeated behaviour where you intentionally hurt someone else.

NATURE V NURTURE

Is our behaviour something we are born with or is it something we develop?

RESPONSIBILITY

Owning up to what you have done. In DNA, no one wants to own up or admit to what they have done.

GANGS

A group of people, especially young people, who go around together and often deliberately cause trouble. They have a shared interest.

Directing and performing scenes in DNA

- Proxemics – consider how far away or how close you stand to other characters to communicate their relationships with each other.
- Levels – how high or low we stand or sit to communicate status.
- Interaction – Think about how an actor can use eye contact and proximity to show how their character interacts with others on stage
- Movement – Think about how the character would move about the stage, use posture, gesture and stage position – how do these help to communicate emotions?
- Vocal skills – Consider accent, pace, pitch, tone, emphasis, pause and volume – how do these help to communicate emotions?
- Audience – Consider what effect you want the scene to have on an audience

KEY WORDS

Play text – the play; DNA

Themes – A reoccurring idea that is seen throughout the play.

Still image – creating an image to highlight a key moment in the scene or play.

Thought track – saying out loud your characters thoughts and feelings.

Role play – the act of pretending to be someone else.

Plot – the sequence of events that make up a play.

Exposition – the beginning of a play.

Narrative – the story being told.

Intentions – what the character wants and how this is communicated to an audience.

Status – the level of power or influence a character has over someone else.

Proxemics – the space between characters to communicate their relationships

Textual analysis – describing, analysing and researching a piece of text.

Transitions -the movement from one scene into another.

Monologue – a long speech said by one actor when there are other actors on stage.

Hot seating – answering questions in character to explore who your character is.

Vocal skills: pitch, pace, pause, volume, tone, intonation, emphasis.

Physical skills: facial expression, gesture, stance, stillness

Practical Rotation

Knowledge Organizer – Year 9 DT

Materials Used:

Pine: a natural softwood from the evergreen Scots Pine tree

MDF: An engineered board, manufactured in sheets from wood dust & glue

Acrylic: A thermoplastic material; comes in many colours & easily cut or melted.

HIPS: High Impact Polystyrene – another thermoplastic, used with a mirrored finish on this project.

Tools Needed for this Project:

Try Square, marking gauge, steel ruler

Tenon Saw, mallet, chisels (6mm & up), smoothing plane, pillar drill, belt sander.

Key Vocab: “Sub-Assembly”:

We know an assembly is a number of parts put together.

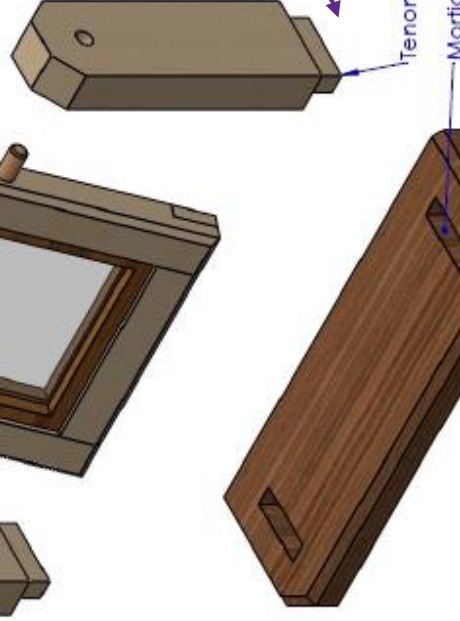
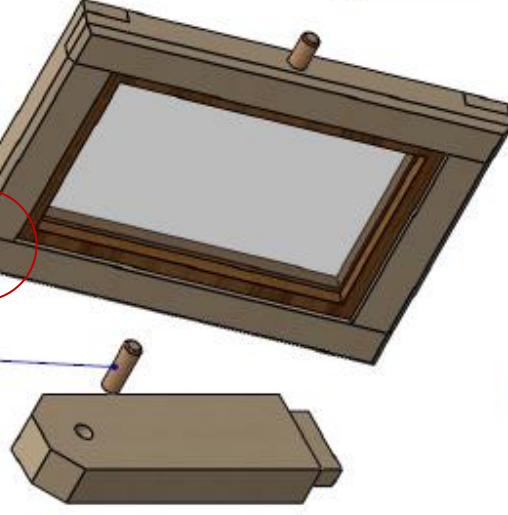
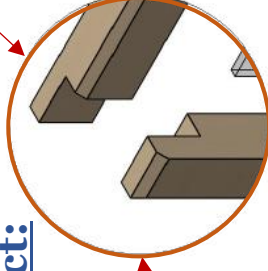
A sub-assembly is when we assemble a collection of parts which are then used together as part of a larger assembly.

In this project, we can make a sub-assembly of the picture frame before assembling it with its stand.

Dowels: These are small wooden pegs, used in the dowel joint, a quick & strong joint, easily made with just a drill. Used on this project for the pivot point.

The Picture Frame Project:

8mm Dowels added so the frame can rotate



Key Vocab: “Chamfer”:

A chamfer is a small bevel put on the edge of a project part – it removes the sharpness of the edge & adds decoration.



The Corner Halving Joint:

This is a really useful wood joint for connecting the corners of frames.

It is often called a lap joint because the 2 parts lap over one another.

By cutting this joint we can increase the area for glue to hold the parts together.

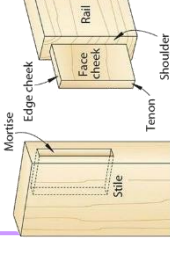
After marking, we need to rip cut down from the end of the workpiece, and cross cut away our waste material at the shoulder. The joint can then be tidied up & made more accurate by paring away any spare waste with a chisel.

The Mortice & Tenon Joint:

This is a great joint for when we need on part of a project to join to & extend from the face of another part, like where the arms to hold the frame join onto the base of our project.

It is made up of a rectangular tongue (the tenon) on the end of one piece which slots into a rectangular hole (the mortice) on the other piece.

Making this joint accurately takes skill & some patience; sawing the tenon is similar to making the corner halving joint above, but we must cut the shoulder on each side. To make the mortice, we chop out our waste material using a mallet & chisel, digging in from both faces.



To get a good fit, the tenon & mortice must be the exact same size & the shoulder must be level all the way around to sit well on the face of the base.

Manufacturing Materials: Plastics:

Plastics are a group of materials called polymers

- **Pros:** They are lightweight, easy to manufacture, durable, colourful & affordable
- **Cons:** They are sourced from crude oil & their production & disposal are harmful to the planet

Thermoplastics: easily softened or melted with heat. Recyclable & good material performance.

Examples = HDPE, Nylon, Polypropylene, Polycarbonate, Polystyrene

Thermosetting Plastics: Can't be remelted with heat. Difficult-impossible to recycle. Often higher performances for specific tasks

Examples = Polyester resin, Epoxy resin, Melamine formaldehyde, Urea formaldehyde, bakelite.

Year 9 DT – Theory Unit Knowledge Organiser

Composite Materials:

Composite materials are materials built of 2+ input materials working together as one. This way we can combine their most useful properties.

GRP; Glass Reinforced plastic – tough, strong, lightweight & affordable. Used in circuit boards

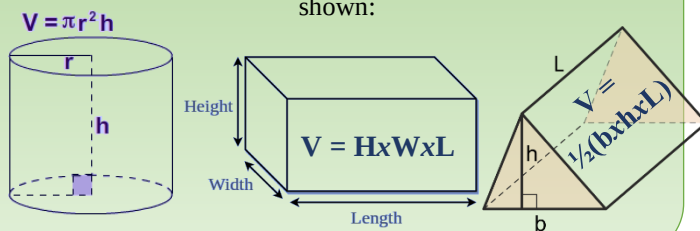
CFRP; Carbon Fibre Reinforced Plastic – excellent strength to weight ratio & tensile Strength

Concrete; Stone, sand & cement – very hard

Plywood; Thin layers of wood laminated together

Maths for DT & Engineering:

The volume of a shape is how much 3D Space it takes up. Use these formulae to find the volume for the shapes shown:

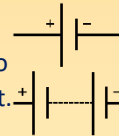


Engineering Electronics:

The below symbols are universally used to show these components in circuit diagrams:

Cell/battery:

stores electricity to provide DC current.



Resistor: Controls/

slows the current flow of electrons



SPST Switch; opens & closes the circuit to allow electricity to flow.



L.E.D; A Light Emitting Diode, like a bulb. Very energy efficient.



Product Investigation Product investigations are a great way to learn **why materials are chosen for specific jobs** & explore what other demands impacted on the **designer's decisions** & how they **solved problems** along the way.

Product Specifications:

What requirements or restrictions might the designer have worked to?

Design Brief; what was the designer's goal/what was their problem to solve?

Common Specifications:

- Aesthetics
- Performance requirements
- Target Audience
- Sustainability
- Cost

Investigating 2 bicycles:

After completing the product investigation, you should be able to explain:

- What a sprocket is
- Why the bicycles differ in design
- Why specific materials were chosen for each
- What design improvements could be made to each

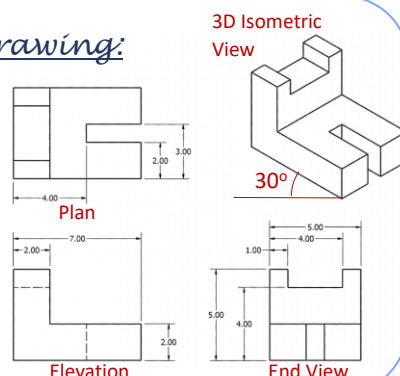
Engineering Drawing:

Orthographic Views

show the object from each angle, in 2D. Dimensions are usually attached to these 2D views.

Isometric Projection

shows a skewed version of each of these views as we see the object in 3D



Key Vocab for this term:

- Polymer
- Thermoplastic
- Thermosetting plastic
- Composite
- Voltage
- Current
- Ohms
- Isometric
- Orthographic
- Volume
- Material Properties
- Sustainable design
- C.A.D.
- C.A.M.

Knowledge Organiser: Transactional Writing

Intent: This unit is designed to introduce students to transactional writing, developing their understanding of creative writing. Students are introduced to a range of non-fiction forms of writing and how to construct their thoughts using the Ethos, Logos, Pathos structure to craft a persuasive and coherent argument.

Types of transactional writing		Structure for your writing	
Letter	A written, typed, or printed communication. These are usually written to facilitate communication between two individuals. Letters can be written to people you know as well as those that you do not know.	Method	Purpose
Speech	A spoken expression of information, ideas and opinions that is made by someone who is speaking in front of a group of people. Speeches are often given for political or motivational/persuasive purposes with the aim being to initiate change within the audience.	Ethos	Ethos is an element of argument and persuasion through which a speaker establishes their credibility and knowledge .
		Logos	Logos is the persuasive technique that aims to convince an audience by using logic and reason .
		Pathos	Pathos is an appeal made to an audience's emotions in order to evoke feeling or emotion.
Article	A piece of writing included with others in a newspaper, magazine, or other publication. Broadsheet newspapers (The Times, The Telegraph, The Guardian) have a higher news content than tabloids . The style of writing differs from tabloids with longer sentences and paragraphs , and more articles offering in-depth analysis . Tabloid newspapers (The Sun, The Daily Mirror, The Daily Mail) report on politics and international news but tend to include more celebrity gossip and scandal . They write short stories using simple language and they have more pictures than other newspapers.	Key Terms	How can it be demonstrated
		Persuasion	Persuasion can be demonstrated by changing the audience's viewpoint on a situation and therefore elicit an emotional response or change in their actions or behaviour .
		Perspective	Perspective can be demonstrated through a trustworthy and reliable viewpoint and through establishing the writer or speaker's opinion on the topic they are discussing.
		Cohesion	Cohesion is demonstrated through referring back to ideas previously mentioned and by linking back to the topic being discussed.
		Structure	Structure can be demonstrated through thoughtfully considering how to build upon and piece together ideas throughout the piece . Having an awareness of the different structures of texts means that the text comes together and fits the required form.



Key Word Glossary		
Word	Definition	Example
Argument	An argument in writing is where the writer is either 'for' or 'against' the topic they are discussing.	His argument was conveyed through his language choices.
Audience	An audience is a person - or group of people - reading a text or listening to a speech.	The audience were engaged in the speech.
Construct	To make or form by combining or arranging parts or elements.	She was able to construct her article by considering different viewpoints.
Convention	Agreed-upon rules of writing used to make writing broadly clear and comprehensible.	The writer considered which convention he should begin his letter with.
Convincing	Persuading or assuring by argument or evidence.	The prime minister's address to the nation was convincing .
Discourse Markers	A word or phrase whose function is to organise writing into segments that link together.	You should use discourse markers when presenting a viewpoint.
Effective	Successful in producing a desired or intended result.	The language used was effective .
Emotive	Appealing to or expressing emotion.	The newspaper article was emotive .
Factual	True or concerned with actual details or information rather than ideas or feelings about it.	The data is factual .
Form	The structure or shape of a text including the language devices used in it.	You must consider the form of a text before writing.
Opinion	A view or judgement formed about something, not necessarily based on fact or knowledge.	People can voice their opinion on topics that affect them.
Persona	A role or character adopted by a writer.	The persona I took on was that of a doctor.
Purpose	The reason for which something is done or created.	The purpose of the text was to inform.
Rhetoric	The art of effective or persuasive speaking or writing.	I use rhetoric to engage my audience.
Tone	The attitude of a speaker or writer conveyed by way word choices, sentence structure etc.	The tone of her letter was demanding.

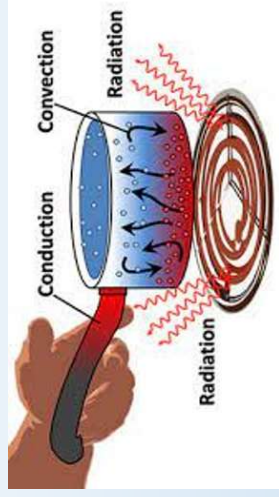


Food Preparation & Nutrition

Yr9 Food – Term 1/ Autumn

Methods of Heat Transfer

- Conduction -> Transfer of heat due to physical direct contact.
- Convection -> Transfer of heat within a fluid caused by molecular motion.
- Radiation -> Transfer of heat radiated in the form of waves or particles



Cooking Methods:

- moist
- dry
- fat-based



Nutritional value. Vitamins, calories...

Sensory attributes – Texture, flavour, odour, appearance

Properties of ingredients

All ingredients have a **function** - The role they play in the recipe or dish could be:

- adding nutritional value
- improving colour or texture
- performing a particular purpose

Scan to find out about the properties and functions of ingredients



SCAN ME

FOOD COOKS IN:

AIR

DRY HEAT
Produces rich flavour due to browning and caramelization

BROILING
- High dry heat from above
- Caramelizes and browns surface

GRILLING
- Usually uses high dry heat from below
- Caramelizes and browns surface

ROASTING/BAKING
- Cooks evenly over longer periods
- Oven allows for consistent temperature control
- There is no difference between "Roasting" and "Baking"

SAUTEING
- High heat and little oil
- High heat prevents moisture loss

PAN FRYING
- Medium high heat
- Requires more oil than Sautéing to prevent moisture loss

DEEP FRYING
- Considered "Dry Heat" due to using extremely high temperatures
- Cooks very quickly and browns

MOIST

DRY

SLOW

FAST

FAT

WATER

STEAMING
- High heat
- Fast cooking time because it uses the steam released after water goes past 212°F (100 °C)

BOILING
- High heat
- Food cooks submerged in liquid
- Liquid is either absorbed by food or discarded when cooking is complete

SIMMERING
- Medium heat
- Small bubbles gently break the liquid's surface
- Used to infuse liquid with flavour from the food being cooked

POACHING
- Low temperature
- Used for delicate foods like eggs
- Liquid will slowly move but no bubbles form

COMBINATION HEAT
Uses both dry heat and moist heat

BRAISING
- Dry Heat = Pan fry or Sauté to brown the meat
- Moist Heat = Add liquid to 1/3 the height of the meat

STEWING
- Dry Heat = Pan fry or Sauté to brown the meat
- Moist Heat = Add liquid to completely cover

Food Preparation & Nutrition

Yr9 Food – Term 1/ Autumn



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PROTEINS

Most foods contain proteins, such as collagen in meat, gluten in wheat flour and albumin in egg white

Denaturation is the change in structure

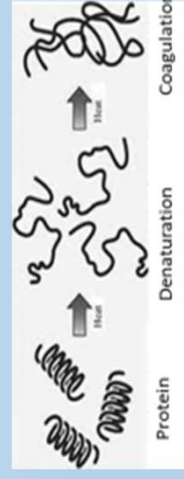
of protein molecules. The process results in the unfolding of the protein's structure and makes the food more palatable.

Factors which contribute to denaturation are mechanical action, heat, salt and pH.

Denaturation can be reversible or irreversible.

Coagulation follows denaturation. For example, when egg white is cooked it changes colour and becomes firmer (sets). The heat causes egg proteins to unfold from their coiled state and form a solid, stable network.

Coagulation is irreversible.



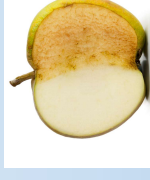
ENZYMIC BROWNING

The rapid browning of fruit (particularly when cut) is due to enzymes that are contained within. Enzymes are exposed to oxygen and other molecules and trigger a rapid browning reaction.

Oxidation can also affect the nutrient content of a food. The longer a food is exposed to air, the less vitamins it will have.

However, some foods (like raisins) are a favourable enzymic browning to change their colour and enhance flavour. There are several methods that can be used to prevent or reduce unwanted enzymic browning, including:

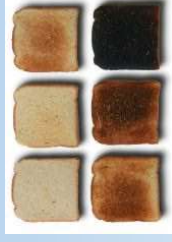
- Blanching (hot water for few time)
- Refrigeration or freezing
- Acidulation (lemon juice)



NON-ENZYMIC BROWNING

Non-enzymic browning refers to a number of different processes and reactions that can make foods 'brown' where oxygen is not involved. These processes are:

- Dextrinization: STARCH → DRY HEAT → DEXTRINS → COLOUR/TASTE
- Caramelization: SUGAR → DRY/MOIST HEAT → CARAMELIZATION
- Maillard reaction (see right)



Climate Change

Background:	
1.	Since the 1860s the global climate has been recorded.
2.	Since then the climate globally has increased by 0.8° Celsius.
3.	Climate scientists can use methods to find out about the global climate before we started recording it. (B)
4.	From this evidence we can see that the planet has always gone through periods of warming and cooling. (A)
5.	However, the rapid increase of carbon dioxide in the atmosphere from burning fossil fuels, is causing the enhanced greenhouse effect. (D)
6.	The enhanced greenhouse effect is causing changes to the planet, such as the melting of Arctic sea ice, rising temperatures, and an increase in extreme weather events such as tropical storms. (E, F)
7.	Countries are trying to resolve the climate change issue by limiting the amount of carbon dioxide released into the atmosphere, this is known as mitigation. (G, H)
8.	Some countries are trying to adapt to climate change by building flood barriers and growing drought resistant crops. (G, H)

A.	Changes in climate (3)	
Climate change	The process of the Earth's climate changing over time.	
Glacial periods	Cold periods.	
Inter-glacial periods	Warm periods.	

B.	Measuring climate change (3)	
Ice cores	Each layer of ice in a core represents a different year. CO ₂ can be measured in each layer, and therefore the temperature.	
Tree rings	Each ring represents a different year. Thicker rings show a warmer climate.	
Historical evidence	Paintings and diaries e.g. paintings of ice fairs on the frozen Thames 400 years ago.	

C.	Natural climate change (3)	
Volcanic eruptions	Ash from volcanic eruptions can block sunlight, making it colder.	
Sun spots	The sun can give out more energy due to an increase in sun spots.	
Orbital change	The orbit of the sun changes from oval (ellipse) to circular approx. 96,000 yrs.	

E.	Effects on people (6)	
Tropical storms	Increase in frequency and intensity so more damage.	
Sea-level rise	Increased risk of floods, damaging property and businesses.	
Melting Arctic ice	Affects trading routes in the Arctic Circle.	
More droughts/floods	Crop failure, could lead to starvation and famine.	
Cost of defence	Governments have to spend more money on disasters instead of developing.	
Environmental Refugees	Pressure on countries to accept refugees.	

G.	Strategies to resolve climate change (4)	
Adaptation	Adapting to climate change to make life easier.	
Adaption examples (3)	1. Building flood defences. 2. Growing new crops to suit the new climate. 3. Irrigation channels, sending water from areas of surplus to deficit.	
Mitigation	Trying to stop climate change from happening by reducing greenhouse gases.	
Mitigation examples (3)	1. International agreements. 2. Alternative energies. 3. Carbon capture.	

D.	Human-induced climate change (5)	
Greenhouse effect	The way that gases in the atmosphere trap heat from the sun. Like glass in a greenhouse they let heat in, but prevent most wave radiation from escaping.	
Greenhouse gases	Gases like carbon dioxide and methane that trap heat around the Earth, leading to climate change.	
Transport	More cars, therefore more combustion so more CO ₂ causing the enhanced greenhouse effect.	
Farming	Farming livestock produces methane, this is a greenhouse gas.	
Energy	More energy required, meaning more fossil fuels burnt, so more CO ₂ .	
F.	Effects on the environment (4)	
Sea temperature rises	Coral bleaching and destruction of marine ecosystems.	
More droughts	Migration/ death of species which can not survive drought conditions.	
Melting glaciers (ice rivers)	Will send more fresh water into the sea, causing the sea level to rise.	
Melting Arctic ice	Loss of habitats for animals, such as polar bears.	
H.	Place specific examples (2)	
Adaption	The Thames Barrier. Positive: Stops flooding due to rising sea levels. Negative: Expensive	
Mitigation	The Paris Agreement. Positive: Countries are trying to lower CO ₂ emissions. Negative: The USA pulled out and China did not sign up.	

Intentionally Blank

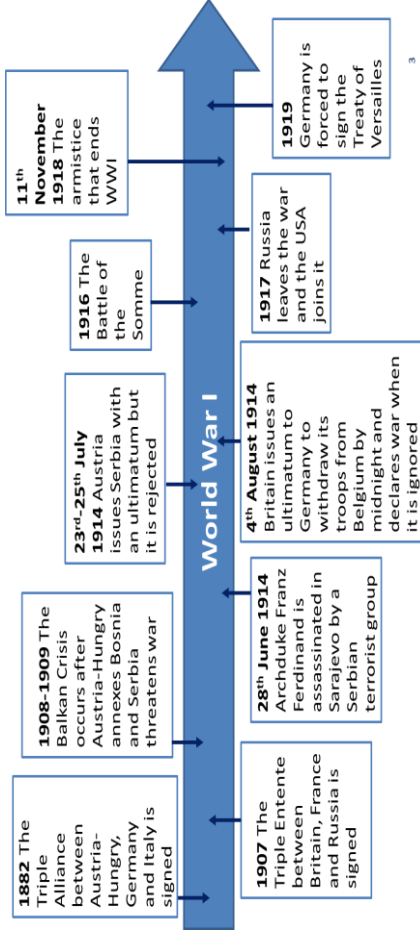
9.01: World War One

Key Vocabulary

1	alliance	an agreement between countries to work together.
2	imperialism	extending a nation's power by colonizing other countries.
3	militarism	prioritising strong military power and readiness.
4	nationalism	having strong pride and loyalty to one's country.
5	annex	to seize land, often by force, as part of your country.
6	Great Power	a country with international influence and strength.
7	Balance of Power	alliances maintaining equal strength to prevent war.
8	encirclement	surrounding a country with hostile alliances.
9	treaty	a formal agreement between countries.
10	arms race	competing to build and develop more/better weapons.
11	Schlieffen Plan	Germany's strategy to quickly defeat France, then focus on Russia.
12	conscription	mandatory (forced) enrollment for military service.
13	trigger	an event which sets off immediate consequences.
14	ultimatum	a final demand of terms, often followed with severe consequences if not accepted.
15	blank cheque	Unrestricted commitment/support given to another party.

Themes and Threads

Warfare	<i>Having studied medieval and 17th century warfare, students will explore the transformation and development in weapons during WW1 (such as the tank and machine gun), as well as a change in tactics with the use of trenches.</i>
Empire	Students will build on the scramble for Africa (8.09) and learn about the impact of European imperialism increasing nationalism and leading to a world war. They will also learn about a diverse range of peoples' experiences from across the British Empire and the significance of WWI for so many.



Knowledge outcomes

1	Which Great Power had the largest and most powerful navy in 1900?	Great Britain
2	Which Great Power felt encircled by the alliance system?	Germany
3	Which three countries signed the Triple Entente?	Britain, France, Russia
4	Which three countries signed the Triple Alliance?	Germany, Austria-Hungary, Italy
5	Who did Serbia have an alliance with?	Russia
6	What was Germany's plan for war?	Schlieffen Plan
7	Which Great Power had the largest land army in 1914?	Germany – 1.5 million men.
8	Which wars in Europe occurred in 1912-13?	Balkan wars
9	Which group aimed to unite Serbs under the leadership of Serbia?	Black Hand
10	What did Austria-Hungary give to Serbia after the assassination?	An ultimatum

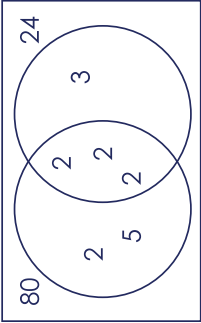
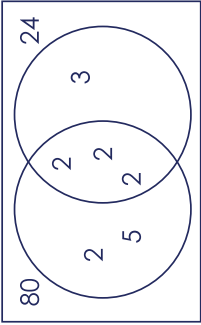
11	Whose neutrality did Britain promise to defend in 1914?	Belgium
12	What was the 'blank cheque'?	Germany's total support of Austria-Hungary.
13	Whose assassination sparked World War One into action?	Archduke Franz Ferdinand
14	What was the area between two front line of trenches known as?	No Man's Land
15	Which battle experienced the most casualties on the first day of fighting?	Battle of the Somme
16	Who was the British General in charge of military plans at this battle?	General Haig
17	What examples of new technologies in warfare were developed through WWI?	Tanks, gas, aerial assault, machine guns, artillery cannons
18	When did World War One end with the armistice?	November 11, 1918
19	Which Treaty punished Germany after the war?	Treaty of Versailles
20	When considering German punishment, what does the acronym 'BRAT' stand for?	Blame, Reparations, Army, Territory



KPI 9.01 Decimals Manipulation		
1) Multiplying decimals	1) Remove the decimal points. 2) Multiply. 3) Insert the same number of decimal points in the answer as in the question. 0.5×0.3 $5 \times 3 = 15$ $0.5 \times 0.3 = 0.15$	$0.72 \div 6$ 0.12 $6 \overline{) 0.72}$
		$0.972 \div 8$ 0.1215 $8 \overline{) 0.9720}$
	3) Dividing an integer by a decimal	1) Write as a fraction 2) Form an equivalent fraction 3) Divide

KPI 9.02 Estimation and Limits of Accuracy		
1) $\approx$	"approximately equal to"	Ignoring all decimal places past a certain point without rounding.
3) Significant figures	The total number of digits in a number, not counting the zeros at the beginning of a number or at the end of a decimal number. 345 000 has 6 significant figures. 0.3047 has 4 significant figures.	Find approximate answer by calculating with numbers rounded to one significant figure.
5) Error Intervals	The range of values (between the upper and lower bounds) in which the precise value could be. least possible value $\leq x <$ greatest possible value	

KPI 9.03 Related Calculations	
$19 \times 18 = 342$ $19 \times 180 = 3420$ $190 \times 18 = 3420$ $190 \times 180 = 34200$ $1900 \times 180 = 342000$	$108 \div 9 = 12$ $1080 \div 9 = 120$ $108 \div 90 = 1.2$ $108 \div 0.9 = 120$ $108 \div 0.09 = 1200$

KPI 9.04 HCF and LCM of Large Numbers			
1) Prime numbers	A prime number has two distinct factors; 1 and itself. 2 is the only even prime number. 1 is not a prime number. The first ten prime numbers are: 2, 3, 5, 7, 11, 13, 17, 19, 23 29		
2) Factor	Any whole number that divides exactly into another number leaving no remainder. Factors of 20 are: 1, 2, 4, 5, 10, 20	3) Multiple	The result of multiplying a number with a whole number. (times tables!) The multiples of 7: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 ...
4) HCF - Venn diagram	 HCF of 80 and 24 = $2 \times 2 \times 2 = 8$	5) LCM - Venn diagram	 LCM of 80 and 24 = $2 \times 2 \times 2 \times 2 \times 3 \times 5 = 240$

KPI 9.05 Fraction Calculations			
1) Writing one number as a fraction of another	$\frac{15}{25} = \frac{3}{5}$	2) Reciprocal	Reciprocal of 7 $\rightarrow \frac{1}{7}$ Reciprocal of $\frac{2}{3} \rightarrow \frac{3}{2}$
3) Fractions of an amount	Divide the amount by the denominator and then multiply the result by the numerator.		
4) Add/Subtract fractions	Make the denominators the same (find the LCM). Use equivalent fractions to change each fraction to the common denominator. Add/subtract the numerators only.		
5) Multiplying fractions	Multiply the numerators. Multiply the denominators. Simplify where possible.		
6) Dividing fractions	Keep the first fraction the same. Change the second to its reciprocal. Multiply the fractions. Simplify/convert to mixed number where possible.		



Knowledge Organiser Key Stage 3

Subject: Music Year: 9

Topic Title: Elements and Notation



Lessons 1&2

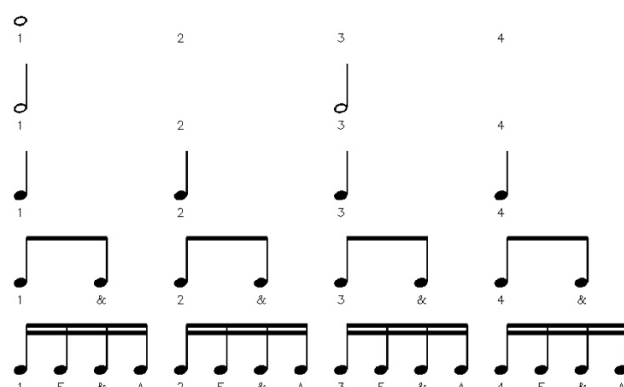
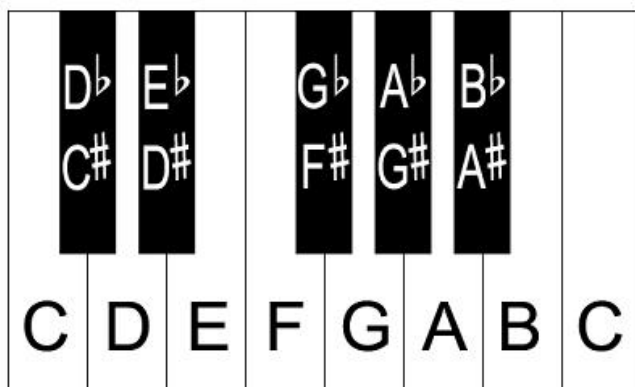
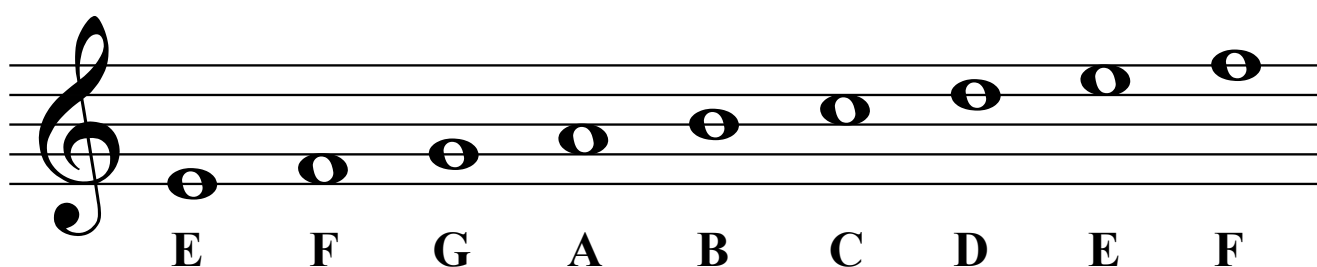
Key Facts from this lesson

- Notation is the method we use to write music. We use rhythm symbols and place them on a line or space of the *treble clef*, which tells us which pitch to play.
- We are using the E minor scale this term, which uses only white keys on the keyboard except F; we use the black key to the right of F (F#) here instead.
- Sometimes we use notes outside of the scale, these are called *accidentals*.

Key words and definitions from this lesson:

- ★ **Notation** – The most common method used to write music
- ★ **Treble clef** – The symbol at the start of a score that tells us which set of pitches to use
- ★ **Score** – A piece of music written down
- ★ **Melody** – The tune in a piece of music
- ★ **Staff** – The set of five vertical lines used in treble clef notation
- ★ **Accidental** – A note from outside of the scale we are using. In this instance, we are using a Bb (the black key to the left of B).

Diagrams to support learning:



♩ – Semibreve – Four beats

♪ – Minim – Two beats

♫ – Crotchet – One beat

♬ – Quaver – Half a beat

♭ – Semiquaver – A quarter or a beat



Lesson 3

Key Facts from this lesson

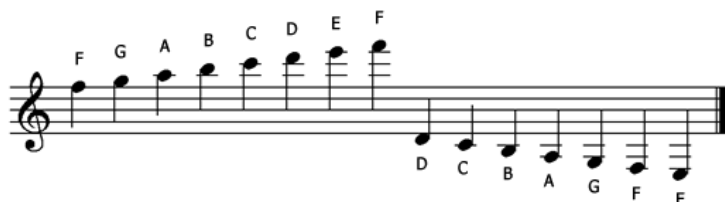
- Sometimes we need to use notes outside of the ones given to use on the notes and lines of the treble clef. We can use *ledger lines* to add additional notes above or below the staff.
- Every bar of music should add up to four beats, so if a note is to be played in one bar and continue into another, we can use a tie symbol to combine the duration of two notes. We can also use ties to keep our scores tidy and make the pulse (the underlying beat of the music) really clear.
- If when we performed music we never stopped playing, the music would be exhausting to listen to! We use rests to add pauses to melodies; they serve the same purpose as punctuation (like full stops and commas) in a sentence.

Key words and definitions from this lesson:

- ★ **Ledger line** – Additional lines drawn above or below the staff that tell us which pitches to play.
- ★ **Tie** – A symbol that tells us to play two notes as one. For instance, a crotchet (1 beat) tied to a minim (2 beats) would tell us to play a note with a duration of 3 beats.
- ★ **Rest** – A symbol that tells us not to play for a given duration.

Diagrams to support learning:

Ledger lines:



Tied notes:



This is a crotchet (one beat) tied to a semibreve (four beats), leaving a resulting note of five beats.

— – Semibreve rest – do not play for four beats

— – Minim rest – do not play for two beats

⏏ – Crotchet rest – do not play for one beat

⏏ – Quaver rest – do not play for half a beat

⏏ – Semiquaver rest – do not play for a quarter or a beat



Knowledge Organiser Key Stage 3

Subject: Music **Year:** 9

Topic Title: Elements and Notation



Lesson 4

Key Facts from this lesson

- On a score, chords are often written above the melody. The accompaniment style (the rhythm of the chords) is left to the player to decide.
- The most simple chords are triads; these are three-note chords that can be major (sounds bright) or minor (sounds dark). If we add any more notes to the triad, it is an extended chord.
- A key signature is found at the start of a piece. It shows us which sharps (black keys to the right of the indicated note) or flats (to the left) to play. This term, we are playing a piece in E minor, which uses one sharp (F#)

Key words and definitions from this lesson:

- ★ **Harmony** – The effect of multiple pitches being played at one time.
- ★ **Chord** – A combination of three or more pitches.
- ★ **Extension** – An additional note added to a triadic chord.

Diagrams to support learning:

Em D C B7

Notes in each chord:

Em – E, G, B

D – D, F#, A

C – C, E, G

B7 – B, D#, F#, A



Lesson 5

Key Facts from this lesson

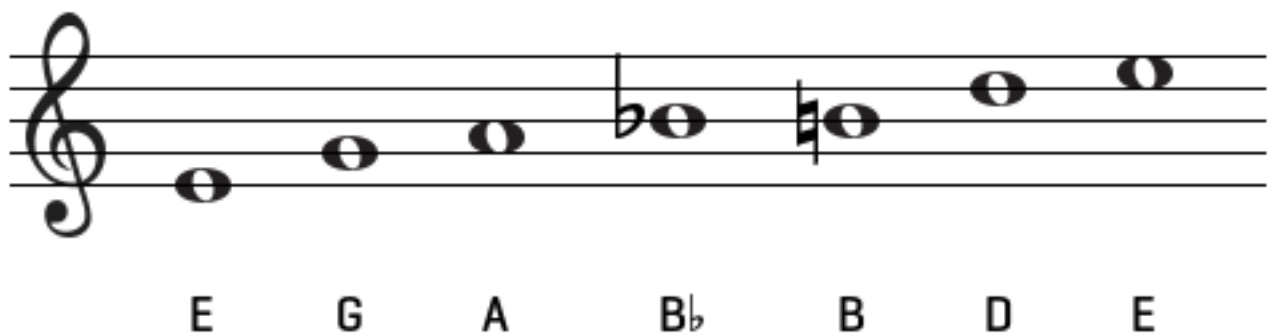
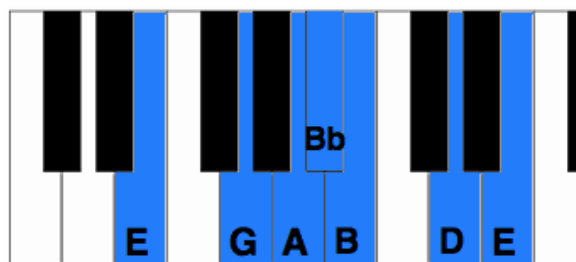
- In Jazz, Blues and other forms of Black American Music, improvisation is frequently used. Improvisation does not mean “play any note at all and hope it sounds good”! Improvisation in music is normally within a fairly strict framework, and there are still several musical “rules” to follow.
- The Blues scale is commonly used in improvisation. It is a pentatonic (five note) scale with one accidental, between the fourth and fifth note.

Key words and definitions from this lesson:

- ★ **Improvisation** – The process of using a scale to create melodies on the spot.
- ★ **Solo** – A moment in a piece in which one of the musicians becomes the main focal point (the others still play), normally by using some improvisation.
- ★ **Blues scale** – The pattern of notes frequently used in blues and jazz improvisation

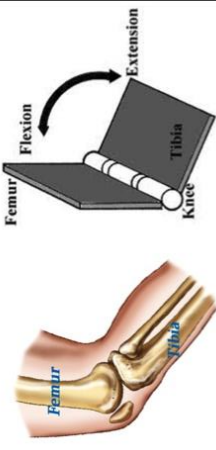
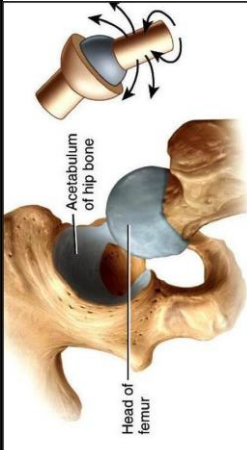
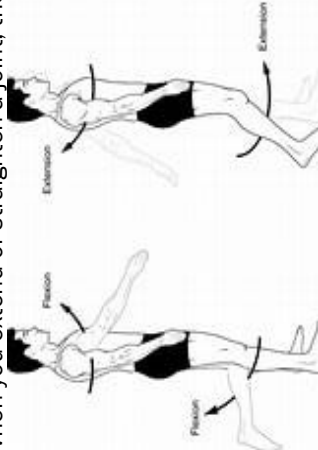
Diagrams to support learning:

E Blues Scale

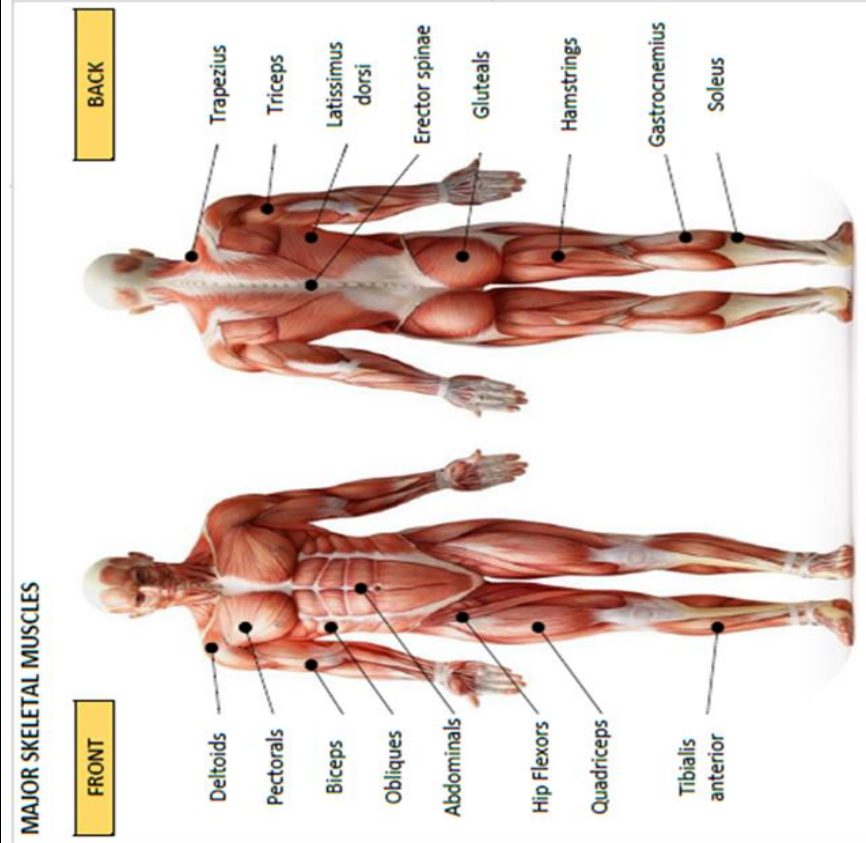
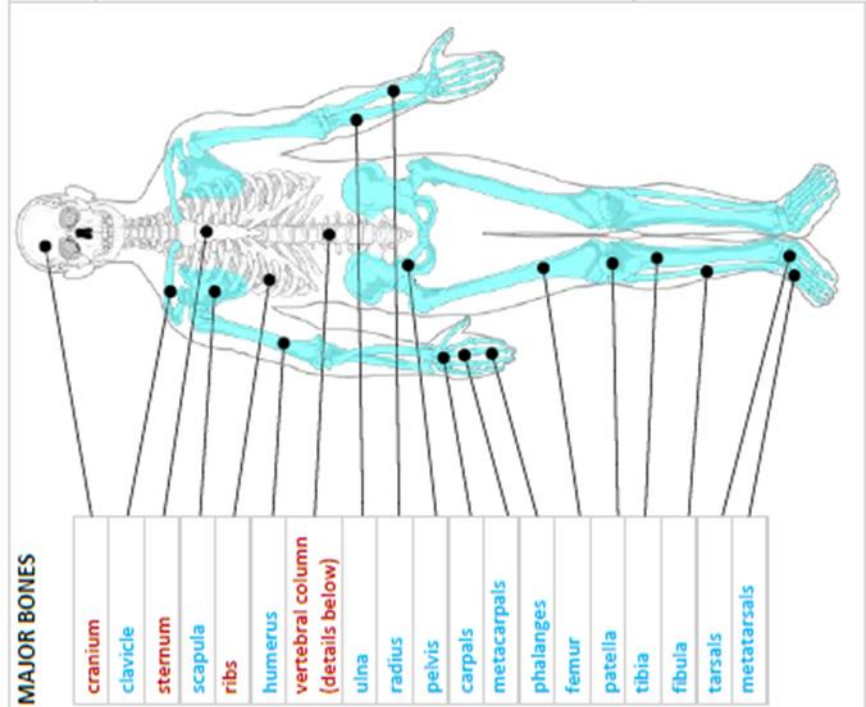


Year 9 PE – Task 1

Fit to Perform Knowledge Organiser

Movement Analysis		
Preparation	Phase 1: Preparation – the movements an athlete makes while preparing to perform the skill	
Execution	Phase 2: Execution – the movements made while performing the main part of the skill	
Recovery	Phase 3: Recovery – the movements that allow an athlete to regain balance and/or position after performing the skill (sometimes to go into action with another performance)	
Joint	Where two or more bones meet	
Type of joint: Hinge E.g. Knee		
Type of joint: Ball and Socket E.g. Hip		
Movement at a joint: Flexion & Extension	 When you extend or straighten a joint, the angle increases, and when you flex or bend a joint, the angle decreases.	

Skeletal and Muscular Systems



Knowledge Organiser Key Stage 3

Subject : Science

Year: 9

Topic Title: Matter

Key Facts

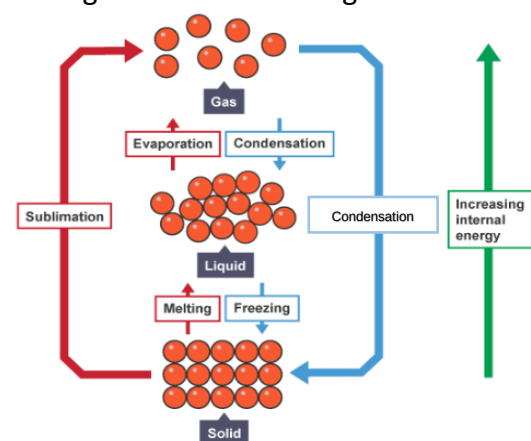
1. Everything around us is made up of **particles**
2. All of these particles are in one of three states of matter – **solids, liquids or gases**
3. Solid particles have the least energy. Solid particles **vibrate** on the spot, in a **fixed position**, and form **strong bonds** with other solid particles in a **regular arrangement**. Solids have a fixed shape and **can't be compressed**.
4. Liquid particles have more energy than solids. Liquid particles move **quickly** and **randomly**, and form **weak bonds** with other liquid particles. Liquid particles are arranged **randomly**, sometimes touching, sometimes not, but the particles are close enough together that liquids **cannot be compressed**.
5. Gas particles have more energy than liquid particles. Gas particles move **very quickly** and **randomly**. Gas particles do not form bonds with each other, so spread out **far apart** in a random way. Because gas particles are far apart, gases have **no fixed shape** and **can be compressed**.
6. The particles in a substance **stay the same** when it changes state. Only **closeness, arrangement** and **motion** change. This means that the **chemical** nature of the substance stays the same and the **mass** of the substance stays the same.
7. **Diffusion** of particles is due to their **movement**. Particles in solids **cannot** diffuse. Warmer particles with more energy move more quickly and so **diffuse more quickly**. Gas particles of a substance diffuse more quickly than liquid particles of the same substance.
8. Pressure (N/m^2) = Force (N) $\div$ Area (m^2) **$P=F/A$**
9. Solids exert pressure towards the centre of the Earth due to their weight. **Fluids** exert pressure in **every direction** as fluid particles are travelling randomly in every direction. If fluid particles hit a surface they exert pressure **at 90° to that surface**.
10. Pressure in a column of fluid (e.g. the liquid in a water pipe, or the gases in the atmosphere) **increases with depth** due to the weight of the fluid above
11. Because the particles in a fluid exert pressure from every direction **including from below**, this causes **buoyancy / upthrust**
12. If an object **floats** in a fluid (e.g. a boat on water, or a balloon in the air) then the force of the upthrust is **equal and opposite** to the objects weight
13. The **maximum upthrust** on a submerged object is equal and opposite to the **weight of fluid displaced** by that object
14. If the maximum upthrust is **lower** than the weight of fluid displaced by an object, it will **sink**. If the maximum upthrust is **higher** than the weight of fluid displaced by an object, it will **float**.
15. You can change the upthrust on an object by changing the way it is in **contact** with the fluid and so how much fluid it **displaces**. A boat placed flat in the water should float. A boat placed end-on might sink!

Key words

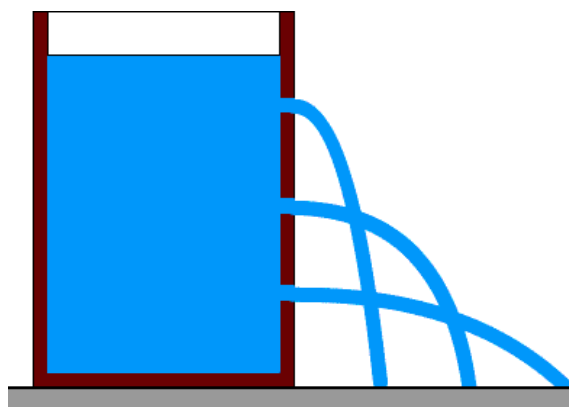
1. **Particle** – a small piece of matter
2. **Matter** – the substances that all physical objects are made from
3. **Regular** – in a repeating pattern
4. **Random** – with no pattern
5. **Compressed** – squashed
6. **Fluid** – a substance that can flow (a liquid or a gas)
7. **Exert** - apply
8. **Diffusion** – the movement of particles from an area of high concentration to an area of low concentration
9. **Brownian motion** – random motion of particles due to their random collisions with each other
10. **Pressure** – a measure of how spread out a force is
11. **Atmospheric pressure** – the pressure due to the weight of the atmosphere
12. **Normal to a surface** – at 90° to the surface, perpendicular to the surface
13. **Upthrust** – the upward force that the particles in a fluid exert on a body floating in the fluid
14. **Maximum** – highest possible
15. **Submerged** – completely surrounded by fluid
16. **Displaced** – moved away, taken the place of

Diagrams

Arrangement of and changes in States of Matter



Pressure in liquids increases with depth



Potential misconceptions to avoid / errors students often make

1. All particles move, even in very cold solids such as ice

Students sometimes aren't clear enough about whether they are talking about the object or the particles that make up the object.

Solids stay in one place. The tiny particles that make up the solid vibrate in a fixed position

Liquids can flow. The tiny particles that make up a liquid move around randomly and quite quickly.

Gases can flow and fill a container. The tiny particles that make up a gas move around randomly and very quickly

2. All particles have energy, even in very cold solids such as ice

Because solids don't vibrate, students sometimes forget that all solid particles have energy and that all solid particles move/vibrate on the spot.

As particles get hotter and gain energy, a solid will melt to a liquid and then a liquid will boil to a gas.

As particles get colder and lose energy, a gas will condense to a liquid and then a liquid freeze to a solid.

The particles move more slowly but they do not stop moving altogether.

3. Upthrust in fluids is just like the reaction force in solids

A small force from an object causes a small upthrust. Larger forces cause larger upthrust. Once the upthrust can no longer balance the downwards force, the object will sink!

YR 9 Spanish: Term 1 Knowledge Organiser

¿Te llevas bien con tu familia? - Do you get on well with your family?

En tu opinión ¿Qué es un buen amigo? - In your opinion, what makes a good friend?

Describe tu familia – Describe your family



Me llevo bien con ... (I get on well with...)	mi/su madre/madrastra (my/his/her mum/stepmum)			cariñoso/a/s (caring)
Se lleva bien con... (He / She gets on well with...)	mi/su padre/padrastro (my/his/her dad/stepdad)	porque (because)		alegre/s (happy)
	mi/su hermano/hermanastro (my/his/her brother/stepbrother)		es (he/she is)	serio/a/s (serious)
Me llevo mal con ... (I don't get on well with...)	mi/su hermana/hermanastra (m/his/her sister/step sister)	ya que (because)	son (they are)	simpático/a/s (nice)
	mi/su tío (my/his/her uncle)	dado que (given that)		feliz/ces (happy)
	mi/su tía (my/his/her aunty)			comprensivo/a/s
Se lleva mal con... (He / She doesn't get on well with...)	mi/su primo/a (my/his/her cousin)			(understanding)
	mi/su abuelo (my/his/her grandad)			maleducado/a/s (rude)
	mi/su abuela (my/his/her grandma)			fantástico/a/s (fantastic)
	mis/sus padres (my/his/her parents)			estupendo/a/s (amazing)
	mis/sus abuelos (my/his/her grandparents)			estúpido/a/s (stupid)
				hablador/s/a/es (chatty)

A mi modo de ver (in my opinion)	un buen amigo (a good friend)					un buen amigo una buena amiga	me hace reír (makes me laugh) me hace feliz (makes me happy) me ayuda con mis problemas (helps me with problems) Me acepta (accepts me) Me entiende (understands me) Comparte todo (shares everything)	
Creo que (I think that)	una buena amiga (a good friend)			te dice la verdad (tells you the truth) te acepta como eres (accepts you the way you are) te da consejos (gives you advice)		es (is)		
Según yo (according to me)	Es alguien que (is someone who)			sin embargo (however)		un buen amigo una buena amiga nunca (never)	es pesimista (pessimistic) es mentiroso/a (liar) es egoísta (selfish) es molesto/a (is annoying) te critica (criticizes you) te juzga (judges you)	

Soy (I am) Es (He / She is) Son (They are)	alto(a)(s) (tall) / bajo(a)(s) (small) / delgado(a)(s) (thin) / gordo(a)(s) (big) / guapo(a)(s) (beautiful) / feo(a)(s) (ugly) / joven(es) (young) / anciano(a)(s) (old) / calvo(a)(s) (bald)			
	muy (very) / bastante (quite)	alegre(s) (happy) / simpático(a)(s) (nice) / amable(s) (kind) / gracioso(a)(s) (funny)		
Tengo (I have) Tiene (He / She has) Tienen (They have)	el pelo (hair)	blanco (white) / rubio (blonde) / negro (black) / pelirrojo (red) / gris (grey) / moreno (dark brown) / castaño (brown)	y (and)	liso (straight) / rizado (curly) / ondulado (wavy) / corto (short) / largo (long)
	los ojos (eyes)	azules (blue) / marrones (brown) / grises (grey) / verdes (green)		
Llevo (I wear / have) Lleva (He / She wears / has) Llevan (They wear / have)	pecas (freckles)	No soy ni alto(a) ni bajo(a). (I am neither tall nor small.) Me gustaría ser alto(a). (I would like to be tall.) Me gustaría tener los ojos verdes. (I would like to have green eyes.) Me gustaría tener el pelo negro. (I would like to have black hair.) Me gustaría llevar gafas. (I would like to wear glasses.)		
	gafas (glasses) / gafas de sol (sunglasses) / barba (beard) / bigote (moustache)	No es ni alto(a) ni bajo(a). (He/She is neither tall nor small.) Le gustaría ser alto(a). (He/She would like to be tall.) Le gustaría tener los ojos verdes. (He/She would like to have green eyes.) Le gustaría tener el pelo negro. (He/She would like to have black hair.) Le gustaría llevar gafas. (He/She would like to wear glasses.) Les gustaría + infinitive = they would like		

Year 9

Term 2

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Knowledge Organiser: We Should All Be Feminists

Writer's Intent		Key Idea	Explanation	How it's seen in the text	
We Should All Be Feminists is an essay written by Chimamanda Ngozi Adichie after the success of her TEDx talk of the same name. In it, Adichie explores what feminism means in the twenty-first century. She provides examples from her own life to highlight some of the realities women face today, as well as to show why feminism is still important – not just for women but for everyone. Throughout the essay, Adichie attempts to persuade people to do something about the inequalities women face and to make positive changes in society to counteract this.		Feminism	Feminism is the belief that men and women should be equal in all parts of society.	Adichie highlights that feminism is not about women gaining a dominance, but about both genders being equal. She notes that this means men being free from the shackles of negative stereotypes as well as women.	
		Gendered Language	The assumption that certain words and phrases are inherently more masculine or feminine.	Adichie looks at the way assumptions about how women talk in a more passive manner, lead to women being criticised for asserting themselves or expressing themselves in the same way as their male counterparts would.	
		Inequality	The condition of being unequal, or there being a disparity between certain groups.	Adichie explores how stereotypes of women can lead to inequalities in all parts of day-to-day life. She comments on how the patriarchy also helps to reinforce these inequalities and makes it difficult for women to overcome them.	
		Masculinity	The qualities or attributes regarded as characteristic of men. This can lead to anxiety felt by men who believe they are falling short of these cultural standards of manhood.	Adichie explores the negative effects that these strongly held stereotypes about what makes a man have. She looks at how it isn't just problematic for women; but can cause severe issues for men too.	
		Socialisation	The process beginning during childhood by which individuals acquire the values, habits, and attitudes of a society.	Adichie looks at how assumptions about gender and what interactions between genders looks like is embedded through their upbringing.	
Writer's Methods					
Supporting Texts		Method	Definition	Example	Purpose
The supporting texts studied in this unit encompass another text by Adichie - her feminist manifesto, <i>Dear Ijeawele</i> (2017) - as well as a range of contemporary journalism exploring some of themes raised by Adichie. <i>Dear Ijeawele</i> crystallises some of the intuitions Adichie makes in <i>We Should All Be Feminists</i> into advice for new parents wanting to raise feminist daughters.		Anecdote	A short amusing or interesting story about a real incident or person.	'Now here's a story from my childhood: When I was in Primary school in Nsukka ...'	Adds a human aspect to an abstract concept making it more relatable.
		Imperatives	Phrases used to give commands, warnings or instructions.	'Close your legs. Cover Yourself.'	It shows that the action is a necessity; adds emphasis.
		Anaphora	Repetition of a word or phrase at the beginning of successive clauses.	'Teach her self reliance...Teach her to try to fix physical things...'	It adds emphasis and a sense of urgency to the argument
		Rhetorical Questions	A rhetorical question is one for which the questioner does not expect a direct answer.	'Why should a woman's success be a threat to a man?'	It gives us the speaker's opinion on the topic and forces us to consider our own opinion.
		Tricolon	A series of three parallel words, phrases, or clauses.	"...she is usually talking about having given up a job, a dream, a career."	It adds emphasis and creates a sense of balance.
		Parallelism	Using phrasing that is grammatically similar or identical in structure.	'We teach girls to shrink themselves, to make themselves smaller.'	It can be used for emphasis (it is a form of repetition) and also to give a rhythmic tone to the text.



Knowledge Organiser: We Should All Be Feminists

Key Word Glossary		
Word	Definition	Example
Bias	An inclination or prejudice for or against one person or group.	It's important not to be biased against certain genders.
Conventions	A way in which something is usually done.	The conventions of marriage are that the woman takes the man's last name.
Empathy	The ability to understand and share the feelings of another.	It is easy to empathise with how angry he is.
Gender	The social and cultural differences associated with being male or female.	Gendered bathrooms stop males and females mixing.
Irony	A state of affairs or an event that seems deliberately contrary to what one expects and is often amusing as a result.	The irony is they were fighting over a job neither of them wanted anyway.
Objectify	To treat a person like a tool or toy, as if they had no feelings, opinions, or rights of their own.	You shouldn't objectify a woman.
Patriarchy	A system of society or government in which men hold the power and women are largely excluded from it.	The patriarchy can mean that women are unable to occupy certain roles.
Perspective	A particular attitude towards or way of regarding something; a point of view.	That may be your perspective on young people but it's not mine.
Persuade	Cause someone to believe something.	You sometimes have to persuade people they're wrong.
Power	The ability or capacity to do something or act in a particular way.	You have the power to walk away from a fight.
Privilege	Someone has advantages or rights that are not afforded (given) to other people.	Use your own privilege for good when you see something in society is unfair.
Stereotypes	An over-generalised belief about a particular category of people.	It is a stereotype that all blondes are dumb.
Stigma	A mark of disgrace associated with a particular circumstance, quality, or person.	A common stigma that feminists face is that they hate men.

Background:	
1.	Development means positive change that makes things better.
2.	As a country develops it usually means that the people's standard of living and quality of life improve. (B)
3.	Different factors can affect development such as economic, social and political factors. (A)
4.	Emerging countries have begun to experience higher rates of development, with a rapid growth in secondary industries. (A, C)
5.	Emerging countries have some of the fastest rates of urbanisation in the world. (D)
6.	This is causing urban areas (cities) to become highly populated, this process can have both opportunities and challenges. One such challenge is the growth of squatter settlements. (E)
7.	Emerging countries often host the factories of many transnational companies. They provide wages and taxes, and can promote development. However, they can also cause negatives. (F, G)

B.	Development indicators (3)	
GDP per capita	The total value of goods and services sold by a country in a year divided by the population.	
HDI	A development measure which combines GDP per capita, life expectancy and literacy rate.	
Life expectancy	The average age you are expected to live to in a country.	

D.	Rural to urban migration (4)	
Rural to urban migration	The movement of people from rural areas (countryside) to urban areas (cities).	
Push factor	Things that make people want to leave an area e.g. a lack of jobs.	
Pull factor	Things that attract people to live in an area e.g. good health care.	
Mechanisation	When machines begin to do the work which humans once completed.	

F.	Transnational corporations (TNCs) (5)	
Transnational corporation	Those that operate across more than one country.	
Footloose	Industries which are not tied to a location due to natural resources or transport links.	
Globalisation	The increased connectivity of countries around the world e.g. through trade.	
Host country	The country where the TNC places it's factories e.g. in an emerging or developing country.	
Source country	The country where the headquarters for the TNC is located e.g. a developed country.	

C.	Encouraging development (4)	
Subsidy	Money given by a government to help an industry keep down the cost of exports.	
Tax breaks	This reduces the amount of tax a company must pay (normally for a fixed period), therefore increasing profit.	
Minimum wage	The lowest wage permitted by law in a country.	
Trade unions	An organisation of workers who work to protect the rights of those employed.	

E.	Squatter settlements (5)	
Squatter/shanty settlement	An area (often illegal) of poor quality housing, lacking basic services e.g. water.	
Inequality	Differences in wealth, and wellbeing.	
Sanitation	Measures to protect public health e.g. clean water and disposing of sewage.	
Informal economy	Jobs which are not taxed, workers do not have contracts or rights.	
Quality of life	A measure of how 'wealthy' people are, but measured using housing, employment and environment, rather than income.	

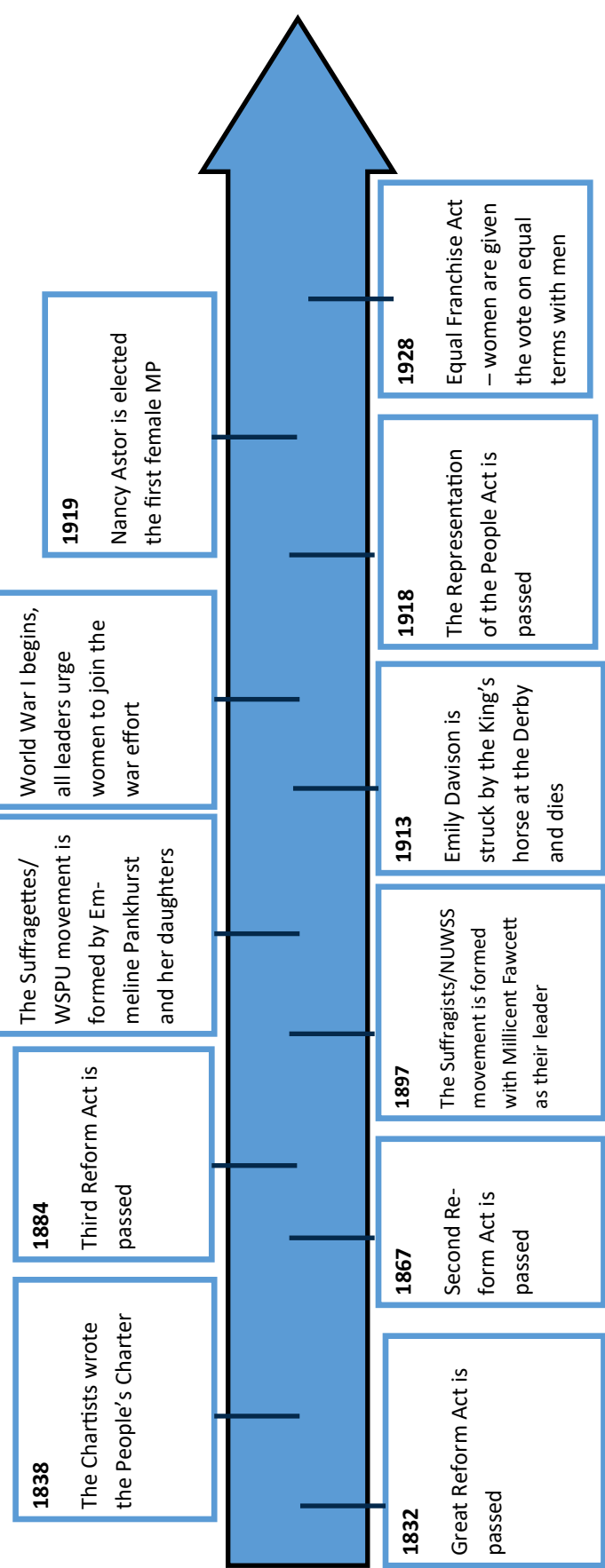
G.	Impact of TNCs	
Positive: (5)	1. More jobs. 2. More taxes. 3. Invest in infrastructure projects. 4. GDP increases. 5. Develop workers skills.	
Negative: (3)	1. Can exploit workers e.g. long hours. 2. Most of the profits from TNCs leave the country where production takes place. 3. Increased levels of pollution e.g. air and water (from industrial waste).	

Life in an Emerging Country

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Unit 2: The Suffragettes

Knowledge Organiser



Key concept: Causation	
Long term	Factor(s) that were around or happened significantly before hand. E.g. Success of protests for male suffrage, demands of the Chartists
Short term	Factor(s) that happen relatively close to the event you are studying. E.g. Militant actions of the Suffragettes
Spark or Trigger	A significant factor or turning point, that has an immediate impact that sets a sequence of events in motion that won't turn back. E.g WW1 and changing role of

Key people	
Nancy Astor	The first women elected as a Member of Parliament (MP)
Emily Davison	Joined the WSPU in 1906. Was struck by the King's horse at the Epsom Derby and killed in 1913.
Benjamin Disraeli	A Conservative Prime Minister (1868, 1874-80) who introduced the Second Reform Act
Millicent Fawcett	Founded the Suffragists/NUWSS in 1897
William Gladstone	A Liberal politician who served in Parliament for over 60 years and four times as Prime Minister. He passed the Third Reform Act, extending the vote to all male homeowners.
Earl Grey	A Whig Prime Minister who proposed the Great Reform Act in 1831 and re-signed when the House of Lords rejected it.
Annie Kenney	A working-class socialist feminist who was active in the WSPU as a militant member and was arrested.
William Lovett	The leader of the Chartist movement and wrote the People's Charter in 1838
Christabel Pankhurst	Speaker for the WSPU in 1905. She trained as a lawyer but could not practice as a woman. She fled the country in 1912 for fear of rearrest, and unsuccessfully ran for parliament in 1918.
Emmeline Pankhurst	Founded the WSPU in October 1903 and encouraged militant action as a form of protest. Was arrested many times, she went on hunger strike and was force -fed. Mother of Christabel.

How do I use my knowledge organiser?

Have you learnt the key dates of this unit?

Can you put the dates into chronological order?

Have you mastered the keywords?

Can you spell them?

Can you define them?

Have you understood the key concept?

Can you explain what an event/individual/place in history reveals about a bigger picture or bigger idea?

Keywords	
Act a written law passed by Parliament	Propaganda information used to promote a political point that can be misleading or untrue
Ballot a system of voting on a particular issue	Reform make changes in order to improve something
Charter a written statement of the rights of a specified group of people	Representation Speaking or acting on behalf of someone
Democracy system of government by the whole population typically through elected representatives.	Rotten boroughs a borough that was able to elect an MP despite having very few voters, the choice of MP typically being in the hands of one person or
Enfranchisement To be given the right to vote	Strike an organised refusal to do something expected or required typically to gain a concession
Manifesto A public set of political aims written down	Suffrage the right to vote
Parliament a group of people who make the laws for their country	Tactics An action or strategy carefully planned to achieve a specific end
Petition a formal written request, typically one signed by many people, appealing to authority in respect of a particular cause	

Fluency sheet						
1	What proportion of the British population had the right to vote before the Great Reform Act?	2.5%		16	Who led the Suffragettes when they split from the Suffragists in 1903?	Emmeline Pankhurst
2	What were boroughs where just one family or land-owner elected the MP called?	Rotten boroughs		17	What methods did the Suffragettes use to persuade people to their cause?	Protests and damaging property
3	What term is given to elections in which votes are not cast in public?	Secret ballot		18	Which law was introduced that allowed the police to release and then rearrest women on hunger strike?	Cat and Mouse Act
4	Before 1870, what happened to a woman's wealth when they got married?	It became their husband's		19	What did women that worked in the munition factories during WW1 become nicknamed?	The Canary Girls
5	Why were politics and government matters for men in the 19th century?	It was believed women didn't have the brain capacity		20	How did women help on the frontline?	Nursing and driving ambulances
6	What happened when Earl Grey's Great Reform Act	Riots broke out across the country		21	How did the war help all men get the vote?	They had fought for their country/democracy
7	In which year was the Great Reform Act passed?	1832		22	Which Prime Minister encouraged female suffrage?	David Lloyd George
8	What was the voting qualification in Britain following the Great Reform Act?	Men living in a property over £10		23	Which law passed in 1918 gave all men aged 21+ and women 30+ the vote?	Representation of the People Act
9	What working-class movement for equal political rights began in 1838?	Chartism		24	Who was the first woman elected as a Member of Parliament (MP)?	Nancy Astor
10	How many people joined a protest at Kennington Common in south London in 1848?	50,000		25	In which year were women given the vote on equal terms with men?	1928
11	Which British Prime Minister extended the vote to all	William Gladstone				
12	Which transport invention made it easier for radicals to travel and spread their ideas?	The train/railway				
13	Who led the Suffragists?	Millicent Fawcett				
14	In which year were the Suffragists/ NUWSS formed?	1897				
15	What three main methods did the Suffragists use to persuade people to their cause?	Pamphlets, petitions, and marches				

KPI 9.06 Algebraic Manipulation

1) $2a$	$2 \times a$	2) ab	$a \times b$
3) a^2	$a \times a$	4) $3a^2$	$3 \times a \times a$
5) a subtracted from b	$b - a$	6) a less than b	$b - a$
7) a divided by b	$\frac{a}{b}$	8) b divided by a	$\frac{b}{a}$
9) 4 times smaller than a	$\frac{a}{4}$ or $a \div 4$	10) 4 times larger than a	$4 \times a \rightarrow 4a$
11) 5 th power of a	a^5	12) Variable	A letter used to represent any number.
13) Coefficient	The number to the left of the variable. This is the value that we multiply the variable by. $4x \rightarrow$ The coefficient of x is 4. $x \rightarrow$ The coefficient of x is 1.	14) Term	A single number, variable or numbers and variables multiplied together.
15) Simplifying	An expression can be simplified by grouping like terms. E.g. $2a + b^2 - 4b + 7a = 9a + b^2 - 4b$	16) Identity	An identity is an equation which is always true no matter what value of the unknown is substituted. E.g. $3x - 15 = 3(x - 5)$

KPI 9.07 Index Laws

1) Multiplication law	$a^m \times a^n = a^{m+n}$ Same base numbers, ADD the powers.	2) Division law	$a^m \div a^n = a^{m-n}$ Same base numbers, SUBTRACT the powers.
3) Power to a power	$(a^m)^n = a^{m \times n}$ MULTIPLY the powers.	4) Raising a fraction by a power	$(ab)^n = a^n \times b^n$ Raise each number or variable to the same power.
5) Power of 0	$a^0 = 1$. Any number or variable to the power of zero equals 1.	6) Negative powers (integers)	$a^{-1} = \frac{1}{a}$ $a^{-2} = \frac{1}{a^2}$ $a^{-n} = \frac{1}{a^n}$ A negative power represents the reciprocal.
7) Positive unit fractions	$\frac{1}{a^2} = \sqrt{a}$ $\frac{1}{a^3} = \sqrt[3]{a}$ $\frac{1}{a^n} = \sqrt[n]{a}$	8) Negative unit fractions	$a^{-\frac{1}{2}} = \frac{1}{\sqrt{a}}$ $a^{-\frac{1}{3}} = \frac{1}{\sqrt[3]{a}}$ $a^{-\frac{1}{n}} = \frac{1}{\sqrt[n]{a}}$
9) Positive non-unit fractions	$\frac{m}{a^n} = (\sqrt[n]{a})^m$	10) Negative non-unit fractions	$(a)^{-\frac{m}{n}} = \left(\frac{1}{a}\right)^{\frac{m}{n}} = \left(\sqrt[n]{\frac{1}{a}}\right)^m$

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Knowledge Organiser Key Stage 3

Subject: Music Year: 9

Topic Title: Elements and Notation



Lesson 1

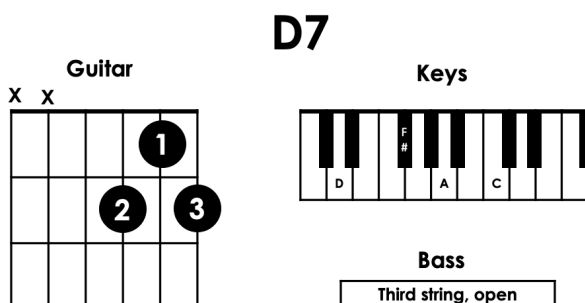
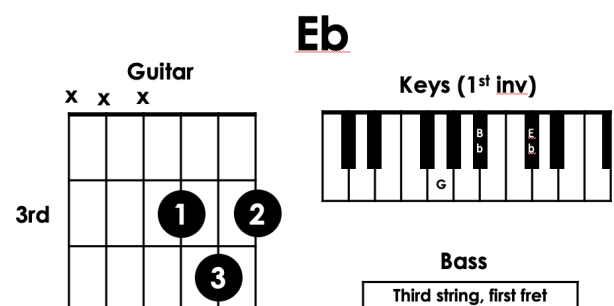
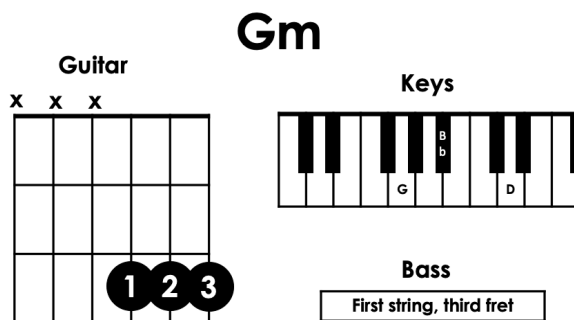
Key Facts from this lesson

- As well as Western Classical Notation (as we used last term), there are a lot of other different ways we can write music, including lead sheets, which we will be using today.
- The piece we are learning today is in the key of G minor, which uses two flats (Bb and Eb)
- We do not always have to play the notes in a chord in with the root (named) note first. We can play the notes in a different order to achieve a different effect; this is called an *inversion*.

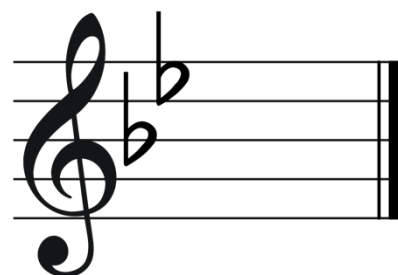
Key words and definitions from this lesson:

- ★ **Lead sheet** – A form of musical notation featuring only lyrics and chords
- ★ **Interval** – The distance between one note and another
- ★ **Tone** – An interval of two notes (for instance F to G)
- ★ **Semitone** – An interval of one note (for instance F to F#)
- ★ **Inversion** – A chord in which the order of notes are changed, for instance Gm is G, Bb, D. Gm 1st inversion is Bb, D, G, and Gm 2nd inversion is D, G, Bb.

Diagrams to support learning:



G minor key signature:





Knowledge Organiser Key Stage 3

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Lesson 2

Success criteria for performance

- A group member counts in at the correct tempo.
- We are not always all playing; there are moments of contrast.
- The singers can be heard above the other members (use your voice!)
- Each member changes chords at the correct time.

Havana - Lead sheet:

[Chorus]

Gm D# D7

Havana ooh na na

Gm D# D7

Half of my heart is in Havana ooh na na

Gm D# D7

He took me back to East Atlanta na na na

Gm

All of my heart is in Havana

D# D7

There's somethin' 'bout his manners

Gm

Havana ooh na na

[Verse 1]

Gm D# D7

He didn't walk up with that "how you doin" (when he came in the room)

Gm D# D7

He said there's a lot of girls I can do with (but I can't without you)

Gm D# D7

I'm doin' forever in a minute (that summer night in June)

Gm D# D7

and Papa says he got malo in him

[Pre-Chorus (same chords as before)]

He got me feelin' like

ooh ooh-ooh ooh

I knew it when I met him

I loved him when I left him

Got me feelin' like

ooh ooh-ooh ooh

and then I had to tell him

I had to go

oh na na na na na



Knowledge Organiser Key Stage 3

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Lesson 3

Key Facts from this lesson

- A really easy way to create interest in music is to use a modulation. By doing this, we can create a completely new section without having to write a new melody or chords. By modulating (changing key) upwards, we can give our music a sense of “lifting”.
- With loud or distorted electric guitars, close intervals like a third can often sound muddy and clashing. Electric guitarists tend to use a bare fifth chord instead of a triad if this is the case.

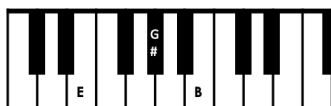
Key words and definitions from this lesson:

- ★ **Bare fifth** – A two note chord; the same as a triad but with the middle note removed.
- ★ **Tablature** – An alternative form of notation for guitar and bass, in which strings and fret numbers are clearly illustrated
- ★ **Modulation** – Also known as a key change. In a modulation, every pitch within a tune and chord progression is repeated but moved up or down a set number of semitones.

Diagrams to support learning:

E

Keys



Bass

First string, open

A

Keys



Bass

First string, fifth fret

B

Keys



Bass

First string, seventh fret

F#

Keys



Bass

First string, second fret

C#

Keys



Bass

Second string, fourth fret

Guitar chords

	1 st half			2 nd half		
	E	B	A	F#	C#	B
E	---	---	---	---	---	---
B	---	---	---	---	---	---
G	---	---	---	---	---	---
D	9	---	---	6	---	4
A	7	9	7	4	---	2
E	7	---	5	2	---	---



Knowledge Organiser Key Stage 3

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Lesson 4

Performance success criteria

- My band all changes chords at the same time.
- The tempo is steady and doesn't change throughout.
- The modulation (key change) doesn't disrupt the performance in any way.

I Wanna Be Sedated – Lead Sheet:

[Verse]

E5 **A5** **E5**
Twenty, twenty, twenty four hours to go, I wanna be sedated

E5 **A5** **E5**
Nothin' to do, nowhere to go, oh, I wanna be sedated

[Chorus]

B5 **E5**
Just get me to the airport, put me on a plane

B5 **E5**
Hurry, hurry, hurry, before I go insane

B5 **E5**
I can't control my fingers, I can't control my brain

A5 **B5**
Oh no, oh, oh, oh, oh

[Verse 2 - same as verse 1]

[Chorus 2 - same as chorus 1]

[Solo]

E5 A5 B5 E5

E5 A5 B5 E5

[Bridge]

E5

[Verse]

F#5 **B5** **F#5**
Twenty, twenty, twenty four hours to go, I wanna be sedated

F#5 **B5** **F#5**
Nothin' to do, nowhere to go, oh, I wanna be sedated



Knowledge Organiser Key Stage 3
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[Chorus]

C#5

F#5

Just put me in a wheelchair, get me to the show

C#5

F#5

Hurry, hurry, hurry, before I go loco

C#5

F#5

I can't control my fingers, I can't control my toes

B5

C#5

F#5

Oh no, oh, oh, oh, oh

[Verse]

F#5

B5

F#5

Twenty, twenty, twenty four hours to go, I wanna be sedated

F#5

B5

F#5

Nothin' to do, nowhere to go, oh, I wanna be sedated

[Chorus]

C#5

F#5

Just put me in a wheelchair, get me to the show

C#5

F#5

Hurry, hurry, hurry, before I go loco

C#5

F#5

I can't control my fingers, I can't control my toes

B5

C#5

Oh no, oh, oh, oh, oh

[Outro]

F#5

B5

C#5

F#5

Bamp bamp, ba bamp, ba bamp bamp, ba bamp, I wanna be sedated

F#5

B5

C#5

F#5

Bamp bamp, ba bamp, ba bamp bamp, ba bamp, I wanna be sedated

F#5

B5

C#5

F#5

Bamp bamp, ba bamp, ba bamp bamp, ba bamp, I wanna be sedated

F#5

B5

C#5

F#5

Bamp bamp, ba bamp, ba bamp bamp, ba bamp, I wanna be sedated



Knowledge Organiser Key Stage 3

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Lesson 5

Key Facts from this lesson

- We don't always count music in fours. Sometimes we use different *time signatures*, which tell us how many beats and what type of beats to use per bar.
- Texture doesn't always just mean thick (many parts) or thin (few parts). It can also refer to what the parts are doing in relation to each other.

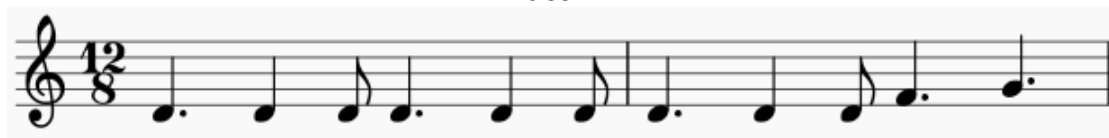
Key words and definitions from this lesson:

- ★ **Polyphonic** – A texture in which there are multiple melodies over an accompaniment.
- ★ **Riff** – A short, repeated melody. In classical terms, this might be called an ostinato.
- ★ **Subdivision** – The units that a beat is broken up into (halves, thirds, quarters etc)
- ★ **Swing** – A rhythmic feel in which the off beat notes are played slightly later than in straight feel.

Diagrams to support learning:

D	F	G	C
Keys	Keys	Keys	Keys
Bass	Bass	Bass	Bass
Third string, open	Third string, third fret	Third string, fifth fret	Second string, third fret

Bass Riff



Guitar chords

D F G C

E-----
B-----
G-----
D--7-----5--
A--5---3---5---3---
E-----1---3-----



Performance success criteria

- We are all playing with swing feel
- At least one member is playing the bass riff in the verses
- Everyone changes chords at the same time

[Chorus]

D F G

Spread your love like a fever

D F G

And don't you ever come down

D **F G**

Spread your love like a fever

D F G

And don't you ever come down

D **F G**

I spread my love like a fever

D F G

I ain't ever coming down

[Instrumental]

D/// C/// G/// F/G/

[Verse]

D F G

She gave me love like a big fire

D F G

I only saw it once

D **F G**

She spread her love like a fever

D **F G**

She's bad, but not enough

[Chorus (like this, then last two lines of first chorus)]

D **F G**

Spread your love like a fever (I'm so low)

D **F G**

And don't you ever come down (I'm so low)

D **F G**

Spread your love like a fever (I'm so low)

D **F G**

And don't you ever come down (I'm so low)



Knowledge Organiser Key Stage 3

Subject: Music **Year:** 9

Topic Title: Elements and Notation



Drum rhythms

Havana



I Wanna Be Sedated



Spread Your Love



Eatwell Guide

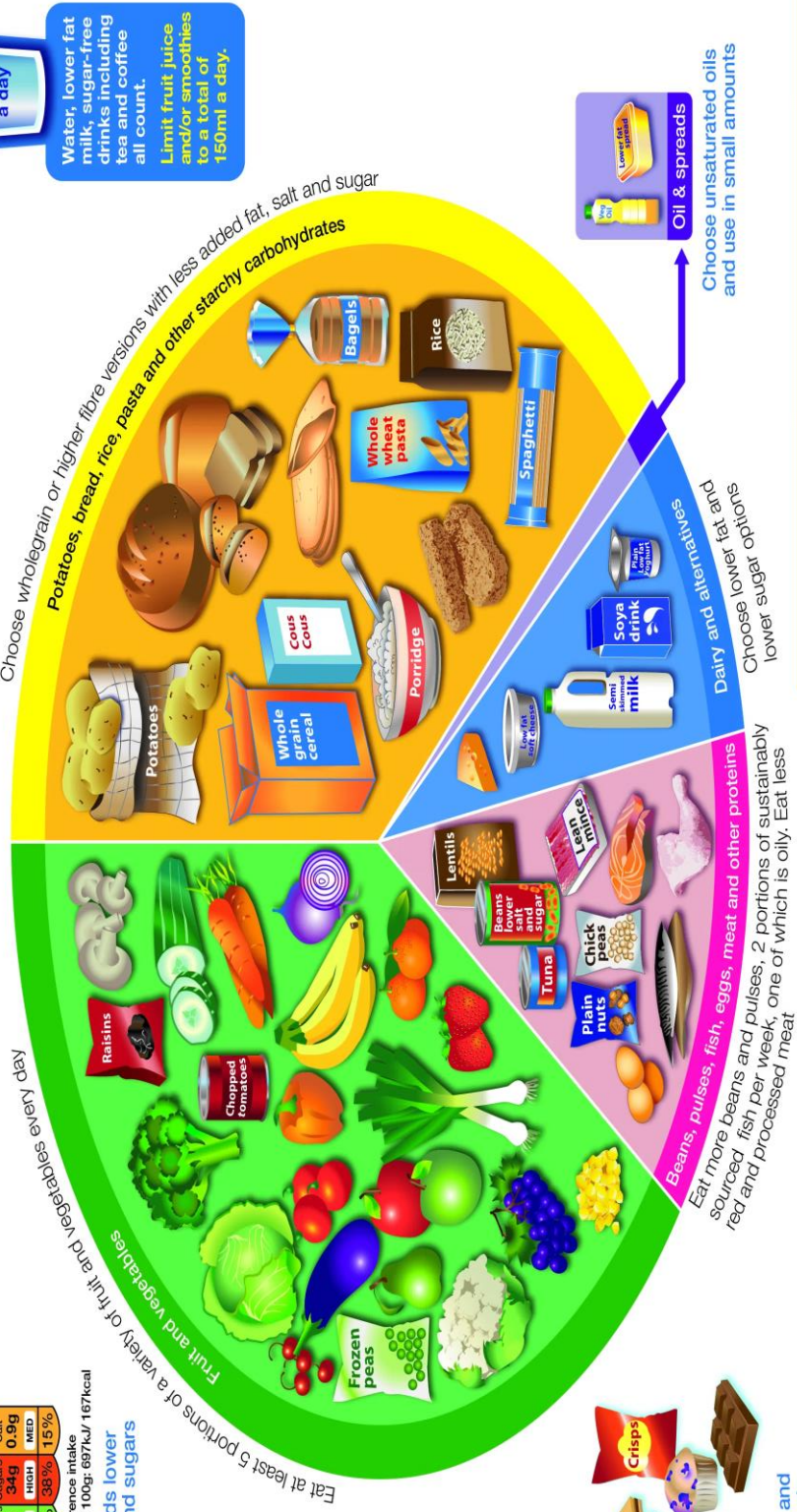
Check the label on packaged foods

Each serving contains					
Energy	Saturated Fat	Sugars	Salt		
1048kJ	5g	1.3g	0.9g		
250kcal	LOW	LOW	HIGH		
12.5%	7%	6.5%	38%	15%	

Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.



Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Carbohydrates	Carbohydrates provide energy and all meals should be based on starchy carbs. Simple carbohydrates (also known as sugars) The basic units of carbohydrates are simple sugar molecules, for example glucose, fructose and sucrose. They are provided by sweet foods like chocolate, milk and fruit. Complex carbohydrates (also known as starch) These are formed of long chains of sugars joined together. They are found in wholegrain foods like bread, rice, pasta and potatoes -these keep us fuller for longer.
Protein	Proteins are a vital part of a healthy diet. Protein-rich foods include fish, meat, eggs and beans. Your body uses proteins to make new cells for growth, and repair damaged tissues.
Fats	Lipids include fats (solid at room temperature) and oils (liquid at room temperature). Lipids are an important part of a healthy diet. The body uses lipids as an energy store, as insulation and to make cell membranes. *Two portions of fish a week is recommended as they provide essential oils. ** Unsaturated fats (e.g. found in avocados) are better than saturated fats (e.g., found in crisps) as they help to lower cholesterol.
Vitamins and Minerals	Vitamins and minerals help the body to use other nutrients efficiently and can be found in fruit and vegetables Vitamin A is vital for good eyesight. It is present in oranges, green vegetables, carrots and milk. Vitamin B1 helps to release energy from carbohydrates. It is in meat, fish, eggs and brown rice. Vitamin C helps to prevent illness and make bones. It is present in citrus fruit, green vegetables and potatoes. Vitamin K helps the blood to clot after an injury or operation. Green vegetables, tea and liver provide this nutrient. *Vegetarians and vegans could eat lentils and beans instead of fish, eggs and meat. ** It is recommended to only eat processed meat sausages/bacon) at least two times a month Important minerals include: Iron is needed to transport oxygen in the blood. Calcium, for bones and teeth. Zinc, to help heal wounds.
Fibre	Dietary fibre is plant material that cannot be digested by the body. It helps the digestive system to move the food we eat through the intestines and push the waste material out of the body.
Key facts	Foods that are rich in fibre include beans, pulses, and vegetables such as broccoli and carrots. The recommended portion size of pasta for an adult is two handfuls The recommended pizza portion for an adult male is two slices The recommended amount of salt for an adult per day is no more than 6 grams a day for adults

Medical Ethics

Background: Key topics in medical ethics	
1.	<i>Abortion: termination of a pregnancy by medical means</i>
2.	<i>Euthanasia: ending a life early to stop suffering (Easy death)</i>
3.	<i>Saviour Siblings: a child born with the purpose of saving a brother or sister.</i>
4.	<i>Surrogacy: the act of carrying a child on behalf of someone else who physically can't do so or doesn't want to.</i>
5.	<i>Fertility Treatment: medical help to assist someone getting pregnancy.</i>
6.	<i>Conjoined Twins: babies born where part of their bodies are attached</i>
7.	<i>Human Experimentation: medical tests on humans</i>

A.	Abortion
Pro-Life	The view that all life is sacred and should be protected because it's a life.
Pro-choice	The view that women should have the right to choose what happens to their body such as having an abortion.
Sanctity of Life	The belief in Christianity that all life is sacred as it is created by God.

B.	Euthanasia
Active Euthanasia	Is when a doctor or someone performs an act that ends someone's life
Passive Euthanasia	Is when care is removed that ends someone's life such as a life support machine
Voluntary Euthanasia	Is when someone chooses to have euthanasia performed.
Involuntary Euthanasia	Is when euthanasia is performed without the person asking for it e.g. in a coma.
Terminal Illness	An illness
Quality of life	The standard of health, comfort and happiness experienced by someone

Pro-life vs Pro choice arguments.	
C.	
Pro-life arguments	
1. The Ten Commandments state 'Thou shalt not kill' meaning abortion and euthanasia are murder. 2. 'Before I formed you in the womb I knew you' shows God creates everyone and to destroy life destroys what God has created. 3. To end a life early ruins potential for future cures.	
Pro-choice arguments.	
1. Jesus taught to 'love thy neighbour' and the more loving thing could be to allow someone to end a pregnancy or their life to stop suffering. 2. It is the woman's body so it is her choice if she has an abortion or not.	
D. Fertility Treatment	
IVF	A medical procedure where an egg is fertilised by sperm in a test tube or elsewhere outside the body.
Fertile	Able to conceive or produce children
Artificial	Made or produced by humans rather than occurring naturally
Insemination	The introduction of semen into a woman by natural or artificial means
Conceive	Create an embryo by fertilising an egg
Embryo	An unborn or unhatched offspring in the process of development, in particular a human offspring between 2-8 weeks after fertilisation.
Foetus	An unborn or unhatched offspring of a mammal
F. Saviour Siblings	
What it is:	The process of having a child with the purpose of using them to medically save a brother or sister.
Advantages (2)	
1. The saviour sibling will be loved and celebrated for saving their brother or sister. 2. It is the loving thing to do to save a sibling	
Disadvantages (1)	
1. To conceive a child to use him – even if it is to cure – is not respectful of his dignity. Archbishop d'Ornellas.	
G. Conjoined Twins Case Study: Jodie and Mary Attard	
Who?	Twins from Malta conjoined at the waist. Jodie was active and alert, Mary relied on Jodie to survive. The parents didn't want them separated, doctors proceeded and Jodie survived but Mary died.
Argument against separation	
"Mary is alive, she is a human being. It is wrong to kill her no matter the intention." Attard's Parish Priest.	
Argument for separation	
"It is in Mary's best interests that she die." Mr Justice Johnson, judge that ruled on the legal case.	

Medical Ethics and Suffering

Background: Key topics in medical ethics	
1. <i>Abortion: termination of a pregnancy by medical means</i> 2. <i>Euthanasia: ending a life early to stop suffering (Easy death)</i> 3. <i>Saviour Siblings: a child born with the purpose of saving a brother or sister.</i> 4. <i>Surrogacy: the act of carrying a child on behalf of someone else who physically can't do so or doesn't want to.</i> 5. <i>Fertility Treatment: medical help to assist someone getting pregnancy.</i> 6. <i>Conjoined Twins: babies born where part of their bodies are attached</i> 7. <i>Human Experimentation: medical tests on humans</i>	
A.	Surrogacy
Surrogate	A substitute for someone, in medical ethics they carry the baby for someone.
Surrogacy	When a woman can't or chooses not to carry a baby herself and has a surrogate carry it for her.
Donor	Someone that gives their sperm or eggs to help those that are infertile
B.	Arguments For and Against Surrogacy
For	In the Bible when Abraham's wife Sarah could not have a child she told him to use Hagar their servant as a surrogate so he could have children.
For	Surrogacy can help couples have children who could be infertile, or can't physically have children such as gay couples.
Against	The Catechism teaches that anything that separates the husband and wife from the process of having children is morally wrong
Against	The Catholic Church teaches Natural Law, which focusses on natural processes of creation so surrogacy would be wrong.

C.		Human Experimentation	
Arguments for Human Experimentation		Arguments Against Human Experimentation	
1. After the experiments are successful, they potentially preserve thousands/millions of 'temples of the Holy Spirit', the body, so Christians may agree with it. 2. Sometimes sacrifice is necessary to make scientific progress. 3. Jesus healed people, so if this helps heal people then it must be a good thing.		1. Potentially goes against the sanctity of life by disrespecting God's gift of life. 2. It is NEVER acceptable to risk a human life, Moses taught that 'Thou shalt not kill' and human experimentation risks killing and goes against this commandment. 3. Human life is the most valuable of all life on earth, because it is the only one in which liberation [Hinduism] or enlightenment [Buddhism] can be achieved. If something endangers life it is not good	
D.	Case Study: Milgram Experiment		
When?	1960s		
What was it?	It was an infamous shock experiment that was conducted by Stanley Milgram which tested the extent to which someone would be willing to follow through with the orders given by them from someone in a position of authority. The test subjects would 'shock' a fake test subject whilst being instructed to do so by an authority figure.		
Why its controversial	Because it mentally affected the people that took part in the test as they were worried about how they were willing to keep delivering shocks.		
E.	Suffering		
What it is:	The issue of the level of suffering in the world being a critical reason for why God cannot exist		
Moral Evil		Natural Evil	
1. Moral evil is evil that is caused by the actions of humans, such as murder, theft, assault.		1. Natural evil is evil that occurs without input from humans, such as earthquakes, tornados, and tsunamis.	
G.	J.L. Mackie's Inconsistent Triad		
What is it?	Mackie used the idea of the Inconsistent Triad to show how evil in the world doesn't make sense with God being omnibenevolent and omnipotent. God can only be either all powerful or all loving and evil exist in the world otherwise it makes no logical sense.		
Omnibenevolent	All loving		
Omnipotent	All powerful		
		Omnipotence Omnibenevolence Evil	

Knowledge Organiser Key Stage 3

Subject: Science

Year: 9

Topic Title: 9CR

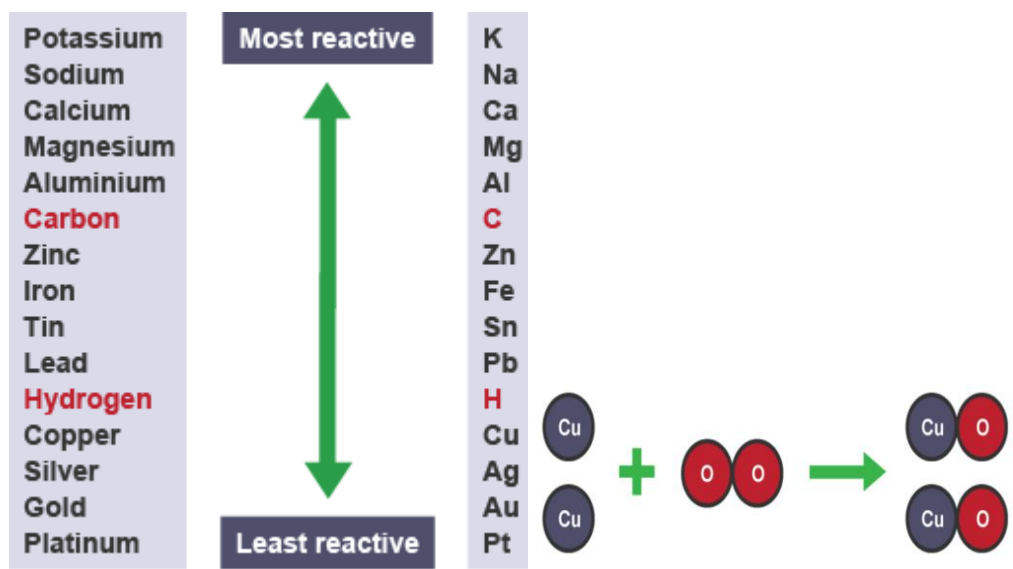
Key Facts

1. Bases are usually: **metal oxides**, such as copper oxide; **metal hydroxides**, such as sodium hydroxide, or **metal carbonates**, such as calcium carbonate.
2. Many bases are insoluble in water.
3. Metals react with oxygen in the air to produce **metal oxides** solid at room temperature.
4. Non-metals react with oxygen in the air to produce **non-metal oxides** usually **gases at room temperature** and they dissolve to form **acids**.
5. The more reactive metal displaces a less reactive metal from its compound. For example:
magnesium + copper sulfate → magnesium sulfate + copper
6. If the more reactive metal is already in the metal compound, nothing happens. For example:
magnesium sulfate + copper → magnesium sulfate + copper
7. Some metals can be extracted from their metal oxides using carbon if the metal is less reactive than carbon.
8. Metal oxide + carbon → metal + carbon dioxide
9. Copper is so unreactive, it does not react with cold or hot water, so it is used for water pipes
10. To extract copper:
 - mix copper oxide powder with carbon powder;
 - heat the mixture strongly in a crucible;
 - keep the lid on the crucible, to stop carbon reacting with oxygen in the air;
 - the carbon dioxide formed in the reaction escapes into the air;
 - let the crucible cool down, you tip the mixture into cold water.
 - brown copper sinks to the bottom, leaving unreacted powder suspended in the water.
11. copper oxide + carbon → copper + carbon dioxide
12. Iron is extracted from iron oxide using carbon. This is done on an industrial scale in a blast furnace.
 - Lumps of iron oxide are mixed with carbon;
 - dropped into the top of the blast furnace;
 - hot air is blasted in at the bottom;
 - The oxygen in the air reacts with carbon, forming carbon monoxide.
 - The carbon monoxide reacts with the iron oxide:
 - **iron oxide + carbon monoxide → iron + carbon**
13. Acids react with most metals to produce a salt and hydrogen. This is the general word equation:
metal + acid → salt + hydrogen
14. The lab test for hydrogen is the squeaky pop test – lighted splint goes ‘pop’ when put in a test tube of hydrogen.
15. In group 1, reactivity increases as you go down the group.
16. Reactivity increases as it is easier to lose the outer electron due to a greater distance between the outer electron and the nucleus.
17. Group 1 is also known as the alkali metals.
18. In group 7, reactivity decreases as you go down the group.
19. Reactivity decreases as it is harder to gain an electron due to a greater distance between the outer shell and the nucleus.
20. Group 7 is also known as the halogens.

Key words

1. A **base** is a substance that can react with acids and **neutralise** them.
2. If a base does dissolve in water, it is called an **alkali**.
3. Reactivity is how easily something reacts
4. Electron shells/ orbitals surround the nucleus and contains electrons
5. Oxidisation is the loss of electrons during a reaction.
6. Reduction is a gain of electrons in a reaction.
7. Electrolysis is a method of extracting reactive metals.
8. Metal ores are naturally occurring rocks that contain metals or metal compounds in sufficient amounts to make it worthwhile extracting them.

Diagrams



Property	Metals	Non-metals
Appearance	Shiny	Dull
State at room temperature	Solid (except mercury, a liquid)	Half solids, half gases, and one (bromine) is a liquid
Density	High	Low
Strength	Strong	Weak
Malleable or brittle	Malleable	Brittle
Conduct heat?	Good	Poor
Conduct electricity?	Good	Poor (except graphite carbon)
Magnetic material	Only iron, cobalt & nickel	None
Sound when hit	Make a ringing sound (sonorous)	They make a dull sound

Potential misconceptions to avoid / errors students often make

1. Students struggle with the concept of something becoming positive if it has lost something –metals are losing some ‘negativity’ and therefore becoming positive.
2. Ensure that the hydrogen gas test is described using a lit or burning splint – not just ‘a splint’
3. Positive test must be described as “hydrogen burns with a (squeaky) pop” not just “you get a squeaky pop”
4. Only the metals that are less reactive than carbon can be extracted by reduction with carbon
5. Oxidation is when oxygen is removed from any substance (metal or non-metal).

6. Students think that most metals rust – ensure they know that only iron rusts.
7. Students also think that most metals are magnetic – only nickel, iron, cobalt, and steel are.

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Knowledge Organiser Key Stage 3

Subject : Science

Year: 9

Topic Title: Energetics & Rates

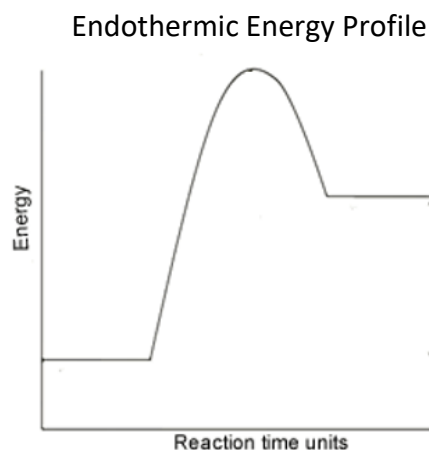
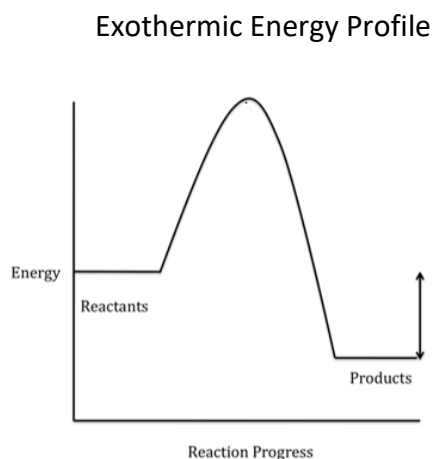
Key Facts

1. Exothermic reactions release energy to the surroundings causing a rise in temperature (positive temperature change).
2. Endothermic reactions take in energy from the surroundings causing a drop in temperature (negative temperature change).
3. Catalysts speed up reactions by reducing the activation energy.
4. Catalysts are not used up during the reaction. They remain chemically unchanged.
5. Car exhausts contain catalytic converters which contain platinum and rhodium as catalysts.
6. Catalytic converters reduce the toxic gases in car exhausts. They convert carbon monoxide to carbon dioxide. They convert nitrogen oxide into nitrogen and oxygen.
7. Carbon monoxide is a toxic gas.
8. Nitrogen oxides cause acid rain.
9. Many metal carbonates take part in thermal decomposition reactions.
10. Thermal decomposition is an example of an endothermic reaction.
11. metal carbonate $\rightarrow$ metal oxide + carbon dioxide
12. Metals and non-metals can take part in oxidation reactions (be oxidised).
13. Metal + oxygen $\rightarrow$ metal oxide
14. Non-metal + oxygen $\rightarrow$ non-metal oxide
15. To test for the presence of carbon dioxide, the gas can be bubbled through limewater. If carbon dioxide is present, the limewater will turn milky.
16. Complete combustion occurs when there is plenty of oxygen available.
17. Complete combustion forms carbon dioxide and water.
18. Incomplete combustion occurs when there is a limited supply of oxygen.
19. Incomplete combustion forms water, carbon monoxide and carbon.

Key words

1. **Exothermic** – a chemical reaction that releases energy to the surroundings.
2. **Endothermic** – a chemical reaction that takes in energy from the surroundings.
3. **Catalyst** – a substance that speeds up a chemical reaction without being used up itself.
4. **Activation energy** – the energy needed to activate a reaction.
5. **Thermal Decomposition** - when a compound breaks down when heated, to form two or more products.
6. **Oxidation** – the gain of oxygen and the loss of electrons.
7. **Reduction** – the loss of oxygen and the gain of electrons.
8. **Combustion** – burning a fuel.

Diagrams



Potential misconceptions to avoid / errors students often make

1. Exothermic vs endothermic

In an exothermic reaction energy is given out to the surroundings which means the products have less energy than the reactants.

In an endothermic reaction energy is taken in from the surroundings which means the products have more energy than the reactants.

2. Defining oxidation

Oxidation is the gain of oxygen **and** the loss of electrons. Lots of students forget that oxidation can also mean the loss of electrons.

3. Learn the definitions!

There are lots of key definitions in this topic and you can sometimes get asked to define them in an exam.

4. Understand and learn the general equations

Metal carbonate $\rightarrow$ metal oxide + carbon dioxide

Metal + oxygen $\rightarrow$ metal oxide

Non-metal + oxygen $\rightarrow$ non-metal oxide

Fuel + oxygen $\rightarrow$ carbon dioxide + water

Fuel + oxygen $\rightarrow$ carbon monoxide + water + carbon

5. Catalysts

Catalysts work by lowering the activation energy

Catalysts are not a reactant themselves, they make it easier for the reactants to react.

YR 9 Spanish: Term 2 Knowledge Organiser

Describe a tu pareja ideal – describe your ideal partner

Háblame de tus planes para el futuro – tell me about your future plans?



Desde mi punto de vista (from my point of view)		Mi novio ideal (My ideal boyfriend)	Mi novia ideal (My ideal girlfriend)
Yo diría que (I would say that)		Mi pareja ideal (My ideal partner)	Mi pareja ideal (My ideal partner)
		Mi marido ideal (My ideal husband)	Mi mujer / esposa ideal (My ideal wife)
sería (would be)		sería (would be)	
		muy (very)	bastante (quite)
alto (a) (tall) / bajo (a) (small) / delgado (a) (thin) / gordo (a) (big) / guapo (a) (beautiful) / feo (a) (ugly) / joven (young)/ anciano (a) (old) / calvo (a) (bald)			
	Si fuera posible, tendría (If it were possible, he / she would have)		
el pelo (hair) blanco (white) / rubio (blonde) / negro (black) / pelirrojo (red) / gris (grey) / moreno (dark brown) / castaño (brown) y (and)			
liso (straight) / rizado (curly) / ondulado (wavy) / corto (short) / largo (long)			
Si fuera posible, sería // no sería (if it was possible, he/she would be // would not be)			
generoso/a (generous) sincero/a (honest) amable (kind) simpático/a (nice) fiable (reliable) leal (loyal) cariñoso/a (understanding)		pesimista (pessimistic) mentiroso/a (liar) egoísta (selfish) molesto/a (mean)	

Cuando sea mayor (when I am older)	me gustaría casarme (I would like to get married)	porque (because)	sería (it would be)	muy (very)	una experiencia inolvidable (an unforgettable experience)
En el futuro (in the future)	me gustaría estar comprometido/a (I would like to be engaged)	dado que (because)	será (it will be)	un poco (a bit)	
Cuando tenga veintisiete años (when I am 27 years old)	espero tener una boda maravillosa (I hope to have a an amazing wedding)	ya que (because)		bastante (quite)	una pérdida de tiempo/dinero (a waste of time/money)
Después de la universidad (after university)	tengo la intención de comprar una coche cara (I want to buy an expensive car)	pero (but)		demasiado (too)	flipante – amazing
Si tuviera la oportunidad (if I had the opportunity)	me encantaría vivir con mi pareja (I would love to live with my partner)	sin embargo (however)			super guay (really cool)
	me darán ganas de viajar por el mundo (I have the desire to travel around the world)				
	no me gustaría casarme (I would not like to get married)				
	prefería vivir con amigos (I would prefer to live with friends)				vale la pena (worth it)

[illegible]

[illegible]

[illegible]

[illegible]



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