

Knowledge Organiser Booklet

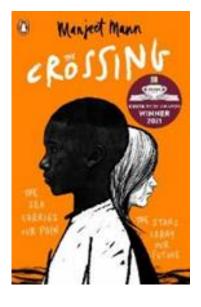
Year 9 Autumn Term

	Ways to use your knowledge organiser						
	Look, Cover, Write, Check	Self Quizzing	Mind Maps	Paired Retrieval	Definitions to Key Words		
9 1	Look at and study a specific area of your knowledge organizer.	Use your knowledge organizer to create a mini quiz. Write down questions using your knowledge organizer.	Create a mind map with information from your knowledge organiser.	Like self quizzing, use your knowledge organizer to create a quiz.	Write down the key words and definitions.		
Step							
Step 2	Cover or flip the knowledge organizer over and write down everything you remember.	Cover or flip the knowledge organizer over and answer the questions and remember to use full sentences and key words/vocabulary.	Add pictures to represent different facts, knowledge. Try to categorise different areas in different colours.	Ask a family member to ask you the questions and tell you which ones you get right and which ones you get wrong.	Try not to use your knowledge organiser to help you.		
3	Check what you have written down. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.	Check your answers. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.	Try to make connections that link information together.	Following the quiz, summarise which areas you got wrong and need to revise further.	Use a different coloured pen to check you work and correct any mistakes you may have made.		
Step			\mathcal{F}				

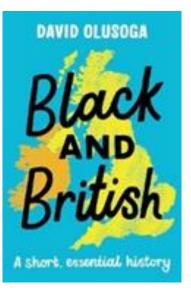
Lionheart Literary Canon: Curating a Lifelong Love of Literature

Recommended books to have read by the end of Year 9

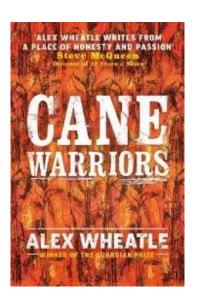




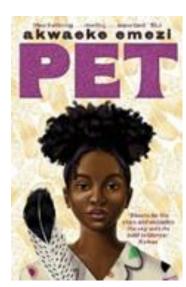
The Crossing Manjeet Mann



Black and British David Olusoga



Cane Warriors Alex Wheatle



Pet Akwaeke Emezi

All books can be purchased online, or loaned from our library

English

Aspects of Narrative – Djinn Patrol



The study of narratology is the study of the choices a writer has made about how they tell their stories. Aspects of Narrative translates as 'ways of telling a story.' Significance is is about what is signified, what meanings arise in terms of values and ideas and how these meanings are produced by what writers do and the methods they use.

Narrative Voice	Genre	Structure	Setting
irst person – introspective, extradiegetic	<u>R</u> omantic or pastoral – ideal images of the natural	Chronological or fragmented?	Wider setting – (country, city
or intradiegetic?	world	Complete or with narrative gaps?	community)
hird person – focalised, authorial or	romance – associated with romantic love	Openings and endings? Climatic	Place – precisely where? House, room,
arrator?	Gothic – creation of darkness and fear	moments? Anti-climaxes?	seat?
ense – retrospective (past tense) or	Realism – portrays the real world with all its flaws	Narrative frame? Media-res opening?	Time – specified?, unstated, present
resent tense immediate?	Comedy – intention to make people laugh	Flashbacks or flash-forwards?	day, past, present?
Aulitperspectivity – a story told from many	Tragedy – solemn and mournful tone	Resolution or narrative-hook? Deus ex	Historically/geographically accurate or
oints of view	Crime - deals with crimes, their detection, criminals,	Machina? (ends tied up or ends on a	entirely fictional?
eliable or unreliable (bias)?	and their motives.	Q)	Setting change - from where to where?
Omniscient (all knowing) or inadequate	Thriller – readers feel heightened feelings of	Order of events within the plot	Use of specific languages or place-
doesn't know the whole story)?	suspense, excitement, surprise, anticipation and	Change of narrators or use of	specific references
Vho? Known/unknown? A character?	anxiety.	dialogue or just description?	Use of place names
·	· · · ·		· · ·

What not to do with narrative method and useful sentence frames

When discussing narrative method it is important to avoid feature spotting. Instead evaluate the impact of the writers choice.

Useful sentence frames

The introduction of the new setting at this point in the narrative allows the writer to show that the character has evolved because...

The gap in the narrative allows the writer to create a sense of confusion and means the reader is unsure who is the victim and who the villain because...

The shift into using typically Romantic generic conventions allows the writer to comment on the importance of the natural world when...

By employing a focalised narrator the writer allows the reader access to the character's unspoken thoughts meaning pity is created when...

How to access "significance" in your analysis

You could consider an extract's significance in terms of the plot – what has happened earlier to instigate these events? What happens later as a result of these events? You could consider what messages are being endorsed? Are any characters or ideas being given preferential treatment or being side-lined? You could reference any cultural, moral or social contexts that are being endorsed by the book. You could consider authorial intent or approval – is the writer advocating any specific ideologies? You could consider whether a text fits into a traditional genre

or whether it borrow from a few and what the effect of that is on the meaning

English

Year 9 Aspects of Narrative – Djinn Patrol

superstitious	inequality	authentic	prestigious
persistent	intimidation	depiction	poignant
disadvantaged	concealment	ascertained	instinctive
urban	Incorporeal	unnerving	malevolent
influential	naive	insinuate	perpetuates
exploitation	exclusion	impulsive	accountability
basti	possession	inglorious	foreboding
Dickensian	minority	inevitable	culpability
dislocated	intuition	powerlessness	pessimistic

Maths

Maths – Year 9

Block 13 – Graphs and Proportion



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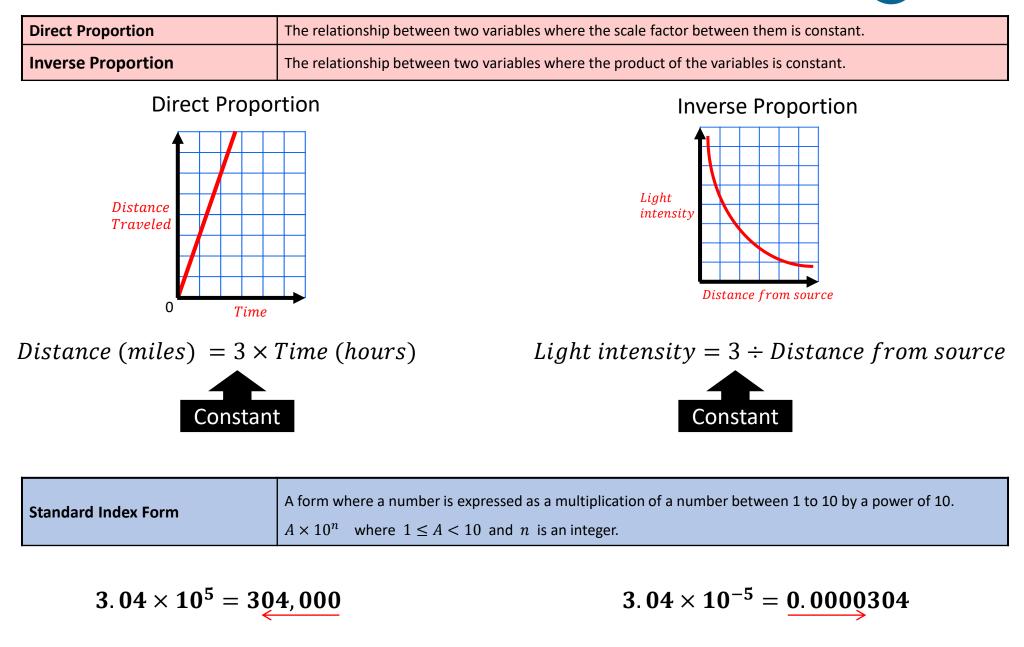
Line		Is straight entity that has no thickness and extends in both directions without end (infinitely).				
Line segment A line with two ends						
Ray A part of a line with a start point but no end point (it goes to infinity)						
ParallelLines, curves, surfaces that are always the same distance apart and will never meet. The lines do not need to be the same length.						
Perpendicular A line that is at right angles to another line.						
IntersectTo cut a line, curve or surface with another.						
Line	Ray	line segment end points	$\overline{\bigcirc}$	$\mathbf{\times}$		
	Starting point		Parallel	Perpendicular	Intersect	
Graph		A diagram showing the relationship between (two) variables				
Midpoint The midpoint is half			fway between the two end points of a li	ne segment		
Gradient Y - Intercept		The steepness of the Where the graph cro	e line. Change in y for every one increase i osses the Y-axis	n x	$y = 2x - \frac{y}{4} - \frac{y}{$	
			y = 2x + 1 Gradient y-intercept		3 2 7 7 1 2 3 4 4	

Maths

Maths – Year 9

Block 13 – Graphs and Proportion





Computer Science

KNOWLEDGE



KS3 – Cyber Security

ORGANISER

Brute Force attackA forThe Computer Misuse ActA UK LThe Data Protection ActA UK LDDoS attackWhen iHackingGaMalwareSofPenetration testersPeop	urity Key Terms orm of attack that makes multiple attempts to discover something (such as a password).		Malware	
The Computer Misuse Act A UK L The Data Protection Act A UK L DDoS attack When if Hacking Gate Malware Sofe Penetration testers Peop				
The Data Protection Act A UK L DDoS attack When Hacking Ga Malware Sof Penetration testers Peop	discover something (such as a passworu).	Viruses	Malicious software that self-replicates.	
DDoS attack When in Hacking Gamma Soft Penetration testers Peop	aw makes accessing a computer system without permission illegal.	Worms	Worms replicate themselves but do not attach themselves to files as a virus would.	
Hacking Ga Malware Sof Penetration testers Peop	aw that gives you the right to access the data an organisation stores on you.	Ransomware	Locks a computer, encrypts files, and therefore prevents the user from being able to access the data. The attacker demands that a ransom is paid.	
Malware Sof Penetration testers Peop	When multiple computers flood a network server with internet traffic in order to disrupt a service.		Software that appears to perform a useful function but unbeknown	
Penetration testers Peop	Gaining unauthorised access to or control of a		to the user it also performs malicious actions.	
Penetration testers Peop	computer system.	Spyware	Unwanted software that monitors and gathers information on a person an dhow they use their computer.	
	ftware that is designed to gain access to your computer with malicious intent.	Adware	Can be a worm, virus, or Trojan. It infects a computer and causes it	
	People who are paid legally to hack into computer systems with the sole purpose of helping a company identify weaknesses in their system.		to download or display malicious adverts or pop-ups when the victim is online.	
		Methods of Social Engineering		
	rmation that is used to describe or recognise a erson (e.g. name, date of birth, address etc.)	Shouldering	Involves the attacker watching the victim while they provide sensitive information (e.g. over their shoulder).	
Social Engineering Metho	ods used by cybercriminals to deceive individuals	Name generate		
	into handing over information. Protecting yourself Checks incoming and outgoing network traffic. Software that scans any file that is able to execute code. If something is at risk it is quarantined. Auto-updates refers to software that automatically checks for available updates for the software you have on your computer. Measures taken to keeping your data and information safe: passwords, biometrics, CAPTCHA, two-factor authentication etc.		information in an app to complete a short quiz or produce a	
Protect			name. Attackers do this to find out key information that can	
Firewalls Checks in			help answer security questions.	
Anti-Malware Software that scans			The victim receives an email disguised to look as if it has come from a reputable source in order to trick them into giving up valuable data.	
Auto-updates Auto-updates ref				
available updates			An attack in which the perpetrator invents a scenario in	
			order to convince the victim to give them data or money.	
User permissions Ensuring inform				

Computer Science

KNOWLEDGE



KS3 – Representations:

Going audio-visual

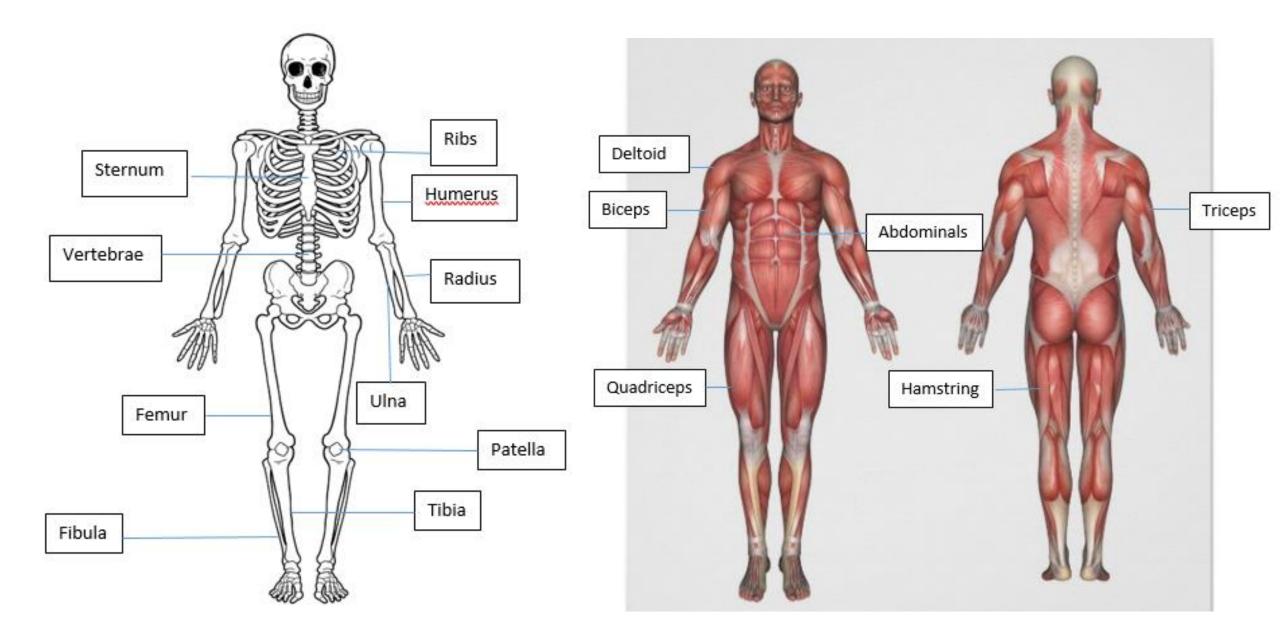
ORGANISER

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	Overall Key terms			High resolution		
Bit		Small unit of data within a computer system (e.g. 0 or 1)			Advantages	Disadvantages
Binary digit		A base 2 nui	mber system made up of bits.		Increased quality	Increased representation size
Machine code		A language	that a CPU is able to process.		Increased capability to capture	More space required for storage
		Images			detail	More effort required for processing
Pixels	A picture element filled with colour.		nt filled with colour.			
Resolution	The number of pixels in a digital image.				More time required for transmission	
Colour depth	The nur	nber of binary digits use	ed to represent each pixel's colour.	٦Ļ		resolution x colour depth
Raster graphics	An image made up of pixels.		┥┟	Hig	sh Colour Depth	
	An image made up of pixels.			Advantages	Disadvantages	
RGB Colour	The quantity of red, green and blue used to create a colour.			Increased quality	Increased representation size	
Representation size resolution x colour depth			More colours available	More space required for storage		
Sound				More effort required for processing		
Sample	mple Taking a regular measurement from sound so you can d		from sound so you can digitise it.			More time required for transmission
Sampling rate		The number of sam	ples taken per second.			resolution x colour depth
Sample size		The number of bits	recorded per sample.		High Sampling Rate	
Representation size Sampling		Sampling rate x sample	e size x duration x channel		Advantages	Disadvantages
					Increased quality	Increased representation size
					Increased ability to accurately represent the original sound.	More space required for storage
						More effort required for processing
	. T					More time required for transmission
1x		2x	3х			resolution x colour depth
(10 x 1)	0 px)	(20 x 20 px)	(30 x 30 px)	-		

Key learning content	Description / Explanation/ Example
Stages of a warm up	Examples of warm up
 Stage 1 – pulse raiser (5 mins) 	 Stage 1 – (Low intensity exercise) A 5 minute jog around a netball court.
Stage 2 – mobility exercises	• Stage 2 – (To a move a joint through its full range of motion) Arm circles, ankle circles, hip circles.
• Stage 3 – stretching (10s+)	• Stage 3 – (Static or dynamic stretches) quadriceps stretch.
Stage 4 – dynamic movement	• Stage 4 – (high intensity exercise) Shuttle runs
• Stage 5 – skills practice	 Stage 5 – (Practice the skills you will be using) Chest/ shoulder passes (netball)
Names of muscles	Names of muscles: quadriceps, hamstrings, biceps, triceps
Benefits of a warm up	Benefits explained
Increase temperature and HR	Allow more oxygen to reach muscles
Decreased chance of injury	Better for overall health. Can maintain involvement in physical activity .
Increased oxygen transport	More oxygen gets to muscles, so can create more energy.
Increased flexibility	Increased flexibility can enhance performance (Reach higher to catch a ball)
Increased speed / strength of muscle contractions	Faster/ stronger movements - perform skills more effectively.
Mental preparation	Mental preparation – feel more alert/ focussed/ confident/ concentrating/ motivated/ relaxed etc.
Stages of a cool down	Examples of cool down
Stage 1 – Low intensity exercise	 Stage 1 – Steady jog on netball court, can move onto a walk
• Stage 2 – Stretching	• Stage 2 – (Static stretches) Quadriceps stretch, hamstring stretch.
Names of movements – flexion and extension	Flexion = bending at an elbow or knee. Extension = straightening at an elbow or knee
Benefits of cool down	Benefits explained
Gradually lower heart rate	Gradually lower heart rate from 150bpm when working to 70bpm when resting.
Gradually lower breathing rate and temperature.	To maintain blood flow/ oxygen transport/ carbon dioxide removal
Speeds up removal of waste products.	Carbon dioxide and lactic acid removed faster. Reduces aching, recovery is faster.
Speeds up recovery	 Joints: Elbow and knee = hinge. Shoulder and hip = ball and socket
Names of joints	
Preparing for physical activity	Preparation explained
Wear appropriate PE kit	Sports trainers, shorts, t-shirt to avoid injury yourself or others.
Long hair tied back	So you can see when playing
Jewellery removed	Earrings taken out, bracelets off to avoid injuring yourself or others.
No chewing gum or food	To avoid chocking when active.
Water for hot weather	To stay hydrated /avoid headaches/ feeling weak
Risks and hazards to check for	Hazards explained
Area free from rubbish	Check there is no debris such as broken glass on football pitch, to avoid someone injuring themselves.
Equipment tidied away	 Check there are no equipment such as bibs left out on a basketball court from a previous activity, to avoid someone slipping/ tripping
Equipment undamaged	over when warming up.
Surface dry/ undamaged	 Check the trampoline is up properly, to avoid injury to a player.
	 Check there is no water spilled on the badminton court, to avoid a player slipping and hurting an arm.

Year 9: Physical Activity- Key terminology

Key word	Description
Aerobic	Use of oxygen for the duration of the exercise. Usually at moderate intensity at a continuous rate e.g. long distance running. Can be performed for a long period of time.
Anaerobic	Exercise which creates energy without the use of oxygen. Usually high or very high intensity for a short period of time. E.g. sprinting up a hill.
Flexibility	Range of movement available around a joint.
Mobility	The ability to move freely.
Dynamic movement	Movements performed at high speed/ intensity.
Oxygen	The gas we breathe in, transport and use to create energy.
Oxygen transport	Oxygen is transported through blood vessels within the red blood cells.
Gaseous exchange	The movement of oxygen and carbon dioxide within the lungs, muscles and vital organs.
Contraction	A muscle contracts and (usually) gets shorter to apply a force and create movement.
Heart rate	Number of heart beats per minute.
DOMS	Delayed Onset Muscle Soreness. Usually occurs 1 or 2 days after high intensity exercise.
Lactic acid	A waste product produced in the muscle tissues during anaerobic exercise.
Waste products	Bi-products of aerobic exercise are carbon dioxide and water. Lactic acid is also a bi-produce of anaerobic exercise.
Carbon dioxide	We produce carbon dioxide as a waste product. We transport it back to the lungs and breathe it out.
Recovery process	Returning the body to resting levels.
Intensity	How hard you work.
Team work	Working together to achieve a common goal. Requires good communication skills.
Reciprocity	Working positively with others as a group.
Demonstration	Showing someone how something should be done.
Communication	Transferring information by speaking, writing, demonstrating and using body language.
Risk	The chance or probability that someone will be harmed.
Hazard	A source of potential danger.
Injury	Damage or harm to the body.
Sprain	Damage to a ligament.
Mental Preparation	Getting your mind ready for competition through visualising the skills and imagining yourself being successful.



Key Word	Description/ Location/ Role
Muscle pair	Muscles that work together to produce a movement. One muscle (agonist) contracts (usually shortens) and produces a movement, while the other
	(antagonist) relaxes (usually lengthens). Also called antagonistic pairs.
Hamstrings	A group of muscles located at the back of your thigh. Muscle pair with quadriceps
Quadriceps	A group of muscles located at the front of the thigh. Muscle pair with hamstrings
Biceps	A muscle located at the front of your upper arm.
Triceps	A muscle located at the back of your upper arm.
Abdominals	A group of muscles at the front of your body between the ribs and pelvis.
Deltoids	A group of muscles located at the shoulder.
Femur	A bone in your thigh
Tibia	A bone in your lower leg on the inside
Fibula	A bone in your lower leg on the outside
Patella	A small bone at the front of your knee
Humerus	A bone in your upper arm
Ulna	One of 2 bones in your forearm. The ulna runs down to your little finger
Radius	One of 2 bones in your forearm. The radius runs down to your thumb.
Ribs	Lots of bones in the chest protecting your lungs.
Vertebrae	Lots of bones in your back, sometimes referred to as your spine.
Sternum	Bone down the front of your chest protecting your heart.
Flexion	Bending a joint. This occurs when the angle of a joint decreases. For example, the elbow flexes when performing a biceps curl.
Extension	Straightening a joint. This occurs when the angle of a joint increases, for example, at the elbow when putting a shot.
Contraction	When a muscle produces a force which pulls on a bone.
Agonist	The name given to a muscle which is contracting and causing a movement/ producing a force.
Antagonist	The name given to a muscle which is relaxing while it's paired muscle contracts to perform an action.
Hinge Joint	These include the elbow and knee. They allow flexion and extension to occur.
Ball and Socket Joint	These include the shoulder and hip and allow flexion, extension, abduction, adduction, rotation and circumduction.
Abduction	Movement away from the midline of the body. This occurs at the hip and shoulder joints during a star jump.
Adduction	Movement towards the midline of the body. This occurs at the hip and shoulder, returning the arms and legs back to the centre from a star jump position.
Circumduction	This occurs at the shoulder and hip and involved the arm or leg moving in a circle.
Rotation	This is where the arm or leg moves in a twisting movement around the shoulder or hip. E.g. twisting foot to side to pass a football.
Concentric	A type of muscle contraction where the muscle shortens while it is contracting. E.g. biceps when lifting a weight.
Isometric	A type of muscle contraction where the muscle stays the same length while contracting. E.g. holding a squat.
Eccentric	A type of muscle contraction where the muscle lengthens while contracting. E.g. Triceps when lowering into a press up.

SOUNDTRACKS

A. The Purpose of Music in Film

Film Music is a type of DESCRIPTIVE MUSIC that represents a MOOD, STORY, SCENE or CHARACTER through music, it is designed to SUPPORT THE ACTION AND EMOTIONS OF THE FILM ON SCREEN. Film Music can be used to:

- Create or enhance a mood (though the ELEMENTS OF MUSIC) ->
- Function as a LEITMOTIF (see D)
- To emphasise a gesture (MICKEY-MOUSING when the music fits precisely with a specific part of the action in a film e.g. cartoons)
- Provide unexpected juxtaposition/irony (using music the listener wouldn't expect to hear giving a sense of uneasiness or humour!)
- Link one scene to another providing continuity
- Influence the pacing of a scene making it appear faster/slower
- Give added commercial impetus (released as a SOUNDTRACK) sometimes a song, usually a pop song is used as a THEME SONG for a film.
- Illustrate the geographic location (using instruments associated with a particular country) or historical period (using music 'of the time').

D. Leitmotifs

LEITMOTIF - A frequently recurring short melodic or harmonic idea which is associated with a character, event, concept, idea, object or situation which can be used directly or indirectly to remind us of one not actually present on screen. Leitmotifs can be changed through SEQUENCING, REPETITION or MODULATION

giving a hint as to what may happen later in the film or may be heard in the background giving a "subtle hint" to the listener e.a. the "Jaws" Leitmotif

E. History of Film Music

Early films had no soundtrack ("SILENT CINEMA") and music was provided live, usually IMPROVISED by a pianist or organist. The first SOUNDTRACKS appeared in the 1920's and used existing music (BORROWED MUSIC - music composed for other (non-film) purposes) from composers such as Wagner and Verdi's operas and ballets. In the 1930's and 1940's Hollywood hired composers to write huge Romantic-style soundtracks. JAZZ and EXPERIEMENTAL MUSIC was sometimes used in the 1960's and 1970's. Today, film music often blends POPULAR, ELECTRONIC and CLASSICAL music together in a flexible way that suits the needs of a particular film.

Year 9 Exploring Film Music

B. How the Elements of Music are used in Film Music

PITCH AND MELODY - RISING MELODIES are often used for increasing tension, FALLING MELODIES for defeat. Westerns often feature a BIG THEME. Q&A PHRASES can represent good versus evil. The INTERVAL OF A FIFTH is often used to represent outer space with its sparse sound. DYNAMICS – FORTE (LOUD) dynamics to represent power; PIANO (SOFT) dynamics to represent weakness/calm/resolve. CRESCENDOS used for increasing threat, triumph or proximity and DECRESCENDOS or DIMINUENDOS used for things going away into the distance. Horro Film soundtracks often use EXTREME DYNAMICS or SUDDEN DYNAMIC CHANGES to 'shock the listener'.

HARMONY – MAJOR – happy; MINOR – sad. CONSONANT HARMONY OF CHORDS for "good" and DISSONANT HARMONY OR CHARDS for "evil". SEVENTH CHORDS often used in Westerns soundtracks.

DURATION - LONG notes often used in Westerns to describe vast open spaces and in Sci-Fi soundtracks to depict outer space; SHORT notes ofter used to depict busy, chaotic or hectic scenes. PEDAL NOTES - long held notes in the BASS LINE used to create tension and suspense. TEXTURE -THIN/SPARE textures used for bleak or lonely scenes; THICK/FULL textures used for active scenes or battles.

ARTICULATION - LEGATO for flowing or happy scenes, STACCATO for 'frozen' or 'icy' wintery scenes. ACCENTS (>) for violence or shock. RHYTHM & METRE - 2/4 or 4/4 for Marches (battles), 3/4 for Waltzes, 4/4 for "Big Themes" in Westerns. IRREGULAR TIME SIGNATURES used for tension. OSTINATO rhythms for repeated sounds e.g. horses.



C. Film Music Key Words

SOUNDTRACK – The music and sound recorded on a motion-picture film. The word can also mean a commercial recording of a collection of music and songs from a film sold individually as a CD or collection for digital download.

MUSIC SPOTTING - A meeting/session where the composer meets with the director and decides when and where music and sound effects are to feature in the finished film.

STORYBOARD - A graphic organiser in the form of illustrations and images displayed in sequence to help the composer plan their soundtrack. CUESHEET - A detailed listing of MUSICAL CUES matching the visual action of a film so that composers can time their music accurately. CLICK TRACKS - An electronic METRONOME which helps film composers accurately time their music to onscreen action through a series of 'clicks' (often heard through headphones) – used extensively in cartoons and animated films. DIEGETIC FILM MUSIC – Music within the film for both the characters and audience to hear e.g. a car radio, a band in a nightclub or sound effects.

NON-DIEGETIC FILM MUSIC - Music which is put "over the top" of the action of a film for the audience's benefit and which the characters within a film can't hear - also known as UNDERSCORE or INCIDENTAL MUSIC.

F. Film Music Composers and their Soundtracks



James Horner









The Lion King Gladiator Dunkirk



Psycho Vertigo Taxi Driver

Titanic Apalla 13 Braveheart



The Good. The Bod and The Ualy

Danny Elfman Mission Impossible





KNOWLEDGE ORGANISER

CHEMISTRY: Advanced Chemical Reactions

Vocabulary

Chemical Reaction: Transfer of energy between reacting substances and the surroundings.

Reactants: Starting substances in a reaction.

Products: Substances that are made at the end of a reaction.

Fuel: A substance that can store energy and can release it when burnt.

Combustion: The process of burning.

Thermal Decomposition: A process in which a single substance is broken down on heating into smaller compounds /elements.

Exothermic: Energy transferred to the surroundings.

Endothermic: Energy transferred from the surroundings.

Conservation of mass: The

total mass of the products in a chemical reaction will be the same as the total mass of the reactants as no mass is lost or gained

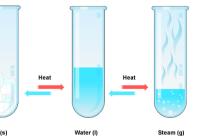
Types of Reaction

Chemical Reactions: atoms are rearranged to create a new substance. These reactions are NOT easily reversed.

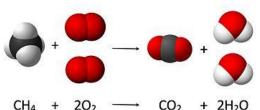
Physical Reactions: no new substance is made but there is a change in appearance of a chemical. These reactions are easily reversed.

Signs of physical and chemical reactions: Physical Chemical Solid dissolving Change in Change in state appearance (colour) Change in energy (temperature, sound ect.)

Physical Change: Dissolving or state change



Chemical Change: forming a new substance



e.g. Combustion of Methane (Natural Gas)

Word Equations:

Reactants \rightarrow Products

A chemical equation tells you which chemicals reacted together (the reactants) and the new chemicals that were made in the reaction (the **products**). The simplest equation is a word equation.

For example:

 $Zinc + Chlorine \rightarrow Zinc Chloride$

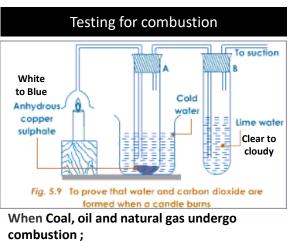
 $Zinc + Carbon + Oxygen \rightarrow Zinc Carbonate$

Combustion:



Fuel: A material that can be burnt to release energy by heating. EG. Glucose, Methane, Petrol

Combustion: Is another name for burning. It is where a fuel is burnt in oxygen and heat to release energy.



•the hydrogen atoms combine with oxygen to make water vapour, H₂O **[TEST A]**

•the carbon atoms combine with oxygen to make carbon dioxide, CO₂ [TEST B]

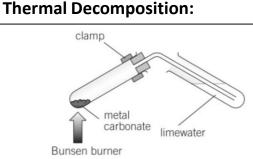
•the maximum amount of energy is release

e.g. Change in state of water



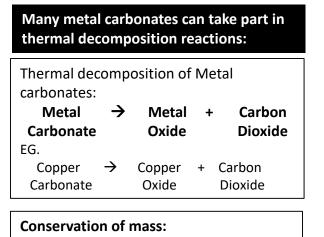
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CHEMISTRY: Chemical Reactions

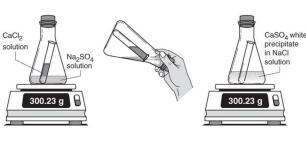


Thermal Decomposition:

Type of reaction in which a compound breaks down to form two or more substances when it is heated.

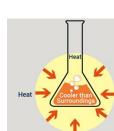


Atoms are not created or destroyed just rearranged in a reaction so the total mass of the products will be the same as the total mass of the reactants.



mass (g) of reactants = mass (g) of products

Exo- and endo-thermic reactions:



Endothermic:

from the

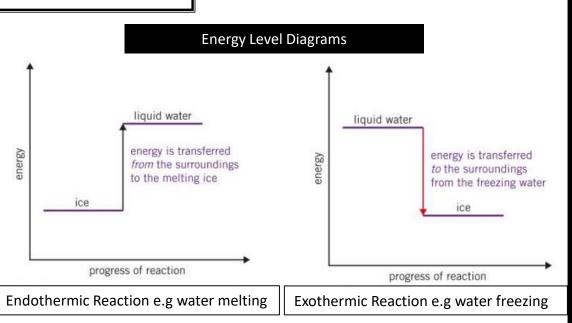
Examples:

surroundings.

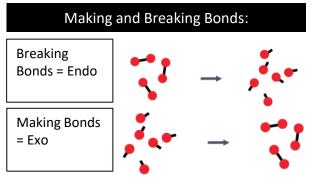
Exothermic : Reaction in which energy is given out to the surroundings. The surroundings then have more energy than they started with so the temperature increases.

Reaction in which energy is taken in

Ехо	Endo
burning neutralisation reactions respiration	 thermal decomposition carbonates and acids photosynthesis



Energy level diagrams help us to show the changes that occur during a reaction



Whether a reaction is endo or exo depends on which energy is greater- the making or the breaking of the bonds. Each chemical bond that is broken or made is given a value in kJ.

Catalysts: Speed up chemical reactions. They alter the rate of reaction without being changed by the reaction. **Enzymes: biological** catalysts that speed up cellular reactions

Be REFLECTIVE: Review your learning



KNOWLEDGE ORGANISER YEAR 8: ADVANCED FORCES

Page 1

Contact force	These forces only act when two things are touching.	Friction and drag		
Non-contact force	These forces can act when things are not touching	 Friction is a force which will slow down a moving object due to two surfaces rubbing on one another The greater the friction, the faster an object will slow down, or the greater the force it will need to overcome the force of friction. For example, it is easier to push a block on ice than on concrete, as the ice is smoother and causes less friction. 		
Newtons	The units for measuring forces	When an object is moving through a fluid, either		
Drag force	The force acting on an object moving through air or water that causes it to slow down.	liquid or gas, the force which slows it down is known as drag • The fluid particles will collide with the moving		
Friction	The forces that slows things down when they move on a surface e.g. a car on a road.	 object and slow it down, meaning that more force is needed to overcome this Both drag and friction are contact forces as the two surfaces in friction, and the object and 		
Streamlined	When something is shaped to reduce friction or air resistance	fluid particles in drag, come into contact with one another A solid moves through a gas. A solid moves through a liquid. Both drag and friction are forces so they are measured in Newtons (N)		
Law of moments	An object is in equilibrium if the clockwise moments equal the anticlockwise moments.	Hooke's law		
Upthrust	The force on an object in liquid or gas that pushes them up	 Some objects, like springs, can be stretched, the amount that they stretch is known as their extension 		
Moment	A measure of the ability of a force to rotate an object around a pivot.	 A force needs to be applied to the spring for it to be stretched, we can achieve this by adding masses which exert the force weight 		
Elastic	Something which stretching and springs back to its normal shape	 A spring will continue to stretch until it passes it's elastic limit If an object obeys Hooke's law it will have a linear relationship: if the force applied to the spring is doubled, the extension will double too 		
Deform	When something changes shape	If an object does not obey Hooke's law, it will not have a linear relationship		
Compress	When an object is squashed			
Extension	The difference between the original length of an object and the length when you apply a force.	e extension 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Pressure	The ratio of force to surface area, in N/m ² , and how it causes stresses in solids.	³ 2 0 1 2 3 4 5 6 7 force (N) ³ 2 0 2 4 6 8 force (N)		
Liquid pressure	The pressure produced by collisions of particles in a liquid.	This graph shows how the This graph shows the		
Equilibrium	When all of the forces on something are balanced and cancel out.	extension of a spring changes relationship between force and extension		



KNOWLEDGE ORGANISER YEAR 8: ADVANCED FORCES

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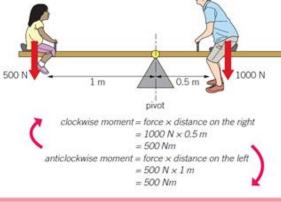
2

Turning forces

- · A moment is the turning effect of a force, it is measured in Newton meters
- · We can calculate a moment with the equation:

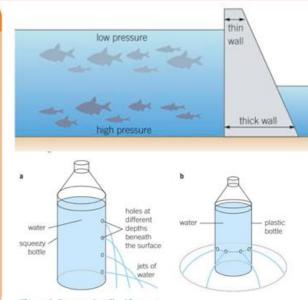
moment (Nm) = force (N) × distance from the pivot (m)

- The size of the moment will increase as the distance from the pivot or the size of the force increases
- · When an object, such as a seesaw, is balanced, the clockwise and the anticlockwise moments will be equal and opposite, which is known as equilibrium
- When forces are equal and opposite to each other, there is no resultant force



Pressure in liquids

- Liquids are incompressible
- The particles in a liquid are already touching, meaning that there is little space between them to compress.
- Liquids will transfer the pressure applied to them, this is seen in hydraulic machines
- As the ocean gets deeper, the pressure will increase, this is because the pressure depends on the weight of the water above
- The greater the number of water molecules above, the higher the pressure will be



Gas pressure

- Gas pressure is caused by the particles of a gas colliding with the wall of the container which they are in
- . The more often that the particles collide with the wall of the container, the higher the pressure of the gas will be
- Gas pressure can be increased by:
 - · Heating the gas so the particles move more quickly and collide with the container with a higher energy
 - Compressing the gas so there are the same amount of particles within a smaller volume meaning that there are more collisions
 - Increasing the amount of particles within the same volume so there are more collisions
- Atmospheric pressure is the pressure which the air exerts on you all of the time, nearer the ground there are more particles weighing down on you so the pressure is greater
- The higher you go, the smaller the atmospheric pressure, this is because there will be less particles weighing down on you

Pressure in solids

- · The pressure which is exerted on a solid is known as stress
- The greater the area over which the force is exerted over, the lower the pressure, this is why snowshoes have a large area to prevent you sinking into the snow
- Pressure can be calculated using the following equation:
 - force pressure = area

pressure $(N/m^2) =$ force (N)area (m²)

Worked example

A caterpillar vehicle of weight 12 000 N is fitted with tracks that have an area of 3.0 m² in contact with the ground. Calculate the pressure of the vehicle on the ground.

Solution

pressure = $\frac{\text{force}}{\text{area}} = \frac{12000 \text{ N}}{3.0 \text{ m}^2} = 4000 \text{ Pa}$



ве кеFLECTIVE: Review your learning



KNOWLEDGE ORGANISER

BIOLOGY: ORGANISMS - Genetics

Structure of DNA	Inher	itance and Punnet squares			Key vocabulary
chromosome gene	x x	female		DNA	Genetic material. DNA is a polymer made up of two strands forming a double helix. The DNA makes up chromosomes.
	V XX XY	- male		Gene	A gene is a small section of DNA on a chromosome
nucleus	Females carry two X chromosomes.	<u>.</u>		Chromosome	A long coil of DNA. Found in the nucleus.
DNA Genetic modification	Males carry one X and one Y chrom			Allele	Different versions of the same gene – dominant and recessive.
Altering an organisms genes to gain a desired characteristic of feature. GM crops are crops that have been produced by genetic engineering e.g.	A a A	A a A a A A a	A a	Dominant	A dominant allele is always expressed . Only one copy is needed.
 Examples of genetic modification: Bacterial cells have human insulin gene inserted into them so that they produce insulin for diabetics. Frost resistant tomatoes 	a Step 1: Step 2:		Aa aa Step 4: Put the alleles	Recessive	Only expressed if two copies are present .
 Plants, such as rice, that have had genes inserted that make them resistant to disease, insects, herbicides or more nutritious. Examples of desired characteristics : 	from one parent from th	e two alleles Put the alleles ne second from the first into the parent into the	from the second parent into the	Allele	Different versions of the same gene – dominant and recessive.
Disease resistance in food crops.Animals which produce more meat or milk.	the top. This boxes of parent has one This pa	on the left. two boxes rent also underneath them.		Mutation	A random change in the DNA
 Domestic dogs with a gentle nature. Large or unusual flowers. Evolution	dominant allele has one and one recessive and rec allele allele.	e dominant cessive	first parent (capital letters first).	Genetic modification/ Engineering	A process which involves modifying the genome of an organism by introducing a gene from another
Scientific analysis of fossils shows that species have changed over long periods of time. This change is evolution. Charles Darwin first proposed this theory called natural selection . If a variation in the genes of an organism is advantageous in an environment, e.g. beak		Extinction and conservation Extinction: A species become extinct when there are no more individuals of that species left,	es re	Evolution	organism to give a desired characteristic. The change in the genes of a population over time . Occurs through natural selection.
shape of finches beaks changed to allow them to find food easier, then it more likely to survive and pass that characteristic to its offspring.After the industrial revolution, the increased soot res being camouflaged more than light peppered moths,	so they were less likely to be	Conservation and biodiver Seed banks are a conservation plants. Seeds are carefully sto	existence. Sity n measure for	Fossil	The preserved remains of an organism from many thousands of years ago. They can also show changes/evolution over time
eaten and more survived and passed on their advant selection	ageous genes via natural	plants may be grown in the fu		Gene banks	Conservation method that stores genetic examples of different species



Y9 Food Tech–Food Hygiene

EXPLORE	DEVELOP	CREATE	EVALUATE
This is an Food Tech project where pupils will explore Food Hygiene through exploring knowledge and theory of practice.	Pupils will develop their skills of cooking through various meals and apply their knowledge of Food and hygiene practic	series of recipes in the booklet.	Pupils will retrieve their knowledge on practice, and applying good health and hygiene knowledge
ESSENTIAL KNOWLEDGE- You wil	Learn That	Techniques and Processes- You	will learn how
Food poisoning can be caused by: bacteria, e.g. through cross-contamination from pes unclean hands and dirty equipment, or bacteria alre present in the food, such as salmonella; physical contaminants, e.g. hair, plasters, egg shells, packaging; chemicals, e.g. cleaning chemicals. Bacterial contamination is the most common cause Microorganisms occur naturally in the environment cereals, vegetables, fruit, animals, people, water, so in the air. Most bacteria are harmless but a small n can cause illness. Harmful bacteria are called patho bacteria. The process of food becoming unfit to eat through oxidation, contamination or growth of micro-organi known as food spoilage.	ady on il and imber genic ady on il and il and	y. , i.e. hould e core ickest this t food where should food be stored in the Cheese, dairy and egg-based proc The temperature is usually coolest a constant at the top of the fridge, allow foods to keep best here. Cooked meats Cooked meats Cooked meats should always be stor raw meats and fish Raw meats and fish should be below meats and sealed in containers to pr	A cooked event
ey Practice	H&S	Key terms	
Best-before- late (ou can eat ood past this date but it night not be at ts best quality.	Allergen and food intolerance awareness There are 14 ingredients (allergens) that are the reason for adverse reactions to food. Cross- contamination of food containing these allergens be prevented to reduce the risk of harm. They m also be labelled on pre-packaged food and men that consumers can make safe choices. The 14 allergens are:	must contamination must be prevented to	reduce the risk of harm. can reproduce to form colonies. Some and others are necessary for food
Use-by-date You've got until the end of this date to use or freeze the food before it becomes too risky to eat. USE BY: BEST BEFORE:	Bacterial growth and multiplication All bacteria, including those that are harmful, have four requireme to survive and grow: • food; • moisture; • warmth; • time.	Usually raw food to ready-to-eat food	f bacteria from one source to another. d but can also be the transfer of bacteria hs or pests. Can also relate to allergens.
25/08/20 25/08/21 KEEP REFRIGERATED STORE IN A COOL DRY PLACE	Why clean? To remove grease, dirt and grime, and prevent food poisoning and pests.	micro-organisms or toxins produced	n eating food which contains food poisoni by micro-organisms. ready to eat, e.g. cooked meat and fish,

To remove grease, dirt and grime, and prevent food poisoning and pests.

micro-organisms or toxins produced by micro-organisms. High risk ingredients: Food which is ready to eat, e.g. cooked meat and fish, cooked eggs, dairy products, sandwiches and ready meals.



Y9 Art & Design – Fine Art & Textiles- Urban

EXPLORE	DEVELOP	CREATE	EVALUATE
This is an Art & Textiles project where pupils will explore the theme of Urban and buildings as well as the work of Harriet Popham	Pupils will develop ideas from studies of buildings and cityscapes as well as drawing and textiles tile techniques.	Pupils will draw from observation in tone a range of buildings and cityscapes to create their own designs for fabric printing and stitching.	Pupils will retrieve their knowledge on techniques, theme and artist to compare and contrast their own work with expectations. A booklet is produced including www & ebi.
ESSENTIAL KNOWLEDGE- You will L	earn That	Techniques and Processes- You w	vill learn how
Tone Using tone correctly can make 2D drawings look 3 dimensional.	Tone, top tips- Remember to look at where the light hits your objects. This will be the lightest area and the opposite side will be the darkest. Look for and try to match, different shades of grey.	Polystyrene Printing Relief printing is when you carve into a print you then use to press onto paper and make or shapes you carve into the printing block w on them, so will not show up on your paper. print will reveal the parts you don't draw, be come into contact with the ink. The print wil image of what you see on your printing block	a print. The lines vill not have ink Instead, the cause they I be a mirror
Key Practitioners – Artists, Designers,	Materials/ Mediums/ H&S	Topic Terminology	
<text><text><text></text></text></text>	 Health and Safety using a sewing machine Always tie back your hair and secure loose clothing. (take off lanyard) Only 1 person uses the sewing machine. Never allow someone else to touch your machine. Turn the machine off at the wall before threading, or if it goes wrong. To not crowd people using machines. Do not talk to people using machines Do not touch any dials except zigzag adjuster and length of stitch. Fabric-Cotton Thread Mixed Media Applique Stitching Tie dye 	Key words- Intricate Detailed Line drawing Imaginative Poly block print Stitch Mixed media Pattern Fessential Elements of Art Line Shopes Shopes Colour Form Shopes Shopes Space Form Space	Zig zag adjuster 1= straight 2-5 = zigzag Length of stitch adjuster 1-5 NEVER 0 Straight stitch MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM



Y9 Product Design–Insect Hotel

EXPLORE	DEVELOP	CREATE	EVALUATE
Students will explore environmental issues; the role that insects play in pollinating plants which gives us food crops as well as biodiversity.	Develop 3D sketching and annotation skills as needed for GCSE NEA projects. Develop practical skills with hand tools and workshop machines – including hammering and screwing; health and safety and development of independent practice;	Students will design and create a wooden insect hotel from upcycled pallet wood, OSB, galvanised steel mesh, wood screws, 25mm panel pins and fencing staples using a limited range of workshop tools and equipment as a short,	Students will evaluate their practical and design work as well as the individual manufacturing processes. skills-based project that sets them up well to make sma pieces of furniture for a future resistant materials / product design NEA.
ESSENTIAL KNOWLEDGE- You will Learn That		Techniques and Processes- You will learn	how
The 6 R's of Sustainability Reduce:- • Use less material to make things • Use less 'non-renewable' energy resources • Use less packaging on products • Throw less things away (Recycle more) • Throw less things away (Recycle more) • Use an old product elsewhere for a different • Avoid throwing it away if it can be used for state	purpose omething else	ead of throwing it away so that the n down and used to make new products from the Council - Paper, Glass, Plastic, we live? E.g. Turn power off at the mains surces of power to manufacture? E.g. than destroying natural habitats	Refuse:- • If you don't need it, refuse to buy it • Don't buy something if it has too much packaging • Don't throw plastic away, recycle it • Don't drive there if you can walk there Repair:- • If something is broken, don't throw it away, try to fix it
Key Practice	Materials and Properties	Topic Terminology	
Impacts of climate change in the UK sea levels could rise, covering low lying areas, in particular east England 		Woodscrews Bolt	Keywords – you must know what these all mean (in a D&T context) and be able to spell them:
droughts and floods become more likely as extreme weather increases	Naite	- allellellellelle	Marking out Bench hook
increased demand for water in hotter summers	Nails		Manufacturing Tenon saw
puts pressure on water supplies		Countersink Electric	Wasting Metalwork vice
 Industry may be impacted, eg Scottish ski resorts may have to close due to lack of snow 		Electric hand	Sustainability Woodwork vice
Impacts of climate change around	Pallet wood	drill	Accuracy Aluminium oxide paper
the world	is wood recovered from		Tanalised Sanding block
sea level rise will affect 80 million people	old pallets. They can be made		Upcycle Vertical belt sander
 tropical storms will increase in magnitude (strength) 	from hardwood (such as oak) or softwood (mainly pine) and have		OSB Grain
species in affected areas (eg Arctic) may become	been either heat-treated or		MDF Fixings
extinct	treated with chemicals making (pilot holes)	Phillips Slotted screwdriver	Chipboard Screw head
 diseases such as malaria increase, an additional 280 million people may be affected 	them suitable for outdoor use.		Plywood Screwdriver bits

History



Year 9 Knowledge Organiser – Women's fight for the vote

Key People

Emmeline Pankhurst - Lead of the Suffragettes (WSPU)

Christabel & Sylvia Pankhurst -Daughters of Emmeline Pankhurst and joint leaders of the WSPU. Sylvia refused to get involved in war work in World War One.

Millicent Fawcett - Leader of the Suffragists (NUWSS)

David Lloyd George - Politician who was a supporter of women's suffrage. His house was bombed by the Suffragettes in 1913. He became Prime Minister in 1915.

Herbert Asquith - Politician who was not a supporter of women's suffrage until around 1917.

Emily Davison – Suffragette who bombed Lloyd George's house and who was killed when trying to pin a scarf on the King's horse in 1913.

Sophia Duleep Singh - Indian princess and high profile Suffragette who protected people against violence, particularly on Black Friday.

Edith Garrud - Expert in martial art of jujitsu who trained Suffragettes to defend themselves from the police.



	Key Dates	Key Words
1819	Peterloo Massacre saw 15 people killed and 600 injured when people in Manchester protested for the vote.	Cat and Mouse Act – Law passed in 1913 which meant the government could release Suffragettes while they were ill and re-arrest them when they became well again.
1832	First petition for women's right to vote created by Mary Smith and presented by Henry 'Orator' Hunt	Constituencies – An area of the country which can vote for their MP. Examples include Harborough or Leicester South.
1832 - 1848	The Chartists fought for men's right to vote.	Democracy – The system which allows people to vote for their government.
1857	Divorce and Matrimonial Causes Act allowed women to divorce husbands who abused them	Franchise – The people who can vote. If people want to extend the franchise, it means they want to increase the number of people who can vote.
1865	Elizabeth Garrett Anderson became the first	Government – The group of people who run the country.
	female doctor in Britain. Barbara Leigh Bodichon forms the Women's Suffrage Committee.	House of Commons – The area of parliament which has MPs who are elected to serve the people. They debate and vote for laws.
1866	Famous petition signed by 1,499 women including Florence Nightingale.	Member of Parliament (MP) – The person who is voted for by people in a particular area who then represents them in the House of Commons.
1882	Married Woman's Property Act allowed women to keep their property when they married.	Monarch – The king or queen.
1887	Leicester Women's Suffrage Society was formed by Agnes Archer Evans	Parliament – the name for both the House of Commons and the House of Lords. Both of these are part of Britain's system of running the country.
1897	National Union of Women's Suffrage Societies	Prime Minister – The person who runs the government.
	(NUWSS) formed by Lydia Becker and Millicent	Suffrage – The right to vote.
	Fawcett. They are nicknamed the Suffragists.	Vote – A right to choose the government who runs the
1903	Women's Social and Political Union (WSPU) is	country.
	formed by Emmeline Pankhurst with her daughters Sylvia and Christabel	Women's Suffrage – The right for women to vote.

daughters Sylvia and Christabel.

History

1905

1907

1910

1913

1914

1915

1918

1928

Key Dates

over them.

Suffragettes.

at the Derby.

munitions.

Christabel Pankhurst & Annie

Kenney disrupt political meeting

of the Liberal party by shouting

Alice Hawkins joins Leicester

Suffragettes use violent tactics to

win publicity. Black Friday sees

arrested by police. Suffragettes

Government starts force-feeding.

George's house. Cat and Mouse

Act passed. Emily Davison is killed

start hunger-strikes in prison.

Emily Davison bombs Lloyd

First World War breaks out.

war work such as working in

First World War ends.

vote (same as men).

Women are encouraged to start

Representation of the People Act

Equal Franchise Act - Women over

21 with no property could now

is passed, giving all women over

30 with £5 property the vote.

Suffragettes assaulted and

Key Words

Anti-suffrage – some people (including women) campaigned against women getting the vote.

Force-feeding – In order to keep them alive, the prison guards would feed Suffragettes by putting a tube down their throat and tipping liquid like soup down it.

Hunger strike – Suffragettes would stop eating while in prison, in protest against being treated as criminals.

Munitions – Ammunition and weapons.

Pacifist – someone who does not support war.

Petitions – List of signatures from the public saying that they support an issue. It is designed to influence MPs by showing how popular an idea is.

Poor Law Guardians – People who had to check the poor law was being followed, including the treatment of the poor in the workhouses.

Workhouses – Like prisons for poor people. They had to do hard work, wore prison uniforms, and were separated from their families.

Key Facts: Women in the 19th Century

- Women were not allowed to vote or become MPs
- Some women took positions of responsibility as Poor Law Guardians to show that they were responsible.
- In 1865 Elizabeth Garrett Anderson became the first female doctor in Britain. Many other women went on to train in other professions such as lawyers, but many were also stopped by universities who refused to give them their qualifications.
- Before the 1857 Divorce and Matrimonial Causes Act women could not divorce their husbands even if they were abused by them.
- Before the 1872 Infant Custody Act children belonged to their father who could stop their mother from seeing them.
- Before the 1882 Married Woman's Property Act women had to give up their property when they got married.
- Women were believed to be mentally and physically inferior. They were seen as too emotional to be able to vote. Many women tried to challenge this.
- Women were expected to focus on getting married and having children if they
 were Middle Class. Working Class women had to do this and find paid work to
 support their families but women's work was always paid lower than men's.

Early Campaign

- In 1865, Barbara Leigh Bodichon formed the Women's Suffrage Committee. She campaigned for women's rights by publishing pamphlets and signing petitions. She helped influence the government to pass the 1882 Married Woman's Property Act.
- Lydia Becker set up the Manchester Suffrage Committee. She campaigned for improvements in education which led to the 1870 Education Act which created better education for girls.
- Agnes Archer Evans set up the Leicester Women's Suffrage Society in 1887.
- Although early campaigns helped get some laws passed, they still did not manage to get the law changed so that women could vote.

History

The Suffragists (NUWSS)

- Formed in 1897
- Led by Lydia Becker and Millicent Fawcett
- Colours were red (dignity), white (purity), green (hope)
- Only used peaceful methods such as petitions, marches, speeches, letter-writing etc.
- In 1897 they published a petition which got 230,000 signatures – a large number at the time.
- Historians debate how much influence they had. Many Suffragists continued to campaign during the First World War and helped to draft the Representation of the People Act which gave women the vote.
- Peaceful tactics often won them a lot of support, in contrast to the Suffragettes who were often seen as terrorists.
- Peaceful tactics also showed that women were responsible and not emotional and irrational as some people argued.
- Many Suffragists also continued to campaign after 1918 for women to get equal voting rights. This was won in 1928.

The Suffragettes (WSPU)

- Formed in 1903
- Led by Emmeline Pankhurst and her daughters Sylvia and Christabel
- Had been Suffragists but became frustrated with the slowness of change and so turned to violent tactics. From 1910 they were becoming most famous for violent tactics, although they continued to use peaceful ones.
- Slogan "Deeds not words".
- Colours white (purity), purple (freedom and dignity), green (hope).
- 1905 Annie Kenney and Christabel Pankhurst disrupted a meeting of the Liberal Party by shouting slogans.
- 1909 Edith Garrud started teaching Suffragettes jujitsu.
- Black Friday in 1910 saw 300 Suffragettes on a peaceful march being assaulted by police officers. One woman in a wheelchair was beaten and kicked. Sophia Duleep Singh used her status to protect a number of women. Many women were arrested.
- 1910 violent tactics included throwing stones at politicians, rocks through shop windows, setting fire to post boxes, using bleach to write slogans on golf courses.
- 1913 Elsie Duval and Olive Beamish set fire to the house of Lady White (an anti-suffrage campaigner), causing £3,000 worth of damage (£400,000 today).
- 1913 Emily Davison planted two bombs at Lloyd George's house, causing £500 worth of damage (£55,000 today).
- 1913 the Liberal government passed the Cat and Mouse Act which allowed them to release Suffragettes who were on hunger strike, only to rearrest them when they got better. This stopped women dying while in prison.
- 1913 Emily Davison was killed trying to pin a Suffragette scarf on the King's horse at the Derby. 6,000 Suffragettes led a peaceful funeral march.
- 1914 the Suffragettes dissolved in order to support the war effort. Sylvia refused to get involved as she was a pacifist.



World War One

- When war broke out in 1914 the government thought women's role was to encourage men to sign up to fight and to look after their homes and children.
- By 1915 there was a shortage of munitions and women were encouraged to work in war industries. Around 1 million women worked in munitions which was very dangerous.
- Women also joined nursing organisations such as Queen Alexandra's Royal Army Nursing Corps. Others were ambulance drivers on the front line or doctors either in the trenches or in hospitals in Britain.
- Flora Sandes was the only British woman to fight on the frontline in World War One. Women were not allowed to fight in the British army so she joined the Serbian army. She became Serjeant-Major.
- 1917 the Women's Land Army was set up to provide food to Britain. Around 23,000 women joined.
- Women were also ticket collectors, bus drivers, police officers, firefighters, post office workers, telephone operators, delivery drivers etc.
- Some women were pacifists and campaigned for an end to the First World War.
- At the end of the war, most women were expected to give up their jobs, but many fought to keep them.

The Vote

- Women over 30 with £5 of property won the vote in 1918.
- The government wanted only Middle and Upper Class women to vote and hoped that over 30 years old they might have a husband to tell them what to do.
- Women campaigned to have equal voting rights, which they won in 1928.









Knowledge Organiser – What are the challenges and opportunities facing Africa? Part 1.

Key Vocabulary

Triangle of Trade	The journey of exchange made of goods and slaves between Europe, the Americas and Africa.
Colonisation	The action or process of taking over control over local people of an area.
Cash crops	A crop produced for its commercial value rather than for use by the grower.
Migrate	To move from one region or habitat to another according to seasons.

Natural Resources

Africa is rich in natural resources:

- It exports 16% of the world's uranium, used to produce nuclear energy.
- In 2011, Africa produced more than half of the world's diamonds and nearly 75% of the world's platinum.
- Africa has 10% of the world's oil and gas reserves.
- Africa is rich in forests, a source of major hardwoods.
- Nigeria and Libya are 2 of the leading oil producing countries in the world.

AFRICA IS NOT A COUNTRY.

The History of Africa.

The Slave Trade

- Between the 1600's and the 1800's, 12-15 million Africans were sold into slavery.
- Europeans bought people in West Africa in exchange for goods, developing a triangle of trade.
- Slavery was abolished from 1833.

The Legacy of Colonisation.

- African countries began to gain their independence from Europe in the 1960's.
- Many countries have found the road to a strong and stable nation difficult.
- The wealth of natural resources continues to be over-exploited by European business.
- The best agricultural land is still used to grow cash crops rather than growing crops to feed the growing population of Africa.

"Africa is not poor, it is poorly managed" Ellen Johnson-Sirleaf, former president of Liberia.

Biomes of Africa

Savanna Biome

These are found to the north

and south of tropical rainforests.

Savanna regions have distinct

wet and dry seasons. This biome

has lots of wildlife within it

however, animals may migrate

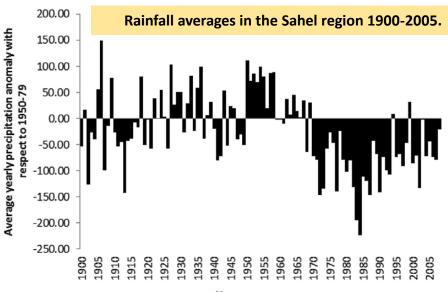
great distances for food and

water.

Is there a future for the

Desertification in the Sahel

- Droughts have occurred when the normally short rainy season is delayed or does not occur.
- Rains are very irregular in the Sahel along with rapid population increase, vegetation clearance and livestock overgrazing are causing the desert to spread southwards (desertification).



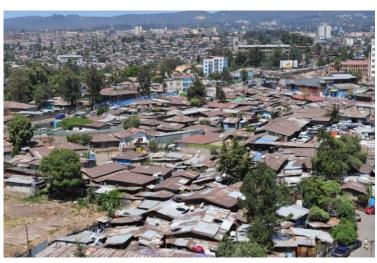


Knowledge Organiser – What are the challenges and opportunities facing Africa? Part 2

Key Vocabulary

Landlocked	A country or region that is entirely surrounded by land.
Exports	A good or service spent to another country.





Urbanisation in Ethiopia.

Ethiopia has the second largest population in Africa with over 100 million people. The government is trying to develop the economy of this landlocked country. Although 80% of the population is still rural, urbanisation and economic development are accelerating fast. Much of the population is located in the capital city, Addis Ababa which is located centrally in the country.

People move to the city as they think they will be better off however, they end up living in slums which is becoming a big problem. Slums are often build illegally, they offer cheap rent but they have limited access to water and toilets. This can lead to a spread of disease and lots of problems for the government to solve.

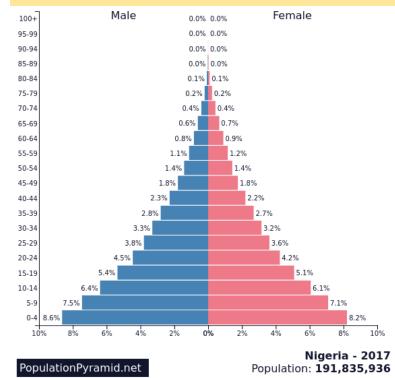
Government Projects to solve some of the problems in Addis Ababa:

 Building: Hundreds of thousands are built every year. These new houses are bought-t—own, and opportunities to live in them are distributed by a public lottery.

- Infrastructure: The Light Rail Transit, the first in Africa, opened in 2015. Built with Chinese support, it cost US\$475 million.
- Business: Attract multinational companies to build factories in the city offering incentives and cheap labour.

AFRICA IS NOT A COUNTRY.

Population Pyramid for Nigeria, 2017.



Trade between China and Africa.

- 15% of Africa's exports, mainly natural resources, go to China.
- China provides 21% of Africa's imports, including a range of machinery, transportation, communications equipment and manufactured goods.
- China is funding the building of factories and construction of roads, railways, ports, airports, hospitals, schools and stadiums, spending billions of dollars a year in Africa.
- More than 1 million Chinese, most of them labourers and traders, have moved to the continent in the past decade.



Knowledge Organiser — Can we ever know enough about earthquakes and volcanoes to live safely? Part 1

Key Vocabulary

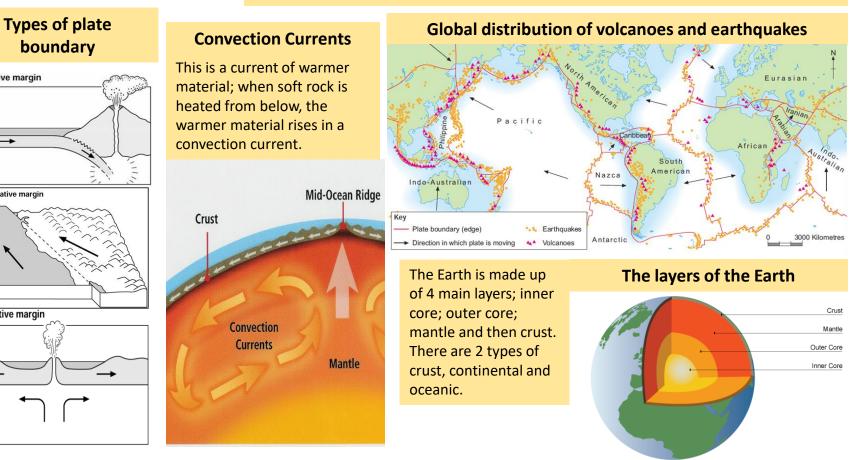
Natural hazard	When a natural event threatens to cause great damage or loss of life.	NORTH AMERICA PANGAEA
Natural disaster	This is a natural hazard when many lives are lost.	SOUTH AMERICA AFRICA INDIA
Tectonic Plate	These are pieces of the rocky outer layer of the Earth known as the crust.	Турез
Destructive or	This is when 2 tectonic plates	bou
convergent plate boundaries	move towards each other (both continental or one continental and one oceanic).	Destructive margin
Constructive or divergent plate boundaries	This is when 2 tectonic plates move apart, away from each other. This is normally with oceanic plates.	Conservative margin
Conservative or transform plate boundaries	This is when no land is made or destroyed. It is when 2 tectonic plates slide past each other causing friction and pressure to be built up.	
Primary Effect	These occur in the minutes and hours after the natural disaster.	Constructive margin
Secondary Effect	These occur in the days, weeks and months after the natural disaster.	



boundary

Wegener's Theory

- Known as continental drift. Millions of years ago the continents that we know today were joined together as one super continent known as Pangea.
- Evidence for this includes:
 - Similar animal fossils and rock types were found on different continents.
 - Evidence of an ice age at the same time across parts of the continents, even the hottest ones.
 - A pattern in the formation of some of the old mountain ranges



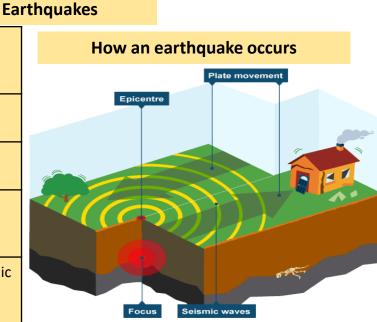


Knowledge Organiser — Can we ever know enough about earthquakes and volcanoes to live safely? Part 2.

Earthquake	A sudden violent movement of the Earth's surface.	
Focus	The location that the earthquake starts.	
Epicentre	The point directly above the focus.	6
Seismic waves	The waves of energy caused by the earthquake.	
Fault line	The line that 2 tectonic plates move by each other.	

Nepal Earthquake

- Saturday 25th April 2015, 11:56am.
- Biggest earthquake in Nepal for over 80 years.
- Epicentre was 75km north-west of Kathmandu (the capital)
- Nearly 9000 people died
- More than 22,000 suffered injuries
- Triggered an avalanche on Mount Everest, killing at least 8 people.
- More than 600,000 homes were destroyed.



Earthquake Management

Preparation:

• Earthquake

support

Earthquake

Cross bracing

Base isolator

Shear wall

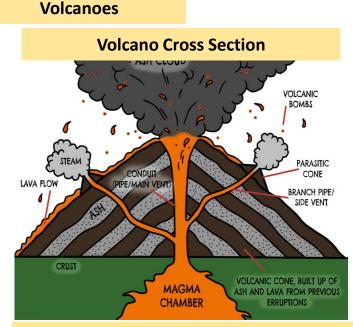
survival kit

Guidance and

Computer-controlled weights on roof to 'Birdcage' interlocking reduce moveme Steel frames which can sway during earth movements Outer panels flexibl attached to steel structure Automatic window shutters to prevent falling glass Roads to provide quick access for • Earthquake drills emergency services Open areas where people can assemble if evacuated Fire-resisitant building resistant buildings: Shock absorbers Foundations sunk into bedrock avoiding clay Rubber shock-absorbers to absorb earth tremor

Volcano	Openings or cracks in the lithosphere where magma from inside the Earth can escape onto the surface.
Shield Volcano	Gentle slopes formed from runny lava.
Composite Volcano	Steep slopes formed from thick sticky lava that doesn't flow far.
Active volcano	Is erupting or has recently erupted and is likely to erupt again.
Dormant volcano	Is one that has not erupted for 10,000 years but could become active again.
Extinct volcano	Hasn't erupted for that last 1,000,000 years and will probably never erupt again.

Why do people live near a volcano?



Managing the risk near volcanoes

Prediction, planning and preparation:

- Prediction monitoring volcanoes to see when it is likely it could erupt.
- Planning includes drawing up evacuation plans and using hazard maps to prevent houses being built in high risk areas.
- Preparation educating people on what to do • if a nearby volcano erupts.
- Fertile soil that is good for agriculture. Even in more developed countries like Japan.
- The presence of minerals.
- Geothermal energy to produce electricity. Especially in more developed countries like Iceland
- Tourism: volcanoes attract millions of visitors every year.

French

Lionheart Modern Languages Year 7-9 High Frequency Words – FRENCH CORE

CORE					
	s/Sequencers	Key ve	rb phrases	Con	nectives
normally	normalement	I have	j'ai	but	mais
often	souvent	I have not	je n'ai pas de	and	et
usually	d'habitude	l am	je suis	because	car/ parce que
from time to time	de temps en temps	l am not	je ne suis pas	also	aussi
sometimes	quelquefois/parfois	I would like	je voudrais	however	cependant
tomorrow	demain	it is	c'est	therefore	donc
next week	la semaine prochaine	it is not	<u>ce</u> n'est pas	as	comme
Summer / Autumn	en été / en automne	there is	il y a	or	ou
Winter / Spring	en hiver / au printemps	there is not	il n'y a pas de	however	pourtant
morning/afternoon/evening	le matin/l'après-midi/le soir	it will be	<u>ce</u> sera	on the other hand	par contre
then	puis	I'm going to	je vais +infinitive	fortunately	heureusement
always/still	toujours	you must	on doit +infinitive	unfortunately	malheureusement
at the moment	en ce moment	you must not	on ne doit pas +infinitive	in addition	en plus
later	plus tard	you can	on peut +infinitive		
in the future	a l'avenir	you cannot	on ne peut pas +infinitive	Negatives	
yesterday	hier	it was	c'était		-
last night	hier soir	it wasn't	<u>ce</u> n'était pas	no	
last week	la semaine dernière	there was	il y avait	neve	er <u>ne</u> pas
last year	<u>l'année</u> dernière	there wasn't	il n'y avait pas de		
next	ensuite	it would be	<u>ce</u> serait	Comparisons	
firstly	d'abord	it would not be	ce ne serait pas	more tha	n plus que
after	après ça	if I was rich	si j'étais riche		· · ·
before	avant	in an ideal world	dans un monde idéal	less tha	n <u>moins</u> que
lastly	<u>enfin</u> / finalement	in my dreams	<u>dans</u> mes rêves		
Quantifiers/	Intensifiers	Ор	inions	la	lioms
very	très	In my opinion	à mon avis / selon moi	How awful !	Quelle horreur !
too	trop	I think that	je pense que	What luck !	Quelle chance !
quite	assez	I Like	j'aime	What a surprise !	Quelle surprise !
a bit	un peu	I love	j'adore	What an idiot!	Quel imbécile !
really	vraiment	I don't like	je n'aime pas	It's brilliant !	C'est le pied !
a lot	beaucoup	I hate	je déteste	It's not my thing !	Ce n'est pas mon truc !
	·	l prefer	je préfère	It's a waste of time!	C'est une perte de temp
		My favourite is	ma/mon <u>préféré(</u> e) est	It's a waste of money!	C'est une perte d'argent
		I find that	je trouve que	, .	

CHALLENGE					
Time phrases/ Sequencers		Key verb phrases		Opinions	
today	aujourd'hui	you can see	<u>on</u> peut voir	for me	<u>d'après</u> moi
each/every	chaque	if it is	si c'est	I believe that	je crois que
currently	actuellement	there would be	il y aurait	according to	selon
the next day	le lendemain	there would not be	il n'y aurait pas de	I really hate	<u>i'ai</u> horreur de
in my dreams	<u>dans</u> mes rêves	you could	on pourrait +infinitive	I really love	j'apprécie
in an ideal world	dans un monde idéal	you couldn't	on ne pourrait pas	I can't stand	<u>ie</u> ne supporte pas
when I was little	<u>quand</u> j'étais petit (e)	you should	on devrait +infinitive	my friends say that	mes copains disent que
when I'm older	<u>quand</u> je serai plus âgé (e)	you shouldn't	on ne devrait pas	my parents say that	mes parents disent que
for 5 years	depuis 5 ans	you must	il faut +infinitive	my teachers say that	mes profs disent que
since I was 5 years old	depuis l'âge de 5 ans	you must not	il ne faut pas	my mum tells me that	<u>ma</u> mère me dit que
				my dad tells me that	<u>mon</u> père me dit que
Quantifiers/ Intensifiers		Negatives		I would say	<u>je</u> dirais que
-	-			I like /love it / them	<u>j'aime</u> /j'adore ça
SO	<u>si</u>	nomore/longer	<u>ne</u> plus	I am for	<u>je</u> suis pour
rather	plutôt	nothing	<u>ne</u> rien	l am against	<u>je</u> suis contre
extremely	extrêmement	no one/nobody	ne personne	I agree with	je suis d'accord avec
frankly	franchement	neithernor	<u>ne</u> ni ni	I disagree with	<u>je</u> ne suis pas accord avec
hugely	énormément			what I like is	ce que j'aime c'est
incredibly	incroyablement			it seems that	il semble que
				as far as is concerned	en ce qui concerne
Connectives		Comparisons/ Superlatives		Idioms	
nevertheless	néanmoins	best	<u>meilleur</u> (e)	Although it is	Bien que ce soit
whereas	tandis que	worst	pire	That's life !	C'est la vie !
even if	<u>même</u> si	the best thing is	la meilleure chose est	What a shame !	Quel dommage !
furthermore	de plus	the most important	la chose la plus	What a disaster !	Quelle catastrophe !
since	puisque	thing is	importante est	What a pain !	Quel ennui !
not at all	pas du tout	what I like the most is	<u>ce</u> que j'aime le plus est	It was so boring !	C'était la barbe !
				I was over the moon!	J'étais aux anges !
				I was bored to death!	Je m'ennuyais à mourir !
				I've had enough!	J'ai le cafard !
				I was so fed up!	J'en avais marre !

