# **Knowledge Organiser**

**Autumn Term - Year 8** 



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- 1. Art
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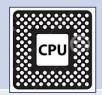
### MECHANICAL OBJECTS | YEAR 8 | ART | TERM 1

	PARTS OF LIGHT				KEYWORDS		
1	Highlight	The brightest part of the object	1	Proportion	The size of one thing compared to the size of another		
2	Mid-tone/half-tone	The tones between shadows and highlights			A line of symmetry can help you draw objects that		
3	Core shadow	The darkest part of the shadow often on the boundary between half- tones an the shadow area	2	Centre Line	are the same on both sides, such as a face.		
4	Reflected light	Light that is reflected of other objects into the shadow areas	3	Line drawi	ng Drawing made with lines only		
5	Cast shadow	Is the dark area behind the object on the opposite side of the light	4	Shading	Adding different tones to create 3D effect		
	cust shudow	source		Composition	The arrangement of different parts of an art piece		
		COLOUR THEORY AND COLOUR MIXING	6	Pattern	A symbol or shape that is repeated		
1	Colour Wheel	a diagram used in the visual arts to represent all colours and their relationships to one another. It can be used to help with	7	Line	A mark which can be used to make a drawing		
		colour selection when creating artwork	8	Shape	A 2D area that is enclosed by a line		
2	Complementary Colours	Colours on the opposite side of the colour wheel. This combination creates the greatest contrast	9	Tone	The lightness or darkness of something		
3	Analogous Colours	Colours close to each other on the colour wheel. These combinations create harmony in artwork.	10	Distortion	The act of twisting or altering something out of its true, natural, or original state.		
		Colours that cannot be made by mixing other colours but can be		PROCESSES			
4	Primary Colours	used to mix all other colours of the spectrum. YELLOW, RED, BLUE	1	Mono- print	An artwork created by transfer of media from one surface to another resulting in a single unique print.		
5	<b>Process Primaries</b>	YELLOW, MAGENTA, CYAN			Artwork created by the transfer of media from a matrix or		
5	Secondary Colours	Colours made by mixing two primary colours together	2	Printing	printing block to another surface.		
7	Orange Green Purple	Yellow + Red/Magenta Yellow and Blue/Cyan Red/Magenta + Blue/Cyan	2	Collage	The technique and the resulting work of art in which pieces of paper, photographs, fabric and other ephemera are arranged and stuck down onto a supporting surface.		
8	Tertiary Colours	Colours made by mixing a primary colour with its close secondary colour, such as yellow-green.	3	Drawing	The act of making picture with a pencil or pen and other dry media		
9	Tints and Shades	Lighter or darker version of a colour by adding white to lighten or adding black to darken.	4	Sculpture	3D artwork designed to be viewed from several angles. Sculpture can be made out of variety		
10	Mixing Brown	Red and Green or orange with a little bit of blue	5	Digital Art	Art created using software on a computer of other devices		

### Year 8 | Computer Science | Term 1: Computer Systems

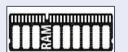
### **Hardware Components**

#### **CPU**



Processes data and instructions in binary.
Fetches them one by one from RAM and controls other components

#### **RAM**



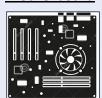
Stores <u>data</u> and <u>instructions</u> needed to run any programs <u>currently</u> <u>open</u>. Volatile: Wiped when power is off

#### **Storage**



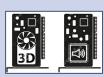
Long-term storage of programs and files.
Non-volatile: Data is safe when power is off

#### **Motherboard**



Connects components
together, allowing power
and data to flow where
needed

#### **Expansion Cards**



Additional cards that **process graphics or sound** better than CPU can do by itself

### Binary Logic Gates

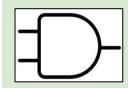
#### **Binary**

The language of 0s and 1s used by computers to make logical calculations.

0 = transistor off, 1 = transistor is on

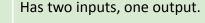
#### **AND**

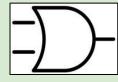
Has two inputs, one output.



Both inputs must be 1 for the output to be 1.
Output will be 0 in all other cases

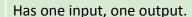
#### OR

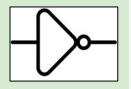




<u>Either</u> input must be 1 for the output to be 1.
Output will be 0 in all other cases

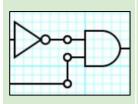
### NOT





Flips inputs so a 0 going in will output 1, 1 going in will output 0

#### **Logic Circuits**



Connecting several logic gates together to perform more complicated tasks or calculations

### **Input, Process, Output**

All computers receive data through an **input**, preform some sort of **process** on that data and then **output** the result

**Input Devices** 

Mouse, keyboard, microphone, touchscreen, joystick, scanner

**Output Devices** 

Monitor, printer, speaker, headphones, projector

### **Operating Systems**

- Software that connects all other apps to the hardware
- Manages resources like memory and access to the CPU
- Provides a graphical user interface (GUI) that allows the user to interact with apps and hardware

### **AI and Machine Learning**

Al	performs tasks that would need intelligence if a human did it
Machine Learning	When AI is given training data to learn from and makes its own rules based on patterns/similarities it finds
Ethics	Problems sometimes occur where machine learning systems

wrong

do what we might see as morally

Design	&	<b>Tech</b>	no	logy
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| Year 8 |

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	C			

Design Movement	Time period and Key designers of the Design Movement	Key Principles of the style/feel of design during the Design Movement	Examples of patterns, products and architectural features from the Design Movement
Arts & Craft Design Movement	1880 to 1910 William Morris John Ruskin	<ul> <li>Simplicity</li> <li>Rebellion against mass production</li> <li>Use of craft techniques</li> <li>Put 'man' back into the design &amp; manufacturing process</li> </ul>	
Art Nouveau Design Movement	1890 - 1910 Louis Tiffany Charles Rennie Macintosh Alphonso Mucha	<ul> <li>Curved lines</li> <li>Sinuous</li> <li>Natural Forms</li> <li>Making use of nature to inspire the look and feels as opposed to Greek and Roman styles</li> </ul>	
Art Deco Design Movement	1920s - 1930s William Van Allen Rene Lalique Tamara de Lempicka	<ul> <li>Luxury style</li> <li>Focused on use of geometric shapes and bold colours</li> <li>Influenced by Egyptian artefacts</li> <li>Chrysler Building, Empire State Building</li> </ul>	
Bauhaus/ Modernist Design Movement	1917 - 1933 Modernism up to the 1970s Walter Gropius Harry Beck Ludwig Mies Van Rohe	<ul> <li>Rejecting the decoration of the past</li> <li>Form follows function</li> <li>Using steel and industrial methods of production</li> <li>Modernity – glass and chrome</li> <li>Simplicity</li> <li>Less is More</li> <li>Functional</li> </ul>	B C D H C D D C D C D C D D C D C D D C D D C D D C D D C D D C D D C D D C D D C D D C D D C D
Streamline Design Movement	1928 - 1955 Raymond Lowey Eames and Saarinen	<ul> <li>Streamlining products to make them appear more modern and slick</li> <li>Very inspired by cars and aircrafts at the time</li> <li>Streamline caravans are items we still see</li> </ul>	
Post Modernist Design Movement	1970 - 1990 Ron Arad Phillipe Starke Ettore Sotsass Andy Warhol	<ul> <li>Form does not follow function. Less is a bore</li> <li>Liked to design with unnecessary ornamentation/decoration</li> <li>Use of plastics</li> <li>Geometric shapes, repeat patterns, and bright colours</li> <li>Shattering the establishment with gestures that were confrontational, funny, sometimes absurd</li> </ul>	

### **Physical Skills**

1

#### <u>Posture</u>

The way the body is held.



#### Alignment

Correct placement of body parts in relation to each other.





#### **Balance**

A steady or held position achieved by an even distribution of weight.



#### Coordination

Efficient combination of body parts.





#### Control

The ability to start & stop movement, change direction & hold a shape efficiently.





#### **Flexibility**

The range of movement in the joints.





### **Strength**

Muscular power.

8



#### <u>Stamina</u>

Ability to maintain physical and mental energy over periods of time.





#### **Extension**

Lengthening one or more muscles or limbs.

# High Quality Performance Expressive Skills

1	Focus	The use of the eyes to enhance performance.
2	Projection	The energy the dancer uses to connect with & draw in the audience.
3	Musicality	The ability to match the movement to the unique qualities in the accompaniment.
4	Facial Expression	The use of the face to show mood, meaning or character.
5	Spatial Awareness	The awareness of the space and ability to use if effectively.
6	Communication of the choreographic intent	The aim of the dance. What the choreographer wants to communicate.

### **Mental Skills**

7 Rehearsal discipline	Showing concentration when taking dance class. Listening to the teacher, responding well to corrections and working hard to achieve your best.
8 Confidence	Bringing energy to the performance & being bold whilst looking up and out to the audience, without shyness or hesitation.
9 Commitmen	Fully committing to the performance, being professional, fully involved and not holding back.

10		
	Movement	
	Memory &	
C	oncentration	

Remaining mentally focused throughout the performance so you do not forget the movement, timing or challenging moments of choreography.

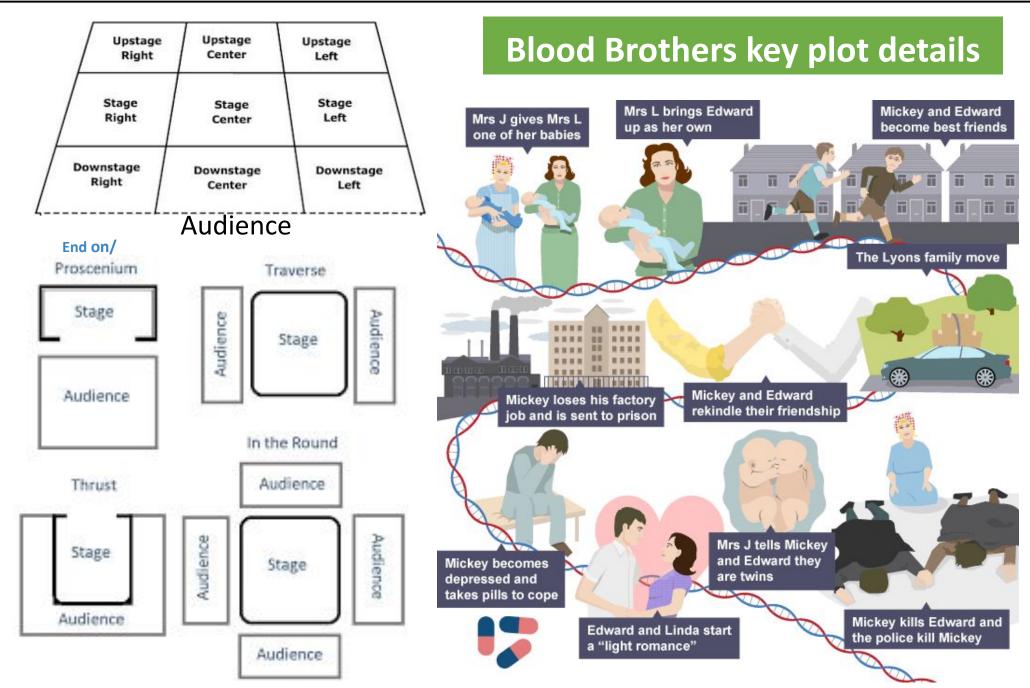
## Choreography DANCE ACTIONS

1	TRAVEL	When a dancer moves through the space on a pathway.
2	TURN	When a dancer rotates their body around in space.
3	ELEVATION	The act of rising up, as in a jump.
4	GESTURE	A movement of a body part in the air.
5	FLOOR WORK	Shapes & movements which take place on the floor.
	DYNAMICS	Qualities of speed, strength & flow added to movement to give expression & meaning.
1	SPEED	Fast and slow Sudden and sustained Acceleration and deceleration
2	STRENGTH	Strong and light
3	FLOW	Abrupt and flowing





	Drama: Mime an	d Scripts (B	September- December		
V	ocal Skills	Scripts (Blood Brothers)		Physical Skills	
Pitch	The particular level (high or low) of a voice, instrument or tune.	Script Playwright	A script is the written content for a visual story such as a play, television show or movie.  Someone who writes plays.	Facial Expression	Look on face which shows emotions.
Pace	The speed at which someone or something moves, or with which something happens or changes.	Blood Brothers details	Playwright: Willie Russell. Written:1981. Set 1960s-70s	Body Language	A range of nonverbal signals that you can use to communicate your feelings and intentions.
Pause	A break in speaking, period of silence.	Blood Brothers main characters	Mickey, Edward, Linda, Mrs Johnson, Mrs Lyons	Gesture	A sign that communicates a character's action, state of mind
Tone	This suggests your mood and your intention towards the listener, eg happy or sad.	Plot summary	Blood Brothers, a musical by Liverpudlian playwright Willy Russell, revolves around twin boys (Mickey and Edward) who are separated at birth and brought up in		and relationship with other characters to an audience.
Valuma	Loudness or quietness		completely different environments in the city.	Posture	Physical alignment of a performer's body, or a physical
Volume	Loudness or quietness of the voice.		Mime		stance taken by a performer which conveys information about
Emphasis	Where a performer will stress a particular word or phrase within a	Mime	Showing a character, scene or scenario entirely by gesture and bodily movement and without the use of props. Making the invisible visible.		the character being played.
	sentence to indicate importance.	Exaggeration	To make something seem larger, more important, better, or worse than it really is	Levels	They show action in a different place/time and can reflect
Accent	A way of speaking in a local area or country.	Dragicion	the quality condition or fact of hoing		relationships.
Clarity of	Clearness of the voice.		the quality, condition, or fact of being exact and accurate.	Gait	A person's manner of walking.
diction		Tension	condition where one or more muscles remains semi-contracted for a prolonged period.		



### English | Annie John

Key Words		
Adversity	A difficult or unpleasant situation	
Rebellion	An action/ process of resisting authority, control or covention	
Coming of age	The age or occasion when one formally becomes an adult	
Autonomy	A person's ability to act on her/his own values and interests	
Transient	Lasting only for a short time	
Adolescence	The process of developing from a child to an adult	

land	
Context	
Colonialism	The policy or practice of acquiring full or partial political control over another country, enslaving its inhabitants, occupying it with settlers, and exploiting it economically
Post Colonialsim	An approach that is concerned with the lasting impact of colonisation, seeking to spread awareness and be critical of the system
Windrush Generation	Relating to the people who emigrated from the Caribbean to Britain on the British ship the <i>Empire Windrush</i> in 1948
Captain Cook	Controversial British explorer who colonised the Caribbean (1728-1779)
Obeah	Obeah is the local spiritual system that relies upon the use of herbs as well as sorcery and spells
John Milton- Paradise Lost	A poem concerning the biblical <b>story</b> of the Fall of Man
Charlotte Bronte- Jane Eyre	The <b>novel</b> follows the story of Jane, a seemingly plain and simple girl as she battles through life's struggles

ļ	Questions to consider:
ľ	How and why does Kincaid explore the transition from girlhood to womanhood in Annie John?
l	How and why does Kincaid explore traditional gender roles in Annie John?
	How and why does Kincaid describe the British Caribbean colonial world in Annie John?
Ì	How and why does Kincaid manipulate the timings of events in Annie John?
	(Arlows and why adoes : Kineald, explore : Annie's : need : for : intellectual : exploration? :

Plot Overview	
Rising Action	At 10 Annie becomes obsessed with death and realises how transient life can be. She is entering her adolescence and begins to question and rebel. Her once close relationship with her mother becomes fragile.
Climax	Annie gets into a ferocious argument with her mother, which ends in her mother using offensive language. This signifies the breakdown of their relationship for good and Annie's coming of age.
Falling Action	Annie has come of age and realises that her narrative is not her own. She decides to leave Antigua for England, thus separating herself from her parents.

Key Terminology	
Eponymous Hero	Eponymous hero is the character in a play or book whose name is the title of that play or book.
Bildungsroman	A novel dealing with one person's formative years or moral/ psychological education.
Memoir	A written account in which someone details their past experiences
Symbolism	The use of symbols to represent ideas or qualities. E.g The trunk, Paradise Lost or the marbles.
Motif	A literary technique that consists of a repeated element that has symbolic significance e.g Obeah,water or death
Foreshadowing	A warning or indication of a future event e.g How the mother's quarrelling with her parents mirrors Annie's quarrelling with her mother.
Sequencing	Order in which events occur e.g chronological order
Unreliable narrator	An untrustworthy storyteller, most often used in narratives with a first- person point of view

### English Year 9 | William Blake

Poem Summary	
Laughing Song	Excitement of children in nature at summertime
Infant Sorrow	The narration of a child born into poverty by its parent
The Shepherd	What it means to be moral, the shepherd is comparable to Jesus Christ
A Poison Tree	How humanity can be immoral, close links to the Garden of Eden parable

Context	
Neo-Classic Poetry	Restrictive style of poetry that came before the Romantic Movement (18 <sup>th</sup> -19 <sup>th</sup> Century)
The Romantic Movement	Poetry that focused on liberty, freedom and nature (19th century)
Industrialisation	A period of rapid development in Victorian England (19th century)
French Revolution	Social and political upheaval in France
Peterloo Massacre	Cavalry charge on group of people protesting for a reform of parliament
Blake as a 'Christian Visionary'	He often saw 'visions' such as angels and spirits. He was against the 'Old Testament' teaching.
Class Hierarchy	Unequal class status led to the corruption and inequality of Victorian society.
Urban Poverty	Mass movement to cities and inequality led to sprawling urban slums.

Literary Terms	
Alliteration	Same letter or sound at the beginning of adjacent or closely connect words
Anaphora	Repetition of a word/phrase at the beginning of successive clauses
Biblical Allusion	A figure of speech that makes direct reference to a biblical story
Metaphor	A metaphor is a figure of speech that is used to make a comparison between two things that aren't alike but do have something in common
Plosives	The exaggerated 'p, b, d, g' sound
Repetition	When the same word/ phrase is repeated
Sibilance	The 'S' sound
Quatrain	Four line stanza
Rhyme Scheme	A poet's deliberate pattern of rhyming words or lack of
Rhyming Couplets	Two lines that rhyme and have the same amount of syllables

Ambitious vocabulary	
Fragility	the quality of being easily broken or damaged.
Morality	principles concerning the distinction between right and wrong or good and bad behaviour.
Pessimism	a tendency to see the worst aspect of things or believe that the worst will happen.
Optimism	hopefulness and confidence about the future or the success of something.
Hypocrisy	the practice of claiming to have higher standards or more noble beliefs than is the case.
Hierarchy	an arrangement of items that are represented as being "above", "below", or "at the same level as" one another.

				l	****			
Mon meille		s'appelle (François	-	il a	onze (11)			ans <i>years</i>
My best frie	t friend (m) is called (François)			he has (is) douze (12)				(old)
					treize (13)			
Ma meilleur	a appene (mangolot			elle a	quatorze (1			
My best frie	na (J)	is called (Françoise	?)	she has (is)	quinze (15)			
					seize (16)			
					dix-sept (1)			
					dix-huit (18 dix-neuf (1			
					dix-neui (1	9)		
II a	les yeux bleu	ıs <i>blue eyes</i>	les cheveux	les cheveux blonds <i>blond hair</i> ur			animal a pet	
he has	_	s green eyes	les cheveux	roux red hair			en <i>a dog</i>	
	les yeux mar	ron <i>brown eyes</i>	les cheveux	gris <i>grey hair</i>		un cha	ın chat <i>a cat</i> ın lapin <i>a rabbit</i>	
Elle a			les cheveux	blancs white hair		un lapi		
she has			les cheveux	noirs <i>black hair</i>		un che	val <i>a ho</i>	rse
			les cheveux	bruns <i>brown hair</i>				
			les cheveux	châtains chestnut/brow	ın hair			
			100 01101011	courts short hair				
			les cheveux	longs <i>long hair</i>				
Il est	petit(e) short	t						
he is	grand(e) tall							
	de taille moy	enne <i>of average hei</i>	ght					
Elle est	beau/ belle &	beautiful each						
she is	religieux/eus	se religious						
	fils unique o							
	fille unique o	only child (f)	(f)					
	très	vraiment	amusant(e) funny					
	very	really		patient(e) patient				
	trop	simplement	:	content(e) happy			que mo	
	too simply		fort(e) strong				than (as) me	
	assez	absolument	triste sad					
	quite	absolutely					que mo	-
	un peu	complètem	ent	nt fidèle <i>loyal</i>			than (as) my dad	
	a bit	completely					que ma	sœur
		parfaitemer	ιτ	pratique <i>practical</i>			-	s) my sister
		perfectly totalement		populaire <i>popular</i> agréable <i>nice</i>				,, 0.0.0.
		totally		responsable responsibl	0		que me	es autres
		extrêmeme	nt	unique unique			-	than (as) my
		extremely		aque aque			other f	
		on on one		heureux/euse happy				
	plus <i>more</i>			sérieux/euse serious				
				travailleur/euse hardw	orking			
	moins <i>less</i>							
				sportif/ive sporty				
	aussi <i>as</i>			gentil/gentille kind				
				sympa <i>kind</i>				
				sûr(e) de lui/d'elle	. 10%	(6)		
				self-confident (sure of h	nimself/herse	eIJ)		

il est

he is

elle est

ils sont

they are

elles sont

parce

car

que (qu')

because

because

puisque

because/

(qu')

since

they are (f)

she is

En général In general
Parfois
Sometimes
Quelquefois
Sometimes
De temps en temps
From time to

avec
I get on well with
je ne m'entends
pas bien avec
I don't get on well
with
je me dispute
avec
I argue with
je dépends de
I depend on

je m'entends bien

mon père my dad mon beau-père my step dad mon grand-père my grandad mon frère mv brother mon demi-frère my half brother/ my step brother mon oncle my uncle mon copain my friend mon meilleur ami my best friend (m)

ma mère mv mum ma belle-mère my step mum ma grand-mère my grandmother ma sœur my sister ma demi-sœur my half sister/ my step sister ma tante my aunt ma copine my friend ma meilleure amie my best friend (f)

mes parents
my parents
mes
grands-parents
my grandparents
mes deux frères
my two brothers
mes trois sœurs
my three sister

patient(e)(s) patient content(e)(s) happy fort(e)(s) strong faible(s) weak triste(s) sad fidèle(s) loyal

amusant(e)(s) funny

pratique(s) practical populaire(s) popular agréable(s) nice responsable(s) responsible unique(s) unique

heureux/euse(s) happy sérieux/euse(s) serious travailleur/euse(s) hardworking

sportif/ive(s) sporty gentil/gentille(s) kind sympa(s) kind

sûr(e) de lui/d'elle self-confident (sure of himself/herself)

il/elle me téléphone souvent he/she calls me often il/elle m'invite aux fêtes he/she invites me to parties il/elle garde mes secrets

il/elle m'envoie des textos sur WhatsApp he/she sends me messages on WhatsApp il/elle me comprend

he/she understands me

they understand me

he/she keeps my secrets

ils/elles me téléphonent souvent
they call me often
ils/elles m'invitent aux fêtes
they invite me to parties
ils/elles gardent mes secrets
they keep my secrets
ils/elles m'envoyent des textos sur
Snapchat
they send me messages on Snapchat
ils/elles me comprennent

Mon modèle c'est My role model is

La personne que j'admire c'est The person that I admire is

j'aime *I like* 

time

D'habitude

Usually

j'adore *I love* 

je préfère *I prefer* 

je n'aime pas I don't like

je déteste *I hate* 

je ne supporte pas I can't stand

je mange

je prends

je bois

I drink

on mange we eat

on prend we have (take)

on boit

we drink

I have (take)

I eat

### **SENTENCE BUILDER 3**

Normalement

**Normally** 

Généralement

Generally

En ce moment

At the moment

Quelquefois

Sometimes

De temps en temps

From time to time

Souvent *Often* 

Dans ma maison

In my house

Chez moi

At mine

Au restaurant

At the restaurant

pour le petit-déjeuner

for breakfast

pour le déjeuner

for lunch

pour le dîner

for dinner

après les cours

after lessons (school)

le soir

in the evening

pour commencer To start

comme entrée As a

starter

comme plat principal For

the main meal

comme dessert For

dessert

du pain *bread* 

du chocolat chocolate

du fromage cheese

du poisson fish

du riz *rice* 

du fruit *fruit* 

du gâteau cake

du fastfood fastfood

de la viande *meat* 

de la glace ice-cream

des oeufs eggs

des légumes vegetables

des pâtes pasta

des frites chips/fries

du lait milk

du thé *tea* 

du café coffee

de la bière beer

de l'eau water

un sandwich a sandwich

une baguette a baguette / French stick

Pour rester en bonne santé To stay in good health

### Additional useful vocabulary

J'ai faim *I am hungry (I have hunger)* 

J'ai soif I am thirsty (I have thirst)

L'addition s'il vous plaît the bill please

Où sont les toilettes? Where are the toilets?

Une table pour deux personnes s'il vous plaît A table for two people please

Est-ce que je peux voir la carte s'il vous plaît ? Can I see the menu please?

Pour rester en bonne

santé

(In order) to stay healthy / in good

health

Pour être en forme (In order) to be in shape

j'essaie de (d')

I try

j'ai tendance à

I tend

je vais

I'm going

manger to eat

boire

to drink

prendre

to have (take)

acheter to buy

commander

to order

cuisiner to cook

du pain bread

du chocolat chocolate

du fromage cheese

du poisson fish

du riz *rice* 

du fruit fruit

du gâteau cake

du fastfood fastfood

de la viande *meat* 

de la glace ice-cream

des oeufs eggs

des légumes vegetables

des pâtes pasta

des frites chips/fries

du lait milk

du thé tea

du café coffee

de la bière *beer* 

de l'eau water

un sandwich *a sandwich* 

une baguette a baguette

bien dormir to sleep well

boire beaucoup d'eau to drink lots of water

jouer au foot to play football

pratiquer les sports to practise sport

aller à la gym to go to the gym

faire de l'exercice to do exercise

courir to run

marcher to walk

faire du vélo to ride a bike

me reposer to rest

être actif / active to be active

bouger plus to move more

être dehors to be outside

éviter

to avoid

les sucreries sugary food

les boissons sucrés sugary drinks

le fastfood fast food

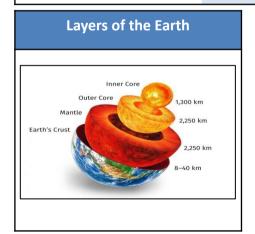
un régime malsain an unhealthy diet

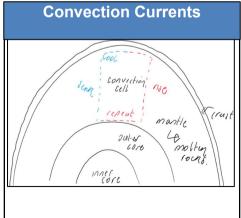
être fatigué(e) being tired

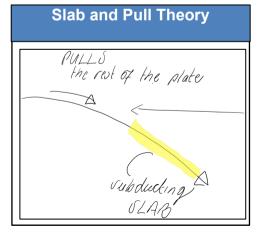
être malade being ill



#### Inside the Earth Consists of iron, nickel, sulphur and oxygen. This liquid layer is found At around 22°C the thinnest layer of the Earth is solid. CRUST 5.150km deep. It is thought to be 4.000-6.000 °C. OUTER CORE Its temperature ranges from 1,400°C to 3,000°C. It is made up of iron, oxygen, silicon, magnesium and aluminium. The majority of this layer is This layer makes up 80% of the Earth's structure. MANTLE molten, MANTLE The layer beneath the ocean bed is about 8km thick and is mainly made A huge solid metal ball of iron and nickel measuring 2,500 km wide. INNER CORE from a rock called basalt, CRUST At 5,000-6,000 °C this part of the Earth is 6,000 times hotter than our The layer that makes up the land ranges from 8km to 70km thick and is atmosphere. INNER CORE mostly made from a rock called granite. CRUST This layer is divided up into segments called tectonic plates. These are It is the movement of metals in this layer that creates our Earth's moving very slowly. CRUST magnetic field. OUTER CORE





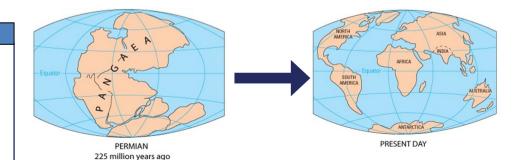


	Key Terms						
Conservative plate margin	Tectonic plate margin where two tectonic plates slide past each other.	Magma	Molten rock below the Earth's surface.				
Constructive plate margin	Tectonic plate margin where rising magma adds new material to plates that are diverging or moving apart.	Plate margin	The margin or boundary between two tectonic plates.				
Destructive plate margin	Tectonic plate margin where two plates are converging or coming together, and oceanic plate is subducted. It can be associated with violent earthquakes & explosive volcanoes.	Primary effects	The initial impact of a natural event on people and property, caused directly by it, for instance the ground buildings collapsing following an earthquake.				
Earthquake	A sudden or violent movement within the Earth's crust followed by a series of shocks	Richter Scale	A unit of measurement for the magnitude and strength of an earthquake. Typically ranges 1-10.				
Epicentre	The point on the surface of the Earth, directly above the focus, where the shockwaves will be felt the strongest.	Secondary effects	The after-effects that occur as indirect impacts of a natural event, sometimes on a longer timescale, for instance fires due to ruptured gas mains resulting from the ground shaking.				
Focus	The point below the Earth's within the crust where pressure is released, and shockwaves travel outwards from.	Tectonic Plate	A rigid segment of the Earth's crust which can 'float' across the heavier, semi-molten rock below. Continental plates are less dense, but thicker than oceanic plates.				
Immediate responses	The reaction of people as the disaster happens and in the immediate aftermath.	Tsunami	Waves generated by an earthquake on the seabed.				
Long-term responses	Later reactions that occur in the weeks, months and years after the event.	Volcano	An opening in the Earth's crust from which lava, ash and gases erupt.				

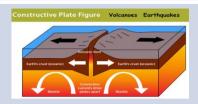
### Key Processes:

#### **Tectonic Drift**

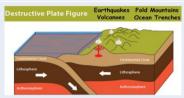
- The earth was initially a super continent called Pangea 250 million years ago.
- Plates move a few centimeters a year, but this adds up to thousands of kilometers over millions of year.
- This movement is called Tectonic Drift.



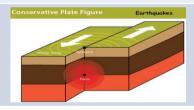
#### **Plate Tectonics**



Constructive margins are where two plates are moving away from each other. Magma (molten rock) rises to fill the gap and cools, creating new crust.



Destructive margins are where two plates are moving towards each other. Where an oceanic plate meets a continental plate, the denser oceanic plate is forced down into the mantle and destroyed. This often creates volcanoes and ocean trenches (very deep sections of the ocean floor where the oceanic plate goes down). When two continental plates meet, the plates collide, and the ground is folded & forced upwards to create mountain ranges.



Conservative margins are where two plates are moving sideways from each other or moving in the same direction but at different speeds. Crust isn't created or destroyed.

Earthquake location Both 7.8 magnitude	LIC Gorkha Nepal, 2015 GDP per capita: US\$ 690	HIC Kaikoura, New Zealand 2016: GDP per capita: US\$ 40,331
Primary effects	9,000 people died, 20,000 injured.	2 died and 50 injured.
Secondary effects	A lack of clean water led to 13 100,000 landslides bloc dying from Typhus. 100,000 and rail.	
Short term responses	Search and rescue teams, water and medical support arrived	200 of the most vulnerable were evacuated from
·	quickly from India and China.	Kaikoura in 24 hours.
Long term responses	The road from Nepal to Tibet was reopened after 2 years.	Most roads and rail systems were repaired within 2 years.





Predicting and Preparing for Volcanic Eruptions	Predicting and Preparing for Earthquakes
Tiltmeters used to measure change in shape.	Use seismometers to identify irregularities in tremors.
Spectrometers to measure sulphur dioxide emissions.	Measure radon gas that will appear as cracks in the ground.
Evacuation and exclusion zones around the volcano.	Retrofit existing buildings with cross bracings.
Ensure medical, food and water supplies are stocked.	Practice earthquake drills.

### Why do people live in areas of tectonic hazards?

- Creates tourism (e.g. Vesuvius in Italy).
- 2. The ash makes the land fertile meaning jobs for farmers.
- 3. Friends and family may live nearby.
- 4. Some people cannot afford to live elsewhere.

#### **Volcanoes** Active volcanoes erupt often, or have erupted recently. Dormant volcanoes have not erupted THREE TYPES OF for a long time, but can still erupt. Extinct OLCANOES, BASED ON TH volcanoes can no longer erupt and have not REACHES THE SURFACE AND THE TYPE OF ERUPTION THAT TAKES PLACE erupted for thousands of years. COMPOSITE VOLCANOES EMIT A STIFF, RAPIDLY SOLIDIFYING LAVA WHICH FORMS HIGH, STEEPSIDED CONES volcano CINDER CONE VOLCANOES BULARLY THROW OUT FLATTER DOMES CALLED CINDER CONES shield volcano SHIELD VOLCANO VIOLENTLY, BUT FLOWS OVER THE CRATER RIM FORMING A BROAD LOW

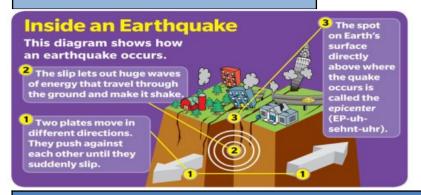
### The Richter Scale

The Richter Scale is a measure how powerful an earthquake has been. It is measured using a seismometer. This measures the shaking of the ground. The amount of energy given out by the earthquake is called magnitude.

What is the Richter scale?								
0-2.0	2.1-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-10
		damage, Slig	if any over large ght structural Dev		large a			
Sometimes felt, no damage caused				Potential for destcructive treat				

Key Terms			
Crust	The Earths hard skin of rock.		
Mantle	It is below the crust. It is mostly toffee like.		
Core	This is made of metal and silica. It is solid		
Lithosphere	This is the crust and upper mantel		
Oceanic crust	Is under the sea and mad of basalt. It is around 7km thick		
Continental crust	It is above the sea and mostly made of granite. It is around 30-50km deep.		
Fault	A crack in rock. This is where blocks of rock can move.		
Focus	The point in the Earth's crust where the earthquake starts		
Epicentre	This is the point directly above the focus on the earth's surface.		
Seismic wave	This is the energy given off by an earthquake.		
Aftershock	As rock settles in a new position there can be little earthquakes.		
Tsunami	A wave created by an earthquake in the ocean floor		
Magma	Melted rock below the earth's surface.		
Lava	Melted rock on the earth's surface.		
Crater	The top of a volcano.		
Pyroclastic flow	A heavy cloud of ask and gases which collapses and moves over the land.		
Mud flow	A mixture of pyroclastic flow and water. This can happen when there is a glacier on a volcano.		

#### The Inside of an earthquake



#### **Earthquakes**

Seismology	The study of earthquakes
Focus	The point within the Earth's crust where the rocks fracture and the earthquake begins.
Epicentre	The point directly above the focus on the Earth's surface where the earthquake is felt strongest
Shock Waves	The name of the vibrations of energy that travel through the Earth's crust. The further they travel, the weaker they become.
Seismometer	This piece of equipment will measure the strength of the earthquake by recording the vibrations caused by the tremors. The vibrations are plotted on a seismograph.
Richer Scale	Measures the magnitude (strength) of the earthquake on a scale of 1-10.



#### Why people live in the danger zone

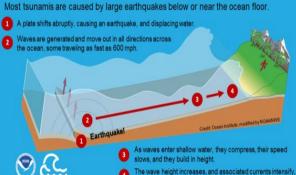
- · People have lived there for a long time
- They are too poor to leave
- There is good soil
- · Money from tourism
- Geothermal energy
- Valuable minerals
- · Fossil fuels



#### What causes a tsunami?

A tsunami is caused when there is an earthquake under the sea. This sets off waves that move in all directions. They are deadly and move at around 700km per hour. Reaching the coast it slows the wave and they can become up to 30 meters high.





becoming a threat to life and property.

Key Vocabulary				
Bilateral Aid	When a government in one country provides aid to the government of a foreign country.	GNI	A measurement of economic activity that is calculated by diving the gross (total) national income by the size of the population. GNI considers not just the value of goods and services, but also the income earned from investments overseas.	
Child Bride	Child marriage is a formal marriage of a minor below the age of 18 years old.	GNI per capita	The total GNI of a country divided by the total population.	
Choropleth map	A map which uses differences in shading within areas to indicate the average values of a particular quality.	Human Development Index (HDI)	A method of measuring development in which income, life expectancy and education are combined to give an overview.	
Colonisation	Type of government where a geographic area is ruled by a foreign power.	Income	Money that an individual, business or country earns in exchange for providing a good or service.	
Department for International Development (DfID)	A government body in the United Kingdom who oversees aid.	Inequality	Difference between wealth and poverty, as well as peoples' wellbeing and access to things like jobs, housing and education.	
Development indicator	A piece of data which is used to measure part of a country's development.	Life expectancy	The average age a person may be expected to live.	
Developing	When a country is changing for the better to ensure people reach an acceptable standard of living or quality of life.	Non-governme ntal aid	Charities call non-governmental organisations (NGOs) raise money from the public to support development projects in other countries.	
Development	The process of change by which people reach an acceptable standard of living or quality of life.	Poverty	When an individual lacks access to basic human needs such as clean water, shelter, food, work, healthcare, sanitation and education.	
Ecological footprint	The amount of the environment required to produce the goods and services necessary to support a particular lifestyle.	Quality of Life	The general well-being of people which includes income, health, education, employment, and the environment.	
Extreme Poverty	When an individual lives below the international poverty line of \$190 and has a severe deprivation of basic human needs.	Subsistence Farming	A type of agriculture producing food and materials for the benefit only of a farmer and his family.	
Gender Inequality	The unequal treatment of individuals based on their gender. There are different forms of gender-based discrimination, gender stereotyping and unequal distribution of power between men, women, girls and boys, and other genders.	United Nations	An intergovernmental organisation of 193 member states formed after the Second World War. The primary aims of the UN are to secure international peace, eliminate poverty and protect human rights.	

### The Development Compass Rose

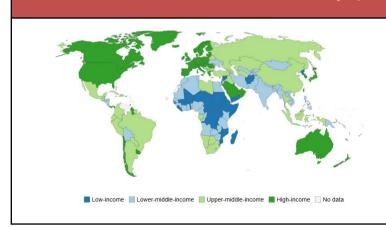


Development isn't only about having money, it's a range of ways in which the quality of peoples' lives in a country can be improved.

Understanding and questioning the idea of development involves thinking about a variety of factors. The Development Compass Rose is a toold to support this thinking. It encourages a range of questions and explores links between the four areas – Natural, Social/cultural, Economic and Who decides (Political).

Country	GNI per capita	Population
Singapore	103,000	5,607,280
Ireland	99,000	4,773,100
Qatar	97,000	
Switzerland	76,000	8,272,100
Norway	69,000	5,492,930
USA	68,000	323,127,510
Denmark	61,000	5,721,120
Netherlands	60,000	17,394,901
United Arab Emirates	59,000	10,030,009
Taiwan	59,000	23,987,345

### How is money spread around the world



The World Bank's income classifications split countries into one of four categories determined by the country's gross national income (GNI) per capita. The GNI thresholds between income groups have change through time based on World Bank definitions.

Factors affecting development		
Historic factors	Country was colonised – resulting in resources and people being exploited to benefit the empire.  Empires created new borders which divides traditional tribal areas	
Economic factors	The value of products sold by countries, which varies depending on the product. Eg: selling bananas is a low value. Whereas, selling cars is higher value, earning the country more money	
Environmental factors	The climate of a country Natural disasters Being landlocked	
Political factors	Conflict or civil war Corrupt government Lack of investment	

Indicators of Development			
Gross Domestic Product (GDP) per capita	The total number of goods and services sold by a country, divided by its population.		
Infant mortality	The number of babies that die per 1000 before their first birthday.		
Life expectancy	The average age you are expected to live to in a country.		
Literacy rate	The % of people that can read and write.		
People per doctor	The number of people to one doctor.		
Human Development Index (HDI)	Combines GNI per capita, life expectancy and years in schooling.		

### **Development**

One of the key questions to ask about development is the standard of living of the people who live in a country. There are many ways to measure the quality of life or level of development of a place.

#### ECONOMIC INDICATORS

INDICATORS	EXAMPLES OF MEASURES		
	Gross Domestic Product (GDP) - the total value of all goods and services produced in a country		
Wealth	Gross National Product (GNP) - GDP plus earnings from foreign investment		
	GNP per capita - GNP divided by the total population		
Jobs	The types of jobs people do differ between countries. In high income countries (HICs) more people work in tertiary and quaternary jobs. In low income countries (LICs) more people work in primary jobs such as farming and secondary jobs such as manufacturing.		

#### SOCIAL INDICATORS

INDICATORS	MEASURES
	Life expectancy
Health	Death rate deaths per 1,000 per year
Hearth	Infant mortality rate
	Birth rate: births per 1,000 per year
Education	Percentage in primary education
	Literacy rate
	Equal opportunities for women
Equality	Fair distribution of wealth
	Freedom of speech, eg people can vote

Physical factors affecting uneven development				
Natural Resources	Natural Hazards			
Fuel sources such as oil.     Minerals and metals for fuel.     Availability for timber.     Access to safe water.	Risk of tectonic hazards. Benefits from volcanic material and floodwater. Frequent hazards undermines redevelopment.			
Climate	Location/Terrain			
Reliability of rainfall to benefit farming.     Extreme climates limit industry and affects health.     Climate can attract tourists.	Landlocked countries may find trade difficulties.     Mountainous terrain makes farming difficult.     Scenery attracts tourists.			

Variatio	Variations in the level of development				
LICs Poorest countries in the world. GNI per capita is low and most citizens have a low standard of living.					
NEEs	These countries are getting richer as their economy is progressing from the primary industry to the secondary industry. Greater exports leads to better wages.				
HICs	These countries are wealthy with a high GNI per capita and standards of living. These countries can spend money on services.				

		The state of the s
Key Advanced countries Emerging developing countries Low-income developing countries	Ž	0_3000km

### Causes of uneven development

Development is globally uneven with most HICs located in Europe, North America and Oceania. Most NEEs are in Asia and South America, whilst most LICs are in Africa. Remember, development can also vary within countries too.

The Demographic Transition Model						
The demographic		STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
transition model (DTM) shows population change over time. It studies how birth rate and death rate affect the total population of a country.		High DR High BR Steady	BR Low Declining DR Very High	Rapidly falling DR Low BR High	Low DR Low BR Zero	Slowly Falling DR Low BR Negative
		e.g. Tribes	e.g. Kenya	e.g. India	e.g. UK	e.g. Japan

#### Human factors affecting uneven development

#### Aid

- Aid can help some countries develop key projects for infrastructure faster.
- Aid can improve services such as schools, hospitals and roads.
- Too much **reliance on aid** might stop other trade links becoming established.

#### Trade



- Countries that export more than they import have a **trade surplus**. This can improve the national economy.
- Having good trade relationships.
- Trading goods and services is more profitable than raw materials.

#### Education

- Education creates a skilled workforce meaning more goods and services are produced.
- Educated people earn more money, meaning they also pay more taxes. This money can help develop the country in the future.

#### Health



- Lack of clean water and poor healthcare means a large number of people suffer from diseases.
- People who are ill cannot work so there is little contribution to the economy.
- More money on healthcare means less spent on development.

#### **Politics**



- Corruption in local and national governments.
- The stability of the government can effect the country's ability to trade.
- Ability of the country to invest into services and infrastructure.

#### **History**

- Colonialism has helped Europe develop, but slowed down development in many other countries.
- Countries that went through industrialisation a while ago, have now develop further.

#### **Consequences of Uneven Development**

Levels of development are different in different countries. This uneven development has consequences for countries, especially in wealth, health and migration.

Wealth	People in more developed countries have higher incomes than less developed countries.
Health	Better healthcare means that people in more developed countries live longer than those in less developed countries.
Migration	If nearby countries have higher levels of development or are secure, people will move to seek better opportunities and standard of living.

### History | Year 8 – The British Empire and New World Slavery | September to October

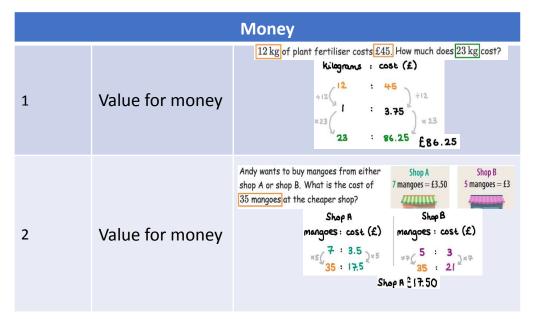
	Т	he British Empire			New World Slavery			Vocabulary																
1	1750 - 1900	Between 1750-1900 Britain conquered many foreign lands.	1	West Africa before the	ore the very peaceful place. The Akan		Empire	Several territories ruled by one powerful country																
		By the beginning of 20th Century approximately 13 million square		slave trade	kingdoms were consistently at war with each other. They had a common	2	Colony	A territory controlled by an Empire																
		miles of territory across the globe was ruled by Britain.	2	British	The second secon	3	Colonisation	The process of taking control and building an Empire																
		British explorers and settlers		involvement	increasingly addicted to the consumption of sugar. British plantations owners in the	4	Colonists	People from Britain who went to live in the colonies.																
		travelled to different regions of the world and claimed the land			Caribbean made a huge amount of money from the business of exporting produce to	5	Independent	No longer part of an Empire.																
		for Britain. These new lands were known as colonies and an 'empire' was a collection of  The slave trade in We	trade in West	Britain from their plantations.  British merchants exchanged guns and metal goods for enslaved Africans who	6	Dispossession	The action of taking away someone's land or property																	
		colonies all ruled by one country.		Africa	they transported to the Caribbean to work on plantations	7	Conversion	Changing someone's religion.																
2	Colonisation	To the British, it didn't matter	1	The Middle	orld Slavery – the Slave Trade  The part of the Transatlantic slave trade	8	Collaboration	Working together 'to collaborate' - working with someone																
		that people already lived in these lands. The British had far better weapons and showed no	Passage	Passage where enslaved people were transported from West Africa to the Caribbean plantations.	from West Africa to the Caribbean	9	Subjugation	Forcing someone to obey you.																
		mercy to local populations, killing thousands to gain new				The conditions aboard these ships were	· ·	10	Akan Kingdoms	30 different regions within West Africa														
		territory across Africa, Australia, India and New Zealand.			treated very badly by ship captains and their crew	11	West Africa	Region of Africa that the majority of enslaved people were taken from																
3	17 <sup>th</sup> & 18 <sup>th</sup> Century The Lenape	In the 17 <sup>th</sup> century, the 1600s, the Lenape - a Native American people experienced	2	Societies of the Caribbean		The Caribbean plantations followed a strict social hierarchy.  At the top level of the hierarchy were	12	Field Overseer	In charge of Field Slaves working on the plantation															
	story	colonisation by the British  William Penn and his sons		Prantacions	the rich white plantation owners. At the bottom were the field slaves	13	Field Slaves	Enslaved African Americans who held the lowest ranked position in the social hierarchy																
		tricked the Lenape and took land from them with the 1737 Walking Purchase.																		j	who were watched by a field overseer.  A domestic slave was seen as the highest ranking for enslaved Africans living on plantations	14	Resistance	The act of fighting back
4	19 <sup>th</sup> century The Maori story	In the 1800s The Maori - people who lived in New Zealand before the Europeans arrived - faced	3	Slave Resistance			There were numerous examples of active slave resistance by enslaved Africans on plantations. For example,	15	To sabotage	Deliberately and secretly destroy something (for example a machine)														
		colonisation by the British who converted people to Christianity			the Maroons were former enslaved people who had successfully escaped	16	The Maroons	Former enslaved people who had run away																
5	20 <sup>th</sup> century	and forcibly took their land In the 1900s The Hausa - a West			their white owner and created their own territories in the hills and forestry	17	Nanny	The Akan woman who led the Maroons																
	The Hausa story	African ethnic group collaborated with the British to increase their power and wealth			areas of Jamaica	18	Guerrilla Warfare	Using ambushes and traps to fight stronger enemies																
		partition partition and a second																						

### History | Year 8 – The Industrial Revolution and the Development of Democracy | Nov - Dec

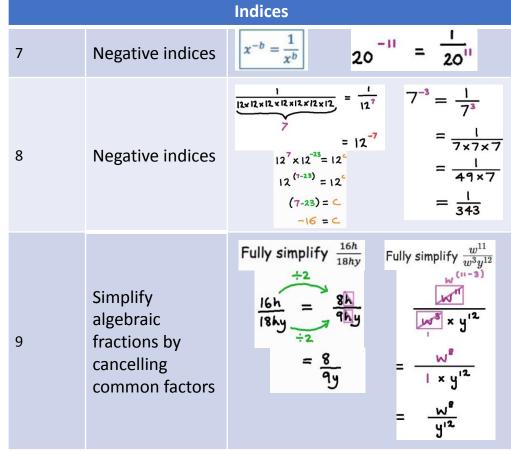
The Industrial Revolution				The De	velopment of Democracy			Vocabulary		
ı	1 Ind	dustrial	A dramatic change in Britain's	1	The English Civil War	Parliament challenged the power of the monarchy (King Charles 1 <sup>st</sup> ) in the 17 <sup>th</sup>	1	Urban	Focuses on Cities and Towns	
	Rev	volution	economy and society in the 18 <sup>th</sup> & 19 <sup>th</sup> century	2	The UK	century.  Before the arrival of King Charles 1st to	2	Rural	To do with countryside	
		Before 1750 Britain was a rural and agricultural society.		parliament	the throne parliament had been formed for a place where nobles, bishops and other dignitaries would write laws.	3	Agricultural	To do with farming		
			By 1900 Britain had became an urban society with factories attracting workers to	3	Execution of Charles 1	Charles was found guilty of treason and he was captured, put on trial and executed in 1649	4	Middle-class	Wealthier people who could be lawyers or doctors	
	2 Th.		the cities.	4	Oliver Cromwell & the	The leader of the parliamentarians who defeated the monarchists now led	5	Slums	Poor quality, overcrowded housing conditions	
		e causes the	<ul> <li>Natural resources such as coal provided new forms of energy</li> </ul>		Protectorate	England as 'Lord Protector'	6	Liberty	Freedom	
		dustrial	- New technology and		The Dev	velopment of Democracy				
		volution Britain	machinery increased production		Revolution	Revolution across the globe including in Britain.		Working-class	The poorest people, who work in factories	
		- The profits and money made from slavery provided wealt to stimulate the industry				There were revolutions in America, France and Haiti. All populations were demanding equality and the right to	8	interpretation	a historians' answer to a question about the past	
	3 Fra	ancis	An author who wrote the novel	2	The	vote Protests for democratic reform were	9	To exaggerate	To make something seem better, worse or more important than it	
		ollope	'Factory boy' by Trollope which described the lives of children		'Factory boy' by Trollope which	tory boy' by Trollope which Cribed the lives of children Massacre In Manchester at St Peter's field thousands had gathered to protest	thousands had gathered to protest for	10	Parliament	really was Part of the government that votes on new laws
	4		who worked in the factories			the right to vote. They protestors were attacked by the authorities and arrested the speakers. 18 people were killed	11	Democracy	A system of government where leaders are elected by the	
		nomas nnan	A photographer from Glasgow who photographed the slums	3		Under pressure from groups such as the Chartists, Parliament passed a series of		Reform	people To change something	
	AII	IIIaII	illustrating how poor living conditions could be for urban			acts that gradually reformed British democracy and expanded the franchise	12	Keloffii		
			workers.	4	Women	Despite the 19th century reforms, women were still denied the right to	13	Protest	A public action to oppose something	
	5 Emma		A historian who used autobiographies to illustrate			vote as Britain remained a patriarchal society	14	Equality	The state of being equal and	
	Griffin	111111	the lives of ordinary working class people in the Industrial						treated the same	
	1		Revolution and how horrible it could be.				15	The franchise	The right to vote	
							16	Patriarchal	Society is ruled and dominated by men	

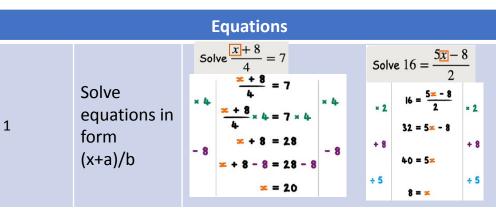
	Po	ercentages
1	Finding percentages of an amount without a calculator	Work out 15% of 25  15% = 10% + 5%  10% of 25 = 25 ÷ 10  = 2.5  5% of 25 = 2.5 ÷ 2  = 1.25  15% of 25 = (10% + 5%) of 25  = 2.5 + 1.25  = 3.75
2	Finding percentages of an amount without a calculator	Work out 1.3% of 900  1.3% = 1% + 0.3%  1% of 900 = 9  0.1% = 1% ÷ 10  0.1% of 900 = 0.9  0.3% of 900 = 3 × 0.9  = 2.7  1.3% of 900 = (1% + 0.3%) of 900  = 9 + 2.7  = 11.7
3	Percentages of amounts with a calculator	Work out a) 17% of 300 17 ÷ 100 = 0.17 17% of 300 = 0.17 × 300 = 51
4	Percentages of amounts with a calculator	Work out 148% of 99   48 ÷  00 =  .48   48% of 99 =  .48 × 99  =  46.52
5	Percentage increase without a calculator	Increase 400 by 5%  5% = 10% ÷ 2 10% of 400 = 400 ÷ 10 = 40 5% of 400 = 40 ÷ 2 = 20 400 + 20 = 420

	Po	ercentages
6	Percentage increase with a calculator	Increase 21 by 46%  100% + 46% = 146%  146 ÷ 100 = 1.46  146% of 21 = 1.46 × 21  = 30.66
7	Percentage decrease with a calculator	What number is 4% smaller than 31?  100% - 4% = 96% 96 ÷ 100 = 0.96 96% of 31 = 0.96 × 31 = 29.76
8	Calculate percentage change	Calculate the percentage increase when 80 is increased to 96  percentage change = difference original value = $\frac{96 - 80}{80} \times 100$ = $\frac{16}{80} \times 100$ = 0.2 × 100 = 2.0 %



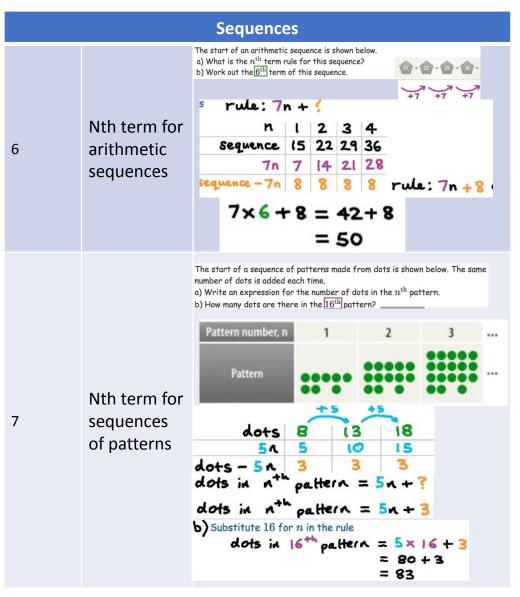
	ı	ndices
1	$a^1 = a \text{ and } a^0 = 1$	23 <sup>4</sup> × 23 = 23
2	Index rules with positive indices	$x^{a} \times x^{b} = x^{(a+b)}$ $w^{3} \times w^{4} = w^{3+4}$ $= w^{7}$ $10 = y$
3		$8^{9} \times 8^{6} \times 8^{14} = 8^{\square}$ $8^{9} \times 8^{6} \times 8^{14} = 8^{\square}$ $8^{9} \times 8^{6} \times 8^{14}$ $= 8^{(9+1)} \times 8^{14}$ $= 8^{15} \times 8^{14}$ $= 8^{(5+14)}$ $= 8^{(5+14)}$ $= 8^{24}$ $19 + \Gamma = 42$ $\Gamma = 23$
4	Index rules with positive indices	$\frac{x^a}{x^b} = x^{(a-b)}$ $= \omega^{35}$ $= \omega^{(35-7)}$ $= \omega^{18}$
5		$\frac{11^{19}}{11^{5}} = 11^{\frac{14}{11^{5}}}$ $\frac{11^{19}}{11^{5}} = 11^{\frac{19}{5}}$ $= 11^{14}$ $\frac{8^{6} \times 8}{8^{3}} = \frac{8^{6} \times 8^{1}}{8^{3}}$ $= \frac{8^{6+1}}{8^{3}}$ $= \frac{8^{7}}{8^{3}}$ $= 8^{7-3}$ $= 8^{4}$
6	With brackets, multiply the powers	$(x^a)^b = x^{(a  imes b)}$ $(w^3)^2 = w^6$





		Equations			Equations
2	Solve equations in form (x/b)+a	Solve $\frac{x}{5} + 3 = 11$ $\frac{x+3}{5} = 11$ $\frac{x+3}{5} \times 5 = 11 \times 5$ $\frac{x+3}{5} \times 5 = 11 \times 5$ $x+3=55$ $x+3-3=55-3$ $x=52$ Solve $3@+4)=24$ Solve $23=5+2(4W+3)$	6	Solving equations with the unknown in the denominator	Solve $\frac{32}{2y} = 2$ $\frac{32}{2y} = 2$ $\frac{32}{2y} \times 2y = 2 \times 2y$ $32 = 4y$ $32 \div 4 = 4y \div 4$ $8 = y$
3	Solve equations involving brackets	$3(\sqrt[4]{+}) = 24$ $3\sqrt[4]{+} = 24$ $23 = 5 + 2(\sqrt[4]{+} + 3)$ $23 = 5 + 8 + 6$ $23 = 11 + 8 + 8$ $23 = 11 + 8 + 8$ $23 = 11 + 8 + 8$ $23 = 11 + 8 + 8$ $23 = 11 + 8 + 8$ $23 = 11 + 8 + 8$ $12 = 8 + 8$ $15 = 4 + 8 + 8$ $15 = 4 + 8 + 8$	7	Solving equations with the unknown in the denominator	Calculate the value of $y$ , giving your answer as a decimal. $\frac{103}{y-5} = 2$ $x(y-5)$ $\frac{\frac{103}{y-5} = 2}{\frac{103}{y-5}} \times (y-5) = 2 \times (y-5)$ $103 = 2(y-5)$ $103 = 2y - 10$ $113 = 2y$ $56.5 = y$
4	Solve equations with unknowns on both sides	Solve $9x - 30 = 3x$ $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	Constructing & solving equations	Tom is k years old. His sister is years old and his brother is 3 times Tom's age.  All three siblings have a total age of 32.  a) Write an equation to represent this.  b) Solve the equation to find out Tom's age.  k + 8 + 3k = 32  4k + 8 - 3 = 32 - 8  4k + 8 - 3 =
5	Solve equations with unknowns on both sides	Solve $31 - 4x = 2x + 7$ $ \begin{vmatrix} 31 - 4x = 2x + 7 \\ 31 - 4x + 4x = 2x + 7 + 4x \end{vmatrix} $ $ \begin{vmatrix} 31 - 4x + 4x = 2x + 7 + 4x \\ 31 - 6x + 7 - 7 \end{vmatrix} $ $ \begin{vmatrix} 31 - 7 = 6x + 7 - 7 \\ 24 = 6x \end{aligned} $ $ \begin{vmatrix} 4 = x \\ 24 \div 6 = 6x \div 6 \end{aligned} $ $ \begin{vmatrix} 4 = x \\ x = 4 \end{vmatrix} $	9	Constructing & solving equations	Write an equation for the sum of the angles in this triangle. Use your equation to find the value of x. $6x + 40 + x = 180$ $7x + 40 = 180$ $7x + 40 - 40 = 180 - 40$ $7x = 140$ $7x = 140$ $7x = 140$ $7x = 140$

		Sequences
1	Term-to-term rules for numerical sequences	The term-to-term rule tells us how to get from one term to the next
2	Term-to-term rules for numerical sequences	The term-to-term rule for a sequence is to subtract 6 each time. The 12th term is 58. What is the 14th term?  12th term 58  52  46
3	Term-to-term rules for sequence of patterns	Jacob is making a sequence of patterns using beads and sticks. He starts with 3 beads and 2 sticks and adds the same number of beads and the same number of sticks each time.  a) How many beads are there in the 4th pattern?  b) How many sticks are there in the 4th pattern?  Pattern number  1 2 3  Pattern  Pattern  1 1 2 3  Pattern  1 1 4 3  Sticks: 2 6 10 4 4 = 14 14 14 2
4	Substituting into position-to term rules	The expression for the $n^{th}$ term of a sequence is $9n + 22$ What are the first three terms in the sequence? position 2 9x1+22 9x2+22 9x2+22 9x3+22
5	Arithmetic Sequences	Arithmetic sequences have a common difference between the terms

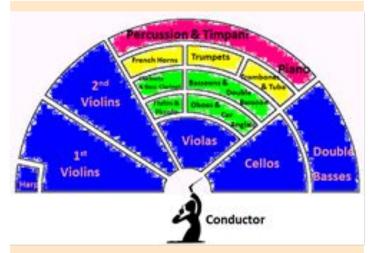


		Ratio			Ratio
1	Simplify ratios	Whatever you do to one side of the ratio, you must do the same to the other.  To simplify, find the highest factor of both sides and divide both sides by that factor.  Fully simplify the ratio 2:14  2:14  2:14  1:7	5	Converting between ratios & percentages	Riley and Alicja shared a whole pizza. Their shares were in the ratio 4.1 What percentage of the pizza did Riley eat?  Find the parts of the ratio 4 corresponding to Riley  Find the total parts in the ratio 4 + 1 = 5  Find the fraction that Riley ate  Percent means "out of 100"  Convert to an equivalent fraction with a denominator of 100  The percentage is the numerator
2	Writing in ratios	boys : girls  28 : 12  -4  7 : 3	6	Using equivalent ratios to find amounts	Milkshake syrup is mixed with milk in the ratio 1:9.  If you use 360 ml of milk, how much syrup do you need?  Syrup: milk  1:9  ×40  10:360
3	Writing ratios in form 1:n	Rewrite the ratio 16: 72 as an equivalent ratio of the form 1: n		Sharing	Emma makes 600 ml of strawberry jam by heating sugar syrup and strawberry pulp in the ratio : . How much sugar syrup does Emma use?  5 + 7 = 12
4	between ratios &	Cyclobutene is made up of hydrogen and carbon atoms. The ratio of hydrogen to carbon atoms in cyclobutene is [3]. What fraction of the atoms in cyclobutene are hydrogen atoms?  Fraction of atoms that are hydrogen   parts of the ratio corresponding to hydrogen	7	amounts in a given ratio	Sugar: Strawberry Total  5: 7 x50 12 x50 250: 350 250ml
	Tractions		Scale Diagrams		
1	Scale Diagrams  Using a map to calculate the distance on map and multiply that by your		2	Use the real distance to we out map scale distance	divide it by your scale to find the

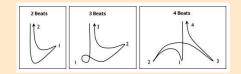
### Music: Sonority City | Year 8 | Autumn 1

	A. Key W	ords, Terms and Facts about the Orchestra
1	ORCHESTRA	A large <b>ENSEMBLE</b> (group of musicians) of performers on various musical instruments who play music together.
2	SYMPHONY ORCHESTRA	No set numbers of performers although a <b>SYMPHONY ORCHESTRA</b> (a large orchestra) can have between <b>80-100+</b> performers.
3	CONDUCTOR	Leads the orchestra with a <b>BATON</b> (white 'stick') and hand signals. Stands at the front so they can be seen my all performers. Sets the <b>TEMPO</b> and <b>BEATS TIME</b> . Brings different instruments 'in and out' when it is their turn to play. Keeps the performers together. Takes charge in rehearsals. In ultimate control of the performance of the music, adjusting <b>DYNAMICS</b> , <b>TEMPO</b> , and mood.
4	FAMILIES SECTIONS	Instruments of the orchestra can be divided into 4 families or sections: <b>STRINGS, WOODWIND, BRASS</b> and <b>PERCUSSION</b> .
5	TUNING UP	Before the orchestra rehearses or plays, all instruments need to be <b>IN TUNE</b> with each other.  The <b>OBOE</b> always sounds the note 'A' which all other instruments <b>TUNE</b> to.
6	SONORITY (also called TIMBRE)	Describes the <b>UNIQUE SOUND OR TONE QUALITY</b> of different instruments and the way we can identify orchestral instruments as being distinct from each other –Sonority can be described by many different words including – <i>velvety, screechy, throaty, rattling, mellow, chirpy, brassy, sharp, heavy, buzzing, crisp, metallic, wooden etc.</i> <b>PITCH</b> - The <b>HIGHNESS</b> or <b>LOWNESS</b> of a sound, a musical instrument or musical note ( <i>high/low, getting higher/lower, step/leap</i> ).

# B. The Layout of the Orchestra and Famous Conductors



How to conduct: 2, 3 or 4 beat in a bar.



### Music: Sonority City | Year 8 | Autumn 1

### C. Strings Section/Family

Largest section of the orchestra who sit at the front, directly in front of the conductor.

Usually played with a **BOW** (ARCO), (not the HARP) but can be PLUCKED (PIZZICATO).

**VIOLINS** split into two groups: 1<sup>st</sup> VIOLINS (often have the main MELODY of the piece of music) and 2<sup>nd</sup> VIOLINS.



2 **PLUCKED** (PIZZICATO). Use finger on the string to create a short sound

### F. Percussion **Section/Family**

**UNTUNED PERCUSSION** (only able to produce



### D. Woodwind Section/Family

Originally (and some still are) made from wood (some now metal and plastic). All are BLOWN. FLUTES: Flute and Piccolo – air blown over hole. SINGLE REED (small piece of bamboo in the mouthpiece): Clarinet, Bass Clarinet & Saxophone (not traditionally in the orchestra, but some modern composers have used it) **DOUBLE REED** (two reeds in the mouthpiece): Oboe, Cor Anglais, Bassoon, Double Bassoon.



### F. Percussion Section/Family

Always located at the very back of the orchestra (due to their very loud sounds!). Large number of instruments which produce their sound then hit, struck, scraped, or shaken.

**TUNED PERCUSSION** (able to play different pitches/notes)



### E. Brass Section/Family

Four types of brass instruments in an orchestra –brass are **BLOWN** by the player 'buzzing their lips' into a **MOUTHPIECE.** The Trumpet, French Horn and Tuba all have three **VALVES** which, along with altering the players mouth positions, adjust the length of the tubing allowing for different notes to be played. The Trombone has a SLIDE which adjusts the length of the tubing. Brass instruments (along with Percussion) have often been used to play FANFARES: a short, lively, loud piece of music usually warlike or victorious in character used to mark the arrival of someone important, give a signal e.g., in battles, of the opening of something e.g., a sporting event or ceremony. Fanfares often use notes of the HARMONIC SERIES – a limited range of notes played by **BUGLES** (smaller trumpets with no valves) and valveless trumpets.



### F. Percussion Section/Family

**UNTUNED PERCUSSION** (only able to produce 'sounds').







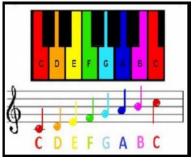




Cabasa

### Music: Structure and Form | Year 8 | Autumn 2

	Eleme	ents of Music
1	Pitch	Music is high or low in sound
2	Dynamics	Where the music is loud and Quiet
3	Duration	How long or short the values of the note
4	Tempo	How fast or slow the music is being played.
5	Timbre	The different sounds of the instruments: Wood, metal, string & skin.
6	Texture	How many instruments are playing at one time, lots or nots many: Thick or Thin
7	Silence	Allow sounds to die away and give effect to the music
8	Structure	The order of the music Verse, chorus, Bridge and Instrumental



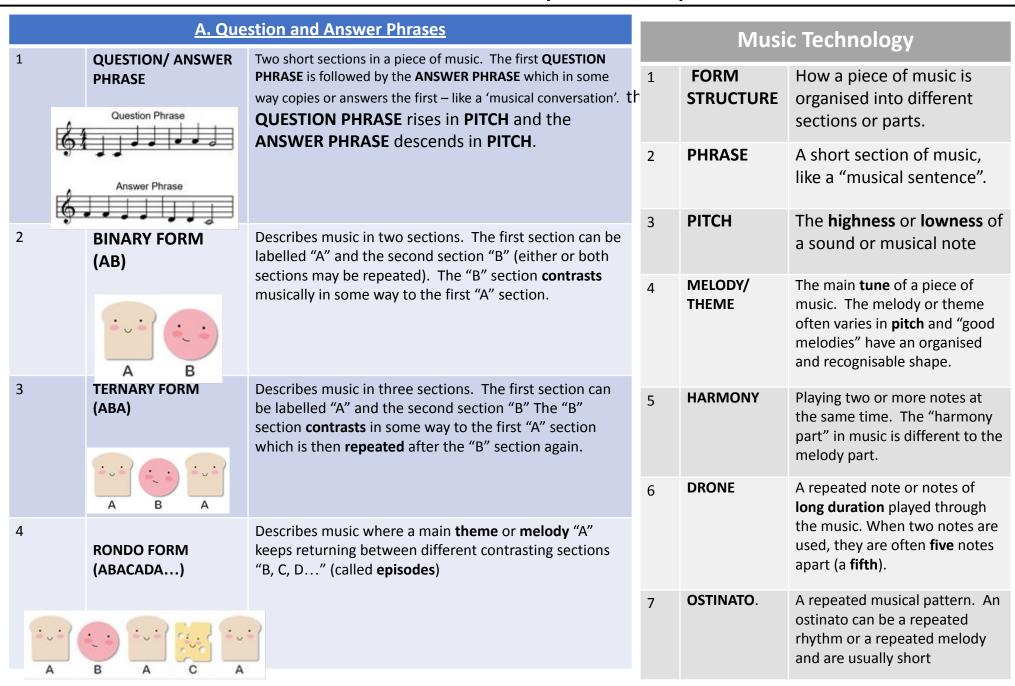
Keyboard
layout

Theory						
1	Time signature 4 or 3 4 4	This tells us how many beats in a bar, that you need to count. The top number tells how many beats; Eg. 4 or 3				
2	#	This is a repeat mark. It means you go bar to the beginning and play the music again.				
3	Rhythm	Is a pattern of sound which can be repeated to a regular beat.				
4	Rests	A rest is a musical sign that indicates a beat of silence. It still counts in the value of the bar.				
5	Pulse	A pulse is a steady, regular beat that continues throughout a song.				

Music is	writte	n on fi	ve lin	es co	lled s	toves	
Music is	<b>W</b> 11110	011 11	TC III	100 Cu	iicu s	iuroo	
Treble Cla	<u>ef</u> (fou	nd at t	he st	art of	the n	nusic)	
/ <sub>Tim</sub>	a Sian	ntuna (t	tolle	ou ho	w mar	w heat	s in a ba
1 1111	e Signi	) siuit	ielis y	-Bar	w mar	y beat	s in a bo
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(() A O	9	9	•	-	•	10	7
01	-					/	
U							
Bar Line (s	/ -  '4 - 4						e (found

	Rhytl	hm note	e Values
1	0	4 beats	Semibreve
2	<i>d.</i>	3 beats	Dotted Minim
3		2 beats	Minim
4		1 beat	Crotchet
5	<b>)</b>	½ beat	Quaver
6	Л	1 beat	2 Quavers
7	A	¼ beat	Semiquaver
8	<del></del>	1 beat	4 Semiquavers
9	\$	1 beat	1 beat crotchet rest
10	-	2 beats	2 beat minim rest

### Music: Structure and Form | Year 8 | Autumn 2



## Science | Year 8 | Autumn 1 True or false: the Earth has a magnetic field associated with

Iron, steel, cobalt, nickel

induced magnet is always

attractive.

True or false: the force between a magnet and a magnetic material is always attractive.	True: the force between a magnet and a magnetic material is always attractive.
What do like poles of magnets do: attract or repel?	Repel
What do opposite poles of magnets do: attract or repel?	Magnetic field
Magnetic field lines always point from to What two words are missing?	North to South
What does the direction of the magnetic field lines tell us?	The direction of the magnetic force at that point.
True or false: the magnetic force is a contact force.	False: the magnetic force is a non-contact force.
Where on a magnet is the magnetic field strongest?	Close to the poles
How do we show a stronger magnetic field on a magnetic field diagram?	Field lines more densely packed
As distance from the magnet increases, does magnetic field strength increase, decrease or stay the same?	Magnetic field strength decreases
What name is given to a magnet that always has a field associated with it?	Permanent magnet
What name is given to a magnet that only becomes magnetic when placed in a magnetic field?	Induced magnet
	True: the force applied by an

Write down one or more examples of magnetic materials.

True or false: the force applied by an induced magnet is

always attractive.

True: the Earth has a magnetic field associated with it What name is given to a coil of wire that becomes magnetic when a current is passed through? Electromagnet True or false: a bar magnet has a very different field shape to False: they have similarly shaped an electromagnet made from a coil of wire. magnetic fields. As distance from a current-carrying wire increases, does the strength of the magnetic field associated with it increase, decrease or stay the same? Magnetic field strength decreases If the current through a wire is increased, does the strength of the magnetic field associated with it increase, decrease or stav the same? Magnetic field strength increases If a wire is wound into a coil with more turns, does the strength of the magnetic field associated with it increase, decrease or stay the same? Magnetic field strength increases What name is given to a wire wound into a coil? Solenoid What material is the coil of an electromagnet usually made out of? Iron Increase the current through the wire. increase the number of turns on the coil. Write down one or more ways you could increase the strength of an electromagnet. wind the coil more tightly. Door locks, circuit breakers, picking up Write down one or more uses of electromagnets. metals in a scrapyard, electric motors True: charge is a property of materials True or false: charge is a property of materials that can be positive or negative. that can be positive or negative. If you rub a plastic ruler with a cloth, what force acts between the two surfaces? Friction Which very tiny particles are transferred from the cloth to the

Electrons

Negative

ruler if there is friction between them?

Do electrons have a positive, negative or neutral charge?

### Science | Year 8 | Autumn 1

Science   rear o   Autumn i						
True or false: charge only builds up on the surfaces of conductors.  If we walk in shoes on a carpet, what force acts between our shoes	False	Which electrical component gives out light (+ heats the surroundings)?	Filament lamp (or bulb)			
and the carpet?	Friction	Which electrical component measures current?	Ammeter			
Which very tiny particles build up on our bodies if friction acts between our shoes and a carpet?	Electrons	Which electrical component measures potential difference?	Voltmeter			
If electrons build up on our bodies because of friction, do we		Which electrical component reduces the current in a circuit?	Resistor			
become positively or negatively charged?	Negatively charged	Which electrical component is a resistor whose resistance can	Madable accides			
Electrons build up on our bodies because of friction. We approach a		be changed?	Variable resistor			
door handle. Is the handle likely to be positively charged, negatively charged, or neutral?	Neutral	Which electrical component only allows current to flow in one direction?	Diode			
Electrons build up on our bodies because of friction. We approach a		Which electrical component is a diode that emits light?	Light emitting diode (LED)			
door handle. What are we likely to experience when our fingers approach the handle?	A static electric shock	Which electrical component is a resistor whose resistance depends on light intensity?	Light dependent resistor (LDR)			
Which natural event is caused by a build up of charge: earthquake, rainbow, lightning?	Lightning	Which electrical component is a resistor whose resistance	Thermistor			
What word is used to describe a movement of electrical charge?	Current	depends on temperature?	Thermistor			
What word is used to describe a difference in charge between two points?	Potential difference	Which electrical component is a thin piece of wire which breaks if the current is too high?	Fuse			
What word is used to describe any part of a circuit that has a		At room temperature, are most metals solids, liquids or gases?	Solids			
specific function?	Component		True: metals contain positively			
Which electrical component provides a potential difference to a circuit?	Cell (or battery / power supply)	True or false: metals contain positively charged particles in a fixed lattice along with electrons that are free to move.	charged particles + free electrons			
True or false: charge only builds up on the surfaces of conductors.	False: charge only builds up on the surfaces of insulators.	What name is given to the positive and negative ends of a battery or cell?	Terminals			
Which electrical component provides a potential difference to a circuit?	Cell (or battery / power supply)	True or false: there is no difference in charge between the two	False: one terminal is always positive and the other is always			
What name is given to a series of cells joined together?	Battery	terminals of a battery.  When a cell is placed into a circuit, are electrons attracted to or	negative  Electrons are attracted to the			
Which electrical component allows current to be turned on and off?	Switch	repelled by the positive terminal?	positive terminal			

### Science | Year 8 | Autumn 1

True: parallel circuits contain

should be approximately the same.

Thermistor, LDR

Resistance decreases

Electrons are repelled by the negative

Resistance

Ohms (Ω)

junctions / branches.

False: series circuits do not contain

When a cell is placed into a circuit, are electrons

power, resistance, voltage?

branches.

What are the units of resistance?

True or false: series circuits contain junctions /

attracted to or repelled by the negative terminal?	terminal	True or false: parallel circuits contain junctions / branches.	junctions / branches.	
When a cell is placed into a circuit, there is an overall movement of electrons. What name is given to this		True or false: if a bulb is added to a circuit in series, the other bulbs get dimmer.	True: the other bulbs would get dimmer.	
movement of electrons?  When a cell is placed into a circuit, there is a	Current	True or false: if a bulb is added to a circuit in parallel, the other bulbs get dimmer.	False: the brightness of the other bulbs would not be affected.	
difference in charge between the two terminals. What name is given to this difference in charge?	Potential difference	A series circuit contains a cell + two identical bulbs. You measure current at different points using an ammeter. Would all readings be	Yes - current should be approximately the same	
If the potential difference of a cell is increased, does current typically increase, decrease or stay the same?	Current increases	the same?	everywhere in a series circuit.  No - potential difference is shared	
What are the units of current?	Amperes (A)	A series circuit contains a cell + two identical bulbs. If you	in series circuits so readings across each bulb would be	
What are the units of potential difference?	Volts (V)	measured p.d. across each bulb, would you expect the readings to	approximately half the reading	
How would we measure the current at a point in a circuit in the lab?	Using an ammeter	be the same as across the cell?  A series circuit contains a cell + two identical bulbs. If you	across the cell.  Yes - bulbs are identical so	
How would we measure the potential difference between two points in a circuit in the lab?	Using a voltmeter	measured p.d. across each bulb, would you expect the readings to be approximately the same?	potential difference should be shared equally.	
True or false: ammeters are always connected in series.	True: ammeters are always connected in series.	A circuit contains a cell + two identical bulbs, each in parallel. You measure current at different points using an ammeter. Would all readings be the same?	No - current splits in parallel so readings on branches should be lower than readings close to cell.	
True or false: voltmeters are always connected in series.	False: voltmeters are always connected in parallel.	A circuit contains a cell + two identical bulbs, each in parallel. If you	Yes - potential difference across	
Which of the following words can be used instead of potential difference: power, resistance, voltage?	Voltage	measured p.d. across each bulb, would you expect readings to be the same as across cell?	each branch of a parallel circuit should be approximately the same.	
What word is used to describe how much potential difference is required to generate a certain current:		A circuit contains a cell + two identical bulbs, each in parallel. If you measured p.d. across each bulb, would you expect readings to be approximately same?	Yes - potential difference across each branch of a parallel circuit should be approximately the same.	

approximately same?

increase, decrease or stay the same?

sensor.

Write down one or more examples of a component that acts as a

As the temperature of a thermistor increases, does its resistance

### Science | Year 8 | Autumn 1

As the temperature of an LDR increases, does its

What is the potential difference supplied by sockets in your

As the temperature of an LDR increases, does its resistance increase, decrease or stay the same?	Resistance decreases	home?	230V
Write down one or more uses of thermistors.	Thermostats - central heating system, oven, fridge, etc	What do we call a potential difference that continuously changes direction from forward to backwards and back again?	Alternating potential difference
Write down one or more uses of LDRs.	Streetlamps, automatic car headlights.	again.	
A person wants a light that switches on when someone approaches their front door. Which sensor should they use: LDR, motion sensor, thermistor?	Motion sensor (NOT an LDR - this detects changes in light intensity, not motion)	True or false: in a plug, there is an alternating potential difference between the neutral wire and the earth wire.	False: there is an alternating potential difference between the live wire and the neutral wire.
Which wire of a plug is brown: live, earth, neutral?	Live wire	True or false: the earth wire of a plug is always at 0V.	True: the earth wire is always at 0V.
Which wire of a plug is connected to the bottom left		True or false: the neutral wire of a plug is always at 0V.	True: the neutral wire is always at 0V.
pin: live, earth, neutral?	Neutral wire	What gas must be present for combustion (or burning) to	
Which wire of a plug is green / yellow: live, earth, neutral?	Earth wire	occur?  Before the discovery of oxygen, what invisible substance	Oxygen
Which wire of a plug is connected to the bottom right		did scientists think was given off during burning?	Phlogiston
pin: live, earth, neutral?	Live wire	If phlogiston was given off during burning, what would we	We would expect the mass to
Which wire of a plug is blue: live, earth, neutral?	Neutral wire	expect to happen to the mass of magnesium after it has been burned in air?	decrease (because phlogiston was given off)
Which wire of a plug is connected to the top pin: live, earth, neutral?	Earth wire	What piece of equipment do we use to measure mass in the lab?	Balance
Which wire of a plug is connected to the fuse: live, earth, neutral?	Live wire		False: liquids and gases must be held
Which wire of a plug helps prevent electric shocks: live, earth, neutral?	Earth wire	True or false: the mass of substances in all states of matter can be measured directly using a balance.	in a container in order for their masses to be measured.
, ,	Laitii wiie	When magnesium is burned in air, does the mass	
What happens to the fuse in a plug if the current gets too high?	It melts / breaks	measured on a balance appear to increase, decrease or stay the same?	The mass appears to increase
True or false: appliances made of metal should always have an earth wire.	True: appliances made of metal should always have an earth wire.	True or false: in a chemical reaction, the total mass of reactants is always the same as the total mass of products.	True: the total mass is always the same

#### Science | Year 8 | Autumn 1 Which of the following is used to test for carbon dioxide: splint, litmus List soc

paper, lime water?	Lime water
Which of the following is used to test for hydrogen: splint, litmus paper, lime water?	Splint
Which of the following is used to test for oxygen: splint, litmus paper, lime water?	Splint
What happens when carbon dioxide comes into contact with lime water?	The lime water turns white/cloudy/milky.
What happens when a glowing splint is placed into oxygen gas?	It relights and begins to burn more brightly.
What happens when a glowing splint is placed into hydrogen gas?	It burns with a squeaky pop.
When measuring the mass of a substance using a balance, what must we always do first?	Press the zero / tare button; ensure the reading is 0.0
What does the word vigorous mean when used to describe a chemical reaction?	Reaction takes place with high energy
Two metals react with water. One is more reactive than the other. What is observed when the more reactive metal reacts?	A more vigorous reaction, e.g. more bubbles, more motion, flames, explosion.
Sodium reacts with water. What are the products of this reaction?	Sodium hydroxide + hydrogen
Sodium reacts with water. If universal indicator had been added to the water before the reaction, what colour would it have changed to?	Green (neutral, pH7)
Sodium reacts with water. If universal indicator is added to the solution after the reaction, what colour would it change to?	Blue (strong alkali, pH12-14)
Sodium reacts with water. If universal indicator is added to the solution after the reaction, why does the colour become blue?	Sodium hydroxide is a strong alkali
Sodium reacts with water. Fizzing is observed. What gas is this?	Hydrogen
Sodium reacts with water. Fizzing is observed. What test could be carried out to determine which gas has been produced?	Squeaky pop test.

List the following metals from most reactive to least reactive: sodium, lithium, potassium.	Potassium, sodium, lithium
Iron reacts with hydrochloric acid. What are the products of this reaction?	Iron chloride + hydrogen
Iron reacts with hydrochloric acid. If universal indicator had been added to the acid before the reaction, what colour would it have changed to?	Red (strong acid, pH1)
Iron chloride is a compound. What name do we give to compounds like this, which are made up of a metal bonded to a non metal?	Salts
What is the chemical name for the salt we eat with our food?	Sodium chloride
Magnesium reacts with sulphuric acid. What is the name of the salt formed?	Magnesium sulphate
Zinc reacts with nitric acid. What is the name of the salt formed?	Zinc nitrate
Iron sulphate is formed by a reaction between iron and acid. What's the missing word?	Sulphuric
Aluminium nitrate is formed by a reaction between aluminium and acid. What's the missing word?	Nitric
Zinc chloride is formed by a reaction between zinc and acid. What's the missing word?	Hydrochloric
Which of the following metals does not react with water or acids: iron, potassium, copper?	Copper
Magnesium is burned in air. What is the product called?	Magnesium oxide
Sodium is a shiny metal but if it is left out in air it forms a dull layer on the outside. What is the name of the compound making up this dull layer?	Sodium oxide
Why does a silver spoon stay shiny much longer than a piece of sodium?	Silver is much less reactive than sodium

Mi mejor amigo/amiga My best friend  Mi novio/novia My boyfriend/girlfriend  Mi hermano/hermana menor my younger brother/sister  Mi hermano/hermana mayor my older brother/sister		se llama (Miguel) is called se llama (Sofía) is called		tiene he/she has (is)	quince diecis diecis diecio	(12) (13) ce (14)	') 3)	años years (old)		
(ÉI) tiene he has los ojos azules blue ey los ojos verdes green e los ojos marrones brot		el pelo gris grey hair el pelo blanco white hair eyes el pelo negro black hair el pelo castaño brown hair el pelo moreno dark hair		un animal an animal un gato a cat un perro a dog un caballo a horse un conejo a rabbit un pez a fish un pájaro a bird		og horse abbit				
	(ÉI) es he is (Ella) es she is	muy very simp demasiado too absolute comp quite un poco a bit perfe totali totali	ente / deramen / truly emente y utamente utely letament letely ctamente ctly mente y	te e	contento/a happy divertido/a fun simpático/a kind bonito/a beautiful activo/a active único/a unique monótono/a boring enfadado/a angry bello/a beautiful alegre happy fuerte strong triste sad responsable responsib socialable social feliz happy individual individual trabajador(a) hardwor hablador(a) chatty			than (contact th	omo) mi omo) mi omo) mi omo) mi oma oms) my sister omo) mis omigos than y other	

Por lo general me llevo bien con mi padre my contento/a(s) happy I aet on well with In aeneral father divertido/a(s) fun no me llevo bien mi papá my dad simpático/a(s) kind A veces con mi padrastro bonito/a(s) beautiful Sometimes I don't get on my step dad activo/a(s) active well with mi hermano my único/a(s) unique (él) es De vez en me peleo con brother monótono/a(s) boring he is cuando I argue with mi abuelo my enfadado/a(s) angry From time to me enfado con grandad (ella) es bello/a(s) beautiful time I get angry with mi primo my she is me divierto con cousin (m) alegre(s) happy Generalmente I have a good mi tío my uncle (nosotros) fuerte(s) strong Usually time with mi hijo my son somos triste(s) sad me apoya mi marido my we are responsable(s) Normalmente he/she supports husband responsible **Normally** me mi vecino my (ellos) son sociable(s) social confío en neighbour they are I confide in mi madre my Mi modelo (a seguir) es (ellas) son mother porque My role model is they are (all feliz/felices happy mi mamá my mum because female) mi madrastra my La persona que admiro es individual(es) individual step mum dado que The person that I admire is trabajador(a)(es/as) mi hermana my because hardworking sister Admiro a hablador(a)(es/as) mi abuela my puesto I admire chatty grandmother que (no) mi prima my since me gusta cousin (f) does I like mi tía *my aunt* not / me hace(n) reír do not mi hija my me encanta he/she makes me laugh (they dauahter I love make me laugh) (nunca) mi mujer my wife me hace(n) sonreír never mi vecina my (yo) prefiero a he/she makes me smile (they neighbour I prefer make me smile) me ama(n) mucho no me gusta he/she loves me a lot (they love siempr mis padres I don't like me a lot) my parents me llama(n) por teléfono always mis abuelos (yo) odio he/she calls me on the phone my grandparents I hate (they call me on the phone) me da(n) miedo mis dos hermanos no soporto a he/she scares me (they scare me) my two brothers I can't bear me ayuda(n) mis tres hermanas he/she helps me (they help me) my three sisters no aguanto a I can't stand

Normalmente	para el desayuno	como	(el) pan bread
Normally	for breakfast	l eat	(el) jamón <i>ham</i>
,	, ,		(el) queso <i>cheese</i>
Generalmente	para el almuerzo	tomo	(el) pescado <i>fish</i>
Usually	for lunch	i have (take)	un bocadillo <i>a sandwich</i>
			un pastel a cake
A veces	para la cena	cocino	(el) chocolate <i>chocolate</i>
Sometimes	for dinner	I cook	(el) arroz <i>rice</i>
			(el) helado <i>ice cream</i>
De vez en cuando	para la merienda		
From time to time	for a snack	bebo	(la) carne <i>meat</i>
		I drink	(la) paella <i>paella</i>
A menudo	después del insti		(la) pasta <i>pasta</i>
Often	after school		(la) fruta <i>fruit</i>
			(la) tortilla <i>Spanish omelette</i>
En mi casa	por la noche		una hamburguesa a burger
At home	In the evening		
		comemos	(los) churros churros
		we eat	(los) huevos <i>eggs</i>
Para empezar		tomamos	(las) tapas tapas (small snack plates)
To start		we have (take)	(las) empanadas <i>Spanish pastries</i> (savoury)
De primer plato		cocinamos	(las) patatas fritas chips/crisps
As a starter		we cook	(las) verduras vegetabes
As a starter			•
De segundo plato		bebemos	(la) leche <i>milk</i>
For the main course		we drink	
			(el) té <i>tea</i>
De postre			(el) café <i>coffee</i>
For dessert			(el) zumo de naranja <i>orange juice</i>
			(el) agua (con gas) water (sparkling)
Para llevar una vida :	cana		
(In order) to lead a h			
(III oraci) to read a n	earthy fijetsyle		
Additional useful voc			
~	nungry (I have hunger)		
Tengo sed I am thirst			
La cuenta por favor t			
•	? Where are the toilets?		
	oor favor A table for two p	lease	
La carta the menu			
Soy alérgico/a I am a	allergic		

Soy vegetariano/a I am vegetarian

Soy vegano/a I am vegan

Para llevar
una vida
sana
(In order) to
lead a
healthy
lifestyle

Para estar en
forma
(In order) to
stay in shape

suelo
I tend
intento

trato de *I try to* 

I try

voy a
'm going to

comer to eat

beber to drink comprar

to buy pedir to order

cocinar to cook

(el) pan bread

(el) jamón *ham* 

(el) queso cheese

(el) pescado fish

un bocadillo a sandwich

(el) arroz rice

(la) carne meat

(la) paella paella

(la) pasta pasta

(la) fruta fruit

(la) tortilla Spanish omelette

(los) huevos eggs

(las) verduras vegetabes

(la) leche milk

(el) zumo de naranja orange juice

(el) agua (con gas) water (sparkling)

dormir bien sleep well

beber mucha agua drink lots of water

jugar al fútbol play football

practicar deporte to practice sport

ir al gimnasio go to the gym

hacer ejercicio do exercise

correr run

caminar/pasear walk

montar en bici ride a bike

descansar to rest

ser activo/a be active

estar al aire libre be outside

moverme más move more

evitar

to avoid

el estrés stress

comida con mucho azúcar sugary food

bebidas azucaradas sugary drinks

una dieta malsana an unhealthy diet

estar cansado/a being tired

estar enfermo/a being ill

fumar *smoking* 

beber alcohol drinking alocohol

### BENEATH THE BLUE | YEAR 8 | TEXTILES | AUTUMN TERM

	TEXTILES EQUIPMENT	KEY TERMS				
Pins	A device, with a head, shaft and point, used for fastening objects or fabrics together.	Pattern  A pattern is a design in which lines, shapes, forms or colours are repeated. The part that i repeated is called a motif. Patterns can be regular or irregular.				
Fabric Scissors Paper Scissors	Scissors (blue and black handle in textiles) used to cut thread, fabric and other types of cloth.  Scissors (red, green/yellow handle in textiles) used to cut card, paper, plastic and anything that  Shape  Shape				• • • • • • • • • • • • • • • • • • • •	
	ISN'T fabric.  A yarn that is manufactured or hand-spun  Texture  Texture  Texture means how something feels.  There are two types of texture: actual texture and visual texture.				l texture.	
Embroidery Thread	specifically for embroidery and other forms of needlework. Thicker than machine thread and	Colour	A reaction to light bouncing and reflecting			
	able to be split.  A handheld electrical tool with a heated flat steel	Machine Embroidery	The process of using a sewing machine or pattern on a textile of your choice.	specialist emb	roidery machine to create a	
Iron	base, used to smooth out creases and remove wrinkles from fabric.	Hand Embroidery	The art of decorative stitching on fabric w	ith needle and	thread by hand.	
Pinking Shears	Scissors with a serrated blade, used to cut zigzag edges onto fabric to prevent fraying.  A wax like crayon that is designed to be used on	Line  A mark made on a surface that joins different points. Lines can vary in length, width direction and shape.				
Fabric Crayons	fabric. Gives a smooth, matte finish with no lumps on fabric – unlike traditional wax crayons. Can be heat fixed with an iron.	Tone	Tone means how light or dark something contrast between them can create very d			
Bondaweb	A soft adhesive web attached to transfer paper. Makes bonding or attaching two fabric layers together quick & easy. Peel when cold only.	Space	Space refers to objects and to the area ar has width, depth and height.	ound them. Sp	ace relates to volume, so a space	
Ironing Board	A stable and solid fabric covered and heat resistant surface to iron fabric on.	SHARPI	E AND ALCOHOL PROCESS STEPS Fabric, newspaper, sketchbook, sharpies,	BONDAWEB SCALES PROCESS STEPS  Iron gets very hot – don't touch		
Greaseproof Paper	A non-stick paper that is used in textiles to reduce damage, staining and destruction to work	Equipment	alcohol gel, paintbrush, biro, needle, black thread and fabric scissors.	H&S	the metal plate. Unplug when not using it.	
Sewing Machine	when ironing.  A machine used to sew fabric and materials together with thread.	Shapes and Patterns	Cover the fabric with colourful sharpie lines, shapes and patterns.	Cut shapes	Using fabric scissors, cut out a selection of shapes to use in the process.	
Machine Thread	Thread that is thin and fine and designed to be used to be used on a sewing machine.	Alcohol Gel	Paint the alcohol gel onto the fabric above the page with newspaper underneath it.	Iron Bondaweb	Iron Bondaweb onto backing fabric with gritty side down.	
Fabric Paint	Paint that is designed to be used on fabric. Can be applied by brush, sponge or thinned to a spray.	Drying	Up to 24 hours to dry completely.  On the page with stains, draw a coral reef	Peel Bondaweb	When completely cool to the touch, peel paper off Bondaweb.	
Sewing Needle	A long slender tool with a pointed tip at one end and a hole (or eye) to hold the sewing thread.	Biro	in biro with shape and line details.  Using a back stitch – embroider into the		Place cut fabric onto cooled Bondaweb and iron down	
Fabric	Any thin, flexible material made from yarn, directly from fibres, plastic film or foam.	Embroidery	fabric some black lines – similar to the biro to add stitched details.	Layout	between layers of greaseproof paper until attached.	