

# **Knowledge Organiser** Year 9 Term 2

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# Maths Year 9 Term 2 – Algebra/Representing and Interpreting Data

TERM FOCUS – Using and interpreting algebraic expressions (F) Using and interpreting algebraic expressions, equations and sequences (H) Finding averages from charts and tables					
Prior Learning Links From Year 8 Term 3: Algebraic expressions, solving algebraic equations From Year 8 Term 2: Knowledge of Drawing and interpreting different types of graphs. Knowledge of finding the different measures of average and correlations.	Future Learning Links Drawing and interpreting linear graphs (gradients, speed/distance) (F) Solving inequalities, quadratic equations, simultaneous equations (H)	A B V X2 A V			

### Subject: Mathematics Topic: Recall Knowledge



 1. What is the difference between an expression, equation, formula and identity?
 Red
 Amber
 Green

 Examples

A **formula** involves two or more letters, where one letter equals an **expression** of other letters.

An **expression** is a sentence in algebra that does NOT have an equals sign.

An **identity** is where one side is the equivalent to the other side.

When **substituting** a number into an expression, replace the letter with the given value.

 $C = \frac{5(F-32)}{9}$  is a formula - a mathematical rule that involves more than 1 letter.

AURORA

Year / Group: GCSE F/H

Term: 1-6

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5m - 7 is an expression since there is no equals sign

 $5(y+6) \equiv 6y+30$  is an identity as the left hand side is always equal to the answer on the right hand side (for any value of y)

3x - 6 = 12 is an equation - can be <u>solved</u> to give a solution and has an equal sign.

2. How do we simplify algebraic expressions?		Red Amber Green			
	Examples				
Collecting Like Terms	Collecting like Terms	Expand and Simplify			
Add/subtract the numbers in front of the common	f+ 3g-4f= 3g - 3g	5(x - 4) + 3(x- 3)			
Multiply the numbers in front of the letters and put	6a × 3b × 2c = 36abc	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
the letters next to each other.	9b .	5x - 20 + 3x - 9			
Divide the numbers in front of the letters.	$\frac{35}{3} = 3b$	Final Ans: 8x - 29			
Expanding brackets					
Multiply the number outside the brackets with EVERY term inside the brackets	Factorise 9x + 18 =	9 9x +18 = 9(x + 2) x + 2			
Factoring expressions					
Take the highest common factor outside the bracket.					

3. How do we solve an equation?	Red Amber Green
Solve: $ \begin{array}{ccccccccccccccccccccccccccccccccccc$	Notes: Remember that we always do the opposite operation when solving. Eg 3b=9 means 3 times b = 9 so we have to do the opposite (ie divide by 3) to find the value of b. When the fraction is on part of the expression only, make sure to remove the non fraction part first. If the whole expression is divided by a number, multpiply first
4. How can we rearrange an equation?	Red Amber Green
Rearrange to make r the subject of the formulae : $Q = \frac{2r-7}{3}$ ×3 × 3 3Q = 2r - 7 +7 +7 3Q + 7 = 2r ÷ 2 ÷ 2 $\frac{3Q+7}{2} = r$	<b>Notes:</b> When all the terms are divided by a number we multiply both sides first, in this case by 3. We have a ' subtract 7' that we need to remove so we do the opposite: add 7
5. What are arithmetic sequences and how do we express them	? Red Amber Green
Linear sequences: 4, 7, 10, 13, 16 a) State the nth term 3n + 1 Term Difference Table difference	Notes: An arithmetic sequence is like a times table, going up in a constant amount each time. The number in front of the n tells you how much it goes up each time. The number on the end tells you what to adjust the times table by. Eg 3n+1 means the 3 times table, adjusted by 1 each time: 3 times table : 3, 6, 9, 12, 15 Adjust by +1: 4,7,10,13,16

6.	How do	we fi	nd the	nth te	rm of a	an arith	metio	c seque	nce?					Red	A	Amber	Green
Wh in tl	at is the he seque	100 <sup>th</sup> t nce?	erm	3	3 3 × 10	3n + 1 0 + 1 =	301					r T t	Notes: To find erm nu he exp	a specifi umber yc ression.	c term, ou are t	, substitu trying to	ute the find into
ls 1 Yes	.00 in thi as 33 is a	s sequ an inte	ence? eger.		3n + 31 n	-1 = 10 n = 99 n = 33	00					T t l i	o chec he exp hen so f the ar nteger)	k if a nui ression e lve the e nswer is ) then it	mber is equal to quatio a whol IS in th	s in a sec o that nu on. le numbe le sequei	quence, put umber and er ( an nce.
7.	What is	differ	ent ab	out a	quadra	tic sequ	ience	?						Red	4	Amber	Green
Fir Sec 11 20 So Th <b>5</b> <b>5</b> <b>5</b> <b>5</b> Th	and a formula equence st difference a = 10 + 2 e formula ha $n^2$ equence e nth term i	10  for th = 8 2 = 5 2 = 5 2 = 5 3 = 5	23 +10 20 23 3	48 +25 +10 hit	83 +35 +35 +11 80 83 mbers in 1	120 +45 0 125 125 128	48, 83, 3 d row a	Work o Halve find the re 3 more	e the seco the seco he coeffic e given so than tho	econd difference we determine the first second difference we have a second difference	erences. ence to $\frac{2}{2}$ . with $5n^2$ .						
8.	What of	ther so	equen	ces do	I need	to reco	gnise	?						Red	<b></b>	Amber	Green
<b>Fibo</b> Adc	<b>onacci se</b> l the two	<b>quenc</b> previ	c <b>es</b> ous tei	rms to	get the	e next te	erm					E F 8	ibonac	es: cci: 0, 1,	1, 2, 3,	. 5, 8, 13,	, 21, 34, 55,
Geo	ometric s	eries	has a c	ommo	n multi	ple bet	ween	each te	erm			C	Geome	tric:			
	$n^{th} term = a \times r^{n-1}$ $a = 1^{st} term$ $r = multiplier$						× 4, 1	3 × 3 1 12, 3	× 3 6, 1	08							





U895 Substituting into composite functions

U200 Drawing stem-and-leaf diagrams

U172 Interpreting pie charts U508 Drawing pie charts

U981 Interpreting frequency tables and two-way tables

# Subject Year 9 Term 1 – B1: Cell Biology

# Term Focus –

# Big question: How are different cells adapted to their functions?

# Prior learning links from KS3 Science:

- 1. Cells are the basic functional unit of an organism.
- Organisms can either be unicellular or multicellular. Bacteria are unicellular, whereas animal and plants are multicellular.
- Labelling and defining the functions for the organelles of animal, plant and bacteria cells to include: Cell wall, cell membrane, nucleus, cytoplasm, mitochondria, chloroplasts and vacuole.
- 4. Being familiar with using an optical microscope to view cells.
- 5. The functions of animal specialised cells to include, muscle cells, red blood cells and sperm cells.

et a start of the start of the

1. What is the difference between animal and plant cells? (Grades 4 to 9) Red Amber Green Plant cell Animal cell . . .0 0.0 Chloroplast - Nucleus C ٠.. Cell membrane -Cell wall de. Mitochondria Vacuole Cytoplasm -8 **Ribosomes** 00.00 C

Future Learning Links:

3. KS5 Microbiology

4. KS5 Sports Science

5. KS5 Applied Science

2. KS5 Biology

1. Microscopy required practical

Key term/question	Definition/answer
1. What are Eukaryotic cells?	Cells with DNA contained inside a nucleus
2. Examples of eukaryotes (2)	<u>1</u> . Plant cells <u>2</u> . Animal cells
3. Nucleus function	Contains DNA that controls cellular activity
4. Cytoplasm function	Site of chemical reactions
5. Cell membrane function	Semi-permeable so controls what enters and exits the cell
6. Mitochondria function	Site of respiration to release energy
7. Ribosomes function	Site of protein synthesis
8. Cell wall function	Supports and strengthens the cell
9. Vacuole function	Contains cell sap to keep the cell turgid
10. Chloroplast function	Site of photosynthesis
11. Cell structures unique to plants (3)	<u>1</u> . Cell wall <u>2.</u> Vacuole <u>3.</u> Chloroplasts

2.	What are the differences between eukaryotic and prokaryotic cells? (Grades 4	Red
	to 9)	



Key term/question	Definition/answer
12. What are prokaryotic cells?	Cells with a single strand of DNA floating free in cytoplasm
13. Give an example of a prokaryote	Bacteria
14. What is a plasmid?	Small loop of DNA containing genes for antibiotic resistance
15. What is the function of the flagellum?	Rotates to make the cell move
16. Name 2 cell structures unique to bacteria	Plasmids and flagellum

How ha	as the development of n re? (Grades 3 to 6)	hicroscopes helped	us understand cellular	Red	Amber	Green			
S. No	Characteristics	Microscopes are used for different applications depend on the size of the organism or							
1.	Magnification	2,000x	Up to 10,000,000x	sample that	sample that needs to be observed.				
2.	Resolution	200 nm	0.5 nm	observed.					
3.	Image produced by	Visible light rays	Electron beam	In addition t	In addition to the differences in				
4.	Image focused by	Glass objective lens	Electromagnetic objective lenses	what can be observed there a cost implications.					
5.	Image viewed through	Glass ocular lens	Fluorescent screen	Light micros	Light microscopes are mu				
6.	Specimen placed on	Glass slide	Copper mesh	microscopes	cheaper then electron microscopes.				
7.	Organisms may be	Live	Always dead						
8.	Specimen requires special stain or treatment	Not always	yes	A common e will ask for a	A common exam question he will ask for an evaluation of the				
9.	Colored Image produced	Yes	No i.e. Black and white	two types of the data pro judgement a and give rea	two types of microscope. the data provided make a judgement about the bes and give reasons for this				

4.	How do we	convert bet	ween units?			Red	Amber	Green
Un	it conversio	ons:						
Uni Cor Size nur Mo	ts are used nparing diff e of a tennis nber is appr st units com	to show the erent objects ball howeve opriate. he with a pre	size of the measure s e.g. the size of the r requires a change fix – a word in fron	ement we are making. E Earth compared to the in units so that the t of the unit that tells u	e S			
uie	Size of the	liteasureittei	ιι.					
	Name of prefix	Symbol for prefix	In standard form	In full numbers				
	tera	Т	10 <sup>12</sup>	1000000000000				
	giga	G	10 <sup>9</sup>	100000000			Centimetre	
	mega	М	10 <sup>6</sup>	1000000		÷10	(cm)	10
	kilo	k	10 <sup>3</sup>	1000			Millimetre	
	hecto	h	10 <sup>2</sup>	100	÷	(	×	
	deca	da	10 <sup>1</sup>	10			(µm)	
	_	_	10 <sup>0</sup>	1	÷	(	Nanometre	۲ <u>ـــــــــــ</u>
	deci	d	10 <sup>-1</sup>	0.1			()	
	centi	С	10 <sup>-2</sup>	0.01				
	milli	m	10 <sup>-3</sup>	0.001				
	micro	μ	10 <sup>-6</sup>	0.000001				
	nano	n	10 <sup>-9</sup>	0.00000001				
	pico	р	10 <sup>-12</sup>	0.00000000001				



- 1. Add a drop of water to the middle of a clean slide.
- 2. Cut up an onion and separate it out into layers. Use tweezers to peel off some epidermal tissue from the bottom of one of the layers.
- 3. Using the tweezers, place the epidermal tissue into the water on the slide.
- 4. Add a drop of iodine solution. Iodine solution is a **stain**. Stains are used to highlight objects in a cell by adding colour to them.

 Place a cover slip (a square of thin, transparent plastic or glass) on top. To do this, stand the cover slip upright on the slide, next to the water droplet. Then carefully tilt and lower it so it covers the specimen. Try not to get any air bubbles under there — they'll obstruct your view of the specimen. Steps 1-5 are shown in Figure 2.



9. How are plant cells adapted to their function? (Grades 2	L – 5) Red	Amber Gree	en
---	------------	------------	----

- Cells can become differentiated to perform functions more efficiently.
- Certain functions need the cell to make chemicals.
- Certain functions require the cell to have physical features to perform their function.

Cell

DNA

hromosome

Nucleus



10. How do our body cells replicate? (Grades 5 - 8)

Stage 1:

- Cells grow and develop to full size during this stage the number of ribosomes (for making proteins) and mitochondria (for energy release) increase.
- At this stage the DNA is in long thin strands, arranged randomly in the nucleus.
- When ready for reproduction, the DNA replicates (makes a copy of itself) and arranges itself into chromosomes. Each arm of the chromosome is identical.



# Stage 2:

- The chromosomes are pulled apart along the centre line of the cell.
- The cell begins to split and new nuclei form around the chromosome halves.
- The split finishes, leaving two new "daughter" cells both with an exact copy of the DNA.
- The DNA forms long thin strands ready for growth and the process can begin over again.

Red

Amber

Green

# 11. Why are stem cells important? (Grades 4 – 9)

Key word	Definition	
Stem Cell	A cell that is unspecialised and can turn into any other type of cell.	
Embryonic Stem Cell	These cells can differentiate into any other kind of cell – this is how an embryo develops and grows.	Replication stem cell
Adult Stem Cell	These are stem cells taken from adult bone marrow, they are NOT able to differentiate as widely as embryonic stem cells.	stem cell differentiated white blood cell
Meristem Cells	These are the plant equivalent of stem cells and explain why we can take e.g. cuttings from a plant to grow into a new plant.	

12. What are the uses of	stem cells in medicine?	Red	Amber	Green	
	Advantages [				
Embryonic stem cells	<ul> <li>Can create many embryos in a laboratory</li> <li>Painless technique</li> <li>Can treat many diseases</li> <li>Can become any type of cell</li> </ul>	<ul> <li>Harm /</li> <li>Embry</li> <li>consent</li> <li>Unrelia</li> <li>work</li> </ul>	oryo ryo cannot e / may not		
Adult stem cells	<ul> <li>Risk of</li> <li>Can or</li> <li>Procection</li> </ul>	infection fron lly treat a few lure can be pa	n procedure diseases inful		
HOME LEARNING TASKS					
Task Description				Done?	
Look, cover, write	, check the key terms for plant and animal c	ells.			
Complete the diag     Calculate the miss	gram showing the different unit conversions sing values in the table below:				
Image Size	Real Size	Magnification			
10mm	1mm				
200nm		X3000			
	40nm	X12,000			
30µm	<u>6μm</u>				
4cm		X200			
	2000nm	X30			
Describe in detail how sperm cells, nerve cells and muscle cells are adapted to their functions.					
• Evaluate the use of a light microscope and an electron microscope to observe a sample of onion skin cells					
• Explain the differences in the use of adult and embryonic stem cells. Write a balanced argument for which type of stem cell should be used in medical applications					

# Subject Year 9 Block 2 – Organisation

# TERM FOCUS – How are different substances transported around cells Big Ideas

# **Prior Learning Links**

- The tissues and organs of the human digestive system, including adaptations to function and how the digestive system digests food (enzymes simply as biological catalysts)
- 2. The structure and functions of the gas exchange system in humans, including adaptations to function

# Future Learning Links

- 1. Factors affecting the rate of enzymatic reactions
- Carbohydrates, proteins, nucleic acids and lipids as key biological molecules
- The need for transport systems in the multicellular organisms, including plants





### 4. What is active transport?

Active transport is the movement of particles against the concentration gradient (from an area of lower concentration to an area of high concentration) this process requires energy This happens in the root hair cells in the plant, plants need mineral ions from the soil normally there is a high concentration of these mineral ions in the root hair cell already.

Another place that this happens is in the gut there is a higher concentration of nutrients in the blood than there is in the gut this means that active transport happens to get the nutrients into the blood system.



5. How are exchange surfaces adapted for exchanging materials?

Depending on the surface to volume ratio this will depend on how easy it is for an organism to exchange substances within the environment. Some parts will have special adaptions so that the exchange system can work efficiently. To calculate volume we use the following equation:

Volume = length x width x height

6. How are substances exchanged in organisms?

Gas exchange in humans happens in the lungs, the lungs need to transfer oxygen from the lungs to the blood within your lungs you have air sacs called alveoli. Surrounded with blood vessels called capillaries to help with the gas exchange. In the digestive system you have parts in the small intestine called villi these are finger like structures that increase the surface area, to also support with substances exchanging.





The underneath of the leaf is an **exchange surface**. It's covered in little holes called **stomata** which the carbon dioxide diffuses in through. Oxygen (produced in photosynthesis) and water vapour also diffuse out through the stomata. This is shown in Figure 7.

Amber

Green

Red





### 10. How is the digestive system organised

In the digestive system this is where food is broken down into nutrients to be absorbed through the gut. There are two ways that this happens through mechanical digestion where the food is physically broken down this happens in the mouth (grinding teeth) and the stomach that churns while breaking down food.

Chemical digestion is where the body uses enzymes to break down food into smaller molecules.

# 11. How do enzymes assist with reactions?

Enzymes are known as biological catalysts, this means that they can speed up a reaction without being used up during the reaction (increases rate of reaction).

Enzymes are made from proteins. Each enzyme has an active site, each enzyme is specific to the substrate it breaks down. This is referred to as the lock and key method.

There are optimum conditions for the enzymes to work within the body. These are temperature ideally the temperature should be around 37°C. The body also has an optimum pH that it needs to function effectively at.

### 12. How are enzymes used in digestion

In the body there are three enzymes that are used to break down different foods. Carbohydrates are broken down by amylase, this is made in the salivary gland, pancreas and small intestine. Is mainly used in the mouth and the small intestine. Proteins are broken down by protease this is made in the stomach, the pancreas and the small intestine. This mainly works in the stomach and the small intestine. Lipids (fats and oils) are broken down by lipase, this is made in the pancreas and the small intestine. Lipase works mainly in the small intestine.







Red

Amber

salivary gland

liver

stomach

pancreas

small intestine

large intestine

Green

Amber

Red

### HOME LEARNING TASKS

Task Description GCSE Pod principles of organisation



GCSE Pod animals, tissues, organs and organ systems



Describe the lock and key model of enzyme function List the key stages in the digestion of food Explain what each of the enzymes groups in digestion work

Explain what each of the enzymes groups in digestion works on and list the products of the digestion. Describe how the surface area to volume ratio helps a snake and a polar bear to be adapted to their environment Done?

# Science Year 9 Term 1 – Atomic Structure and Periodic Table

# TERM FOCUS -

# Big Ideas – What makes up matter and how can we separate it?

# **Prior Learning Links**

- KS3 Science Knowing the differences between atoms, elements and compounds.
- KS3 Science Chemical symbols and formulae for key elements and compounds
- 3. KS3 Science What a mixture is and different techniques on how to separate them.
- KS3 Science Knowing how the atom developed through time and what electronic structure is.

# Future Learning Links

- 1. KS3 Science Investigations
- 2. GCSE Required Practical Activities
- 3. GCSE Science Investigations



1. What makes up	an atom?			Red Am	ber Green
1. What makes up an atom?					on on on shell
				Proton mass, charge and location.	<ol> <li>Mass = 1</li> <li>Charge = +1</li> <li>(positive) <u>3.</u></li> <li>Location =</li> <li>nucleus</li> </ol>
Name	Mass	Charge	Where is it?	Neutron	<u>1.</u> Mass = 1
Proton				mass,	<u>2.</u> Charge = 0 (neutral) 3
Neutron				and	Location =
Electron				location	nucleus
				Electron mass, charge and location	<u>1.</u> Mass = 0 <u>2.</u> Charge = -1 (negative) <u>3.</u> Location = shells that orbit the nucleus





4. What happens when several elements co	mbine together?	Red	Amber Green
Compound	Vement. A compound.	1. 2. 3.	When elements react, atoms combine with other atoms to form compounds. Compounds are formed by 2 or more elements. The atoms are held
OH	000	4.	chemical bonds. Compounds are represented by a formula. The
A Water Molecule	A Carbon Dioxide Molecule	5.	formula shows what elements are present and in what ratio. Water is made up of 2 Hydrogen atoms and 1 Oxygen atom. The formula is H <sub>2</sub> O. Carbon Dioxide is made up of 2 Oxygen atoms and 1 Carbon atom. The formula is CO <sub>2</sub>
5. How can a chemical reaction be represen	ted?	Red	Amber Green
Magnesium + Oxygen → Magnesium	Diatomic Molecules: A molecule containing 2 atoms bonded together.	When v reactior this:	vriting a chemical n we set them up like
oxide	You will need to learn them and make sure your symbol equations are correct.	Reactar	nts $\rightarrow$ Products
Sodium + Chlorine → Sodium Chloride Methane + Oxygen → Carbon dioxide +	What do you notice about these molecules?	<u>Reactar</u> substan	n <u>t:</u> A reactant is a nee that reacts in a al reaction
Water	Nomo Formula	chernic	
Symbol Equations:	Hydrogen H <sub>2</sub>	Reactar side of t	nts always go on the left the reaction.
$2Mg + O_2 \rightarrow 2MgO$	Nitrogen N <sub>2</sub>	<u>Product</u> substan	<u>t:</u> A product is a nce that is formed from
2Na + Cl₂ → 2NaCl	Fluorine F <sub>2</sub>	the che	mical reaction.
$CH_4 + O_2 \rightarrow CO_2 + H_2O$	ChlorineCl2BromineBr2	right sic	de of the reaction.
	Iodine I <sub>2</sub>		



Green

are **NOT** chemically bonded

together.

Chromatography: A method used to separate a mixture based on how the components interact with a stationary and a mobile phase.



Simple Distillation: A method used to separate a liquid from a mixture by heating and condensing.



Fractional Distillation: Separating multiple liquids from a mixture using their boiling points.



7.	How can we separate different dyes in an ink?		Red	Amber	Green
	Paper         Solvent is the mobile phase.	er is the onary phase.	Key Wo Mobile chroma to move a liquid Station chroma move, i	<u>Phase:</u> The ph tography that e, either a gas ary Phase: The tography that s a solid.	ase in is able or phase in does not
8.	How can we produce a paper chromatography?		Red	Amber	Green
	Chromatography paper Direct mod so Solvent	ction of tion of lvent Start ine'	1. 2. 3. 4. 5. 6. 7.	Use a pencil t horizontal bas line/start line from the bott paper. Add a spot of onto the cros allow to dry. Place chroma paper into a k tube or beakte Add solvent, n sure it does n above the sar Leave until th is near the to paper. Remove the chromatogram pencil, mark t solvent front coloured spot Allow the chromatogram	o draw a se , 2cm om of the sample s and tography poiling er. making ot go nple spot. e solvent p of the m. Using a the and the ts. m to dry.







they must have a small positive charge at the centre and electrons floating around in the empty space.

# Niels Bohr 1913:

Determined that electrons orbit the nucleus in shells and each shell is a fixed distance from the nucleus.

## Various other scientists 1920s:

Other scientists realised the nucleus could be divided into smaller particles and referred to them as protons.

### James Chadwick 1932:

Chadwick discovered the neutron by working with isotopes. This led to the nuclear model as we know it today.

# The first twenty elements

	1	2	13	14	15	16	17	18
1	hydrogen							helium 2
2	lithium 2.1	beryllium 2.2	boron 2.3	carbon 2.4	nitrogen 2.5	oxygen 2.6	fluorine 2.7	neon 2.8
3	sodium 2.8.1	magnesium 2.8.2	aluminium 2.8.3	silicon 2.8.4	phosphorus 2.8.5	sulfur 2.8.6	chlorine 2.8.7	argon 2.8.8
4	potassium 2.8.8.1	calcium 2.8.8.2						

# The first electron shell can only contain 2 electrons, each shell after that can only contain a maximum of 8 electrons.

HOME LEARNING TASKS	
Task Description	Done?
Complete the labels for the structure of the atom, and the relative mass and charge of each sub-atomic particle.	
Look, cover, write, check for the structure of the atom, and the relative mass and charge of each sub-atomic	
particle.	
Keyword spellings for any key terms that are bold and underlined.	
Calculate the relative atomic mass for the isotopes of chlorine.	
Look, cover, write, check for the word and symbol equations.	
Write out some of your own word and symbol equations that you have learnt.	
Write a simple method for each separation technique.	
Outline the alpha particle scattering experiment that led to the disproving of the plum pudding model. Explain	
what they expected to find and what they actually found out from the experiment.	

# Physics, Year 9 Term 1 - Energy and Energy Resources

# Term Focus

- BQ How is energy transferred from one store to another?
- BQ Can renewable energy resources replace non-renewable ones?

# **Prior Learning Links**

**KEY VOCABULARY** 

- KS3 Science What energy is • KS3 Science– Use of formula and • basic formula symbols.
- KS3 Science Understanding of Particle theory
- KS3 Science Renewable and • non-renewable resources.

**Future Learning Links** Energy and energy transfer are one of the fundamentals within Physics. Having a comprehensive knowledge of energy and its transfer is a necessity to understand the Physics course.



KEY	WORDS	KEY SUBJEC	T TERMINOLOGY / FORMULA
Chemical Elastic	Energy store Energy transfer	1. Calculating <b>kinetic</b> energy	kinetic energy = 0.5 × mass × speed² E <sub>k</sub> = 1/2 mv²
potentialPowerElectricalNon-renewableGravitationalRenewablepotentialGeothermal	2. Calculating elastic potential energy	Elastic potential energy = 0.5 x spring constant x extension <sup>2</sup> <b>E</b> <sub>e</sub> = <b>1/2ke</b> <sup>2</sup>	
Kinetic Light Nuclear	Hydroelectric Solar Tidal	3. Calculating gravitational potential energy	Gravitational potential energy = mass × gravitational field strength × height <b>E</b> <sub>p</sub> <b>=mgh</b>
Sound Wave Thermal Wind Efficiency Bio-f	Wave Wind Bio-fuels	4. Calculating <b>change in</b> thermal energy	Change in thermal energy = mass × specific heat capacity × temperature change ∆ <b>E = mc</b> ∆ <b>θ</b>
Convection	Nuclear fuels	5. Calculating <b>energy</b> transfer	Energy transferred = Power x time E = Pt
conductivity Dissipation		6. Calculating work done	work done = power x time <b>W = Pt</b>
Radiation		7. Calculating <b>efficiency</b> using energy	Efficiency = useful output energy transfer ÷ total input energy transfer
		8. calculating <b>efficiency</b> using power	Efficiency = useful output power ÷ total input power

### 1. What are the different energy stores?

Red Amber Green

it of energy	J = Joules
nit of mass	Kg = Kilograms
it of speed	m/s = Metres per second
it of spring constant	N/m= Newtons per meter
nit of extension	m = Metres
it of gravitational field strength	N/kg = Newtons per kilogram
nit of height	m = Metres
nit of temperature	°C = degrees Celsius
it of specific heat capacity	J/kg°C
nit of power	W = Watts
hit of time	s = seconds
	it of energy it of mass it of speed it of spring constant it of extension it of gravitational field strength it of height it of temperature it of specific heat capacity it of power it of time

# Energy Stores and Transfer

Energy store	Objects with energy in this store		Energy can be transferred	
Kinetic	Anything moving has energy in its kinetic e	energy store.	between stores in four main	
Thermal	Any object. The hotter it is, the more energy this store. You may also see thermal energy internal energy stores.	ways: •Mechanically – an object moving due to a force acting on		
Chemical	Anything that can release energy by a chere.g. food, fuels.	nical reaction,	it, e.g. pushing, pulling, stretching or squashing.	
Gravitational Potential	Anything that has mass and is inside a grav	itational field.	•Electrically – a charge (current) moving through a	
Elastic Potential	Anything that is stretched (or compressed)	e.g. springs.	moving around a circuit	
Electrostatic	Anything with electric charge that is interact another electric charge — e.g. two charges repel each other.	cting with that attract or	•By heating – energy transferred from a hotter object to a colder object, e.g. heating a	
Magnetic	Anything magnetic that is interacting with a — e.g. two magnets that attract or repel ea	another magnet ch other.	pan of water on a hob. •By radiation – energy	
Nuclear	Atomic nuclei have energy in this store tha released in nuclear reactions.	t can be	transferred by e.g. light / sound waves ( for example , energy	
			from the Sun reaching Earth by light)	
The Lav	w of conservation of energy		Closed systems	
Energy can be transferred usefully, stored, or dissipated, but can never be created or destroyed		<ul> <li>Energy changes occur within a closed system.</li> <li>This is where no energy can enter or leave.</li> <li>The net change in the total energy of a closed system is always zero.</li> </ul>		
2. What does i	s it mean if an object is efficient?		Red Amber Green	
2. What does in the transferred into the transferre	s it mean if an object is efficient? <u>What is efficiency?</u> e proportion of INPUT energy that is USEFUL energy	<u>Example -</u> A T that energy is u What is the eff	RedAmberGreenV uses 500 J of energy. 300 J of useful, the rest is wasted. iciency?	
2. What does in Efficiency is the transferred into <u>Calcula</u>	s it mean if an object is efficient? <u>What is efficiency?</u> proportion of INPUT energy that is USEFUL energy ting efficiency using energy	<u>Example -</u> A T that energy is u What is the effi Efficiency = use	Red     Amber     Green       V uses 500 J of energy. 300 J of useful, the rest is wasted.       iciency?       eful energy	
2. What does in Efficiency is the transferred into Calcula	s it mean if an object is efficient? <u>What is efficiency?</u> proportion of INPUT energy that is USEFUL energy <u>ting efficiency using energy</u> seful energy output (x 100)	Example - A T that energy is u What is the effi Efficiency = us tot	Red     Amber     Green       V uses 500 J of energy. 300 J of useful, the rest is wasted.       iciency?       eful energy       al energy	
2. What does in Efficiency is the transferred into <u>Calcula</u> Efficiency = us to the transferred into <u>Calcula</u>	s it mean if an object is efficient? <u>What is efficiency?</u> e proportion of INPUT energy that is USEFUL energy ting efficiency using energy seful energy output (x 100) otal energy input	Example - A Ty that energy is u What is the effi Efficiency = use tot = 300	RedAmberGreenV uses 500 J of energy. 300 J of useful, the rest is wasted. iciency?eful energyeful energy al energy0/500 = 0.6 (or 60%)	
<ol> <li>What does i</li> <li>Efficiency is the transferred into <u>Calcula</u></li> <li>Efficiency = us to to take</li> <li>What is the</li> </ol>	s it mean if an object is efficient? <u>What is efficiency?</u> proportion of INPUT energy that is USEFUL energy <u>ting efficiency using energy</u> <u>seful energy output</u> (x 100) otal energy input difference between conduction and co	Example - A T that energy is u What is the effi Efficiency = uso tot = 300	RedAmberGreenV uses 500 J of energy. 300 J of useful, the rest is wasted. iciency?al energyeful energy al energy0/500 = 0.6 (or 60%)RedAmberGreen	
<ol> <li>What does i</li> <li>Efficiency is the transferred into <u>Calcula</u></li> <li>Efficiency = us to take the transferred into <u>Calcula</u></li> <li>What is the the transferred into <u>Calcula</u></li> </ol>	s it mean if an object is efficient? <u>What is efficiency?</u> proportion of INPUT energy that is USEFUL energy <u>ting efficiency using energy</u> <u>seful energy output</u> (x 100) otal energy input <u>difference between conduction and con</u> <u>Conduction</u>	<u>Example -</u> A T that energy is u What is the effi Efficiency = use tot = 300	Red       Amber       Green         V uses 500 J of energy. 300 J of useful, the rest is wasted.       iciency?         eful energy       al energy         0/500 = 0.6 (or 60%)       Red       Amber         Red       Amber       Green	
<ol> <li>What does i</li> <li>Efficiency is the transferred into <u>Calcula</u></li> <li>Efficiency = us to <u>Calcula</u></li> <li>What is the <u>Calcula</u></li> <li>What is the <u>Calcula</u></li> <li>Heat en faster</li> <li>Fast vib neighbor</li> <li>This pase</li> </ol>	<ul> <li>s it mean if an object is efficient?</li> <li><u>What is efficiency?</u></li> <li>proportion of INPUT energy that is USEFUL energy</li> <li>ting efficiency using energy</li> <li>seful energy output (x 100)</li> <li>otal energy input</li> <li>difference between conduction and con Conduction</li> <li>y moves in solids by CONDUCTION ergy excites atoms which vibrate</li> <li>prating atoms knock into buring atoms sees on the heat energy</li> </ul>	Example - A Ty that energy is u What is the effi Efficiency = use tot = 300 nvection? Convection is t region of high t temperature by only occurs in t	Red       Amber       Green         V uses 500 J of energy. 300 J of useful, the rest is wasted.	

4. How can unwanted thermal energy transfers be reduced? Red Amber Green					
<u>R</u> (	educing energy lo	ss from buildings			
<ol> <li>Loft insulation – air trapped between fibres is a bad conductor</li> <li>Cavity wall insulation – material with very poor conductivity pumped in the space between 2 layers of walls.</li> <li>Aluminium foil behind radiators – reflect radiation back into room</li> <li>Double glazed windows – thick glass with dry air between, poor conductors</li> <li>Thick walls with low conductivity – act as poor conductors of heat</li> <li>Draught excluders – reduce air flow under/around doorways</li> </ol>					
5. What is the specific heat capacity	of a material?		Red Amber Green		
Specific Heat Capacity	Method for meas	suring the specific heat capa	city of a metal block		
Specific heat capacity is the amount of energy needed to raise the temperature of 1kg of a substance by 1°C The amount of energy something	<ol> <li>Using a the block</li> <li>Use a piphole.</li> <li>Put the the the block</li> </ol>	balance measure the mass o in insulation. bette to put a small volume of nermometer in this hole and in ure of the block.	f the block, then wrap f water in the smaller measure the starting		
stores is dependent on its MASS and TEMPERATURE and also the TYPE OF MATERIAL.	<ol> <li>Place a h</li> <li>Connect</li> <li>Connect across th parallel.</li> </ol>	heater in the larger hole in the block. the ammeter, power pack and heater in series. the voltmeter he power pack in			
Example-what is the specific heat capacity (SHC) of a substance that requires 8800 J of heat energy to raise 1 kg of it by 10°C?	<ul> <li>7. Switch the power pack on and record the ammeter and voltmeter readings.</li> <li>8. Calculate the power by using the equation B = 1 x V</li> </ul>				
SHC = <u>energy</u> (mass x temperature) = $8800 / (1 \times 10)$	9. Record the every minutes.	ne temperature nute for 10	Metal Block Thermometer		
= 880 J/Kg°C	change f 11. Calculate	e the temperature or each result. the energy transferred to th	e block by using the		
	12. Calculate specific h	e the specific heat capacity by neat capacity = energy / (mas	y using the equation ss x temperature		
6. What is the definition of power?	onangoy		Red Amber Green		
Power is the rate of energy transferred or the rate of doing work. Power is measured in watts (W). One watt is equivalent to one joule transferred per second (J/s) "Rate" means how fast something happens					
Power (W) = Energy transferred (J) Time(s) Power (W) = Work done (J) Time(s)					
<u>Example -</u> A man pushing a wheelba of work in 5 seconds. What is his power? = 400/5	arrow does 400 J	Example - A shower transfe energy to the water in 1 mir in watts? In kilowatts? = 540000/60 = 9000W (÷1	ers 540,000 J of nute. What is its power 000)		
= 80W		= 9kW			

Anything that is m object speeds up The energy in the	Anything that is moving has energy in its kinetic energy store. Energy is transferred to this store when an object speeds up and is transferred away from this store when an object slows down. The energy in the Kinetic energy store depends on the objects mass and speed.					
Calculating kinetic energyTo calculate kinetic energy ( <i>E</i> K) we use the equationKinetic energy = $\frac{1}{2}$ x mass x (velocity) <sup>2</sup> (J) (kg) (m/s) <sup>2</sup>		Example – An obje velocity of 3 m/s. Calculate the kinet $Ek = \frac{1}{2} \times m \times v^2$ $Ek = \frac{1}{2} \times 2 \times (3)$ $Ek = 0.5 \times 2 \times 9$ Ek = 9 J	ect of mass 2 kg is moving at a ic energy of the object. <sup>2</sup>			
8. How can we ca	alculate the energy o	of an elastic obj	ect?	Red Amber Green		
Elastic potential energy stores Stretching or squashing an object can transfer energy into its elastic potential energy (Ee) store. Elastic potential energy = $0.5 \text{ x}$ spring constant x extension <sup>2</sup> E <sub>e</sub> = $1/2\text{ke}^2$		Example- A catapult is extended 0.5 m to fire a stone at a window. The spring constant of the catapult is 3 N/m. What is the elastic potential energy stored in the catapult? $Ee = \frac{1}{2} \times k \times e^{2}$ $Ee = \frac{1}{2} \times 3 \times (0.5)^{2}$ $Ee = \frac{1}{2} \times 3 \times 0.25$ $Ee = 0.375 \text{ J}$				
9. How is energy	generated using dif	ferent resource	s?	Red Amber Green		
<ul> <li>9. How is energy generated using different resources</li> <li>Nonrenewable energy sources</li> <li>Coal, oil and gas are examples of <i>non-renewable</i> energy sources.</li> <li>-We give them the collective name <i>fossil fuels</i>.</li> <li>Fossil fuels are made underground over millions of years.</li> <li>They are made at a slower rate to the rate at which they are used.</li> <li>They will run out one day.</li> </ul> Non-renewable energy sources damage the environment in a number of ways: <ul> <li>When burnt as fuels they release CO<sup>2</sup></li> <li>Mining</li> <li>Storage of the fuels</li> <li>Disposal</li> </ul>		Renewable energy Solar, wind and bio renewable energy s • Renewable at the same • Therefore the same • Therefore the same state stat	Sources         o-fuels are examples of sources.         energy resources can be made a rate as they are being used.         hey will never run out.			
I. HOW CALLETIER	able energy resour		generate electricity ?	Red Amber Green		
Energy resource	How it works	Uses	Positive	Negative		
Biofuel	Plant matter burnt to release	Transport and generating	Renewable. As plants grow, they remove carbon dioxide. They are	Large areas of land needed to grow fuel crops. Habitats destroyed and food not grown. Emits carbon dioxide when		

dioxide. They are

'carbon neutral'.

burnt and adds to greenhouse

gases and global warming.

Red Amber Green

7. How can we calculate the energy of a moving object?

thermal energy

electricity

Kinetic Energy Stores

Tides	Every day tides rise and fall, so generation of electricity can be predicted	Generating electricity	Renewable. Predictable due to consistency of tides. No greenhouse gases produced.	Expensive to set up. A dam like structure is built across an estuary, altering habitats and causing problems for ships and boats.
Waves	Up and down motion turns turbines	Generating electricity	Renewable. No waste products.	Can be unreliable depends on wave output as large waves can stop the pistons working.
Hydroelectric	Falling water spins a turbine	Generating electricity	Renewable. No waste products.	Habitats destroyed when dam is built.
Wind	Movement causes turbine to spin which turns a generator	Generating electricity	Renewable. No waste products.	Unreliable – wind varies. Visual and noise pollution. Dangerous to migrating birds.
Solar	Directly heats objects in solar panels or sunlight captured in photovoltaic cells	Generating electricity and some heating	Renewable. No waste products.	Making and installing solar panels expensive. Unreliable due to light intensity.
Geothermal	Hot rocks under the ground heats water to produce steam to turn turbine	Generating electricity and heating	Renewable. Clean. No greenhouse gases produced.	Limited to a small number of countries. Geothermal power stations can cause earthquake tremors.

# 11. How are non-renewable energy resources and bio fuels used to generate electricity?

Red Amber Green

Generating energy using Biofuels

Biofuels are renewable energy sources created from either plant products or animal dung.

• They can be solid, liquid or gas.





Energy resource	How it works	Uses	Positive	Negative
Fossil Fuels (coal, oil and gas)	Burnt to release thermal energy used to turn water into steam to turn turbines	Generating electricity, heating and transport	Provides most of the UK energy. Large reserves. Cheap to extract. Used in transport, heating and making electricity. Easy to transport.	Non-renewable. Burning coal and oil releases sulphur dioxide. When mixed with rain makes acid rain. Acid rain damages building and kills plants. Burning fossil fuels releases carbon dioxide which contributes to global warming. Serious environmental damage if oil spilt.
Nuclear	Nuclear fission process	Generating electricity	No greenhouse gases produced. Lots of energy produced from small amounts of fuel.	Non-renewable. Dangers of radioactive materials being released into air or water. Nuclear sites need high levels of security. Startup costs and decommission costs very expensive. Toxic waste needs careful storing.

# 12. How is energy use changing?

Red Amber Green

Moving towards renewable energy

The UK has pledged to become net zero carbon emissions by 2050. This will mean moving towards renewable energy sources. However, renewable energy sources are not reliable enough to meet this demand for energy at present.

Carbon neutral

As plants grow, they absorb  $CO^2$  from the atmosphere. When they are burnt, this  $CO^2$  is released back into the atmosphere.

So overall, there is no overall effect as the amount of CO<sup>2</sup> taken in by the growing plant is the same as the amount of CO<sup>2</sup> released when the plant is burnt.

HOME LEARNING TASKS	
Task Description	Done?
Task 1 – Read, Cover and Recall all 8 types of energy store from the list	
Task 2 – Read, Cover and Write and definition for Conduction and Convection	
Task 3 – Recall and write a method to determine the specific heat capacity of a 1kg mass of metal	
Task 4 – Rearrange for formula for Kinetic energy to calculate Velocity (V)	
Task 5 – Explain the difference between a renewable and non-renewable source of energy	
Task 6 – Explain the process of using fossil fuels to generate electricity	

Physics Year 9 - P2A – Circuits - P2B Domestic Electri - P3 Particle Model of	9 Block 2 city Matter	
<ul> <li>TERM FOCUS –</li> <li>P2A BQ - What is Electricity?</li> <li>P2B BQ – How do we use Electricity?</li> <li>P3 BQ – How do we understand matter throu</li> <li>Prior Learning Links <ol> <li>KS3 Science – Electricity</li> <li>KS3 Science – Use of formula and basic formula symbols.</li> <li>KS3 Science – Understanding of Particle theory</li> <li>KS3 Science – Understanding of how to conduct a scientific investigation</li> </ol> </li> </ul>	gh the arrangement of particles? Future Learning Links 1. Electricity and the arrangement of particles in matter all link to the fundamentals of physics and having a comprehensive knowledge of these topics is a necessity to understanding the Physics course.	SCIENCE SCIENCE




#### I-V characteristics

I-V characteristics (current-potential difference graphs) show how the current varies as you change the potential difference across a component.





- 1. Connect the circuit for two resistors in series, as shown in the diagram.
- 2. Switch on and record the readings on the ammeter and the voltmeter.
- 3. Switch off and add another resistor in series.
- 4. Switch on and record the readings on the ammeter and the voltmeter.
- 5. Switch off and add the fourth resistor in series.
- 6. Switch on and record the readings on the ammeter and the voltmeter.
- 7. Calculate the total resistance for each number of resistors added.



- 1. Connect the circuit for two resistors in parallel, as shown in the diagram.
- 2. Switch on and record the readings on the ammeter and the voltmeter
- 3. Switch off and add another resistor in parallel (you will need to create another loop).
- 4. Switch on and record the readings on the ammeter and the voltmeter.
- 5. Switch off and add the fourth resistor in parallel (you will need to create another loop).
- 6. Switch on and record the readings on the ammeter and the voltmeter.
- 7. Calculate the total resistance for each number of resistors added

Red Amber

Green

#### 6. LDRs and Thermistors

#### Light-dependent resistors (LDRs)

An LDR is a resistor that is dependent on the intensity of light.

- In bright light, the resistance decreases
- In darkness, the resistance is highest



#### **Thermistor**

A thermistor is a resistor that is dependent on temperature.

• As the temperature increases, the resistance decreases.



7. Electricity in the Home

Green

Amber

Red

#### Alternating and direct current

#### Alternating current (AC)

- The current is constantly changing direction.
- It is created by a direct potential difference, where the positive and negative ends of the source are fixed.

#### **Direct current (DC)**

- The current is always flowing in the same direction.
- This occurs due to alternating potential differences in which the positive and negative ends keep alternating

The UK domestic mains supply is an AC supply at around 230V.

 The frequency (how often the current changes direction) is 50 cycles per second (50 Hertz, Hz)



#### Earth wire

- The 'safety wire'
- Provides a low resistance path to the Earth

#### Live wire

- How the current enters the device
- Provides the 230 V

#### Neutral wire

- Completes the circuit
- Carries the current away



#### National grid

The national grid is a network of cables and transformers.

- It connects power stations to consumers.
- Electrical power is transferred from power stations to anywhere on the grid (homes, businesses).



#### Internal Energy

- A system of particles store energy in their movement (kinetic energy) and in their interactions with each other (potential energy).
- Internal energy is the total energy of all the particles' kinetic and potential energy stores.

#### Internal Energy - Heating

- Heating a system transfers energy to the particles.
- The particles gain kinetic energy, moving faster, so there is an increase in internal energy.
- This leads to an **increase in temperature** depending on the mass of substance, the material (specific heat capacity) and the energy transferred.



#### Internal Energy – Change of State

• If a substance is heated enough, particles will have enough energy to overcome the forces or bonds holding them together.

#### Change of State

- Changing state is a **physical change**. A change of state does **not** create a new substance, just a different arrangement.
- Intermolecular forces and bonds, those in between different molecules, are broken.
- The number of particles and what they are made of does not change. Mass is conserved.



• Particles with a gas move with random speed and direction.

- Increasing the temperature of the gas transfers energy into the kinetic energy stores of the particles.
- The temperature of a gas is related to the average kinetic energy stores of its particles.

Gas Pressure

- As gas particles move about at high speeds, they collide into one another and anything else in their path.
- When a particle collides with a surface, it exerts a force on it.
- Pressure (force per unit area), is exerted by gas particles colliding with a surface.

#### Gas Pressure and Temperature

- Increasing temperature increases the speed of particles.
- Increasing the speed of particles increases the force and frequency of collisions.
- Increasing the force of collisions increases the net force on a surface.
- Increasing the net force increases the pressure.
- So, increasing the temperature of a gas will increase the pressure.

HOME LEARNING TASKS	
Task Description	Done?
Draw a circuit diagram with a cell , a filament lamp and a switch	
State the difference between a series circuit and a parallel circuit	
Describe the process of electricity being transported through the national grid	
Explain the role of the 3 different wires in a 3 core domestic plug	
Explain the change in energy levels when a material changes state	
Draw a graph which shows the change in state of a material	

# History Year 9 Term 2 Part 1 – Renaissance Medicine

In this unit, you will explore the significant medical changes that occurred during the Renaissance, focusing on prevention, treatment, and the understanding of disease. You will learn about key individuals like Andreas Vesalius and William Harvey, and examine the role of institutions such as the Royal Society and the printing press in advancing medical knowledge. The unit also covers changing responses to plagues and developments in anatomy and surgery. You will develop analytical skills by assessing the impact of scientific discoveries, comparing continuity and change in medical practices, and evaluating the effectiveness of Renaissance-era treatments.



GCSE Pod – Scan me!

#### Prior Learning Links

 Year 7 Term 6 – Renaissance in Europe contextual developments and medical change Future Learning Links

 Revision of content in Year 11 upon completion of the course

#### **KEY VOCABULARY**

#### Historical Skills Vocabulary

**Cause** – the reason for something happening **Change** – when things are different to how they were before

**Consequence** – the result of something happening **Continuity** – the opposite of change; when something stays

the same or continues Difference – the ways in which things are different to one

another

**Factor** – something that can affect, or determine an event or outcome

**Inference** - a conclusion drawn about something using the information you already have about it

Rate of change – the pace at which change occurs; e.g. very quickly or slowly

**Reliability** – the degree to which something can be trusted or relied upon as accurate

Significance – the importance of something

Similarity – the quality of being similar, or the same Trend – when there are a number of similar and related changes continuing in the same direction over a period of time

**Turning point** – a significant change happens – something that is different from what has happened before and which will affect the future

#### Medicine Through Time: Renaissance Vocabulary

- **1.** Adaptation The process of change by which something becomes better suited to its environment or situation.
- **2.** Dissemination The act of spreading something, especially information, widely.
- **3.** Emergence The process of coming into existence or prominence.
- **4.** Ideology A set of beliefs, especially the political beliefs on which people, parties, or countries base their actions.
- Innovation A new method, idea, or product introduced to improve something.
- **6.** Paradigm A model for something which explains it or shows how it can be produced.
- **7.** Perception The way in which something is regarded, understood, or interpreted.
- 8. Perspective A particular attitude or way of viewing something.
- Theory A system of ideas intended to explain something based on general principles independent of the particular instances.
- **10.** Transformation A marked change in form, nature, or appearance.

#### **Essential Medical Vocabulary**

**Anatomy** – The study of the structure of the bodies of people or animals **Care** – to provide help and support for someone who is unwell

**Diagnosis** – the act of identifying what is wrong with someone who is ill

Disease - an illness which affects people, spread by bacteria or infection

**Prevention** - to prevent something, is to ensure that it does not happen

**Public Health** – the health of the general population, and the activities and services that are designed to improve or protect this

**Surgery** – a medical treatment in which someone's body is cut open so that a doctor can repair, remove, or replace a diseased or damaged part

Treatment – medical attention given to a sick or injured person or animal

#### Renaissance Medicine Glossary

**Alchemy** – A precursor to modern chemistry, alchemy was practiced during the Renaissance and involved attempts to transform base metals into gold and discover a universal cure for diseases, influencing early medical thought and experimentation.

Apothecaries – Medical professionals in the Renaissance who prepared and sold medicines.

**Black Death** – The devastating global epidemic of bubonic plague that struck Europe and Asia in the mid-1300s. **Bloodletting** – A common medical treatment in the Renaissance, believed to balance the body's humours by removing blood.

**Circulatory System** – The system of the body responsible for the circulation of blood, studied in detail by William Harvey.

**Diagnosis** – The process of determining which disease or condition explains a person's symptoms.

**Four Humours** – An ancient medical theory that health was maintained by balancing four bodily fluids: blood, phlegm, yellow bile, and black bile.

**Galen** – A prominent Greek physician whose ideas dominated European medicine for over a millennium, many of which were challenged during the Renaissance.

**Great Plague (1665)** – The last major epidemic of the bubonic plague in England, providing an example of Renaissance-era public health responses.

**Harvey**, **William** – An English physician who discovered the circulation of blood and challenged centuries-old ideas about the heart and vascular system.

**Herbal Remedies** – Treatments made from plants, commonly used in the Renaissance to cure illnesses. **Hospitals** – Institutions that cared for the sick, with many Renaissance hospitals continuing medieval traditions, though some improvements were made.

**Humanism** – A Renaissance cultural movement that turned away from medieval scholasticism and revived interest in ancient Greek and Roman thought, influencing medical thinking.

**Inoculation** – The introduction of a disease into the body to create immunity, with early ideas of inoculation emerging during the Renaissance.

**Journeyman** – A worker who had finished learning a trade and who was employed by someone rather than working on his or her own.

**Miasma** – A theory that diseases were caused by 'bad air' or pollution, a prevalent idea in the Renaissance despite the growth of more scientific explanations.

**Paracelsus** – A Renaissance physician and alchemist who challenged the medical orthodoxy of Galen and the four humours.

**Phlebotomy** – The surgical practice of drawing blood, widely practiced during the Renaissance for various medical conditions.

**Printing** Press – An invention that revolutionised the spread of medical knowledge by allowing ideas to be disseminated more widely and rapidly.

**Quarantine** – The practice of isolating people to prevent the spread of disease, which became more formalised during the Renaissance in response to plague outbreaks.

**Renaissance** – The cultural, intellectual, and scientific rebirth in Europe from the 14th to the 17th century that led to new approaches in medicine and science.

**Royal Society** – A learned society established in 1660, promoting scientific discoveries and playing a key role in advancing medical knowledge.

**Surgeons** – Medical practitioners who specialised in surgery, a profession that gained increasing respectability and professionalism during the Renaissance.

**Sydenham**, **Thomas** – An English physician who advanced clinical medicine and is known for advocating careful observation in diagnosing diseases.

**University of Padua** – One of the leading medical schools in Europe during the Renaissance, where Vesalius and Harvey studied.

**Vesalius**, **Andreas** – A pioneering anatomist whose work, De humani corporis fabrica, revolutionised the understanding of human anatomy.

1. How did medical ideas evolve during the Renaissance?	Red	Amber	Green	
Are you able to explain how Renaissance ideas differed from medieval beliefs about medicine?				
Can you identify the key factors that contributed to changes in medical thinking?				
Are you able to describe the role of humanism in challenging traditional medical knowledge?				
2. How did the understanding of disease and illness change during the Renaissance?	Red	Amber	Green	
Are you able to describe the continuity and change in ideas about the causes of disease?				
Can you explain how Thomas Sydenham's work influenced diagnosis and medical practice?				
Are you able to discuss the impact of the miasma theory and its persistence during the Renaissance?				
3. What role did the printing press play in the spread of medical knowledge?	Red	Amber	Green	
Are you able to explain how the invention of the printing press affected the transmission of med	dical idea	s?		

Can you describe specific medical texts that became widely available due to the printing press?			
Are you able to evaluate how the printing press led to greater collaboration and debate among	medical p	orofessiona	ls?
4. How did Vesalius' work improve knowledge of human anatomy?	Red	Amber	Green
Are you able to explain how Vesalius' work challenged Galen's anatomical theories?			
Can you describe Vesalius' method of conducting dissections and its impact on medical understa	anding?		
Are you able to explain the significance of <i>De humani corporis fabrica</i> in advancing medical kno	wledge?		_
5. How did medical training and education change during the Renaissance?	Red	Amber	Green
Are you able to describe how universities and medical schools adapted their curricula during the	e Renaissa	ance?	
Can you explain how medical students learned through direct observation and dissection?	-		
Are you able to assess the influence of Renaissance universities like Padua on medical advancer	nents?		_
6. Did William Harvey's discovery of blood circulation revolutionise medicine?	Red	Amber	Green
Are you able to explain how Harvey's discovery of circulation challenged traditional beliefs?			
Can you describe the methods Harvey used to prove his theory about blood circulation?			
Are you able to assess the long-term impact of Harvey's findings on medical practice?	_		_
7. How did Renaissance ideas about plague prevention and treatment differ from earlier	Red	Amber	Green
approaches?		1	
Are you able to explain the key differences between how the Black Death (1347) and the Great	Plague (10	665) were	dealt
with?			
Can you describe the preventive measures taken by city authorities during the Great Plague?		_	
Are you able to evaluate the effectiveness of medical treatments used for plague victims in the	Renaissar	ice?	_
8. What impact did hospitals and community care have on treatment during the	Red	Amber	Green
Renaissance?			
Are you able to describe the continuity and change in hospital care from the Middle Ages to the	Renaissa	nce?	
Can you explain how hospitals adapted to the growing medical knowledge during this period?			
Are you able to assess the role of community-based care in the treatment of the sick?	_		_
9. How did the theory of the Four Humours persist and decline during the Renaissance?	Red	Amber	Green
Are you able to explain the Four Humours theory and how it influenced medical treatments?			
Can you describe the factors that led to the decline of humoural theory during the Renaissance	?		
Are you able to identify which new medical ideas started to replace humoural treatments?			
10. How did alchemy and astrology influence Renaissance medicine?	Red	Amber	Green
Are you able to explain how alchemists contributed to the development of early medicines?			
Can you describe how astrology influenced medical practices such as bloodletting?			
Are you able to assess the extent to which these beliefs were scientific or superstitious?			
11. What role did government and public health authorities play in medical change during the Renaissance?	Red	Amber	Green
Are you able to describe how city governments responded to public health crises like the plague	<u>,</u> ,		
Can you explain the role of guarantine and other preventive measures in disease control?			
Are you able to evaluate the effectiveness of these government interventions?			
12. How did the Royal Society contribute to the development of scientific medicine?	Red	Amber	Green
Are you able to describe the founding and purpose of the Royal Society in advancing science?			
Can you explain how the Royal Society encouraged new medical research and discoveries?			
Are you able to assess the long-term impact of the Royal Society on scientific communication ar	nd medicii	ne?	
HOME LEARNING TASKS			
Task Description			Done?
Use 'Look, Cover, Write, Check' to learn the Medieval Medicine Vocabulary			
Complete GCSE Pod Tasks 1-4 using the QR code at the top of the page			
Explain how Thomas Sydenham's methods of diagnosis were <b>different</b> from the methods used by	Hippocrat	tes &	
Galen			
Create a timeline charting the key developments and discoveries that helped influence medicine i	n the Ren	aissance.	
You must include the following: Discovery of the 'New World', Development of the Printing Press,	The Refo	rmation	
& the Dissolution of the Monasteries, Harvey's discovery of circulation, Vesalius' De Humanis Corp	pori Fabric	a,	
Government reaction to the Great Plague 1665, the creation of the Royal Society			
Exam Style Question: Explain why understanding of human anatomy improved in the Renaissance	e (12 mark	(s)	
Exam Style Question: 'The ideas of Thomas Sydenham marked a turning point in medical thought	during th	e	
Renaissance.' How far do you agree with this statement? (16 marks)			

# History Year 9 Term 2 Part 2 – 18<sup>th</sup>-19<sup>th</sup> Century Medicine

In this unit on 'Medical Change in 18th-19th Century Europe & England,' you will explore the evolution of medical practices, key figures, and public health reforms that shaped modern healthcare. You will examine significant advancements in understanding disease causation, the development of vaccination, and the impact of sanitation on public health. Through analyzing historical events and contributions from individuals like Edward Jenner and John Snow, you will enhance your critical thinking, research, and analytical skills. By evaluating the social and economic factors influencing medical advancements, you will gain a deeper understanding of how historical context informs contemporary health practices and policies.

#### **Prior Learning Links**

 Year 8 Term 1 – Industrial Revolution in Britain provides contextual understanding behind the politics and society of this period

#### **KEY VOCABULARY**

#### Historical Skills Vocabulary

**Cause** – the reason for something happening **Change** – when things are different to how they were before

**Consequence** – the result of something happening

**Continuity** – the opposite of change; when something stays the same or continues

**Difference** – the ways in which things are different to one another

**Factor** – something that can affect, or determine an event or outcome

**Inference** - a conclusion drawn about something using the information you already have about it

**Rate of change** – the pace at which change occurs; e.g. very quickly or slowly

**Reliability** – the degree to which something can be trusted or relied upon as accurate

**Significance** – the importance of something

**Similarity** – the quality of being similar, or the same

**Trend** – when there are a number of similar and related changes continuing in the same direction over a period of time

**Turning point** – a significant change happens – something that is different from what has happened before and which will affect the future

# Future Learning Links

Revision of content in Year 11 upon completion of the course



GCSE Pod – Scan me!

#### Medicine Through Time: 18<sup>th</sup>-19<sup>th</sup> Century Vocabulary

- 1. **Adaptation**: The process of changing to suit new conditions or environments.
- 2. **Catalyst**: Something that causes or speeds up significant change or action.
- 3. **Contribute**: To help bring about a result or provide part of the necessary work or ideas.
- 4. **Emerge**: To become apparent or prominent, often after being hidden or unknown.
- 5. **Exploit**: To make full use of and derive benefit from something.
- 6. **Impact**: The strong effect or influence something has on a situation or person.
- 7. **Implement**: To put a decision or plan into effect.
- 8. **Innovative**: Featuring new methods or ideas; advanced and original.
- 9. **Revolutionary**: Involving or causing a complete or dramatic change.
- 10. **Widespread**: Found or distributed over a large area or among many people.

#### **Essential Medical Vocabulary**

Anatomy – The study of the structure of the bodies of people or animals Care – to provide help and support for someone who is unwell

**Diagnosis** – the act of identifying what is wrong with someone who is ill

Disease – an illness which affects people, spread by bacteria or infection

**Prevention** - to prevent something, is to ensure that it does not happen

**Public Health** – the health of the general population, and the activities and services that are designed to improve or protect this

**Surgery** – a medical treatment in which someone's body is cut open so that a doctor can repair, remove, or replace a diseased or damaged part

Treatment – medical attention given to a sick or injured person or animal

## 18<sup>th</sup>-19<sup>th</sup> Century Medicine Glossary

- 1. Anaesthetics: Substances used to induce insensitivity to pain during surgical procedures.
- 2. Antiseptics: Chemical substances that prevent infection by inhibiting the growth of microorganisms.
- 3. Bacteriology: The study of bacteria, which played a crucial role in understanding infectious diseases.

- 4. **Broad Street Pump**: A famous water pump in London that was linked to a cholera outbreak, leading to important public health reforms.
- 5. **Cholera**: A severe bacterial disease that causes severe diarrhoea and dehydration, leading to high mortality rates.
- 6. **Edward Jenner**: An English physician known for developing the smallpox vaccine, the first successful vaccination.
- 7. Edwin Chadwick: British social reformer, known for his Report on the Sanitary Condition of the Labouring Population of Great Britain (1842)
- 8. **Germ Theory**: The scientific theory that microorganisms are the cause of many diseases, proposed by Louis Pasteur and Robert Koch.
- 9. **Hospital Reform**: Changes made to improve conditions, care, and treatments in hospitals during the 18th and 19th centuries.
- 10. Inoculation: The introduction of a vaccine into the body to produce immunity to a specific disease.
- 11. John Snow: A British physician who played a key role in the understanding of cholera transmission and advocated for improved sanitation.
- 12. Koch's Postulates: A series of criteria established by Robert Koch to identify the specific causative agents of diseases.
- 13. Laissez-Faire: A policy which is based on the idea that governments and the law should not interfere with business, finance, or the conditions of people's working lives.
- 14. Louis Pasteur: A French chemist known for his discoveries of vaccination, microbial fermentation, and pasteurization.
- 15. **Medical Licensing**: The process of regulating who can practice medicine, which evolved significantly during this period.
- 16. **Microbiology**: The branch of science that deals with microorganisms, including bacteria, viruses, and fungi.
- 17. **Miasma Theory**: The belief that diseases were caused by "bad air" or miasmas, which was prevalent before germ theory.
- 18. **Nightingale**, **Florence**: A pioneering nurse known for her work in nursing reform and the establishment of modern nursing practices.
- 19. **Nightingale Pledge**: An ethical code for nurses, developed by Florence Nightingale, emphasizing patient care and professionalism.
- 20. Pasteurization: A process of heating liquids to kill bacteria and pathogens, developed by Louis Pasteur.
- 21. **Public Health Act (1875)**: A law aimed at improving sanitation and health conditions in urban areas across England.
- 22. **Sanitation**: Measures taken to promote health through cleanliness, especially in relation to water and waste disposal.
- 23. **Surgery**: A branch of medicine that involves the treatment of injuries or diseases through operative procedures.
- 24. **Vaccination**: The administration of a vaccine to stimulate an individual's immune system against disease.
- 25. Victorian Era: The period of Queen Victoria's reign (1837-1901), marked by significant social, economic, and medical changes.

1. How did ideas about the causes of disease evolve during the 18th and 19th centuries?	Red	Amber	Green
Are you able to explain the main theories of disease causation during this period?			
Can you compare the miasma theory and germ theory?			
How did key individuals contribute to these evolving ideas?			
2. What were the major advancements in surgical practices during this time?	Red	Amber	Green
Can you identify key developments in anaesthetics and antiseptics?			
Are you able to discuss the impact of these advancements on surgical outcomes?			
How did public perception of surgery change as a result of these improvements?			
3. In what ways did Edward Jenner's work influence public health?	Red	Amber	Green
Are you able to describe the process of vaccination that Jenner developed?			
Can you explain the significance of Jenner's findings in the context of public health?			
How did Jenner's work pave the way for future vaccination efforts?			
4. What role did government play in public health reforms in the 19th century?	Red	Amber	Green
Are you able to identify key public health acts and their impacts?			

Can you discuss the significance of government involvement in health care during this period?	
How did social conditions influence government responses to public health crises?	
5. How did John Snow's approach to cholera differ from previous methods of disease Red Amber control?	Green
Can you summarize the key findings of Snow's investigation of the cholera outbreak?	
Are you able to explain how Snow's work contributed to modern epidemiology?	
How did Snow's recommendations lead to changes in public health practices?	
6. What were the social and economic factors that influenced medical advancements? <b>Red</b> Amber	Green
Can you discuss the relationship between industrialization and public health?	
Are you able to identify key social movements that impacted medical reforms?	
How did class disparities affect access to medical care and innovations?	
7. What were the key features of hospital care in the 18th and 19th centuries? Red Amber	Green
Can you compare the conditions in hospitals before and after reform efforts?	
Are you able to identify key figures, such as Florence Nightingale, and their contributions to hospital care?	
How did changing attitudes towards nursing and patient care affect hospital practices?	
8. How did the understanding of infection and its prevention change during this period? Red Amber	Green
Are you able to explain the importance of Koch's Postulates in identifying infectious diseases?	
Can you discuss how the development of antiseptics transformed surgical practices?	
How did public health initiatives address the issue of infection?	
9. What challenges did medical practitioners face in combating diseases like cholera and <b>Red Amber</b>	Green
smallpox?	
Can you identify the main obstacles to effective disease prevention and treatment?	
Are you able to discuss the societal responses to epidemics and pandemics during this time?	
How did advancements in science and technology help overcome these challenges?	
10 In what ways did vassingtion become a grussil tool for public health? Bod Ambor	<b>C</b>
To: In what ways did vacchation become a crucial tool for public health?	Green
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# Geography Year 9 Term 2 – Rivers

In this topic, you'll explore how rivers change from their source to their mouth, and how they shape the landscapes they pass through. Rivers are dynamic systems that go through different stages, from the steep upper course to the wide, meandering lower course. You will learn about the processes of erosion, transportation, and deposition that sculpt river landforms. We'll also investigate how both natural and human activities can lead to flooding, and what can be done to reduce the risks of flooding. By the end of the topic, you'll be able to explain how rivers transform landscapes and the various ways we can manage them.

#### **Prior Learning Links**

- Year 7 Term 5 Rivers and flooding.
- Processes for landform formation revisited in Year 8 Term 3 coasts.
- Rivers also examined in terms of flooding context, and the impacts / conflicts with humanity in Year 7 Term 1, Term 3, Term 6 and in Year 8 Term 6.

#### Future Learning Links

- Water and Rivers a key resource for humanity (moving directly on from Term 1).
- Sets foundations for the step-by-step formation of physical landforms, with the processes involved, seen across physical geography.



#### **KEY VOCABULARY**

- Fluvial Related to rivers and the processes associated with them, including erosion, transportation, and deposition.
- Profile The shape of a river's course, both in terms of its long profile (from source to mouth) and cross profile (from one side of the valley to the other).
- Upper/Middle/Lower Course The different sections of a river's journey from its source in the highlands to its mouth where it flows into the sea.
- Vertical/Lateral Erosion Vertical erosion deepens a river valley, particularly in the upper course. Lateral erosion widens the river valley, particularly in the middle and lower courses

- **Transportation** The process by which a river carries its load (sediment and other materials) downstream.
- **Deposition** The process where a river drops the material it has been carrying, usually when it loses energy.
- **Source** The starting point of a river, often in the mountains or hills.
- **Mouth** The point where a river meets the sea or a lake.



- slopes. Lateral erosion increases, forming meanders.
- Lower course: The river is at its widest and deepest, with the fastest flow. Deposition dominates, creating features like floodplains and deltas.

2.	How do processes change the shape of a river?	Red	Amber	Green
Riv	vers shape the land through erosion transportation, and deposition			

Rivers shape the land through erosion, transportation, and deposition.

- **Erosion:** Vertical erosion in the upper course carves out deep valleys. Lateral erosion in the middle and lower course creates wider valleys and meanders.
- **Transportation:** The river transports material downstream through traction, saltation, suspension, and solution.
- **Deposition:** When the river loses energy, it deposits material, building up features like levees and deltas.

# Types of Erosion in Rivers:

- 1. **Hydraulic Action**: The force of water hitting the riverbanks and bed, compressing air in cracks and causing erosion over time.
- 2. **Abrasion**: Rocks and sediment carried by the river scrape against the riverbed and banks, wearing them away.
- 3. Attrition: Rocks and pebbles collide with each other as they're transported, breaking into smaller, smoother pieces.
- 4. **Solution**: Minerals in the riverbanks and bed dissolve in the water, contributing to erosion.

# Types of Transportation in Rivers:

- 1. Saltation: Small pebbles and stones are bounced along the riverbed by the flow of water.
- 2. **Suspension**: Fine, lighter particles like silt and clay are carried within the water, floating as they move downstream.
- 3. Solution: Dissolved minerals are transported invisibly within the water.
- 4. **Traction**: Large boulders and rocks are rolled or dragged along the riverbed by the force of the water.

3.	What makes a river so bendy?	Red	Amber	Green

Rivers become "bendy" or form meanders due to the process of lateral erosion and deposition.

- Water flows faster on the outer bend of a river, eroding the bank and creating a river cliff.
- On the inner bend, where the flow is slower, the river deposits material, creating a slip-off slope.
  Over time, this creates large meanders that can eventually form oxbow lakes when a meander is



**4. How does the river shape the land in the lower course? Red Amber Green**In the lower course, the river shapes the land primarily through deposition.

- **Floodplains** form when the river overflows its banks during flooding and deposits silt across the valley floor.
- Levees are raised banks that form along the sides of a river as it deposits sediment.
- **Estuaries** form at the river's mouth where freshwater meets seawater, often creating mudflats due to deposition of fine material.

5. What makes flooding worse – humans or nature?RedAmberGreenFlooding is caused by both natural factors and human activities.

- Natural causes: Heavy rainfall, snowmelt, and natural river processes can lead to flooding.
- Human causes: Urbanisation, deforestation, and poor agricultural practices can increase flood risk by preventing water from being absorbed into the ground.

Flooding can be worsened by altering the landscape or the river's flow, and both natural and human factors play a role.



# 6. How can we reduce the effects of flooding?

Hard Engineering Strategies

**Hard engineering** involves constructing physical structures to control natural processes. These methods are often expensive but provide a high level of protection.

Red

Amber

#### Examples:

- 1. **Dams and Reservoirs**: Large structures built across rivers to control water flow. Reservoirs store excess water, which can be released gradually to prevent flooding downstream.
  - $\circ\quad$  **Example**: The Three Gorges Dam in China.
- 2. Levees and Embankments: Raised banks along rivers that prevent water from spilling over into adjacent land. They confine the river to its channel even during high flows.
  - **Example**: Levees along the Mississippi River in the USA.
- Flood Walls: Concrete barriers built around urban areas to protect them from river flooding.
   Example: The Thames Barrier in London.
- 4. **Channel straightening**: The process of straightening and deepening a river channel to allow water to flow more quickly through urban areas, reducing the risk of local flooding.
  - **Example**: River channelization in the Los Angeles River.

#### Pros:

- **High level of protection**: These methods provide immediate, effective solutions, especially in densely populated areas.
- **Controlled water flow**: Structures like dams can regulate water release and generate hydroelectric power.
- Long-term solution: Hard engineering structures are typically built to last and can protect against extreme events.

#### Cons:

- **Expensive**: High initial costs for construction and ongoing maintenance.
- **Environmental impact**: Dams can disrupt ecosystems, fish migration, and sediment transport, while channelization may destroy natural habitats.
- **Can cause problems downstream**: Levees and flood walls may increase flood risk in other areas as water is funneled more quickly downstream.

#### **Soft Engineering Strategies**

**Soft engineering** focuses on working with natural processes to manage flood risk. These techniques are often cheaper and more sustainable in the long term.

#### Examples:

- 1. **Afforestation**: Planting trees in river catchment areas to reduce surface runoff. Trees intercept rainwater and promote infiltration, reducing the volume of water reaching rivers.
  - **Example**: Afforestation projects in the River Severn catchment, UK.
- 2. **Floodplain Zoning**: Restricting development in high-risk flood zones, allowing natural floodplains to absorb excess water.
  - **Example**: The use of floodplain zoning in parts of the Netherlands.

- 3. **River Restoration**: Restoring the river's natural meanders and wetland areas to slow down water flow and store excess water naturally.
  - **Example**: River restoration projects on the Rhine, Europe.
- 4. **Wetland Creation**: Developing wetlands to act as natural buffers, absorbing and holding excess water during flood events.
  - **Example**: The Somerset Levels wetlands in the UK.

#### Pros:

- **Sustainable**: These methods are environmentally friendly, enhancing biodiversity and natural habitats.
- **Lower cost**: Soft engineering typically has lower upfront costs and minimal maintenance compared to hard engineering.
- Adaptable: These methods can evolve with the landscape and are often more resilient to long-term changes such as climate change.

#### Cons:

- Lower level of protection: Soft engineering might not provide immediate protection against extreme flood events, making it less suitable for densely populated areas.
- **Slow impact**: Afforestation and river restoration can take years to have a noticeable effect.
- Land use limitations: Floodplain zoning and wetland creation might conflict with urban development or agriculture.

7.	What are the social, economic, and environmental effects of flooding?	Red	Amber	Green

Flooding can have devastating impacts:

- **Social:** Loss of homes, lives, and livelihoods.
- Economic: Damage to infrastructure, businesses, and the cost of repairs.
- Environmental: Destruction of habitats, pollution, and long-term damage to ecosystems.

Understanding these effects helps to highlight why flood management is so important.

HOME LEARNING TASKS	
Task Description	Done?
1. Learn key word terminology	
2. River Drainage Basin info poster	
3. Explore River landscapes in the UK - GCSE Geography Revision - AQA - BBC Bitesize	
4. Revision notes on causes of flooding Flood risk - the causes of flooding - River flooding -	
causes and management - Eduqas - GCSE Geography Revision - Eduqas - BBC Bitesize	

Religion Year: 9	What is the Inca	rnation?	Key words	<u>s:</u>
Big Questions         1. What is the Story of Jesus?	becoming Jesus. Incarnation literally m Christians, the incarnation shows that human. It is an essential part of belief i	that God took human form by eans 'to take on flesh'. For Jesus was fully God and fully n the <b>Trinity.</b>	<u>Trinity</u> – t describe t <u>Natural ev</u>	he trinity is the word used to the three persons of God. <u>vil</u> – is when suffering is caused by
<ol> <li>Who was Jesus?</li> <li>How is Jesus as part of the Trinity?</li> </ol>	What is the Cruc <u>The Gospel of Mark</u> Jesus is forced to carry his cross to Golgo Simon of Cyrene, a passer-by, is made to	<b>ifixion?</b> (15:21–41) tha, the place of his crucifixion, but carry it when Jesus becomes	<u>Moral evil</u> – moral evil is when suffering occurs due to human. For example, mu bullying, stealing etc.	
<u>What is Judgement Day?</u> Some Christians believe that God judges each soul as soon as a person's body dies. Souls are then sent straight to Heaven or Hell, rather than waiting for a Day of Judgement . This is called personal <b>judgement</b> . Some Christians believe that people will be judged again at the Last Judgement, at the end of time.	<ul> <li>exhausted.</li> <li>At Golgotha, Jesus is offered wine mixed with myrrh to reduce his discomfort, but he does not take it.</li> <li>The soldiers take his clothes and gamble to decide who gets what.</li> <li>Jesus is crucified in the morning alongside two criminals, who are nailed to crosses either side of him. Many passers-by insult and mock Jesus.</li> <li>At noon, darkness settles over the land. Then, at three o'clock in the afternoon, Jesus cries out, "Eloi, Eloi, lema sabachthani?", meaning My God, my God, why have you forsaken me?</li> <li>At the moment of Jesus' death, the curtain of the Temple rips in two from top to bottom. A Roman soldier who witnesses Jesus' death exclaims, 'Surely this man was the Son of God!'</li> </ul>		<ul> <li>bullying, stealing etc.</li> <li><u>Creation</u> – Creation is the word used we describing how the world came into be <u>Creationist</u> – a creationist is someone we believes in the biblical account of creat in Genesis 1.</li> <li><u>Incarnation</u> – God made flesh – (Jesus)</li> <li><u>Crucifixion –</u> Refers to Jesus being kille the cross.</li> </ul>	
What happens in Heaven is described as <b>eternity</b> in the presence	the Afterlife? of God, as Heaven is a state of being		<u>Ascension</u> – refers to the event where J physically ascended to the heavens.	
be reunited with God and united with Christ. Since God has given human beings <b>free will</b> , th reject God. This is the basis of the idea of Hell. place of eternal fire that symbolises pain and so refusal to accept the happiness that God wants opposite of Heaven - it is eternity in the absence	ere must be an opportunity for people to Hell has traditionally been depicted as a uffering. This is seen as the result of the people to share with him. Hell is the se of God.	What is the Ascension 40 days after his resurrection physically ascended into the in front of 11 of his discip	<b><u>n?</u></b> In Jesus heavens ples.	Quick facts! Holy book – The Bible (500CE) Age of religion 2027 years old (roughly) Place of worship – Church Name of followers – Christians Number in the UK - 31,479,876

# Subject Art Year 9 Term 1 & 2 – 'Drawing an and Printmaking'

Term Focus – Broaden printmaking skills learned in Year 8, through experimenting with a range of printmaking techniques. Investigate how artists make use of printmaking techniques and processes in their work. Select and develop ideas appropriate for printmaking.

#### Prior Learning Links

Throughout KS3 students learned about the Formal Elements and developed basic skills in Observational Drawing, Tone, Colour 3D, Printmaking, creating 3D work inspired by other cultures, composition planning and painting. All projects were underpinned the processes of recording, developing, refining, evaluating and realising intentions and they will continue to repeat and further embed these in their GCSE projects beginning with 'Drawing and Printmaking'. Future Learning Links Drawing and Painting Techniques and Processes-Build on knowledge of colour theory learned in Year 7. Develop skills in more advanced painting techniques and media such as working with acrylics. Investigate how artists use colour and painting techniques to communicate mood and atmosphere in art. They will transfer this knowledge into their own paintings.



The Ultimate Guide on Different Art Mediums – ARTDEX

KEY VOCABULARY	
KEY WORDS	KEY SUBJECT TERMINOLOGY
I will learn the meaning of Relief/Repeat/Texture/Sequence/Reduction/Pattern/Intaglio/	Record Develop
Mono/Stencil/Collagraph/Line/Positive and Negative space within the context of <b>Printmaking.</b>	Refine Realise Evaluate

1. How do artists use printmaking?	Red	Amber	Gre
			en

*Develop ideas through investigations, demonstrating critical understanding of sources (AO1):* 

#### I will learn how to confidently record...

• images and information appropriate for printmaking

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):

# I will learn how to confidently evaluate...

 artists using analytical writing skills and forming opinions



#### Introducing the German Expressionists



















**Top left to right:** Otto Mueller, Emil Nolde, Herman Max Pechstein, Ludwig Meidner, Karl Schmidt-Rottluff, Lovis Corinth, Max Beckmann and Lyonel Feininger.

Bottom left to right:

Erich Heckel, Ernst Ludwig Kirchner and Walter Gramatte

2.	Why is drawing important for printmaking?	Red	Amber	Gre
				en

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):

#### I will learn how to confidently record...

- images and information appropriate for printmaking
- using drawing and printmaking techniques
- building on my knowledge and understanding of how artists use printmaking techniques to create meaningful work
- ideas for a print

3. How does positive and negative space work in printmaking?

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

#### I will learn how to confidently develop...

• and broaden my knowledge and understanding of printmaking





Amber

Gre en

Red

4.	What does the term relief mean in printmaking and how can we	Red	Amber	Gre
	demonstrate it?			en

# Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

#### I will learn how to confidently develop...

- and broaden my knowledge and understanding of printmaking
- a range of compositions suitable for printmaking
- alternative ideas in response to a given theme, linking to artists work.
- my higher order thinking skills



5.	Can you demonstrate the reduction printing process?	Red	Amber	Gre
				en

# *Develop ideas through investigations, demonstrating critical understanding of sources (AO1):*

#### I will learn how to confidently develop...

- and broaden my knowledge and understanding of printmaking
- 6. Can you list the materials and equipment needed to make a lino Red Amber Green

# *Develop ideas through investigations, demonstrating critical understanding of sources (AO1):*

#### I will learn how to confidently develop...

• and broaden my knowledge and understanding of printmaking

Lino Ink Roller Lino cutting tools Bench Hook Paper Block Printing Ink Print Press



# Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

# I will learn how to confidently develop ...

• and broaden my knowledge and understanding of printmaking



en

Refine work by exploring ideas, selecting and experimenting with media, materials, techniques and processes (AO2):

## I will learn how to confidently refine...

- using images and information to create ideas for printmaking
- through experimenting with a range of printmaking techniques e.g. Relief, Mono and Collagraph.
- by selecting ideas to adapt and improve into a final idea



Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language (AO4):

# I will learn how to confidently realise intentions...

• using print techniques and processes.

9.	Why do we need to evaluate our print work?	Red	Amber	Gre
				en

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):

## I will learn how to confidently evaluate ...

- analysing and reflecting on the development of my own work
- making connections between my own artists' work
- suggesting ways I could I improve

# **EVALUATING ARTISTS' WORK**

- 1. Describe the piece of art you are looking at
- 2. What is the name of the artist or type of art?
- 3. What art movement or culture does the art link to?
- 4. Research and list 5 or more things about the artist or culture?
- 5. What important things have happened in the country that the art comes from?
- 6. What has influenced the art E.g. other artists, people, personal experiences, society, culture, politics, gender, colour, pattern, movement, religion, travel, places, objects etc.
- 7. Describe the materials used to make the art
- 8. How has the art been produced?
- 9. What is being communicated through the art?
- 10. Which of these words best describes the mood of the picture? EMOTIONAL/POWERFUL/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/ INTENSE/SCARY can you think of any other words?
- 11. What do you like or dislike about the picture? Explain your reasons...

# **ANNOTATING YOUR OWN WORK**

- In this artwork I was trying to...
- The artist/culture that has influenced my work is...
- The source I have used is...
- I found the source I used at...
- In this artwork I used the technique of...
- The media I have used is...
- I like/dislike this piece because...
- My idea links to the theme because...
- I can improve this piece by...
- I could develop this work further by...

## END OF PROJECT EVALUATION

- 1. Describe each stage of the project from start to finish
- 2. What media did you use to produce your work? E.g. Paint/Pencil/Clay etc.
- 3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
- 4. Which artist's culture have you looked at?
- 5. Write down 2 or more similarities between your work and the artist's work.
- 6. Which piece of your work best shows the Artist's style or the influence of another culture and why?
- 7. Describe some of your own ideas...
- 8. Have you used a primary or a secondary source?
- 9. Have you included the secondary source in your work? Where did you find it?
- 10. Imagine your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
- 11. Explain any other influences on your work e.g. personalities *(including your own)*, places, memories, objects, politics, events, activities, religion, fact, fiction etc.
- 12. Describe how your work links to the project theme?
- 13. Explain what you have done well...
- 14. Explain how you could improve...
- 15. What would you do differently, if you were to repeat any part of this project?



Think!

See?

Know?

Think?

# Homework- tasks linked to 'Drawing and Printmaking' (2 hours per cycle)

#### How do artists use printmaking?

Below are two very different prints by two different artists, it is easy to spot the differences but if you study the images carefully you will also notice some similarities as well. Complete the following tasks:

- Describe 3 or more differences
- Describe as many similarities as you can
- Do a drawing of the one you like best
- As an extension research the artists and create a presentation about them



## Why is drawing important for printmaking?

Drawing allows us to show our thinking and planning, before committing to a final decision; in much the same way as you have to show your working outs for a maths solution: Draw a set of four drawings that could express happiness without using a smiling face: then refine the drawing that best expresses happiness.

Can you describe a situation where positive and negative space could be used?

Signs and symbols often rely on the brain to understand negative space to fully understand the whole image. Design your own set of symbols that use negative space imaginatively...





# Things you could use to inspire this:

- Your initials
- Parts of the
- body
- Your
- surroundingIndoor and
- outdoor signs
- Objects

Done ? What does the term relief mean in printmaking?

Comprehension exercise:

## Read the following text then fill in the blanks below:

# READ ME...

A relief print is a printmaking technique that allows a design to be repeated multiple times. Here's how it works:

- A design is created on a surface called a printing plate.
- The printing plate can be made from materials like wood, linoleum, or rubber.
- Ink is applied to the raised parts of the design on the plate.
- The plate is then rolled or painted with ink and pressed onto paper or fabric.
- The ink transfers to the paper, creating a mirror image of what's on the plate.

Common relief printing techniques include **Woodcut**, **Lino cut**, **Letterpress** and **Rubber and Metal Stamping**. It's a versatile method that has been used for centuries!

Did you know? Relief printing dates back over 2000 years, with woodblock printing being used in ancient Egypt and China!

# COMPLETE ME...

A ..... is a printmaking technique that allows a design to be repeated ...... times. Here's how it works:

- A ..... is created on a surface called a **printing plate**.
- The printing plate can be made from materials like wood, ....., or rubber.
- ..... is applied to the ..... parts of the design on the plate.
- The plate is then ..... or painted with ink and ..... onto ..... or fabric.
- The ink transfers to the paper, creating a ..... of what's on the plate.

Common relief printing techniques include **Woodcut**, ....., **letterpress** and **rubber and metal stamping**. It's a versatile method that has been used for centuries!

Did you know? Relief printing dates back over ...... years, with ...... printing being used in ancient Egypt and China!

WORD BANK: Print, Multiple, Printing, Linoleum, Relief, Raised, Rolled, Pressed, Paper, Transfers, Image, Lino cut, Woodblock, Mirror Image, Relief, Design, 2000, Ink.

### Can you demonstrate understanding of the reduction printing process?

Printmakers Breaking the Mold: Dave Lefner - YouTube

• Watch the video and then list 3 things you have learned about the Reduction Printing Process:

.....

.....

• Now do a drawing of one of these images by Dave Lefner

• Then evaluate the picture using the 'See Know Think' Evaluation





.....





Can you list the materials and equipment needed to make a lino print?

Label the images of the tools below: giving a brief explanations on how to use them correctly.



My Favourite Print is the...... and it was made by.....

What does it mean to realise intentions in printmaking?

- Go back to the examples of Dave Lefner's lino prints and design 3 rough ideas for a print inspired buy his work.
- Complete one best design

Inspirational pictures only (you could also use your own initials and personal items):



## Why do we need to evaluate our print work?

It is important to reflect on the creative processes we explore considering what, how and why we have completed the work. Evaluating your work will help you see what has gone well, what could be better and where you could take the idea next.

• Evaluate your work using What, How and Why...

Watch the videos below and complete the following Quiz:

# German Expressionist Art Quiz



1. When did the term German Expressionism become commonly used?

-----

2. Which very famous artists (who lost his ear) was said to have influenced the German Expressionists?

-----

3. What was emphasised above all else in their artwork?

-----

.....

4. Where did these artists emerge from?

5.	What does Die Brucke mean?	
6.	What does Die Blaue Reiter mean?	
7.	When did New Objectivity begin, before or after WWI?	
8.	What did the Nazi's label Modern Art as?	
9.	What happened to Ernst Ludwig Kirchner after the German Expressionists were exiled?	
10	. What did German Expressionism evolve into later in the 1970s?	
	https://www.youtube.com/watch?v=v3sec7eG0wk	
	https://www.youtube.com/watch?v=MLhDLL3MjSs	
	Printmaking Techniques Explained	

#### **Reduction**

Reduction printmaking is the process of **creating a multilayered or coloured print using only one block or piece of lino**. a reduction print is made up by gradually carving away more lino after each layer is printed. the process of carving away and printing is repeated on the same block until the final print is built up.

#### <u>Mono</u>

Monoprinting is a **one-off fine art printing technique** that uses a sheet of glass or Perspex to transfer a unique design onto a sheet of paper. No two monoprints are alike, and the design created can only be used once ('mono' = single).

#### **Collagraph**

A collagraphis a **unique printmaking technique that uses textured materials to create a printing plate**. This plate is then inked and used to produce beautiful prints with a rich variety of textures and depths.

#### <u>Intaglio</u>

Intaglio printing is a form of printing that involves **carving an image on a metal plate**, which is then covered in ink and transferred to paper. The marked line holds the ink and creates the image. The name intaglio derives from the Italian intagliare, meaning "to carve" or "to engrave", a reference to cutting the image into the metal plate.

# Media Year 9 Term 2 – Cinematography +

# **Audience**

#### Term Focus -

#### **Prior Learning Links**

**KEY VOCABULARY** 

Term 1- Intro to Media

1. What is an extreme wide shot?

# **Future Learning Links**

Year 9 Term 3- Practical Skills



#### **KEY WORDS/ SUBJECT TERMINOLOGY**

**Cinematography-** The art of filming (the posh name for how you set the camera up when you record)

Framing- How the subject is placed within the frame e.g. close or far away

**Angle-** The angle the camera is pointing (up=low/down=high)

Movement- How the camera is moving when it records

Audience- People who consume media products

Demographic- a way of dividing up people into different groups based on their statistical data

Psychographic - a way of dividing up people based on the way they think

Red

This is where the camera is far away from the subject it is filming and contains a lot of the background/setting. It might be



used at the start of a sequence to show the audience where the sequence is going to take place and where the character is in the setting. This is known as an establishing shot in that case.

What is a wide shot? 2.



Red Amber Green

Amber

Green

This is where the character is fully in shot (head near the top and feet near the bottom. However you can still see the background in a lot of detail.

What is a medium shot? 3.

A medium shot would show the character from the waist to the head- half the person.

It might be used if you wanted to show someone speaking but also to get across their body language too.



What is a close up? 4.



A Close up is when the camera shows mainly character's head/face. It would often be used for emotions.

It could also be used to show specific props in detail like the watch below:







When the camera focuses in on a specific part of the subject this is called an extreme close up. This counts with props too:



Amber

Green

6. What is a high angle?

When the camera is placed above the subject/s and looks down at them this is a high angle. It is often used to make the subjects look small and weak.



Red

7. What is a low angle?

A low angle is where the camera is placed low down and looks up at the subject. This makes the subject look strong and powerful.



8. What is camera tracking?



Red Amber

Green

If the subject is moving and the camera moves with them as they go, this is called tracking. You might see it referred to as trucking or dollying as well.

However we will refer to tracking as when the camera is moving alongside the subject and dollying as the camera moving forwards or backwards.

#### 9. What camera panning?

. . . .

If the subject is moving but the camera stays still and instead just swivels on the spot to follow them this is called panning. If it is up and down instead of side to side then it is called a tilt.

10. What does audience mean and what is a demographic profile?

In its most basic sense, these are the people who consume media products. They watch TV, read magazines and play computer games.

However we need to consider the make up of different audiences. This is the demographic profile of the audience. For example the demographic profile of someone who reads the Guardian Newspaper, will be different from someone who plays Fortnite.

In a demographic profile we consider things such as: Age/gender/location/social class/ education/race/religion

11. What is a psychographic profile?		Red Amber Green
In a demographic profile, we can separate people out based on statistical data, in a psychographic profile, we try to separate people in groups based on how they think. There are 7 different groups. Think MASTERS!	Resigned Struggler	Rigid, strict, authoritarian and chauvinist values, oriented to the past and to Resigned roles. Brand choice stresses safety, familiarity and economy. (Older) Alienated, Struggler, disorganised - with few resources apart from physical/mechanical skills (e.g. car repair). Heavy consumers of alcohol, junk food and lotteries, also trainers. Brand choice involves impact and sensation.
Mainstreamer Acriter	Mainstreamer	Domestic, conformist, conventional, sentimental, passive, habitual. Part of the mass, favouring big and well-known value for money 'family' brands. Almost invariably the largest 4Cs group.
Succeeder The Resigned	Aspirer	Materialistic, acquisitive, affiliative, oriented to extrinsics image, appearance, charisma, persona and fashion. Attractive packaging more important than quality of contents. (Younger, clerical/sales type occupation)
Explorer Reformer	Succeeder	Strong goal orientation, confidence, work ethic, organisation support status quo, stability. Brand choice based on reward, prestige - the very best . Also attracted to 'caring' and protective brands stress relief. (Top management)
Struggler	Explorer	Energy - autonomy, experience, challenge, new frontiers. Brand choice highlights difference, sensation, adventure, indulgence and instant effect - the first to try new brands. (Younger - student)
	Reformer	Freedom from restriction, personal growth, social awareness, value for time, independent judgement, tolerance of complexity, anti-materialistic but intolerant of bad taste. Curious and enquiring, support growth of new product categories. Select brands for intrinsic quality, favouring natural simplicity, small is beautiful.(Higher Education)
Red Amber Green		
HOME LEARNING TASKS		
Task Description		Dana

Task Description	Done?
Watch a film and try and spot the different shots in that film	
Write up 3 shots you saw and try to explain why they used those shots	
Research a TV show and work out the demographic profile of the audience	
Find a TV advert and decide which psychographic profile it is appealing to.	



Amber Green

#### Drama Year 9 Term 2 Performing

#### <u>Term Focus</u>

You will learn how to:

- Build upon your understanding of performance skills both through theoretical and practical explorations.
- Develop your understanding of Melodrama and Pantomime and the use of stock characters
- Perform a scripted Pantomime whilst collaborating with others developing your teamwork, communication and problem-solving skills.
- Evaluate your own work in addition to the work of your peers.

#### Prior Learning Links

- Future Learning Links
- Key Stage 3 lessons will have encouraged pupils to develop a basic understanding of performance skills and drama techniques creating a foundation of practical knowledge which can be built upon at Key Stage 4.
- Understanding of the following:
  - History of Theatre Greek / Melodrama
  - Theatre Roles
  - How to approach a script performing scripted and devised
  - Interpreting a script analysis of a performance including all constituent features

#### <u>Future Learning Links</u>

- Key skills will continue to be developed in preparation for Unit 1 and Unit 2.
- Pupils' command of vocabulary is the key to their learning and progress across the whole curriculum.
- Promotes confidence and resilience across the wider school.

<u>Keywords</u>	Pantomime Ingredients
Narration	Exaggeration
Thought tracking	Comedy
Pantomime	Mixed gender roles
Exaggeration	Audience participation
Audience Participation	Elaborate costumes
Genre	<ul> <li>Good characters traditionally enter from</li> </ul>
Character Structure	stage right
Levels	<ul> <li>Villains traditionally enter from stage left</li> </ul>

# **Characterisation**

There are 3 ways that an actor can become a character;

- Face Facial expressions
- **Body** Gestures, posture, proxemics, walk
- Voice Pitch, pace, use of pause, accent, tone, idiolect

As well as this, the actor could use theatrical skills such as costume, props and make up. An actor can NOT change their own personality as this is integral to them as a person, however by changing the things listed above you can portray a different personality through a character

1. What transferrable Red skills will you develop in Drama?

Drama is a subject that allows you to develop key skills that you can use in all areas of your life. These skills are what employers look for when you are applying for a job. You may not be someone who would like to be an Actor but all the skills you will develop in your lessons are important life skills for the future.

Teamwork	Each lesson you will work in grou to work with your peers. You will to create a performance to perfo	ups to complete a perform need to contribute ideas rm to the class.	ance task. You will need as well as listen to others
Creativity	You will be required to think of in exciting for the audience.	naginative ideas to create	a performance which is
Problem Solving	When given a challenging task, you will need to work with your peers to overcome any issues you face. You will also need to navigate working with a range of different people with a variety of skillsets. You will need to problem solve in order to get the task completed.		
Leadership	Leadership skills will be developed when devising your own performances. Being able to take lots of ideas and find a way to move forwards with the task will encourage you to take charge.		
Confidence	Confidence will be developed in a variety of ways. You will be expected to contribute ideas in class discussions, group work and when evaluating each others work. You will be expected to perform to your peers every lesson in addition to working with a variety of different people. Confidence is a key skills which will be developed.		l be expected to n evaluating each others lesson in addition to key skills which will be
Resilience	You will be challenged outside of your comfort zone but being able to continue to push yourself every lesson will result in your resilience developing. Performing to an audience, working with others and speaking		
Communication	You will be expected to be able to communicate politely with one another in group work and class discussions.		
2 What is	Red	Amber	Green

 2. What is
 Red
 Amber
 Green

 Melodrama?
 Image: Comparison of the second sec

Melodrama was a form of Drama popular in 19th century. The word is a mixture of two words *Melody* and *Drama.* 

The term originated from the early 19th-century French word *mélodrame*, which comes from the Ancient Greek words *melos* (music) and *drān* (to do or perform).

A good melodrama is always sentimental. Despite what happens in the plot and the dangerous things that happen to the characters, the hero always marries the heroine, and the bad guy always gets caught.

3. What is a stock	Red	Amber	Green
character?			

A stock character is a character typically found in Pantomime. They are:

- A Dame
- A villain
- A comedy sidekick
- A Hero
- A Heroine

4. What is a though track?	t Red	Amber	Green

Amber

A **<u>thought track</u>** is when a character steps out of a scene to address the audience about how they're **<u>feeling</u>**. Sharing thoughts in this way provides deeper insight into the character for an audience.

It's an effective way of showing greater depth about one's character to the audience. Stopping the action and sharing thoughts enables the actor/audience to fully understand how the character thinks or feels at any given moment.

The character must **speak directly to the audience** and not the other characters in the scene.

5. How does costume enhance a character?	Red	Amber	Green		
Costume helps the audience to better understand a character's situation. For example; A happy character might wear a bright yellow dress, a poor character might wear dirty, ripped dungarees and an old person might wear a long nightdress and a night cap. The key components that make up 'costume' are: •Shoes •Style •Material •Makeup •Pattern •Accessories •Colour •Hair •Length •Garment					
	SSMM P	ACH LG			
6. What is narration?	Red	Amber	Green		
Narration is where there is a <b>spoken commentary</b> for the audience about the action onstage. A narrator is like a storyteller informing the audience about the plot. Narration is useful in making a story more understandable for the audience. It also makes the drama <b>stylised</b> . This means that it becomes non-naturalistic because the audience are aware throughout that a story is being told and the <b>fourth wall</b> is broken. This is therefore used in abstract theatre. Narration can also save time when information is given to the audience, rather than showing everything in scenes. A narrator is not part of the plot themselves.					
A narrator is not part of	tion can also save time wi g in scenes. The plot themselves.	nen information is given	to the audience, rather		
A narrator is not part of	tion can also save time w g in scenes. <sup>T</sup> the plot themselves. <b>(S</b>	nen information is given	to the audience, rather		
A narrator is not part of HOME LEARNING TASK Task Description	tion can also save time wi g in scenes. The plot themselves. <u>(S</u>	nen information is given	to the audience, rather Done?		
### Dance Year 9 Term 2 Dance – Skills for Performance and Expressive/Mental Skills

### Term Focus

You will learn how to:

- Develop basic dance skills which link to expressive/mental skills.
- Perform to peers using knowledge developed of physical and expressive skills
- Evaluate your own work and the work of others using correct terminology.
- Develop the link between the knowledge developed through practical exploration and how this applied to exam style questions from a theoretical standpoint.

### Prior Learning Links

 In Term 1 students will have developed basic dance skills in relation to safe practice and used physical skills to perform to peers and consider expression.

### Future Learning Links

- Key vocabulary underpins all performance elements of the course. This will lead into Term 3. Students will be expected to build upon these skills theoretically and practically.
- Safe practice is an integral part of all practical lessons. This will feed into all lessons of KS4.

### **KEY VOCABULARY: PHYSICAL SKILLS**

## Physical Skills enable a dancer to physically complete the action therefore giving an effective performance.

### TOP TIP: We use BASIC SPEC FM to help us remember these skills.

Balance	A steady or held position achieved by an even distribution of weight.
Alignment	The correct placement of body parts in relation to each other.
Stamina	The ability to maintain energy over a period of time.
Isolation	An independent movement of part of the body.
Control	The ability to stop and start movement, change direction and hold shape efficiently.
Strength	Muscular Power.
Posture	The way the body is held.
Extension	The lengthening of muscles or limbs.
Coordination	The ability to move 2 or more body parts at the same time efficiently.
Flexibility	The range of movement at a joint.
Mobility	The ability to move fluently from movement to movement.

### KEY VOCABULARY: EXPRESSIVE SKILLS

Expressive Skills are aspects that contribute to performance artistry and that engage the audience.

### TOP TIP: We use FAT FROGS POUNCE MASSIVELY SIDEWAYS SOUTH to help us remember these skills. FFPMSS

Facial Expressions	The use of the face to show mood, character or feeling.
Focus	The use of the eyes to enhance performance or interpretative qualities.
Projection	The energy the dancer uses to connect with and draw the audience in.
Musicality	The ability to make the unique qualities of the accompaniment evident in performance.
Sensitivity to Other Dancers	Awareness of and connection to other dancers. EG: Timing.
Spatial Awareness	Consciousness of the surrounding space and its effective use .

1. What are expressive skills in Dance?	led	Amber	Green
Expressive skills are aspects that contribute to performance artistry that engage th	ie au	dience.	
Top tip – we use Fat Frogs Pounce Massively Sideways South to help us remember	per th	ese skills:	
Eacial expressions Eocus Projection			
<u>M</u> usicality <u>S</u> ensitivity to other dancers <u>S</u> patial awareness			
2. What are mental skills in Dance?	led	Amber	Green
Mental skills are aspects of a performance/rehearsal process that allow a dancer to point where they are mentally able to perform.	o be a	able to ge	t to the
<b>Top tip 1</b> – we use McFlurries Can Cause Coughing to remember the mental skills <b>performance</b> :	for d	lance	
<u>M</u> ovement memory <u>C</u> ommitment <u>C</u> oncentration <u>C</u> onfidence			
<b>Top tip 2</b> – we use Massive Snails Play Randomly Round Caves to recall mental s <b>process</b> :	skills	for dance	
Mental rehearsal Systematic repetition Plan a rehearsal Rehearsal discipline Response to feedback Capacity to improve			
3. What are technical skills	led	Amber	Green
When creating a motif we must consider technical skills. It is not just about the move consider other things too. We remember these through <b>DARRTS</b> :	veme	ent, we ne	ed to
<ul> <li>Dynamic content (speed, strength and flow)</li> <li>Action content (the five basic body actions – jump, turn, travel, gesture, still</li> <li>Relationship content (who the movement is performed with, e.g. lead and flow)</li> </ul>	lness low, c	) contact, m	irroring)

- Rhythmic content (repeated patterns of sound or movement)

<ul> <li>Timing content (the use of time or counts when matching movement to sound)</li> <li>Spatial content (where the movement is being performed, e.g. direction, pathway, size, lev</li> </ul>	els)
4. What is action content? Red Amber	Green
<ul> <li>Action content refers to the movement itself performed by the dancer. Action content is required in motif as without it the dancers would not have anything to perform. A motif can be developed through action content through the following ways:</li> <li>Add an action</li> <li>Minus an action</li> <li>Repeat an action</li> <li>Reorder actions</li> <li>Change body parts</li> </ul>	ugh
5. What is dynamic content? Red Amber	Green
Dynamic content refers to how a movement is performed specifically focusing on speed, strength and flow.  Speed – the rate at which something moved  Strength – the level power behind the action performed  Flow – the state of changeability	
6. What is spatial content? Red Amber	Green
Space refers to where the movement is being performed: <u>Spatial Design</u> – where you are in the space (centre stage, upstage right, downstage right etc) <u>Levels</u> – where the movement is in relation to height (floor work, low level, mid-level, high level ar the air) <u>Direction</u> – where are you facing (front/back/left/right/diagonal)? <u>Pathway</u> – the path in which the movement follows – side to side, front to back, zig-zag and circul <u>Size</u> – how big or small the action is and how much space is being used – arm circle/shoulder circul	nd in lar) cle
7 What is relationship content?	Green
Relationship content refers to who the movement is performed with. If a dance is performed by a s relationship content cannot be applied. If there are 2 or more dancers, it can be included in a performance. Relationship content includes: Lead and Follow – following an responding to a dancer's actions Complementary – similar movements Contrast – movements with nothing in common Formations – positioning of dancers in the space Contact – use of physical touch Mirroring – reflection Action and Reaction – a physical response to an action Accumulation – the gathering of movements and additional dancers Counterpoint – phrases being performed simultaneously	soloist,
HOME LEARNING TASKS	
Task Description	Done?
Use 'Look, Cover, Write, Check' to learn the Key Vocabulary	
Identify and define each expressive skill. Provide an example of how each expressive skill could be used.	
Identify and define each mental skill. Why is each skill important?	
Identify and define each technical skill.	
Watch a dance clip on YouTube – identify as many of the 5BBA as you can.	

Evaluate the movement you have created this term and discuss how you have included	
elements of action content, spatial content and dynamic content	

<u>Music Year 9 Te</u> Popular M	e <u>rms 1 &amp; 2</u> usic	
Term Focus         You will learn how to:         -       develop your knowledge and und performing         -       perform a piece of popular music         -       develop an understanding of pop         -       listen to and identify feature of po	erstanding of music through ular music pular music	
<ul> <li>Year 7 Term 3&amp;4 Keyboard Skills – students will have explored some four chord popular songs</li> <li>Year 8 Term 1&amp;2 Ukulele Skills – students have learnt basic chords on the ukulele and performed popular songs</li> <li>Year 8 Term 5&amp;6 – students have explored popular music structures and features and explored writing popular songs</li> </ul>	<ul> <li>Component 1 – all students will perform two pieces of music, at least one must be as part of an ensemble</li> <li>Component 3 – students will be assessed through a written/listening examination that will assess their knowledge of AoS4: Popular Music</li> </ul>	

KEY VOCABULARY				
KEY WORDS	KEY SUBJECT TERMINOLOGY			
Solo: a song or piece of music	Musical elements: the building blocks of music that			
performed by a single performer. This	include dynamics, tempo, texture, timbre and pitch			
can be accompanied or unaccompanied				
Dynamics: the volume that notes	<b>Popular music:</b> music that is popular at a given time			
should be played/sung	and appeals to a wide audience			
<b>Tempo:</b> the speed or pace of the music	Music technology: the incorporation of technology,			
	such as computers and software, to perform and			
	create music. It could include DJ-ing and sequencing			
Texture: how melody, harmony and	Musical arrangement: altering or adapting an existing			
rhythm are combined in music to create	piece of music through changing musical elements,			
layers of sound	structure or the instruments used			
Timbre: the type of sound produced by	Musical ensemble: a group of people who perform			
an instrument or a voice	instrumental or vocal music together			
Pitch: how high or low a note sounds	Musical accompaniment: the music that plays in the			
	background to support a melody			
Structure: the order the different	Technical control: the ability to perform with secure			
sections of a song or piece of music are	instrumental/vocal technique, control of tuning and			
played in (e.g. verse/chorus/intro)	tone and projection			
Harmony: more than one note/pitch is	Musical expression: a performance that shows good			
played or sung at the same time	communication of the feeling of the piece of music and			
	effective balance between performers			
Unison: one sound. I wo or more	Stylistic awareness: successfully include stylistic			
people play/sing the same pitch	features relevant to the genre of music in a			
Diff. a cataly repetitive malady in ser	performance			
<b>KIIIT:</b> a catchy, repetitive melody in pop	race and fluency: a musical performance that is			
music	accurate and at an appropriate tempo			

### 1. What are some common pop music structures?

### Red Ambe Green

Green

### Verse-Chorus Structure

Pop songs often start with an intro that uses the best bit from the song to grab the listeners' attention. Many pop songs contain the following sections:

Intro: The opening section that sets the stage for the rest of the piece.

**Verse**: A section where the melody may remain the same but the lyrics change with each repetition.

**Chorus**: A recurring section that usually contains the main theme and is often more memorable.

**Bridge**: A contrasting section that connects different parts of the song, providing variety and a break from the repetitive sections.

Outro: The concluding section that wraps up the piece.

A lot of pop songs follow this structure: intro - verse – chorus – verse – chorus – bridge – chorus - outro

Find more information here:



### Strophic Form

In strophic form there is no chorus and the music for each verse remains the same (although the lyrics change). Examples include *The Times They Are A-Changin'* by Bob Dylan and *Blue Suede Shoes* by Carl Perkins.

### 32-Bar Song Form

These pop songs contain four 8-bar sections, Sections 1,2 and 4 have the same melody but section 3 has a contrasting melody. This creates an AABA structure. A famous example of a pop song with this structure is *Yesterday* by The Beatles.

### 2. What are some features of vocals in pop music? Red Ambe

Voices in pop songs are very important and you will need to know about the lead vocals (the lead singing usually sings the melody) and the backing vocals (backing singers usually sing the harmonies).

Some vocal features in pop music are:

a capella - singing with no instrumental accompaniment
vibrato – when singers voices wobble up and down slightly in pitch to make a warm sound
falsetto – when (usually) men make their voices go really high
portamento – sliding from one note to another
scat – improvising using made up words (e.g. 'doo' or 'dat')
riffing – when singers add decoration to the main tune
belting – singing notes at a louder volume than normal
rapping – lyrics are spoken or chanted to a rhythm
beatboxing – using the voice to make percussive sounds to sound like a drum kit



Synthesizers can look just like the keyboards we use in school, or a little more complex with additional functions. They are electronic instruments that can create the sound of virtually any instrument you want (e.g. flute or violin).

5. How can I develop my instrumental/vocal skills?

l skills?

Red Ambe Green

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You may wish to begin by evaluating your skills from 1 (poor) to 5 (excellent) in the audit below:

Area	Skill	1	2	3	4	5
	<ul> <li>accuracy of pitch/intonation</li> </ul>					
	<ul> <li>accuracy of rhythm and timing</li> </ul>					
	<ul> <li>accuracy of expression and dynamics</li> </ul>					
	<ul> <li>accuracy of phrasing</li> </ul>					
	<ul> <li>range of notes (vocalists)</li> </ul>					
	<ul> <li>breath control (vocalists)</li> </ul>					
les	diction (vocalists)					
р	<ul> <li>following an accompaniment</li> </ul>					
inc	learning new pieces					
sch	projection					
Ľ	musical interaction					
	• accurate interpretation and reproduction of style					
	<ul> <li>awareness and communication with</li> </ul>					
	accompaniment in performance					
	<ul> <li>physical expression – body language, facial</li> </ul>					
~	expressions					
ior	• communication with the audience in performance					
at	<ul> <li>use of timing and rhythm for expression</li> </ul>					
ret	<ul> <li>use of phrasing for expression</li> </ul>					
rp	<ul> <li>use of dynamics for expression</li> </ul>					
Ite	confidence					
	stage presence					

Following your skills review, create some SMART targets to explain what you want to achieve with your performance skills:

S - Be **specific**. Describe and explain exactly what you want to achieve with your performance skills. Think about your technical vocabulary.

M - Make sure you can **measure** and track this target. How will you know that you are making progress?

A - Is this target **attainable** and realistic to achieve. Work towards something that is challenging but possible.

R - Is this a **relevant** target?

T - Check the **time frame** and set deadlines. Are you going to achieve this in the short or long term?

r

Create a rehearsal schedule, including SMART targets. See the example below:

### **Instrument Rehearsal Plan**

Musician's Name: Instrument: Date Range of Plan:

### 1. Goals and Objectives

### **Overall Goal:**

What is the primary aim of this rehearsal period? (e.g., preparing for a performance, improving technical skills, mastering a particular piece)

### 2. Rehearsal Schedule

Date	Time	Focus Area	SMART Target	Notes
MM/DD	HH:MM	E.g., Warm-up, scales	E.g., S: Practice C major scale. M: Play without mistakes for 3 minutes. A: Already know basics. R: Important for piece. T: Within this session.	Any additional notes
MM/DD	HH:MM	E.g., Piece practice	E.g., S: Master measures 20-40. M: Play at 80 bpm accurately. A: Challenging but manageable. R: Crucial for performance. T: By the end of the week.	Any additional notes
MM/DD	HH:MM	E.g., Technical exercises	E.g., S: Improve finger dexterity. M: Perform exercise without errors 5 times consecutively. A: Exercises are familiar. R: Enhances overall playing.	Any additional notes
MM/DD	HH:MM	E.g., Technical exercises	E.g., S: Improve finger dexterity. M: Perform exercise without errors 5 times consecutively. A: Exercises are familiar. R: Enhances overall playing.	Any additional notes
MM/DD	HH:MM	E.g., Repertoire review	E.g., S: Polish entire piece. M: Play through without stopping 3 times. A: Already learned notes. R: Ready for concert. T: By next rehearsal.	Any additional notes

### 3. Warm-up Routine

### Duration:

Exercises:

- 1. Breathing exercises: E.g., Deep breathing for 2 minutes
- 2. Scales and arpeggios: *E.g., Major and minor scales for 5 minutes*
- 3. Technical drills: E.g., Finger exercises for 5 minutes

### 7. How can I work successfully with other musicians? Red Ambe Green

r

For your GCSE assessment, you will have to perform at least one piece of music as an ensemble. There must be between two and eight of you playing or singing, but your part cannot be doubled. You have to perform a significant part and your group cannot be conducted. You must think carefully about which musicians in the class will work well with you to create a balanced performance.

Here are some key strategies to help you and your ensemble succeed:

### 1. Clear Communication

- Establish Roles: Ensure everyone knows their role in the group, whether it's a lead player or accompanist
- **Regular Meetings:** Hold regular meetings to discuss goals, schedules, and any issues that arise.
- **Open Dialogue:** Foster an environment where members feel comfortable expressing ideas and concerns.

### 2. Set Clear Goals

- **Short-term Goals:** Set specific, achievable goals for each rehearsal, such as mastering a particular section of music.
- Long-term Goals: Have overarching objectives, such as preparing for a performance or recording a piece.

### 3. Effective Rehearsals

- **Structured Plan:** Have a clear rehearsal plan with allocated times for warm-ups, individual sections, and full run-throughs.
- **Punctuality:** Start and end rehearsals on time to show respect for everyone's schedule.
- Focus on Problem Areas: Identify and spend more time on challenging sections rather than just playing through the entire piece.

### 4. Develop Strong Musicianship

- **Individual Practice:** Ensure all members are practicing their parts individually outside of group rehearsals.
- **Technical Skills:** Work on improving individual technical skills and ensemble playing techniques, such as dynamics, timing, and articulation.

### 5. Regular Feedback

- **Constructive Criticism:** Give and receive feedback in a constructive and positive manner.
- **Self-Evaluation:** Encourage self-evaluation and group reflection after rehearsals and performances to identify areas for improvement.

### 6. Performance Preparation

- **Mock Performances:** Hold mock performances to simulate the conditions of the actual event and reduce performance anxiety.
- **Stage Presence:** Work on stage presence and audience interaction as part of your rehearsals.

Red Ambe

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Green

The standard of pieces selected for performance should be broadly equivalent to grade 3 of the graded music examinations.

**One** of the pieces performed must be linked to specific aspects of musical content within **one** of the four areas of study. All students are required to perform one ensemble piece and when this is linked to area of study 2, Music for Ensemble, the piece must be related to one of the specific genres or styles covered in this area of study.

### Area of study 1: Musical Forms and Devices Area of study 2: Music for Ensemble Area of study 3: Film Music Area of study 4: Popular Music

In all performances, learners will be expected to display:

- technical control
- expression and appropriate interpretation
- accuracy of rhythm and pitch
- appropriate pace and fluency
- effective use of dynamics
- stylistic awareness
- empathy (in ensemble playing).

## 9. What is the musical staff and how do we write notes? **Red Ambe Green**

The musical staff (or stave) is a set of five horizontal lines and four spaces that represent different musical pitches. It is the foundation for writing and reading music, providing a framework where musical notes, rests, and other symbols are placed to indicate specific pitches, rhythms, and dynamics.

### Example 1



As shown in Example 2, if we place pitches in the form of note heads on the staff, information about the relationship of the pitches with each other is produced.



**Treble Clef (G Clef):** Indicates that the second line from the bottom is the note G above middle C.



The notes on the lines (from bottom to top) in the treble clef are E, G, B, D, and F. A common mnemonic to remember this is "Every Good Boy Does Fine." The notes in the spaces are F, A, C, and E, remembered as "FACE."

**Bass Clef (F Clef):** Indicates that the fourth line from the bottom is the note F below middle C.



The notes on the lines (from bottom to top) in the bass clef are G, B, D, F, and A. A mnemonic for this is "Good Boys Do Fine Always." The notes in the spaces are A, C, E, and G, remembered as "All Cows Eat Grass."

11.How do we write musical notes?	Red	Ambe	Green
		r	

You should bear in mind the following guidelines when writing notes on paper.

- Note heads are oval in shape (some open, some filled in) and should sit centrally on a line or in a space so that no confusion can arise as to the pitch notated.
- Most notes also need **stems**, and these should be vertical and should be roughly the same height as the height of the staff.
- In addition, note stems should go down on the left-hand side for note heads on the top two lines of the staff and in the top two spaces, and up on the right-hand side for note heads on the bottom two lines and in the bottom two spaces. Stems for note heads on the middle line can go up or down.
- Ledger lines should run parallel to the lines of the staff.

### Example



12. How can we tell how long notes last for?	Red	Ambe r	Green
Some common note lengths:			
<ul> <li>semibreve (American – whole note), which lasts for twice a</li> </ul>	s long a	as	
minim (half note), which lasts for twice as long as			
<ul> <li>crotchet (quarter note), which lasts for twice as long as</li> </ul>			
quaver (eighth note), which lasts for twice as long as			
semiquaver (sixteenth note), which lasts for twice as long as	s		
demisemiquaver (thirty-second note)			
HOME LEARNING TASKS			
Task Description			Done ?

	?
Complete music skills audit	
Create a rehearsal schedule with SMART targets	
Music theory – the musical staff	
Music theory – writing notes	
Music theory – identifying notes	
Music theory – note lengths	

# Subject Hospitality and Catering - Year 9 Term 2 Theme – Raising Agents and Preparation of Food

Term Focus – Building on previous knowledge of raising agents, learning the difference between chemical, biological and mechanical raising agents. Developing basic skills to learn how to roll, wrap, skewer, mix, coat and shape food.



Prior Learning Links	Future Learning Links
KS3 – Basic cooking skills	Hospitality and catering WJEC.
KS3 – Basic hygiene and safety	Required medium and complex skill
KS3 – Safe use of equipment	development.
KS4 – Review of basic nutrition	Producing effective time plans in
KS4 – Review of hygiene and safety	line with WJEC requirements
KS4 – Use of equipment	Working towards presentation skills
	to achieve higher grades by meeting
	WJEC presentation requirements.

### **KEY VOCABULARY**

	KEY WORDS	KEY SUBJECT TERMINOLOGY	
Mis en place	Shaping	HATTIE	
Kneading	Dough	Al dente	
Rolling	Paste	Mis en place	
Wrapping	Pastry	Hygiene and safety	
Skewering	Bread	Equipment / utensils	
Mixing	Shortcrust	Cooks knife	
Folding	Ruff puff	Paring knife	
Binding	Flaky	Bread knife	
	<u>.</u>	Claw grip / bridge hold	
		Kneading	
		Fermentation	
		Proving	



2. How do we prepare, combine and shape food?

Red Amber Green







### 3. How can we make a roux sauce?





4. How can we make a reduction sauce?

### The Principle of Reduction

Sauces are based on the principle of heating and reducing various liquids with aromatics, wine, and herbs, to meld, concentrate, and balance flavor & consistency



### 5. What other methods of sauce making are there?

Sauces are a great way to use liquids produced in cooking, to retain the nutrients that have been lost in cooking and to make dry foods more palatable and enjoyable.





Red Amber Green

Red Amber Green



#### 9. What is a pathogen?

Amber Green

Red



Pathogens are potentially lethal bacteria and viruses that people can pass to one another, or that can be passed from one food to another OR that can be passed from a food to a person!

10. How can we prevent food related illnesses?	Red	Amber	Green
Washing our hands is one of the simplest ways to avoid food poisoning and food related illnesses.			
11. What is the role of the EHO?	Red	Amber	Green
An Environmental Health Officer is a Council Official who inspects any premises that provides food to the public. They have very strong powers and can close down and even prosecute companies that are not following the hygiene rules.			

12. How can we best prepare for a practical assessment?







Red Amber Green

#### for more info: ourfoodfix.com/time-saving-tips-miseen-place-tor-cooking-success

HOME LEARNING TASKS	
Task Description	Done?
Think about the foods that you would provide for a children's party. List them and explain how you would present them to make them attractive to younger children. Draw the table with the	
food on it. Label as appropriate.	
Design a variation of a sponge cake, consider the decoration that you might have on the top.	
How would this change with the seasons? Eg Spring, Summer, Autumn and Winter.	
Consider the different accompaniments you might have with a) a piece of fish, b) a portion of lasagne and c) a steak.	
Thinking about different sauces, consider what you might serve with a piece of fish. Write down 3 different sauces that you could serve with the fish.	
Design a cake for a children's party. You should identify a theme and an age for the child and ensure that the cake was appropriate. Draw it and label carefully.	

## Sport Science // Year 9 & 10 // Terms 1-6

Cambridge National Level 1 / 2 Sport Science R181: Applying the principles of training: fitness and how it affects skill performance

### Prior Learning Links

- Knowledge of basic components of fitness from Core PE.
- Some knowledge of basic fitness tests such as MSFT.
- Completed unit of work on "Fitness" in Years 7&8 in Core PE.
- Some links to questions in exam paper for R180.

**Future Learning Links** 

• BTEC Level 3 Unit 2 – Fitness Training and Programming.



KEY VOCABULARY				
KEY WORDS & TERMINOLOGY				
ppic Area 1: Components of fitness applied in sport Topic Area 2: Principles of training in sport				
<ul> <li>Strength – the extent to which a muscle or muscle group can exert force to overcome a resistance, e.g. in weightlifting</li> <li>Power – exerting muscular force (strength) with speed, e.g. 100m sprint</li> <li>Agility – the ability to change direction at speed while remaining in control of movement, e.g. sidestepping an opponent</li> <li>Balance – the ability to maintain the centre of mass over the base of support, e.g. standing on one leg</li> <li>Flexibility – the range of movement around a joint, e.g. performing the splits</li> <li>Muscular endurance – the ability of the muscles to repeatedly contract without fatiguing/tiring</li> <li>Cardiovascular endurance – the ability of the heart and lungs to meet the oxygen demands of the muscle over a prolonged period of time</li> <li>Speed – how fast an athlete covers a premeditated distance</li> <li>Fatigue – extreme tiredness from mental or physical exertion</li> <li>Stamina – the term used to describe the body's ability to sustain physical activity for a long time</li> <li>Coordination – the ability to use two or more body parts at the same time with efficiency</li> <li>Reaction time – how long it takes to respond to a stimulus</li> <li>Pressurised drill – an activity within a training session which has an added element of competition such as being timed or up against an opponent</li> </ul>	<ul> <li>Key Terms:</li> <li>Progression – gradual increases or movements towards a goal</li> <li>Overload – doing more than what was done in a previous session to ensure continued results</li> <li>Frequency – how regularly an individual trains, i.e. times a person trains per day, week or month</li> <li>Intensity – how hard an individual works during a session</li> <li>Time – how long an individual exercises for</li> <li>Type – the method of training adopted by the participant, e.g. circuit training</li> <li>Specificity – training which improves a component of physical or skill-related fitness related to an individual's goal, sport or activity of choice</li> <li>Reversibility – the regression in physical fitness or ability after a prolonged period of inactivity</li> <li>Specific – how relevant goal is to the performer or their role in that sport</li> <li>Measurable – a goal which is not impossible to meet</li> <li>Realistic – a goal which is set a duration in which it is to be achieved</li> </ul>			

## Topic Area 3: Organising and planning a fitness training programme

### Key Terms:

- Injury history whether an individual has had any physical niggles in the past which may affect the planning of a training programme.
- Aims the ultimate goals that the training programme hopes to achieve
- Objectives the measurable, intermediate steps that help and athlete check progress leading to the ultimate goal
- Suitability whether or not a training programme is appropriate enough for an individual's needs
- Adaptability the extent to which a programme can be manipulated in response to an unforeseen event or new demands
- FITT an acronym for the principles of progressive overload which should be incorporated into any successful training programme (Frequency, Intensity, Time, Type)
- Reflection coaches and athletes taking time out to check on strengths, weaknesses and progress – to help formulate future plans
- ✓ Facilities the location or amenities needed to take part in sport or physical activity
- Equipment the items or resources which are needed to perform a certain sport or physical activity
- Risk assessment a pre-exercise safety measure carried out to identify hazards and arrange appropriate controls
- Testing a way of evaluating a training programme by comparing a fitness component before and after the training block.
- SMART goals the targets that an individual sets themselves for a fitness training programme which applies different principles ensuring its effectiveness

**<u>Topic Area 4</u>**: Evaluate own performance in planning and delivery of a fitness training programme

### Key Terms:

- ✓ Protocol the set of instructions involved in carrying out a fitness test
- ✓ Sequence the order in which a series of tests are carried out
- Validity whether a test actually measures the component of fitness that it intends to
- Reliability the ability of a test to produce the same outcome if performed exactly the same
- Practicality the feasibility of a test protocol or its ease of implementation with respect to time, equipment, space and individuals
- Normative data the typical age and gender matched fitness test results of a larger population, used for comparative purposes
- Average the mean value of a set of fitness results
- Rating the descriptor given to a test result that helps categorise or group together sets of results
- ✓ Gender whether an individual considers themselves as male, female or another identity will affect how they are scored in a fitness test
- ✓ Age how old or young an individual is, which impacts their expected fitness test result
- Standardisation an established set of procedures which are reproduced every time to ensure consistency in both inter and intra individual testing
- Comparison analysing the results from two different individuals or groups and measuring them against each other
- ✓ Accuracy the extent to which a test result is recorded with precision
- Procedure the sequence of steps for carrying out a task
- Units the quantity given for a particular measurement

### 1. How are components of fitness relevant to different sports?

2. Can you justify why different components of fitness are relevant for different sports?

Red Amber Red Amber

Ť.

### **Components of Fitness**

Think about which components of fitness are needed to complete the challenges set for the sports stars below

enge: To steal the ball and sidestep an op	ponent to score a try.
Component of fitness	Definition

- L.....

Sillon	: Diles (gymnastics)
enge: To execute the double layout floor e	xercise to a high standard.
Components of fitness	Definition

3.	What fitness tests are used for each component of fitness?	Red	Amber	Green
4.	Can you apply the components of fitness to a skilled performance?	Red	Amber	Green

### Fitness Tests

Fill in the missing appropriate fitness tests:

Component of Fitness	Appropriate fitness test
Agility	
Cardiovascular endurance	Multistage fitness test
Muscular endurance	Press up test
Speed	30m speed test
Strength	
Power	Standing long jump
Flexibility	
Balance	Stork stand test
Coordination	

5. What are the principles of training	? 6	ed Amber	Green				
Principles of Training							
Fill in the blanks for the following definitions of the FITT principles:							
• Frauecv-thenumbe	• <b>Fr</b> $\Omega U = CV - the number of times you train per week (how often)$						
		(c) ()					
• III_e_s_ty - now hard yo	u train during each training session (no	w nard)					
<ul> <li>_im_ – the length of each</li> </ul>	training session (how long)						
<ul> <li>T_p_ – the method of train</li> </ul>	ning used during each training session	(which training method)					
6 What are SMART goals?		Amber	Green				
SMART Goals		Amber	Green				
Match up the SMART principles below y	with their definitions						
Specific	It should be possible to reach your	goal					
Specific	all and the second second second second						
	Goals should not be vague but sho	uld describe what you					
Measurable	want to achieve in detail.						
Achievable Goals should be tracked in order to see your progress as you							
complete them.							
Destinate							
Realistic	it should be clear when your goals	snould be achieved by.					
	A goal should be something that is	nossible given your					
Time bound	individual circumstances, e.g. the a	mount of time you can					
Time-bound	dedicate to training, or the facilitie	s and equipment available					
5	to you.	And the second se					

7.	What are methods of training and their advantages/disadvantages?	Red	Amber	Green
Me	ethods of Training			

Complete the table below to describe the characteristics of the exercises/training methods and the advantages and disadvantages of each.

Exercise/ training method	Aerobic, Anaerobic or both?	Advantages	Disadvantages
Walking around the room/hall/track for 1 minute			
jogging on the spot for 30 seconds			
Sprinting on the spot for 10 seconds			
Weaving in and out of 10ms of cones			
Sprinting to a cone 10m away and walking back			
Sprinting to a cone 10m and sprinting back			
Enacting a first and second tennis serve			
Performing four different static stretches for 10-12 seconds each			

8.	What factors should you conside programme?	r when designing a fitness trainin	g	Red	Amber	Green				
De	Designing a Fitness Programme									
Cir	Circle the 5 most important factors to consider when designing a fitness training programme:									
	Method used	Current fitness levels	Saf	ety/risk a	ssessments					
	Duration	Previous injuries	Sui	table acti	vities					
	Name	Session aims	Арр	olication	of SPOR					
	Age	Athlete goals	Pro	gression						
	Aims	Equipment/ facilities needed	Obj	ectives						
9.	How do you apply the principles	of training to a fitness programm	e?	Red	Amber	Green				

### **Principles of Training**

Read what each athlete says below about their training and give them advice on how they could apply the most relevant principle of training to their situation

	I have managed to stay fit and active over the years and continue to run recreationally, but I am frustrated by the fact that I can no longer run at the same pace I did when I was racing.	
838	I always lift the same weights at the gym as I'm comfortable with this but I don't seem to feel any fitter or stronger.	

10. How do you plan a fitness programme?	Red	Amber	Green
11. How do you record your results from a fitness training programme?			

### Planning a Fitness Programme

Think about the information that goes into a training programme. Fill out the worksheet below to begin the planning process.

Suitable warm-up and cool-down Suitable main activities [Think about the different components of warm-ups and (Can you think of different activity examples suitable to a range cool-downs and how exercises may vary for of different subjects?) different activities.) Coaching points (What instructions might coaches provide to improve the performance of different skills and techniques?) Duration of plan (What factors would influence the Duration of sessions (What factors might influence the optimum duration of the programme?) duration of a training session?) Monitoring progression and adaptability Equipment and facilities (How is progress monitored and how might a training (What different equipment and facilities are needed for session or mid-term testing result in adaptation of different sports and activities?) the programme?)

12. What are the strengths and areas for improvement for your fitness	Red	Amber	Green
training programme?			

### **Strengths and Areas for Improvement**

It is important to evaluate the effectiveness of a fitness programme. Think about the strengths and weaknesses of your fitness programme. Things to consider are:

- $\checkmark$  The level of success based on whether or not the goals were met
- ✓ Whether the training methods were appropriate for the participant
- $\checkmark$   $\,$  If the programme was tailored to the individual needs of the subject
- ✓ Whether the programme was fully adhered to (if not, why not?)

Strengths	Areas for improvement

HOME LEARNING TASKS						
Task De	escription			Done?		
1)	<b>Complete Checkpoint 1 &amp; 2 on the EverLearner at a minimum grade of</b> <b>70%</b> <i>"Components of fitness applied to sport"</i>	8				
2)	<b>Complete Checkpoint 3 &amp; 4 on the EverLearner at a minimum grade of</b> <b>70%</b> <i>"Applying the principles of training: fitness and how it affects skill performance"</i>	8				
3)	Complete Checkpoint 5 on the EverLearner at a minimum grade of 70% "Organising and planning a fitness training programme"	8				
4)	<b>Complete Checkpoint 6 on the EverLearner at a minimum grade of</b> <b>70%</b> <i>"Evaluate own performance in planning and delivery of a fitness</i> <i>training programme"</i>	8				

### Spanish Year 9 Term 2 – School

Term Focus – This term introduces you to talking about your school. You will be able to:

- Talk about school rules
- Give your opinion on school rules
- Talk about how you would improve your school
- Talk about your ideal teacher
- Use the conditional tense

**Prior Learning Links** 

- School subjects (Year 7)
- Adjectival agreement (Year 7&8)
- Giving opinions (Year 7&8)

### **Future Learning Links**

- Using the future tense
- Adjectival agreement
- Describing people
- Using the conditional tense

Red

1.	What	are	the	school	rules?

¿Cuáles son las normas de tu insti? (What are the rules in your school?)							
				llegar a tiempo			
					(arrive on time)		
				y hay que	respetar a los alumnos / los profes		
En mi insti,				(and you must)	(respect students / teachers)		
(In my school,)		(phones are pr	ombiled)	y tenemos que	mantener limpio el patio		
				(and we have to)	(keep the playground clean)		
					quedarse sentado en la clase		
					(stay seated during class)		
	-	a ca daha	traar aparatas a	lastránicas	comer / beber en las aulas		
	/ nc	J Se debe	traer aparatos electronicos		(to eat / to drink in the classrooms)		
Sin embargo	(y	ou must not)	personales				
(However)	no	o se permite	(to bring person	al electronic devices)	ir al servicio sin nermiso		
(110000001,)	(у	ou are not	tirar basura al si	uelo			
	allowed)	(to throw rubbis	h on the floor)	(to go to the tollet without			
			`	,	permission)		

		permission)				
2. What do you think of t	he school rules?	Red	Amber	Green		
¿Qué piensas de las nor	rmas? (What do you think of the rules?)					
Por un lado			justa			
(On the one hand)	estoy de acuerdo con esta norma	porque es	(fair)			
Diría que	(I agree with this rule)	(because it is)	necesaria			
(I would say that)			(necessary)			
Por otro lado			injusta			
(On the other hand)	no estoy de acuerdo con esta norma	porque es	(unfair)			
Pienso que	(I don't agree with this rule)	(because it is)	tonta			
(I think that)			(silly)			
WOW Phrase:						
Mis profes dicen que es (My teachers say that it is)						



Green

Amber

3. What would you chang	ge about your school?	Red Amber Green						
¿Cómo cambiarías tu instituto? (How would you change your school?)								
	construiría un nuevo gimnasio							
Si pudiera elegir,	(I would build a new gym)	permitiría el uso de los móviles en clase						
(If I could choose,)	mejoraría la calidad de la comida	(I would allow the use of mobiles in class)						
Si fuera posible,	(I would improve the quality of food)	ofrecería más actividades extraescolares						
(If it were possible,)	reduciría el precio del uniforme	(I would offer more extracurricular activities)						
	(I would reduce the price of uniform)							

### 4. What would your ideal teacher be like?

¿Cómo sería tu profesor ideal? (What would your ideal teacher be like?)							
		haría mucho esfuerzo	nos dejaría usar el móvil				
En mi opinión		(would make lots of effort)	(would let us use our mobiles)				
	mi profesor	no gritaría nada	nunca llegaría tarde a clase				
	ideal	(wouldn't shout at all)	(would never arrive late to class)				
Diria que	(my ideal	no nos pondría demasiados deberes	tendría un buen sentido del humor				
(I would say	teacher)	(wouldn't give us lots of homework)	(would have a good sense of humour)				
that)		no sería demasiado estricto	sería comprensivo				
		(wouldn't be too strict)	(would be understanding)				

### 5. What is the conditional tense?

Red Amber

Red Amber

Green

Green

The conditional tense is used to describe what someone **would do** or what **would happen** in the future. It can also be used to express ambitions and intentions. The most common verb in the conditional tense is **me gustaría**  $\rightarrow$  I would like.

The conditional tense is a good way to show off in writing and speaking and will help you to maximise your grades.

6. How do you form the conditional tense?	Amber Green	
The conditional tense is one of the easiest to form in	I	ía
Spanish. Follow these steps:	You (singular)	ías
<ol> <li>Take your infinitive verb</li> <li>Decide who is doing the action</li> </ol>	He / She / It	ía
<ol> <li>Add the ending which matches the person</li> </ol>	We	íamos
The good news is that the endings are the same, regardless	You (plural)	íais
of whether the verb is an -AR, -ER or -IR verb!	They	ían

7. Where did you go with your school?			Red	Amber	Green			
¿Adónde fuiste con tu instituto? (Where did you go with your school?)								
	a Francia							
	(to France)		en tren	en	autocar			
Hicimos un viaje de fin de curso	a España	y viajamos	(by train)	(b	y car)			
(We went on an end of year trip)	(to Spain)	(and we travelled)	en avión	en	coche			
	a Londres		(by plane	) (b	y car)			
	(to London)							

8. What did you	u do on the s	chool trip?			Red	Amber	Green	
¿Adónde fuiste con tu instituto? (Where did you go with your school?)								
Cada día hicim	Cada día hicimos actividades distintas.							
(Every day we	(Every day we did different activities.)							
El primer día		visitamos el parq	ue nacional	com	imos platos t	ipicos		
(On the first da	iy)	(we visited the national park) (v			(we ate typical dishes)			
El segundo día	El segundo día fuimos al parque temático		hiciı	hicimos windsurf				
(On the second	l day)	(we went to the t	heme park)	(we went windsurfing)				
El tercer día		asistimos a una c	lase de cocina	dim	os un paseo e	en barco		
(On the third d	ay)	(we attended a cookery class)		(we	went on a bo	at trip)		
	emociona	nte	inolvidable					
Fue	(exciting)		(unforgettable)		y me gustai	ía volver alg	ún día	
(It was)	genial		una experiencia única		(and I would	d like to retur	n one day)	
	(great)		(a unique experience)					

Green

Amber

Red

### 9. What is an adverb?

Adverbs are used to say when, where or how something is done. In English, many adverbs end in -ly.

E.g especially

In Spanish, add -mente to the feminine form of the adjective.

E.g. normalmente  $\rightarrow$  normally

Below are some common adverbs you will see this term:

Spanish	English	Spanish	English
Desafortunadamente	Unfortunately	Afortunadamente	Fortunately
Especialmente	Especially	Generalmente	Generally
Inmediatamente	Immediately	Rápidamente	Quickly
Recientemente	Recently	Actualmente	Currently
Seguramente	Surely	Verdaderamente	Truly

			_
10. What is an infinitive verb?	Red	Amber	Green
Definition: A verb in its most basic form. It tells us what the action is but	not who	is doing it o	r when it
is happening.			
In Spanish, an infinitive verb always ends in either –AR, -ER or –IR. In English	sh, we tra	inslate them	with the
word 'to' at the start.			
11. What is a conjunction?	Red	Amber	Green
Definition: A word used to link two clauses or sentences.			
Key Conjunctions: y (and), también (also), sin embargo (however)			
12. What is an intensifier?	Red	Amber	Green
Definition: An intensifier is used <u>before</u> an adjective to add detail.			
Key intensifiers: muy (very), bastante (quite), un poco (a little), demasiado	(too)		
HOME LEARNING TASKS			
Task Description			Done?
Can you write a short paragraph describing your school rules?			
Can you write a short paragraph describing how you would change your school?			
Can you write a short paragraph talking about a school trip that you have been on?			
Can you use the sentence builders above to write sentences answering the questions? Ca	an you impr	ove these by	
adding conjunctions and intensifiers?			
Practise the vocabulary in your knowledge organiser by using the look, cover, write, chec	k method.		
Go to <u>www.sentencebuilders.com</u> and practise this terms vocabulary.			

### French Year 9 Term 2 – School

### Term Focus – This term introduces you to talking about your school. You will be able to:

- Use the imperfect tense to talk about your primary school
- Say what languages you speak
- Talk about why languages are important and how you will use them in the future

### **Prior Learning Links**

- School subjects (Year 7) •
- Clothes (Year 7) •
- Adjectival agreement (Year 7&8) •
- Opinion phrases (Year 7&8)
- Negative phrases (Year 7&8) •

1.	What were	you like at	primary	school?

### **Future Learning Links**

- Using the future tense •
  - Adjectival agreement
- Giving opinions
- Using the imperfect tense •
- Talking about future ambitions •



### 2. What was your life like at primary school?

C'était comment, ta vie à l'école primaire? (What was your life like at primary school?)

					en bi	JS	er	n train
Le matin, j'alla		is à l'école		(by bus) (		(b	oy bus)	
(In the morning,	)	(I use	ed to go to primary	school)	en vo	oiture	à	pied
					(by c	ar)	(o	n foot)
	j'aim	ais		les maths		le fran	çais	l'histoire
À Késala	(I use	ed to lil	ke)	(Maths)		(Frenc	h)	(History)
A recole, (At primary school,) ma	j'étu	diais		les sciences		l'espa	gnol	la géographie
	(I use	(I used to study)		(Science)	(Spanis		sh)	(Geography)
	ma n	ma matière préférée était		l'anglais		la mus	ique	l'EPS
	(my favourite subject was)		(English)		(music	)	(PE)	
			je jouais dans l'or	chestre			je regardais	la télé
Apres l'école,			(I used to play in t	he orchestra) (I used		(I used to wa	atch TV)	
(After school,)			je jouais au foot		et		je faisais me	es devoirs
Pendant la pause déjeuner (		(I used to play foo	otball)	(and)	(and) (I us		o my homework)	
(At break time,) j		je mangeais				j'aidais mon	père	
			(I used to eat)				(I used to he	lp my Dad)



Amber Green

Red

3. What were your teachers	like?		Red Amb	er Green
C'étaient comment, tes pro	ofs? (What were your tea	achers like?)		
			était le prof le plus sympa	
			(was the nicest teacher)	
J'aimais			éxpliquait tout avec patienc	e
(I used to like)			(explained everything with p	atience)
J'adorais			offrait des petits cadeaux	
(I used to love)			(gave small gifts)	
	mon prof de maths		me donnait confiance en m	oi
	(my Maths teacher)	car il	(gave me self confidence)	
	mon prof d'anglais	(because he)	était le prof le plus sévère	
	(my English teacher)		(was the strictest teacher)	
Je n'aimais pas			n'avait jamais l'air heureux	
(I didn't like)			(never seemed happy)	
Je détestais			criait tout le temps	
(I hated)			(shouted all the time)	
			nous donnait trop de devoi	rs
			(gave us too much homewor	k)

4. What is the imperfect tense?

Red Amber Green

The Imperfect tense is a past tense that is used for two main reasons:

- 1. To **describe** things in the past  $\rightarrow$  **There were** lots of people in the restaurant.
- 2. To talk about things that **regularly happened** in the past  $\rightarrow$  When I was little, I used to play everyday.

5. What are the key verbs in the imperfect tense? Red Amber Green

These are the main verbs that you will need for this topic and future topics. As you can see, the majority

of them end in -ais. This is a big clue that the verb might be in the imperfect tense.

English	French	English	French
I used to be / I was	J'étais	l used to find	Je trouvais
I used to play	Je jouais	l used to help	J'aidais
l used to like	J'aimais	I used to go	J'allais
I used to study	J'étudiais	I used to do	Je faisais
I used to read	Je lisais	It used to be / it was	C'était
I used to eat	Je mangeais	There used to be / there was	ll y avait

Quelles langues parles-tu? (What languages do you speak?)         Je parle       deux       trois       plusieurs       langues         (I speak)       (two)       (three)       (several)       (languages)	Red Amber Green				ı speak?	ages do you	6. What langua
Je parledeuxtroisplusieurslangues(I speak)(two)(three)(several)(languages)			peak?)	lages do you s	: <b>u?</b> (What lang	es parles-t	Quelles langu
	)	<b>langues</b> (languages)	<b>blusieurs</b> several)	)	<b>trois</b> (three	<b>deux</b> (two)	<b>Je parle</b> (I speak)
Je parle							Je parle
(I have spoken) l'anglais l'italien l'allemand deux ans	deux ans	d	l'allemand	l'italien	l'anglais	ı)	(I have spoken
J'apprends (English) (italian) (German) depuis (two years)	(two years)	depuis (†	(German)	(italian)	(English)		J'apprends
(I have been learning) le français l'espagnol le mandarin (for) trois mois	trois mois	(for) t	le mandarin	l'espagnol	le français	earning)	(I have been le
J'étudie (French) (Spanish) (Mandarin) (three months)	(three months)	(1	(Mandarin)	(Spanish)	(French)		J'étudie
(I have been studying)						tudying)	(I have been st

### 7. What do you think of languages?

Qu'est-ce que tu penses des langues? (What do you think of languages?) J'aime (I like) important intéressant Je pense qu' apprendre des langues est (important) (interesting) inutile (I think that) (learning languages) utile (is) À mon avis (useful) (useless) (In my opinion)

Red Amber Green

8. How are you going to use languages in the future?			Red	Amber	Green
Comment vas-tu utiliser le	s langues à l'avenir	? (How are you going to use languages in	the futu	re?)	
		regarder des films sous-titrés			
		(watch subtitled films)			
À l'avenir	je vais	écouter des podcasts en français			
(In the future)	(I am going)	(listen to podcasts in french)			
Dans le futur	je voudrais	utiliser une appli sur mon portable			
(In the future)	(I would like)	(use an app on my phone)			
		lire des blogs en français			
		(read blogs in french)			

### 9. What negative structures are there in French?

Remember, a negative structure is formed of two parts in French. The verb must go in the middle.

Negatives are often used to trick students, particularly during listening and reading activities.

French	English	French	English
Nepas	Not	Ne jamais	Never
Ne rien	Nothing	Ne que	Only
Ne aucun(e)	No, not any, not a single	Ne ni ni	Neither nor

Red Amber Green

### e.g. Je ne parle aucune langue $\rightarrow$ I don't speak a single language

Je ne parle que l'anglais  $\rightarrow$  I only speak English

10. What is an infinitive verb?	Red	Amber	Green				
Definition: A verb in its most basic form. It tells us what the action is but not who is doing it or	when it is	happenin	g.				
In French, an infinitive verb always ends in either -ER, -RE or –IR. In English, we translate them with the word 'to' at the st							
11. What is a conjunction?	Red	Amber	Green				
Definition: A word used to link two clauses or sentences.							
Key Conjunctions: Et (and), Aussi (also), Cependant (however)							
12. What is an intensifier?	Red	Amber	Green				
Definition: An intensifier is used <u>before</u> an adjective to add detail.							
Key intensifiers: très (very), vraiment (really), assez (quite), un peu (a little), trop (too)							
HOME LEARNING TASKS							
Task Description			Done?				
Can you write a short paragraph describing your time at primary school?							
Can you write a short paragraph about studying languages?							
Can you use the sentence builders above to write sentences answering the questions? Can you improve these by							
adding conjunctions and intensifiers?							
Practise the vocabulary in your knowledge organiser by using the look, cover, write, check metho	d.						

Go to <u>www.sentencebuilders.com</u> and practise this terms vocabulary.