2023/2024 **Cycle 2 Knowledge Navigator** Morning meeting homework 100% Sheets

Year 9

Name:

Form:

DIXONS COTTINGLEY ACADEMY

Determination | Integrity | Trust

YEAR 9 Cycle 2 Knowledge Navigator Contents page

Morn	ing meeting homework	100%	Sheets
4	Homework schedule	17	Maths
5	French	19	RE
8	Science: P3	22	French
9	Science: B1	29	Art
10	Science: C1	31	Design Technology
11	History	33	IT
13	Geography	35	Health and Social Care
15	English	36	Business and Enterprise
16	Spellings	38	PE

		Week 1		Week 2		Week 3		Week 4		Week 5
Monday	11/12/23	French Page 5 Week 1	01/01/24	Bank Holiday	08/01/24	French Page 5 Week 3	15/01/24	French Page 5 Week 4	22/01/24	French Page 5 Week 5
Tuesday	12/12/23	Science Page 9 Box 1	02/01/24	Science Page 9 Box 2/4	09/01/24	Science Page 9 Box 3	16/01/24	Science Page 10 Box 1/2	23/01/24	Science Page 10 Box 3/4
Wednesday	13/12/23	Geography Page 13 Week 1 Sparx Maths	03/01/24	History Page 11 Box A Sparx Maths	10/01/24	Geography Page 13 Week 3 Sparx Maths	17/01/24	History Page 11 Box B Sparx Maths	24/01/24	Geography Page 13 Week 5 Sparx Maths
Thursday	14/12/23	Staff only	04/01/24	English Page 15 Box 2	11/01/24	English Page 15 Box 3	18/01/24	English Page 15 Box 1	25/01/24	English Page 15 Box 2
Friday	15/12/23	Staff only	05/01/24	Spellings Week 2 Page 16	12/01/24	Spellings Week 3 Page 16	19/01/24	Spellings Week 4 Page 16	26/01/24	Spellings Week 5 Page 16
		Week 6		Week 7		Week 8		Week 9	Week 10	
Monday	29/01/24	French Page 5 Week 6	05/02/24	French Page 5 Week 7	19/02/24	French Page 6 Week 8	26/02/24	French Page 6 Week 9	04/03/24	French Page 6 Week 10
Tuesday	30/01/24	Science Page 10 Box 5	06/02/24	Science Page 8 Box 1/2/4	20/02/24	Science Page 8 Box 3	27/02/24	Science Page 9 Box 1	05/03/24	Science Page 9 Box 2/4
Wednesday	31/01/24	History Page 11 Box C Sparx Maths	07/02/24	Geography Page 14 Week 7 Sparx Maths	21/02/24	History Page 12 Box D Sparx Maths	28/02/24	Geography Page 14 Week 9 Sparx Maths	06/03/24	History Page 12 Box E Sparx Maths
Thursday	01/02/24	English Page 15 Box 3	08/02/24	English Page 15 Box 1	22/02/24	English Page 15 Box 2	29/02/24	English Page 15 Box 3	07/03/24	English Page 15 Box 1
Friday	02/02/24	Spellings Week 6 Page 16	09/02/24	Staff only	23/02/24	Spellings Week 8 Page 16	01/03/24	Spellings Week 9 Page 16	08/03/24	Spellings Week 10 Page 16
		Week 11		Week 12		Week 13				
Monday	11/03/24	French Page 7 Week 11	18/03/24	French Page 7 Week 12	08/04/24	French Page 7 Week 13			ON	S
Tuesday	12/03/24	Science Page 10 Box 1/2	19/03/24	Science Page 10 Box 3/4	09/04/24	Science Page 8 Box 1/2/4				IGLEY
Wednesday	13/03/24	Geography Page 14 Week 11 Sparx Maths	20/03/24	History Page 12 Box F Sparx Maths	10/04/24	Geography Page 14 Week 13 Sparx Maths	ACADEMY			
Thursday	14/03/24	English Page 15 Box 2	21/03/24	Staff only	11/04/24	English Page 15 Box 1				
Friday	15/03/24	Spellings Week 11 Page 16	22/03/24	Staff only	12/04/24	Spellings Week 13 Page 16				

	French		Enviro	nment	CYC	LE 2	Year 9	
We	ek 1		We	ek 2		Week 3		
Ve	rbs	Local I	Problems	Adje	ctives	Global Problems		
sauver	to save	les voitures	cars	sale	dirty	les embouteillages	traffic jams	
battre	to beat	les camions	lorries	propre	clean	les inondations	flooding	
nettoyer	to clean	le transport	transport	tranquille	peaceful	la pauvreté	poverty	
construire	to build	les industries	industries	bruyant	noisy	la sécheresse	draught	
conduire	to drive	les déchets	rubbish	animé	lively	le changement climatique	climate change	
concerner	to concern	la pollution	pollution	affreux	terrible	l'empreinte carbone	carbon footprint	
fondre	to melt	la circulation	traffic	pollué	polluted	la déforestation	deforestation	
disparaître	to disappear	les sans-domicile fixe	homeless	industrielle	industrial	le déboisement	deforestation	
encourager	to encourage	le chômage	unemployment	mauvais	bad	le réchauffement climatique	global warming	
brûler	to burn	les usines	factories	triste	sad	le monde	the world	
We	ek 4	Week 5		Week 6]		
Recy	cling	Save the pla	net from home	Save the plan	et from home			
les boîtes	tins	éteindre	to turn off	se baigner	to take a bath			
le verre	glass	se doucher	to shower	prendre	to take			
les journaux/un journal	newspapers / a newspaper	fermer	to close	réutiliser	to re-use	*Week 7 full	test: Revise all the	
les papiers	paper	mettre	to put	voyager	to travel	previous weeks	s complete RCWC on	
les pots	pots	réduire	to reduce	marcher	to walk		Veek 1	
les magazines	magazines	trier	to sort	installer	to install			
les bouteilles	bottles	économiser	to save	vérifier	to check			
les vêtements	clothes	partager	to share	baisser	to lower			
les sacs en plastique	plastic bags	gaspiller	to waste	augmenter	to increase			

	French			Town ar	Town and Social Issues		СҮС	CLE 2	Year 9
s	We ocial Iss	ek 8 ues Nouns			State flag	I	8	4+	
Le chômage		unemployment	t		Weather		Ø,		
La pauvreté		poverty		() envato				Teal.	+ 1
Les sans-abri		homeless peop	ole	22 - 3			650		A 4
Les sans domicile Fixe	(SDF)	homeless peop	ole			Y	J.	宗	390 1+
Une association caritat	ive	a charity			🛛 🏢 🖵 📥	-	14	a marke	
Les personnes défavor	isés	disadvantaged	people	× * - =	MOULIN ROUGE		Juerce	624	Lion. IU
Le travail bénévole		voluntary work	κ.		· · · · · · · · · · · · · · · · · · ·		. 🔽		Due 1
L'eau potable		drinking water		envato			2	Salar Salar	41 + 0
Un logement		accommodatio	n			\$		PART	
La nourriture		food					non!	+ -	+
		We	ek 9				Wee	ek 10	
Social Iss	ues Nou	ns	Socia	l Issues Adjectives	s Adjectives Social Issues Verbs				
des vêtements	clothe	5	difficile	difficult	se soigner	to loo	k after oneself	s'inquiéter	to worry
des volontaires	volunt	eers	malheureux	unfortunate	donner	to give	9	dormir	to sleep
un emploi	a job		triste	sad	offrir	to offe	er	boire	to drink
un centre d'emploi	a job c	entre	sérieux	serious	distribuer	to dist	ribute	se droguer	to take drugs
un sac de couchage	a sleep	ing bag	injuste	unfair	demander	to ask		travailler	to work
le trottoir	the pa	vement	grave	serious	acheter	to buy	1	permettre	to allow
l'inégalité	inequa	lity	dure	hard	se loger	to she	lter	dépriver	to deprive
les choses indispensables	the ess	sentials	sain/malsain	healthy/unhealthy	payer	to pay	,	collecter	to collect
le froid	the co	d	menaçant	threatening	chercher	to loo	k for	partager	to share

	French		Social	Issues	CY	CLE 2	Year 9	
Week 11			Week 12				Week 13	
Drink aı	nd Drugs	Social Issues Verbs				Moda	Modal Verbs	
contre la loi	against the law	lutter	to fight	vouloir	to want	je veux	l want	
les rues	the streets	se débrouiller	To sort yourself out	pouvoir	to be able	on doit	we have to	
des problèmes sociaux	social problems	proteger	to protect	ésperer	to hope	on peut	we can	
des maladies	illnesses	apporter	to bring	manquer	to miss	on devrait	we should	
boire l'alcool	to drink alchohol	choquer	to shock	se laver	to wash	on pourrait	we could	
s'injecter	to inject	porter	to carry	décider	to decide	il faut	you must	
les drogues dures/douces	hard/soft drugs	rendre	to give back	s'habiller	to get dressed	il faudrait	you should	
un drogué	a drug addict	commencer	to start	vivre	to live	je dois	I have to	
les narcotrafiquants	drug traffickers	soucier	to worry	tomber malade	to fall ill	il ne faut pas	you must not	
le revendeur de drogues	drug seller	régler	to settle (a problem / money)	se sentir	to feel	on ne doit pas	we are not allowed to	

Sci	ence - Trilog	y Physics &	RP	P3 — PARTIC	CLE MODEL OF N	ATTER (inc. Separate Physics only)	CYCLE 2	YEAR 9	
1. Density of m	aterials					4. Particle motion in gases			
The density of a The particle moc • the differen • differences	material is defined el can be used to e nt states of matter in density.	by the equation: explain	Density (in kg/m³) = n	nass (in kg) / volume	(in m³) [p = m/V]	The molecules of a gas are in constant random motion. The temperature of the gas is related to the average kinetic energy of the molecules. Changing the temperature of a gas, held at constant volume, changes the pressure exerted by the gas.			
2. Changes in state						A gas can be compressed or expand	ded by pressure changes. The pressu	re produces a net force at right	
Changes of state are physical changes which differ from chemical changes because the material recovers its original properties if the change is reversed.					iterial recovers	angles to the wall of the gas contai For a fixed mass of gas held at a co	iner (or any surface). nstant temperature:		
Melting Solid → liquid	Freezing Liquid → solid	Boiling Liquid → gas	Evaporating Liquid → gas	Condense Gas → liquid	Sublimating Solid → gas	pressure (in Pa) × volume (in m ³) = Work is the transfer of energy by a	constant [p V = constant pressure] force. Doing work on a gas increases	s the internal energy of the gas and	
3. Internal energy and energy transfers							nature of the gas.		
Energy is stored inside a system by the particles (atoms and molecules) that make up the system. This is called internal energy. Internal energy is the total kinetic energy and potential energy of all the particles (atoms and molecules) that make up a system. Heating changes the energy stored within the system by increasing the energy of the particles that make up the system. This either raises the temperature of the system or produces a change of state. If the temperature of the system increases, the increase in temperature depends on the mass of the substance heated, the type of material and the energy input to the system. The following equation applies: change in thermal energy (in J) = mass (in kg) × specific heat capacity (in J/kg °C) × temperature change (in °C) [$\Delta E = m c \Delta \theta$] The specific heat capacity of a substance is the amount of energy required to raise the temperature of capacity of one kinggram of the substance heater.						Aim of the experiment To measure the density of various of Method 1: Regular solids 1. Use a ruler to measure the left 2. Place the steel cube on the to 3. Calculate the volume of the c 4. Use the measurements to cal 5. Use vernier callipers to measure 6. Place the metal sphere on the 7. Calculate the volume of the s 8. Use the measurements to cal	materials. ngth (I), width (w) and height (h) of a p pan balance and measure its mass ube using (I × w × h). culate the density of the metal. ure the diameter of the sphere. e top pan balance and measure its m phere using $\frac{4}{3}\pi r^3$ culate the density of the metal.	a steel cube.	
The energy needed for a substance to change state is called latent heat. When a change of state occurs, the energy supplied changes the energy stored (internal energy) but not the temperature. The specific latent heat of a substance is the amount of energy required to change the state of one kilogram of the substance with no change in temperature. energy for a change of state (in J) = mass (in kg) × specific latent heat (inJ/kg) [E = m L] Specific latent heat of fusion – change of state from solid to liquid Specific latent heat of yaporisation – change of state from liquid to yapour					 Method 2: Stone or other irregular shaped object Place the stone on the top pan balance and measure its mass. Fill the displacement can until the water is level with the bottom of the pipe. Place a measuring cylinder under the pipe ready to collect the displaced water. Carefully drop the stone into the can and wait until no more water runs into the cylinder. Measure the volume of the displaced water. Use the measurements to calculate the density of the stone. 				

1. Cell structure Organelle Fr Nucleus Contains genetic material (DN/ Cell membrane Cytoplasm Jelly-like substance where r Mitochondria Site of respiration, where ener Ribosomes Site of protocol Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to kee Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cell siretain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a caspecialised cell.	nction) which controls the cell's activities. movement of substances in and out. nost chemical processes happen. gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	3. Transport in cells Diffusion is the spreading out of t a net movement from an area of Some of the substances transport exchange, and of the waste produ Factors which affect the rate of di	he particles of any substance in solut higher concentration to an area of lo red in and out of cells by diffusion are	tion, or particles of a gas, resulting in					
Organelle Fit Nucleus Contains genetic material (DN/ Cell membrane Surrounds the cell and controls Cytoplasm Jelly-like substance where r Mitochondria Site of respiration, where ener Ribosomes Site of prot Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to kee Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a carp specialised cell.	nction) which controls the cell's activities. movement of substances in and out. nost chemical processes happen. gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	Diffusion is the spreading out of t a net movement from an area of Some of the substances transport exchange, and of the waste produ Factors which affect the rate of di	he particles of any substance in solut higher concentration to an area of lo red in and out of cells by diffusion are	tion, or particles of a gas, resulting in					
Nucleus Contains genetic material (DM/ Cell membrane Surrounds the cell and controls Cytoplasm Jelly-like substance where r Mitochondria Site of respiration, where ener Site of respiration, where ener Ribosomes Site of respiration, where ener Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to kee Cells may be specialised to carry out a particular function: Site of respiration • sperm cells, nerve cells and muscle cells in animals Site of respiration • root hair cells, xylem and phloem cells in plants. Site of As an organism develops, cells differentiate to form different types of Most types of plant cell sretain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c) which controls the cell's activities. movement of substances in and out. nost chemical processes happen. gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	a net movement from an area of Some of the substances transport exchange, and of the waste produ Factors which affect the rate of di	higher concentration to an area of lo red in and out of cells by diffusion are						
Cell membrane Surrounds the cell and controls Cytoplasm Jelly-like substance where r Mitochondria Site of respiration, where ener Ribosomes Site of protection Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to keet Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a carp	movement of substances in and out. nost chemical processes happen. gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	Some of the substances transport exchange, and of the waste produ Factors which affect the rate of di	ed in and out of cells by diffusion are	a net movement from an area of higher concentration to an area of lower concentration.					
Cytoplasm Jelly-like substance where r Mitochondria Site of respiration, where ener Ribosomes Site of proc Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to keel Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c •	oost chemical processes happen. gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	exchange, and of the waste produ Factors which affect the rate of di		Some of the substances transported in and out of cells by diffusion are oxygen and carbon dioxide in gas					
Mitochondria Site of respiration, where ener Ribosomes Site of pro Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to keel Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a or •	gy is released from food molecules. tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	Factors which affect the rate of d	exchange, and of the waste product urea from cells into the blood plasma for excretion in the kidney.						
Ribosomes Site of product Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy strengthens Vacuole Contains liquid, and used to keel Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cell stretain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c •	tein synthesis. in plant cells it is made of cellulose. o the plant can make food.	• the difference in concert	Factors which affect the rate of diffusion are: • the difference in concentrations (concentration gradient)						
Cell wall Supports & strengthens the cell Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to keel Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a or specialised cell. •	in plant cells it is made of cellulose. o the plant can make food.	Interview of the concent of the concent							
Chloroplast Absorbs light energy s Vacuole Contains liquid, and used to kee Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of plant cell stream the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c •	o the plant can make food.	• the temperature							
Vacuole Contains liquid, and used to keed Cells may be specialised to carry out a particular function: • • sperm cells, nerve cells and muscle cells in animals • • root hair cells, xylem and phloem cells in plants. • As an organism develops, cells differentiate to form different types of • • Most types of animal cell differentiate at an early stage. • • Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a carp cells.		• the curface area of the m	ombrana						
Cells may be specialised to carry out a particular function: • sperm cells, nerve cells and muscle cells in animals • root hair cells, xylem and phloem cells in plants. As an organism develops, cells differentiate to form different types of • Most types of animal cell differentiate at an early stage. • Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell.	p the cell rigid and store substances.	• the surface area of the m							
 root hair cells, xylem and phloem cells in plants. As an organism develops, cells differentiate to form different types of Most types of animal cell differentiate at an early stage. Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell. 		A single-celled organism has a rel of molecules into and out of the c	atively large surface area to volume is the needs of the organism of the organ	m.					
 As an organism develops, cells differentiate to form different types of Most types of animal cell differentiate at an early stage. Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell. 		In multicellular organisms, surfac	es and organ systems are specialised	d for exchanging materials. This is to					
 Most types of animal cell differentiate at an early stage. Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell. 	of cells.	allow sufficient molecules to be t	allow sufficient molecules to be transported into and out of cells for the organism's needs. The						
• Many types of plant cells retain the ability to differentiate through In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell.		effectiveness of an exchange surface is increased by: • having a large surface area • a membrane that is thin, to provide a short diffusion path • (in animals) having an efficient blood supply							
In mature animals, cell division is mainly restricted to repair and rep acquires different sub-cellular structures to enable it to carry out a c specialised cell.	out life.								
acquires different sub-cellular structures to enable it to carry out a c specialised cell.	acement. As a cell differentiates it								
specialised cell.	ertain function. It has become a								
		 (in animals, for gaseous exchange) being ventilated. 							
An electron microscope has much higher magnification and resolvin	g power than a light microscope.	Water may move across cell membranes via osmosis. Osmosis is the diffusion of water from a dilute							
This means that it can be used to study cells in much finer detail. Th	s has enabled \wedge	solution to a concentrated solution	on through a partially permeable me	embrane.					
biologists to see and understand many more sub-cellular structures.		Active transport moves substances from a more dilute solution to a more concentrated solution (against							
Magnification (M) = size of image (I) / size of actual object (A)	AM	a concentration gradient). This requires energy from respiration							
		Active transport allows mineral in	ons to be absorbed into plant root be	airs from very dilute solutions in the					
2. Cell division		soil Plants require ions for health	av growth	and norm very under solutions in the					
			iy growth.	iene in the cut into the hland which					
The nucleus of a cell contains chromosomes made of DNA molecule	. Each chromosome carries a large	It also allows sugar molecules to	be absorbed from lower concentration	ons in the gut into the blood which					
number of genes. In body cells the chromosomes are normally found	l in pairs.	has a higher sugar concentration	. Sugar molecules are used for cell re	espiration.					
		4. Stem cells							
During the cell cycle the genetic material is doubled and then divide	d into two identical cells.	A stem cell is an undifferentiated	cell of an organism which is capable	e of becoming other types of cells.					
Before a cell can divide it needs to grow and increase the number of	sub-cellular structures such as	Stem cells from human embryos	can be cloned & made to differentiat	te into most different types of					
ribosomes and mitochondria. The DNA replicates to form two copies		human cells.							
In mitosis one set of chromosomes is pulled to each end of the cell a	of each chromosome.	Stem cells from adult bone marro	ow can form many types of cells inclu	uding blood cells.					
Finally, the cytoplasm and cell membranes divide to form two identi	ot each chromosome. nd the nucleus divides.	Meristem tissue in plants can differentiate into any type of plant cell, throughout the life of the plant.							
Cell division by mitosis is important in the growth and development	of each chromosome. nd the nucleus divides. cal cells.	Trootmont with stom cells may h	a able to belo conditions such as dial	hotos and naralysis					
	or each chromosome. nd the nucleus divides. cal cells. of multicellular organisms.	Treatment with stem cells may b	e able to help conditions such as dial	betes and paralysis.					

Science	- Trilogy Chemistry	C1	— Atomic Structur	e And The Periodic Table	CYCLE 2	YEAR 9	
1. Atoms, mixtures and	l compounds			4. Representing atoms			
All substances are made of Atoms of each element ar There are about 100 differ Compounds are formed fr formation of one or more combined. Compounds ca A mixture consists of two chemical properties of eac physical processes such as chromatography	f atoms. An atom is the smallest par e represented by a chemical symbo ent elements. Elements are shown om elements by chemical reactions new substances. Compounds conta n only be separated into elements h or more elements or compounds no th substance in the mixture are uncl filtration, crystallisation, simple dis	rt of an element that I, eg O for oxygen c in the periodic tabl . Chemical reaction in two or more elen by chemical reaction ot chemically comb hanged. Mixtures o stillation, fractional	at can exist. or Na for sodium. e. ns always involve the ments chemically ns. ined together. The can be separated by distillation and	Atoms can be represented as shown in this example: (Mass number) 23 (Atomic number) 11 The relative atomic mass (A _r) of an element is an average value that takes account of the abundance of the isotopes of the element. The electrons in an atom occupy the lowest available energy levels. The electronic structure of an atom can be represented by numbers or by a diagram. e.g. The electronic structure of sodium is 2,8,1 or showing two electrons in the lowest energy level, eight in the second energy level and one in the third energy level.			
2. History of the atom				5. The periodic table			
Early model Tiny spheres that could not be divided			The elements in the periodic table a	are arranged in order of atomic (pro	oton) number and so that elements		
Electron discovered Plum pudding model – atom was ball of positive charge with negative electrons spread around inside it			with similar properties are in columns, known as groups. The table is called a periodic table because similar properties occur at regular intervals.				
Rutherford and Marsden Plum pudding model is replaced with nuclear model – small central positive nucleus with negative electrons orbiting			- small central positive	Elements in the same group in the p (outer electrons) and this gives the	periodic table have the same numborn similar chemical properties.	er of electrons in their outer shell	
Niels Bohr	Electrons orbit at specific distance	es		The early periodic tables were incomplete and some elements were placed in inappropriate groups if the strict order of atomic weights was followed.			
Later experiments James Chadwick	Positive charge in nucleus can be Discovers neutron	subdivided – proto	ns	 Mendeleev overcame some of the problems by leaving gaps (that were later filled) for elements that he thought had not been discovered and in some places changed the order based on atomic weights. 			
3. Sub-atomic particles The relative electrical char Name of partic Relative charg Relative mass	ges and relative masses of the part le Proton Neu e +1 (icles in atoms are: tron Elect D -1	ron L small	Elements that react to form positive ions are metals and those that do not are non-metals. The majority of elements are metals. Metals are found to the left and towards the bottom of the periodic table. Non-metals are found towards the right and top of the periodic table. The elements in Group 0 are called the noble gases. They are unreactive and do not easily form molecul because their atoms have stable arrangements of electrons. The noble gases have eight electrons in the			
In an atom, the number of Atoms have no overall ele The number of protons in Almost all of the mass of a	electrons is equal to the number o ctrical charge. an atom of an element is its atomic n atom is in the nucleus.	f protons in the number.	cleus.	 outer shell, except for helium, which has only two electrons. The boiling points going down the group. The elements in Group 1 are known as the alkali metals and have characteristic properties because of the single electron in their outer shell. They react rapidly with water and the reactivity increases going down the group. The elements in Group 7 are known as the halogens and all have seven electrons in their outer shell. The further down the group the more the reactivity of the elements decreases. 			
Atoms of the same element	u neurons in an atom is its mass m	unuer.	s are called isotones	A more reactive halogen can displa	ace a less reactive halogen from an a	aqueous solution of its salt.	
Atoms are very small, havi	ng a radius of about 0.1 nm (1 x 10-	-10 m).		The transition elements are metals with similar properties which are different from those in Group 1. Many transition elements have ions with different charges, form coloured compounds and are useful as			
The radius of a nucleus is	ess than 1/10 000 of that of the ato	m (about 1 x 10-14	- m).	catalysts.	-		

	History		Nature of Imperialism		CYCLE 2		Year 9		
Week		Key	Knowledge to learn – Enquiry Question How did the Indian po	pulation res	sist British rule?				
	Overview of the British Empire In the 16 th 17 th & 18 th Britain began to	expand its social,	Colony			A country or ar of another cou	ea under the full or partial control ntry		
⊿	economic and political interests acro	oss the globe. By		Colonis	e	Send settlers to	o a place to take control of it		
ion	people, 23% of the worlds population held 24% of the Earths total land ar	at this time and ea. A well known	Carter Carter	Empire		An extensive g monarch or so	roup of states ruled over by a single vereign state		
Sect	phrase at the time stated it was 'the Empire on which the sun never sets' It began though with the Age of Discovery, when English explorers would compete, with other European empires, to colonise territory across the			Imperialis Merchan		Extending a countries power and influence through colonisation or military force			
						Someone who	buys and sells goods		
	known and unknown world.		-85.1	Indiger	ous	The original occupants of colonies			
s ire	Exploration	Between 1497 and was the first to rea finding new lands	etween 1497 and 1763 English Seaman set out on journeys of exploration, they began to reach places Europeans had never seen before. Christopher Columbus as the first to reach the Caribbean in 1492. In 1497, an Italian financed by Henry VIII reached Canada. Other English explorers followed such as Walter Raleigh, nding new lands in the Americas. It was known as the Age of Discovery.						
tion E Fmp	Colonisation	The first English colonies were founded in the 1620s, in the Caribbean, Barbados, Jamaica, Virginia and New York. These would be followed in the 17 th Century by colonies in India, Africa and Australia. Often this was brutal, violence was used to take over these lands and many indigenous people were enslaved.							
Sectures Sec	Competition & warfare	Competition to establish colonies was intense between the European powers of Spain, Portugal and France all understood the economic and military power colonies could bring. In the 18 th century Britain fought a number of wars against France and took control of many French colonies as a result.					economic and military power es as a result.		
Cat	Trade	By the 17 th centur British governmen The London Comp	By the 17 th century Britain was heavily involved in the Transatlantic Slave Trade, this required colonies for plantations. Private companies, encouraged by the British government contributed to expanding colonies to help trade materials such as cotton, tea, sugar and spices. Companies such as the East India Company, The London Company and the Plymouth Company did business for and on help aff of the government who received lucrative taxes from trade						
to C	British Attitudes Towards Empire 16 th to 19 th Century (For)	Many British peop thing by taking Bri they were genuine more like the Briti	le supported the growth of Empire. They thought they were do tish political values and Christianity to the rest of the world. So the helping others and were doing the right thing by helping pe sh and improve.	oing the rig ome though ople becom	ht Attitudes of Co t Many were de political and eo	Attitudes of Colonists Many were deeply unhappy with being under British rule, facing political and economic inequality the decline in their cultural and			
ection titudes	British Attitudes Towards Empire 16 th to 19 th Century (Against)	Some British peop culture before the warfare and a way	le thought they were wrong that colonies had their own tradit British arrived and these should be preserved. Some disappro of controlling and expanding the empire.	religion. Many in 1776 Americ Mutiny, 1899 t quickly defeate	religion. Many colonists tried to rebel against British rule, such a in 1776 American War of Independence, in 1857 with the Indian Mutiny, 1899 the Boer War. These rebellions were quickly defeated and stricter rules put in place.				
Ati	Present Attitudes	Its unacceptable to own forms of gove cost, the slave trac	Its unacceptable to say that colonised people did not have or would not have developed their own forms of governments or laws without British influence. Also Britain's Empire came at cost, the slave trade and stripping indigenous people of their land and rich cultures.						

	History	Britain and the Slave Trade	CYCLE 2	Year 9		
Week		Key Knowledge to learn				
	Section D Significance of India	Section E Ghandi & Independence Movement	Section F Partition	Section F Partition		
n D, E, F India	 India became part of the British Empire in 1858 and too over the lands that were controlled by the East India Company. The British got rid of many independent states in India a formed laws and policies of their own. Eventually the elevation country came under the British rule. The Battle of Plassey in 1757 ensured the East India Company could take control of India The British provided a single system of law and government, unifying India. They also introduced English as a unifying language such as the set of the set of	 Gandhi was an Indian lawyer, anti-colonial nationalist who employed nonviolent resistance to lead the successful campaign for India's independence from the British. Gandhi was also given the title of 'Father of The Nation' this title was accepted by the Indian community, who then referred to Gandhi as "Bapu" In 1930 he led the Salt March, a peaceful protest where 60.000 Indians were arrested including himself 1942, Gandhi also launched the "Quit India" movement which called for the immediate withdrawal of the British from Indian governance. 	 The partition of India spli of <u>India</u> and <u>Pakistan</u> (Eas The partition was caused <u>theory</u> presented by Syed a <u>Muslim</u> country, and <u>Ind</u> but <u>secular</u> country. The main spokesman for <u>Jinnah</u>. He became the fir Once the lines were estab crossed the borders to wh their religious majority. 	t <u>British India</u> into the countries t and West Pakistan) in 1947. in part by the <u>two-nation</u> Ahmed Khan. <u>Pakistan</u> became <u>dia</u> became a majority Hindu the partition was <u>Muhammad Ali</u> st Governor-General of Pakistan. blished, about 14.5 million people hat they hoped was the safety of		
ior	Treaty of Allahabad Indians were also looked down upon by the British 	Section E Jinnah & Independence Movement	• Approximately 14.5 million felt forced to move across the new borders of each country, one of the largest in history			
Secti	 and their culture was treated as inferior to European culture. Indian workers provided the British with inexpensive la India was so Important to the British Empire because of trade links with China, primarily tea, silk and opium 	 Jinnah served as the leader of the <u>All-India Muslim</u> <u>League</u> from 1913 until the creation of Pakistan on 14 Augus 1947. He is revered in Pakistan as the <i>Quaid-i-Azam</i> ("Great Leader") and <i>Baba-i-Qaum</i> ("<u>Father of the Nation</u>"). He believed the only fair wat for India to gain independence would be for Muslims to have their own land. 	The newly formed govern with <u>forced migration</u> of s occurred from all sides, h	ments were unable to deal such huge numbers. Violence undreds of thousands died.		
erview	Time Line of British India (Control & Resistance) 1617 - East India Company Wins trading rights with Mughal Empire	1773 – Warren Hastings becomes first Governor of India, taking away power from Nawabs	1906 – Muslim Leagu for a Muslim indepen	ue Organised aiming ndent state.		
0 – 0 v	1757 – Robert Clive wins decisive victory at Plassey, taking territorial and political control of large part of India	1857 – Sepoy Rebellion break out against treatment of Indian soldiers serving under British.	1919 – Amritzar Mas Fire on thousands of	sacre the British army opens peaceful Indians		
ction	1765 – Treaty of Allahabad and Duel Government created.	1858 – The British Parliament put India directly under their political control	1930 – The Salt Marc On the salt trade	ch to end British monopoly		
Se		1885 – Indian National Congress formed to Fight peacefully for independence				

	Geography	The Fu	The Future		Year 9	
Week		Key Kno	wledge to learn			
1– Future Misconce ptions and The Future of the EU	 Future Misconceptions In all LICs across the world today, 60% of girls f Majority of the world live in NEEs In the last 20 years, the proportion of the world has almost halved The average life expectancy is the world is 70 y 80% of the worlds 1-year old children today some disease 80% of people in the world have some access to a som	 European Union - a group of 27 countries following similar laws à the UK left the EU on the 31st January 2020 (BREXIT) 1957 - The European Economic Community (EEC) is created. The member countries are Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany. The group aims to remove trade barriers and form a common market. The objectives of the European Union are to establish European citizenship, ensure freedom, justice and security, promote economic and social progress, and assert Europe's role in the world. The capital of the European Union is Brussels, Belgium. 				
3 – Brexit and Problem with Energy	 Reasons for Leaving the EU We get control over all laws created We get control over immigration within the l Don't pay £50 million a week membership fe We may have to pay to enter EU countries Goods imported to the UK may become more We would set our own taxes More low paid jobs available We can decide who we trade with We won't have limits set on us like how much 	 Problem with Energy In the past, the UK was heavily reliant on fossil fuels such as coal, oil and gas. It is projected that in the future we will use more renewable energy. Energy supply and demand has increased overtime due to increase use of transport and industry. Carbon Footprint = The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization, or community. 				
5 – Solving the energy problem and the problem with food	Solving the energy problem Energy Consumption - The amount of energy or p Renewable Energy - is naturally replenished of sunlight, wind, rain, tides, waves, and geothermal Examples of Renewable energy include: Solar, power	nower used n a human timescale, such as heat Hydroelectric power and wind	 The Problem with Food Malnutrition - lack of proence of the right things 1 billion in 2012 are hungi Our planet has enough for Bolivia, Democratic Reputting they have lots of food and rate of malnutrition. 41% 60% of people globally that USA has lower rates of human set of the set of the	per nutrition, caused by not have ry in the world which means 1 pe od so hunger shouldn't exist. blic of Congo and Ethiopia are str d mostly work in agriculture. The of Ethiopians are undernourishe at are hungry tend to work in far nger and they struggle with obe	ing enough to eat, not eating erson out of 7. ruggling with hunger though ese countries have the highest d. ming. sity.	

	Geography	The Future		Cycle 2	Year 9		
Week		Key Knowledge	e to learn				
7 – Solving the problem of Food and the Plastic Crisis	Solving the problem of Food Lab Grown Food more and more companies are beginning t such issues as greenhouse gases emissions They use stem cells to produce this meat Insects as a food source Some countries have been eating insects example, countries in central America and diet. Insects are very nutritious, have val However, some insects may cause an allerging	o produce meat in labs as a way to combat s, overfishing and animal welfare concerns. for centuries and it isn't a new thing for d Asia. 2 billion eat insects as part of their uable fatty acids and are high in calcium. ic reaction.	 In 1950 the world produced only 2 million tonnes per year. Since then, annual production has increased nearly 200-fold, reaching 381 million tonnes in 2015. For context, this is roughly equivalent to the mass of two-thirds of the world population. With the largest population, China produced the largest quantity of plastic, at nearly 60 million tonnes. This was followed by the United States at 38 million, Germany at 14.5 million and Brazil at 12 million tonnes. 				
9 – Causes and Impacts of Plastic	Causes of Plastic Pollution Fishing Nets - Commercial fishing is an ecor However, the nets used for certain large-sc plastic. These leaking toxins at will, but the It is Overused - As plastic is less expensive, overused item in the world today. When dis and pollutes the land or air. Disposing of Plastic and Garbage - Because impossible to break down. Burning plastic is atmospheric conditions and deadly illness. T stop releasing toxins in that area.	nomic necessity for many parts of the world. ale trolling operations are usually made of y also often get broken up or lost. it is one of the most widely available and sposed of, it does not decompose easily e plastic is meant to last, it is nearly s incredibly toxic and can lead to harmful Therefore, if it is in a landfill, it will never	 Impacts of Plastic Pollution It Upsets the Food Chain Groundwater Pollution Land Pollution Air Pollution It Kills Animals It is Poisonous It is Expensive to clean up 				
11/13 - HS2	Advantages and disadvantages of HS2 Journey times from London to Birmingham The £2-£3bn annual capital investment will The environmental impact will be mitigated tunnels' and planting of trees The costs of HS2 continue to rise. Initially, ir was forecast to cost £56bn but could now th soar to over £100bn Forecasts for passenger numbers are uncert Noise pollution is a concern also .	will be less than one hour. help create jobs by 'green n 2015, the project he total cost could tain	Bradford Regener Urban decline - it investment and m Regeneration - m decline. Examples of how B Shopping Centre; Food Market; and	ation s the deterioration of the inne aintenance. eans improving an area that has Bradford has been regenerated a Lister Mills renovation into flats; Sunbridge wells bars and pubs.	r city often caused by lack of been experiencing a period of are as follows: The Broadway Plans for a new Bradford		

Engli	sh		The Go	thic	CYCLE 2		Year 9
1.0 Gothic Cor	nventions		2.0 Key Techn	iques	3.0 Structural	features	
1.1 extreme landscapes	dark, wild, and weather, maley graveyards	treacherous place full of wrathful volent forests, and ghostly	2.1 Gothic fiction	a genre of literature and film that covers horror, death and, at times, romance	3.1 shift in focus	when the auth	or changes the focus of the writing
1.2 abandoned buildings	haunted house churches fallen	s, cobwebbed castles, derelict into disrepair	2.2 metaphor	describing one thing as though it is another	3.2 character introduction	when the auth	or introduces a new character
1.3 omens, portents, visions	a character ma or some pheno coming events	y have a disturbing dream, vision, menon may be seen as a portent of	2.3 metonymy	is a subtype of metaphor, in which something is used to stand for something else eg rain symbolises sorrow.	3.3 dialogue	speech betwee	en characters
1. 4 terror	suspenseful fee dread, or disgu	elings of fear, fear of death, shock, st in the reader	2.4 simile	a comparison using 'like' or 'as'	3.4 flashback/ flashforward	when the narr or backwards o	ative moves momentarily forwards out of chronological order
1. 5 supernatural monsters	demons, witch other supernat	es, ghosts, banshees, vampires, and ural creatures	2.5 semantic field (lexical choice)	a collection of words which are related to one another either through meaning or through a more abstract relation	3.5 setting	when and where a text takes place	
1.6 atmosphere of mystery and suspense.	the work is per fear enhanced	vaded by a threatening feeling, a by the unknown	2.6 tone	the mood of the writing created by vocabulary choices	3.6 shift in time	moving backw	ards or forwards in time
1.7 Femme Fatale	French for "fata and femininity, femme fatale is	al woman", is a being of sexuality enchantment and mystery; the s often seen as destructive and	2.7 foreshadowing	when the author hints at future events	3.7 shift in place	when the write setting	er changes focus of the location or
	transforming		2.8 pathetic fallacy	attribution of human emotions to something non- living	3.8 repetition	using the same	e word or phrase again and again
1.8 science vs religion	many people v religion as bein felt science wa God's matters	iewed science and a belief in g at odds with each other; many s dangerous and was meddling in	2.9 anaphora	the repetition of a word or phrase at the beginning of successive clauses, sentences or paragraphs	3.9 cyclical structure	when, in a nar began	rative, the story ends where it
1.9 supernatural or inexplicable events	dramatic, amaz giants walking, of armour or pa	zing events occur, such as ghosts or or inanimate objects (such as a suit ainting) coming to life	2.10 symbolism	an object used as a sign for a deeper idea/meaning	3.10 linear structure	when an autho	or tells a story in chronological order
1.10 high, even overwrought emotion	characters are surprise, and e	often overcome by anger, sorrow, specially, terror	2.11 onomatopoeia 2.12 imagery	words that sound like their meaning e.g. crash five senses are evoked to create mental images	3.11 juxtaposition (contrast)	when two diffe side, emphasis	erent ideas are presented side by ing their contrast

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
1. medicine	1. Mediterranean	1. miniature	1. scholastic	1. occasional
2. encyclopaedia	2. extract	2. fantasy	2. spreadsheet	2. librarian
3. fibre	3. yeast	3. flour	3. gallery	3. menu
4. friends	4. gauge	4. genius	4. mortgage	4. immediately
5. fulfilled	5. friends	5. gauge	5. liaison	5. incidentally
6. science	6. occasion	6. exercise	6. penicillin	6. scissors
7. interactive	7. irrelevance	7. immediately	7. icon	7. virus
8. highlight	8. layering	8. palette	8. frieze	8. illusion
9. monetary	9. irresistible	9. negotiate	9. minutes	9. necessary
10. feasible	10. immigrant	10. criticism	10. immediately	10. February
WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
1. occurrence	1. necessary	1. parallel	1. movable	1. expenses
2. magazine	2. irrelevant	2. newspaper	2. glossary	2. internet
3. melting	knife/knives	3. minerals	3. ingredient	3. landscape
4. independent	4. humorous	4. maintenance	4. guardian	4. incidentally
5. indispensable	5. illuminate	5. irrelevant	5. height	5. grievance
6. parliament	6. negotiable	6. separate	6. exception	6. essential
7. software	7. Index	7. interface	7. processing	7. keyboard
8. form	8. kneading	8. impasto	8. kiln	8. motion
9. miniature	9. height	9. height	9. honorary	9. mortgage
10. irresistible	10. illiterate	10. foreign	10. government	10. conscious
WEEK 11	WEEK 12	WEEK 13		
1. seize	1. paralleled	1. efficient		
2. input	2. non-fiction	2. justify		
3. harmony	3. foreground	3. line	CYC	LE 2
4. movable	4. medicine	4. medicine	SDELL	INGS
5. manoeuvre	5. irreparable	5. chaos	JF LLI	
6. minutes	6. mortgage	6. fascinate	YEA	AR 9
7. fiction	7. genre	7. liaison	DIX	ONS
8. glazing	8. hygiene	8. pastel		ADEMY
9. guile	9. grievance	9. negotiable		
10. guile	10. guardian	10. especially		

	Math	S	V	ocabulary, formulae and methods	CYCLE 2	Year	9		
BOX 1: Non	-calculator Me	ethods	SURDS		INDEX NOT	ATION			
MULTIPLES, FAC	IULTIPLES, FACTORS AND PRIME NUMBERS Iultiple The result of multiplying a number by an integer. E.g. The 3 rd multiple of 7 is 21.		Surd	An irrational number that is a root of a positive integer, whose value cannot be determined exactly. Surds have infinite non-recurring decimals. $e = a \sqrt{2}$	$\mathbf{a} = \mathbf{b}^n$ a is the Pow b is the Base	yer. e. 74	Index		
Lowest Common Multiple (LCM)	The lowest common number in the multiplication tables of two or more library different numbers.		Rational Number	An integer , terminating decimal or recurring decimal (can be negative).	n is the Inde	Base	Power		
Factor	A quantity which div number. <i>E.g. factors</i>	<pre>ides equally into a of 8 are 1, 2, 4 and 8.</pre>		where p and q are integers and q $\neq 0$.	INDEX LAW	S: MULTIPLICATION AND DI	IVISION		
Highest Common Factor (HCF)	Highest The highest factor which belongs to two or Irrational Numb Common more numbers. Factor (HCF)			Any number that is not rational . It has an infinite number of decimal places, that don't repeat . <i>E.g.</i> π , $\sqrt{3}$	When the b laws when	When the base is the same , we use the for laws when multiplying and dividing.			
Prime Number	er An integer greater than 1 that has exactly two factors, 1 and itself.		SURDS: LAWS	$\sqrt{ab} = \sqrt{a} \times \sqrt{b}$	Multiplying	Add the powers E.g. $a^m \times a^n =$	<i>a</i> ^{<i>m</i>+<i>n</i>}		
Prime Factor	A factor of a number	r which is also prime.		Special case: $\sqrt{a} \times \sqrt{a} = a$	Dividing	Subtract the power $E a_{n} a^{m} \div a^{n} =$	wers		
Decomposition	To break something	down	Dividing Surds	$\int \frac{a}{b} = \frac{\sqrt{a}}{\sqrt{b}}$	Raising a po	wer by Multiply the pov	wers		
Product of	A set of prime	E.g. prime factor tree	Simplifying surds	Using square number factors to get the smallest number	another pov	wer $E.g. (a^m)^n = a^n$	mn		
(prime	multiply to give a	2 <u>6</u> 3		possible in the surd	SPECIAL PO	SPECIAL POWERS			
factorisation)	number.	$12 - 2 \times 2 \times 2 \text{ or } 2^2 \times 2$	Rationalising the denominator	When you remove a surd in the denominator by writing a equivalent fraction (usually with a surd in the numerator)	n P ⁰	Anything to the power of 0) is 1		
Unique	The fundamental the	$12 - 2 \times 2 \times 3 \text{ of } 2^{-} \times 3$	STANDARD FORM	NOTATION	p1	Anything to the power of 1	l is itself		
factorisation Each integer can be written as a unique product of prime factors. This is why 1 is not a prime number.		Allows us to write Numbers written in	very large or very small numbers without lots of zeros. the form A x 10 ⁿ .	Negative indices	Reciprocal <i>E.g.</i> $a^{-m} = \frac{1}{a^m}$				
STANDARD FORM: LAWS (MULTIPLY & DIVIDE)		N is any integer	10.	Fractional	Root. E.g. $a^{\frac{1}{n}} = \sqrt[n]{a}$				
Multiplication	Multiplication $A \times 10^n \times B \times 10^m = (A \times B) \times 10^{n+m}$		'n' is positive	Large number (≥ 1)		The power $\frac{1}{2}$ = square root.			
Division	$A \times 10^n \div B \times 10^n$	$n = (\boldsymbol{A} \div \boldsymbol{B}) \times 10^{n-m}$	'n' is negative	Small number (< 1)		The power $\frac{1}{3}$ = cube root			

	Ma	aths		,	Vocabulary, formu	lae and metho	ds		CYCLE 2	Year 9	
SQUARES A	ND ROOTS			BOX 2: L	Jsing percentage	S	вс	BOX 3: Maths and money			
Index	Tells us how	Square Number	Index = 2	PERCENTAGE	CALCULATIONS		А	APPROXIMATION AND ESTIMATION			
	use the number	Number		Multiplier	A percentage written as a You can then use multiplica	decimal. ation to find the	R	ounding	Mriting a number less accurately so it is easier to work with. Below 5, stay the same .		
	multiplication.	Cube Number	Index = 3		percentage.						
Root	The inverse of an	Square Root	Index = $\frac{1}{2}$	Percentage increase	Adding a percentage to the original amount.		Т	runcating	To shorten (a number) l	by chopping off the end.	
(Fractional Index)	index.	Cube Root	Index = $\frac{1}{3}$	Percentage decrease	Subtracting a percentage from the original amount.		D	ecimal place	The position of a digit a	fter the decimal point.	
POSITIVE IN	TEGER POWERS		3	Percentage Change	The change between the Difference $\times 100$ Original $\times 100$		N	loney	When working in pounds (£), all answers should be to 2 decimal places		
Square	The answer when	he answer when you multiply a number by			value as a percentage		Si	ignificant Figure	The first digit in a number which is not a zero. Any digit thereafter is significant		
numbers	itself. n ² 1, 4, 9, 16, 25, 3	36, 49, 64, 81, 10	0, 121,	Reverse Percentage	Working backwards to find	100%	E:	stimate a	The process of rounding	numbers to one significant	
	144			Simple Interest	Interest calculated as a per original amount, so the sar	rcentage of the me amount is added	Ca	alculation	answer.		
Cube numbers	The answer when itself, and then by	you multiply a r y itself again	number by		each year.		А	pproximate	proximate An answer close to the exact value.		
	n ³ 1, 8, 27, 64, 125	5, 216, 343, 512,	729, 1000	Exponential Growth	When we multiply a number same number (more than the same properties each	er repeatedly by the 1), so it increases by time		Pe	nny, pennie	es, pence	
Powers of 2	2 ⁿ 2, 4, 8, 16, 32,	64, 128, 256, 51	2, 1024	Compound	An example of exponential	growth.			(States)		
Powers of 3	3 ⁿ 3, 9, 27, 81, 2 4	13, 729		merest	accumulated interest, so e amount of interest is paid.	ach year a larger	1	Image credit: Royal Mint 2019 This is a one penny co	in. This is a two pence of	trage credit: Royal Mirt 2019 Here are two pennies. They're worth two pence.	
Powers of 4	4 ⁿ 4, 16, 64, 256,	1024			R = A x M ⁿ R is the end value. A is the starting value. M is the multiplier. n is the number of years.			Th	e penny dr	opped	
Powers of	5 ⁿ 5, 25, 125, 62	ⁿ 5, 25, 125, 625		per annum	per year		Wł	hen people say the "pe	enny dropped," they mean the	t someone suddenly understood	
5 Powers of 10	10 ⁿ 10, 100, 1000), 10 000, 100 00	0	Exponential Decay	When we multiply a number same number (less than 1) the same proportion each	er repeatedly by the), so it d ecreases by time.	something. The phrase was first used in a 1911 article about thieves using fake pennies to steal from an early automatic vending machine in a shop. When a real penny was used, the shopkeeper could hear the sound of it dropping. When fake pennies were used, he could not hear anything because the fakes were made from paper. It wasn't until the 1930s that the phrase started to be used in the sense of the idiom we know today.				

	Maths		Vocabu	lary, fo	ormulae and n	nethods	CYC	CLE 2	Year 9		
BOX 4: D	eduction	ANGLE R	RULES				BOX 5: Ro	BOX 5: Rotation and translation			
TYPES OF AN	GLE	Angles a	Angles around a point Add to 360 ° (as they make a full turn)				TRANSFORMA	TRANSFORMATIONS			
Angle	A measure of turn	Angles o	on a straight line	Ad	ld to 180°		Congruent	When two s	When two shapes are exactly the same shape		
Acute Angle	An angle less than 90°	Vertically	y opposite angles	Ar	e equal			and size, bu	can be in different orientations		
Right angle	90°	Angles ir	n a triangle	Ac	ld to 180 °		Rotation	To turn a sh	эре.		
Obtuse Angle	e An angle between 90° and 180°	Angles ir	n a quadrilateral	Ac	ld to 360 °			The shape d	oes not change size (congruent)		
Straight line	180°		ANGLES IN PARALLE	LLINES				To rotate a s	shape you need a centre of		
Reflex Angle	An angle between 180° and 360°	,	Alternate angles	Are	equal			rotation, the direction of	e number of degrees to turn, and a turn (clockwise or anticlockwise)		
A full turn	360°		Corresponding angle	es Are	Are equal		Invariant point	s Points on a	line or shape which do not move		
Links to: PAR	ALLEL LINES		Co-interior angles		d to 180 °			when a spec	ific transformation is applied		
Parallel Li	nes with the same gradient		ANGLES IN PO	LYGONS			Translation	Translate m	eans to move a shape.		
Lines Tr Tł	hey never meet. hey are always the same distance apart.		Triangle	3 sides	Interior angles	Exterior angles		The shape d	oes not change size (congruent).		
ANGLES IN POL	YGONS: FACTS		Quadrilatoral	4 sides	add to 180°	add to 360 °		To translate	a shape you need a vector in the		
Polygon	A 2D shape with 3 or more straight sides or	ıly.	Quadrilateral	4 sides	add to 360°	add to 360°		form $\begin{pmatrix} x \\ y \end{pmatrix}$			
Regular polygor	A polygon with sides that are all equal and a all equal .	angles that are	Pentagon	5 sides	Interior angles add to 540°	Exterior angles add to 360°		·			
Interior angle	An angle inside a polygon		Hexagon	6 sides	Interior angles add to 720 °	Exterior angles add to 360 °	Links to: VECTO	DRS			
Sum of interior	angles (n – 2) x 180° Where n is the number of sides		Heptagon (or Septagon)	7 sides	Interior angles add to 900 °	Exterior angles add to 360°	Vector	A quantity wh It defines a m	ich has magnitude and direction . ovement from one point to		
Exterior angle	The angle formed outside a polygon when one side is extended		Octagon	8 sides	Interior angles	Exterior angles		another.	()		
	Interior angle + exterior angle = 180°,	\bigwedge	Nonagon	9 sides	Interior angles	Exterior angles	(in 2D)	The top numb The bottom n	er (x) moves left (-) or right (+). umber (y) moves up (+) or down (-).		
	because they made a straight line.	d			add to 1260 °	add to 360 °		$e.a. \begin{pmatrix} 3 \\ 2 \end{pmatrix}$ mean	s a movement of		
Sum of exterior angles	360°		Decagon	10 sides	Interior angles add to 1440 °	Exterior angles add to 360°		3 right and 2 u			

	RE		Μι	ıslim Beliefs	CYCLE 2	Year 9		
Week	Key Knowledge to learn		Week		Key Knowledge to learn			
 Islamic beliefs: Sunni and Shia history 	 Sunni Muslims follow the example of the Prophet Muhammad Shi'as Muslims follow the example of the Prophet Muhammad and his About 80% of the worlds Muslims are Sunni The larger group of Muslims chose Abu Bakr, a close Companion of the Caliph The term Caliph means the social and political leader who was chosen community Sunnis believe that there were only four Caliphs after the Prophet Mula Sunni Muslims call these the "Rightly Guided Caliphs" Many Shi'a Muslims believe there are twelve Imams who are the succe Muhammad Sunni Muslims make up the majority of British Muslims 	son-in-law Ali Prophet, as the to lead the Muslim hammad essors to the Prophet	4. FESTIVAL: Ash`ura	 This is celebrated by Sunni and Shia Muslims on the tenth of the month of Muharram, but for different reasons. Ashurameans "tenth". Sunni: remembers Prophet Musa fasting on this day to remember the saving of the Israelites from the Pharoah in Egyp Shia: Remembers the death of Hussein, the grandson of the Prophet, who was killed at the battle of Karbala on this dat 680CE. Yazid was unjust and kept slaves so Hussein had refused to be led by him, and was imprisoned in Karbala and kil Sunni: Many see it as a Day of Atonement, when sins are forgiven if repented of. Many fast on the 8th-10th of Muharrai Shia: this is festival of sincere sorrow and sadness. Many wear black as a sign of grief. Mosques are covered in black clu After prayers in the afternoon, poems about the tragedy of Hussein are read. Shias learn from Ashura that Hussein, and the actions of the imams, should never be forgotten. This shows that all of t should stand up for justice to make society better and fight the unjust. A Shia's love for Allah is shown through their lo 				
2. Islamic Beliefs: Six beliefs of Islam	 The first belief is Tawhid, this means a belied that God is one. Ar monotheistic. The second belief is Malaikah, this means a belief in the existence of ar The third belief is in the authority of Holy Books. The Qur'an is believed message received form Allah by the Prophet Muhammad. Islati importance of other holy books of Judaism and Christianity. These Abraham and Moses, the Torah and Psalms and the Gospels. The fourth belief is hubuwwah and Risalah which means belief in propl The 5th belief is he belief in the Day of Judgement. The whole world wi will be judged by Allah on their actions. Allah will decide who will be Jannah (Paradise) or Jahannam (Hell) The 6th belief is Al-Qadr. This is the belief in predestination. Which humans have free will, Allah knows what will happen The six beliefs are found in the "Kita al-inam" (book of faith) The Six beliefs are in Multime in Query in the six of the set of the set	nother word for this is ngels d to be the final perfect m also recognise the include the scrolls of hets II end and every human awarded a place in al- h means that although	5 Key Belief: Tawhid and Surah 112	 Surah 112 of the Qur'an says "He is Allah, the And there is none like Him." Muslims believe Allah is eternal and unique, v They will only worship Allah, and no image or or the Prophet Muhammad because they mig Islam) Muslims believe Allah is not split into differen one and cannot be divided up in any way 	e; None is born of Him, nor is He born; so they will not make images of Allah he sin of shirk which is the worst sin in s a Trinity; instead Allah is completely			
3.Islamic beliefs: The Five Roots	 The Six beners drifte an summer mashing in one community which they can be subble to the subble summer and submer mashing in one community which they can be subble to the subble subb	and avoid bad ah as successors to the he resurrection of the n. ay of Judgement llowed the Prophet	6. Key Belief: The nature of Allah	 Anan has many quarters such as immanence, omniscience, listed in his 99 glorious names Some believe He is both immanent and transboth Others say He is transcendent but knows ever without being physically close/immanent Since the Qur'an teaches that Allah is "closer they do and why they do it so he will judge fa Therefore they will try to live how Allah wish escapes his notice. Believing that God is fair, loving and omnipol he has a bigger plan for them; this may invol plan it this way 	, transcendence, omnipotence, benevoler scendent in a way that we cannot underst erything that we do, which means he is "c r to you than your jugular vein", Muslims v airly on the Day of Judgement and send th tes because they know they will be held ar tent means Muslims see everything that h ve suffering but must be the right thing fo	and, because the Qur'an says he is loser to you than your jugular vein" will know Allah understands everything tem to heaven or hell accordingly. ccountable for every action and none happens as part of a test and trust that or them, otherwise Allah would not		

	RE		Chris	tian Beliefs	CYCLE 2	Year 9			
Week	Key Knowledge to learn		Week		Key Knowledge to learn				
7. Key Belief: Angels	 They have no free will and only exist to serve and worship Al Different angels have different roles, eg Jibril is in charge of of between Allah and prophets; Mikail is in charge of weather. Angels are appointed over you to protect you; they are kind write down your deeds. They know and understand all that y "They celebrate His praises night and day, nor do they ever getween the server and the server an	lah communication and honourable, and rou do." (Qur'an) get tired or stop."	LO . Key Belief: Judgement	 Everyone is accountable for all their is Good and bad deeds are weighed in heaven or hell "No one can bear the burdens of and believe Jesus did) Everyone will have to account for the try to live and worship as the Qur'an Even sins as light as a mustard seed of the try to see the try t	s accountable for all their actions in life bad deeds are weighed in a scale and whichever side is heavier determines whe hell an bear the burdens of another" so no one else can pay the penalty of your sin (a sus did) will have to account for their actions, with an angel reading out their Book of De and worship as the Qur'an commands so they will as light as a mustard seed will count in the scales of justice, so Muslims will try h				
edestination	 All things are known to Allah before they happen, and approvall things We created with predestination." "No disaster strikes except by permission of Allah." Qur'an 64 Muslims believe that life is a test and Allah sends suffering for not understand that reason but it is part of his plan for our live learn to cope and not fall into despair or doubt. 	ved by him: "Indeed, 4:11 or a reason; we may ves and we must	11. Key Belief: Heaven and hell	 and to do good deeds, so their scales Jannah (heaven) is a place of plenty a "There are rivers of pure water; rivers Jahannam (hell) is a place of burning "There are some whom the Fire will r and yet others up to their necks." 	enty and closeness to Allah rivers of milk of which the taste never changes rning and shame, and being away from Allah will reach their ankles, others up to their knees, others up to their waists,				
8. Key Belief: Pre	 learn to cope and not fall into despair or doubt. Muslims would respond that Allah does not MAKE us do what we do, he just knows in advance what we will do with our free will and what choices we will make, so judgement is fair. Allah chose to limit his power by giving us free will so would not change what we do, because free will is needed for accountability and judgement to be fair. This is like watching a film for a second time: you know what is going to happen but you cannot change it. 			 Allah communicated with mankind t Adam and Ibrahim are key prophets Muhammad is the final prophet; the humankind. Adam: first man, first prophet, taugh Ibrahim: rewarded for his total obed Muhammad: received the Qur'an via his life; the final seal of the prophets 	through prophets at different points in history s who came before Muhammad ere will be no more prophets now that Allah has revealed the Qur'an th people to bake bread, cultivate crops and worship Allah dience to Allah in being willing to sacrifice his son ia revelations lasting over 23 years; taken up into heaven at the end o ts; hadith are his sayings, traditions and customs and these are carefu				
9 Key Belief : Akhirah and resurrection	 After death everyone will wait in the grave for the Last Day where be resurrected and judged, then go to heaven or hell Muslims will care for their bodies and avoid tattoos and dan like drinking alcohol and smoking, because they want their be and pure in the afterlife for resurrection Muslims will try to avoid sin so that they pass the test of judge to heaven not hell 	when everyone will naging behaviours podies to be whole gement day and go	13. Key Belief: Holy books	 studied by Muslim scholars; they have authority second only to the Qur'an Holy books: the Scrolls of Abraham, Torah, Psalms and Gospels The Qur'an is Allah's final message to humankind and will never be replaced by another; it is the highest authority in Islam Muslims will study the Qur'an very carefully to try to learn how to live and worship correctly Muslims will try to live according to the Qur'an's teachings to go to heaven Some try to learn it off by heart and become a hafiz 					

Fre	nch		Key Informati	on		C١	CYCLE 2		All Years
Les jours de la semaine		Les nombre	es en français						
	0 zero	10 dix	20 vingt	30 trente					
lundi	1 un	11 onze	21 vingt-et-un	31 trente-	et-un				
mardi	2 deux	12 douze	22 vingt-deux	32 trente-	deux		F		
inardi	3 trois	13 treize	23 vingt-trois	33 trente-	rois		Frence	n SPAG	marking
mercredi	4 quatre	14 quatorze	24 vingt-quatre	34 trente-	quatre	_			
	5 cinq	15 quinze	25 vingt-cinq	35 trente-	cinq	sp	Spellin	Ig	
jeudi	6 six	16 seize	26 vingt-six	36 trente-s	six	•	· ·	0	
	7 sept	17 dix-sept	27 vingt-sept	37 trente-s	sept	art	Article	1	
vendredi	8 huit	18 dix-huit	28 vingt-huit	38 trente-l	nuit		/	•	
camadi	9 neuf	19 dix-neuf	29 vingt-neuf	39 trente-i	neuf	l vh	Vorh		
samedi	40 quarante	50 cinquante	60 soixante	70 soixant	e-dix	VD	VEID		
dimanche	41 quarante-et-un	51 cinquante-et-un	61 soixante-et-un	71 soixant	e-onze		T		
annanene	42 quarante-deux	52 cinquante-deux	62 soixante-deux	72 soixant	e-douze		lense		
Les mois	43 quarante-trois	53 cinquante-trois	63 soixante-trois	73 soixant	e-treize	_	-		
	44 quarante-quatre	54 cinquante-quatre	64 soixante-quatre	74 soixant	e-quatorze	Acc	Accent	t	
janvier	45 quarante-cinq	55 cinquante-cinq	65 soixante-cinq	75 soixant	e-quinze				
<i>c</i> /	46 quarante-six	56 cinquante-six	66 soixante-six	76 soixant	e-seize	adi 🛛	Adject	ive inco	prrect/agreement
fevrier	47 quarante-sept	57 cinquante-sept	67 soixante-sept	77 soixant	e-dix-sept	,	j = = =		
marc	48 quarante-huit	58 cinquante-huit	68 soixante-huit	78 soixant	e-dix-huit		Canita	I	
111013	49 quarante-neuf	59 cinquante-neuf	69 soixante-neuf	79 soixant	e-dix-neuf		Cupitu	•	
avril	80 quatre-vingt		90 quatre-vingt-dix				Mrong	word	
	81 quatre-vingt-et-un		91 quatre-vingt-onze			~~~~~	viong	g woru	
mai	82 quatre-vingt-et-deux		92 quatre-vingt-douze					,	
	83 quatre-vingt-et-trois		93 quatre-vingt-treize			_ ?	Re-phr	rase/no	sense
juin	84 quatre-vingt-et-quatre		94 quatre-vingt-quator	ze		_			
iuillat	85 quatre-vingt-et-cinq		95 quatre-vingt-quinze				Word ı	re-orde	r
Junet	86 quatre-vingt-et-six		96 quatre-vingt-seize						
août	87 quatre-vingt-et-sept		97 quatre-vingt-sept			_			
88 quatre-vingt-et-huit			98 quatre-vingt-dix-hui	t					
septmebre	89 quatre-vingt-et-neuf	_	99 quatre-vingt-dix-neu	ıf	-		_		
octobre	100 cent	600 six cents	105 cent cinq		1,001	mille et un		74,000	soixante-quatorze mille
	200 deux cents	700 sept cents	149 cent quarante	e-neuf	1,500	mille cinq cents		100,000	cent mille
novembre	300 trois cents	800 huit cents	181 cent quatre-v	ingt-un	1,766	sept cent soixant	e-six	1,000,000	un million
	400 quatre cents	900 neuf cents	501 cinq cent un		2,001	deux mille un 3,000,000 trois millions			trois millions
décembre	500 cinq cents	1,000 mille	565 cinq cent soix	ante-cinq	40,000	quarante mille	1,0	000,000,000	un-millard

		Mai	rking Sticker	CYCL	E 2
Title:					
<u>Detail</u>	www	<u>EBI</u>	<u>Tenses</u>	www	EBI
Connectives	123		Present tense	123	
Opinions	123		Past Perfect	123	
Reasons (adjectives)	123		Imperfect	123	
Intensifiers	123		Conditional	123	
Time expressions	123		Simple Future	123	
Adverbs	123		Pluperfect	123	
Negetives	1.2.2		Perfect Conditional	123	
Negatives	123		Subjunctive	1	
Comparatives	plus moins		Modal Verbs	1	
	le plus		Other Persons	123	
Superlatives	le pire le meilleur		Quality of Work	Si j'avais le choix	
Si clause	123				
Openers	123		1 Excellent	Quand j'étais plus jeune	
Exclamation	123		2 Good	Pour que je sois contente	
Questions	123		2 0000	Quand je serai plus âgé	
Total			4 Poor	vu que	
				tandis que	
				Si je pourrais	
				Pour que je puisse	

	French	Verl	conjugation explana	ation	CYCLE 2	All Years
Pluperfect I had played Imperfect Past Perfect I used to play I had played			Present I play Near F I am goin	Simp I w uture g to play	le Future S ill play If h Condition I would p	ubjunctive Probability f I am rich/If I am happy nales
Tense	Add or Remove ending		Meaning	Example		
Imperfect	Remove ending ER IR RE OIR		I used to play	Jouer – remove	er – je jouais	
Pluperfect	Remove ending ER IR RE OIR		I had played	Jouer – remove	er – J'avais joué	
Past perfect	Remove ending ER IR RE OIR		I have played	Jouer – remove	er – j'ai joué	
Present	Remove ER IR RE OIR		l play	Jouer – remove	er – je joue	
Near future	Add the infinitive		I am going to play	Jouer – add to t	the structure – je vais joue	r
Simple future	Add to the infinitive ER IR RE		I will play	Jouer – add the	ending to the end – je jou	ierai
Conditional	Add to the infinitive ER IR RE		I would play	Jouer – add the	ending to the end – je jou	ierais
Subjunctive	Probability – If I am rich /If I am ha	арру		Learn set sente	nces (marking sticker& wr	iting frame)

*imperfect and conditional share endings

Fren	ch	French Literacy Mat		CYCLE 2	All Years
Connectives car / parce que = because puisque = since aussi = also donc = therefore puis = then après = after Ensuite = next/then ou = or cependant = however par conséquent = as a result étant donné que = given that	Subjunctive Pour que je sois = so that I am Pour que je puisse = so that I can Il faut que = It is necessary that Il est essential qu'il aie = it is esser Il est necessaire qu'on fasse = it is Questions Pourquoi? = Why Qui? = Who? Quand? = When? Comment? = How?	tial that there is necessary that we do Time Phrases Aujourd'hui = Today Hier = Yesterday Demain = Tomorrow En été = In summer	Adverbs d'habitude normaleme quelquefois tous les jou généraleme Superlati le / la moin le / la plus le / la pire	= Usually ent = normally s = sometimes rs = every day ent = generally Ves s = the least = the most = the worst x = the best	Reasons (Adjectives) c'est = it is c'était = it was ce sera = it will be ce serait=it would be intéressant = interesting passionnant = exciting sympa = nice époustouflant = mind-blowing triste = sad affreux = terrible
tanti donne que = given that tandis que = whereas vu que = considering that Malgré = despite Afin que = so that Pourvu que = given that Sauf = except Magré = despite En outre furthermore Pour que = so that	Que = What? Que = What? N'est-ce pas? = Isn't it? As-tu / Avez-vous? = Do you have Intensifiers très = very assez = quite un peu = a little vraiment = really	En ete = In summer En hiver = In winter L'année dernière = Last year L'année prochaine = Next year À l'avenir = In the future La semaine dernière = Last week Le mois prochain = Next month Adjectival Agreement un garçon intelligent = a clever boy	Exclamat Quel surpri: Quel chanc Quel domm Quel horreu Negative ne pas = r	ion se! = What a surprise! e! = What luck! hage! = What a shame! ur! = What horror! s hot	épouvantable = dreadful bizarre = strange sale = dirty propre = clean bruyant = noisy tranquille = calm beau/joli = nice cher = expensive différent = different
Openers D'abord = firstly Par contre = On the other hand Premièrement = Firstly Deuxièment = Secondly Troisièmement = Thirdly Finalement = Finally Pour moi = As for me	beaucoup = a lot Complex Opinions Je pense que = I think that J'estime que = I consider that Je crois que = I believe that Il me semble que = It seems to me Je trouve que = I find that À mon avis = in my opinion En ce qui me concerne = Concerni Je suis d'accord car = I agree becau	une fille intelligente = a clever girl un pull bleu = a blue jumper une veste grise = a grey blazer une cravate violette = a purple tie une chemise blanche = a white shirt that ng me se	ne jamais ne que = o ni ni = nei ne plus = Compara plus que = moins que	= never only ther nor not anymore tives = more than e = less than	ennuyeux = boring mauvais/mal = bad paresseux = lazy vieux = old propre = clean facile = easy moche/ laid = ugly grand = big petit = small

Pluperfect	Past Imperfect	Past Perfect	Present Tense	Near Future	Simple Future	Conditional	Perfect Conditional
			INFINITIVE: porter = to	wear (Regular er)			
I had worn	I used to wear	l wore	I am wearing/I wear	I am going to wear	l will wear	l would wear	I would have worn
Je (J') Tu avais porté avais porté avait porté avait porté avait porté avait porté avait porté avais porté avait porté avait porté avaient porté avaient porté	Je (J') port ais Tu port ais II port ait Elle port ait Nous port ions Vous port iez IIs port aient Elles port aient	Je (J') ai porté Tu as porté Il a porté Elle a porté A porté Nous avons porté Vous avez porté Ils ont porté Elles ont porté	Je (J') port e Tu port es II Elle port e port e port e port e port ez II Nous port ons Vous port ez IIs port ent Elles	Je (J') vais porter Tu vas porter II va porter Va porter Va porter Nous allons porter Vous allez porter IIs vont porter Elles	Je (J') porter ai Tu porter as porter a porter a porter a porter a porter ont Vous porter ez lls Elles porter ont	Je (J') porterais Tu porterais porterait porterait porterait Nous porterions Vous porteriez IIs porteraient Elles porteraient	Je (J') aurais porté Tu aurais porté aurait porté aurait porté aurait porté aurait porté aurit porté aurit porté Nous auricz porté Ils Elles auraient porté
		-	INFINITIVE: finir =	to finish (ir)	-		
I had finished	I used to finish	l finished	I am finishing/ I finish	I am going to finish	I will finish	l would finish	I would have finished
Je (J') avais fini Tu avais fini avait fini avait fini avait fini avait fini avait fini avait fini avait fini avait fini avaient fini avaient fini	Je (J') finiss ais Tu finiss ais port ait finiss ait On finiss ait Nous finiss ions Vous finiss iez Ils finiss aient Elles finiss aient	Je (J') ai fini Tu as fini I a fini Elle a fini Nous avons fini Vous avez fini Ils ont fini	Je (J') fin is Tu fin is I fin it Elle fin it Nous fin issons Vous fin issent Elles fin issent	Je (J') vais finir Tu vas finir II va finir Elle va finir Nous allons finir Vous allez finir IIs vont finir	Je (J') finir ai Tu finir as I finir a Elle finir a Nous finir ons Vous finir ont Elle finir ont	Je (J') finir ais Tu finir ais II finir ait Elle finir ait Nous finir ait Vous finir iez IIs finir aient Elles finir aient	Je (J') aurais fini Tu aurais fini aurait fini Elle aurait fini aurait fini aurait fini aurait fini vous auriez fini auraient fini auraient fini
			INFINITIVE: attendre	e = to wait (re)			
I had waited	I used to wait	l waited	I am waiting/ I wait	I am going to wait	I will wait	I would wait	I would have waited
Je (J [']) avais attendu Tu avais attendu avait attendu on avait attendu avait attendu avait attendu avions attendu vous aviez attendu avaient attendu avaient attendu	Je (J') attend ais Tu attend ais attend ait Elle attend ait On attend ait Nous attend ions Vous attend iez attend aient Elles attend aient	Je (J') ai attendu Tu as attendu a attendu a attendu a attendu a attendu a attendu Nous avons attendu Vous avez attendu IIs ont attendu	Je (J') attend s Tu attend s II attend _ Elle attend _ on attend ons Vous attend ez attend ons attend ent attend dons attend ent	Je (J') vais attendre Tu vas attendre Va attendre Va attendre Va attendre Va attendre Nous allon%ttendre Vous allez attendre vont attendre	Je (J') attendrai Tu attendras attendra Blle attendra on attendra attendra attendra attendra stendrons vous attendront attendront attendront	Je (J') attendrais Tu attendrais attendrait attendrait attendrait attendrait attendrait attendrait Nous attendriez Is attendraient attendrait	Je (J') aurais attendu Tu aurais attendu aurait attendu Blle aurait attendu aurait attendu aurait attendu Nous aurions attendu Vous auriez attendu auraient attendu auraient attendu

French				Ver	bs			CYCLE 2			All Years	
Present Tense Regular Verbs												
	ER verb	habiter = to live			IR verb finir	= to finish				<mark>RE verb</mark> a	ttendre	= to wait
Je (J')habit eI liveTuhabit esYou live (s/informal)IIhabit eHe livesEllehabit eShe livesOnhabit eWe liveNoushabit onsWe liveNoushabit ezYou live (pl/formal)IIshabit entThey live (m/mixed)Elleshabit entThey live (f)		Je (J') Tu II Elle On Nous Vous IIs Elles	fin isI finishfin isYou finish (s/informal)fin isHe finishesfin itShe finishesfin itWe finishfin issonsWe finishfin issezYou finish (pl/formal)fin issentThey finish (m/mixed)fin issentThey finish (f)		Je (J') Tu Il Elle On Nous Vous Ils Elles	at at at at at at at	attend sI waitattend sYou wait (s/informal)attend _He waitsattend _She waitsattend _We waitattend onsWe waitattend ezYou wait (pl/formal)attend entThey wait (m/mixed)attend entThey wait (f)					
					Present Tense I	rregular V	/erbs					
	avoir = t	o have		être =	to be		faire	= to do			aller	= to visit
Je (J') Tu II Elle On Nous Vous IIs Elles	ai as a a avons avez ont ont	I have You have (s/informal) He has She has We have We have You have (pl/formal) They have (m/mixed) They have (f)	Je (J') Tu II Elle On Nous Vous Ils Elles	suis es est est sot sommes êtes sont sont	l am You are (s/informal) He is She is We are We are You are (pl/formal) They are (m/mixed) They are (f)	Je (J') Tu II Elle On Nous Vous Ils Elles	fais fais fait fait faitons faites font font	l do You do (s/inforr He does She does We do We do You do (pl/form They do (m) They do (f)	nal) al)	Je (J') Tu II Elle On Nous Vous Ils Elles	vais vais va va allons allez vont vont	l go You go (s/informal) He goes She goes We go We go You go (pl/formal) They go (m/mixed) They go (f)

	French		Ve	rbs	CYC	CLE 2	All Years		
Present Tense	Past Perfect	Immediate Future	Conditional	Simple Future	Past Imperfect	Past Pluperfect	Perfect Conditional		
INFINITIVE: aller = to go (Irregular)									
I am going / I go	I have gone / I went	l am going to go	I would go	I will go	I was going / I used to go	I had gone	I would have gone		
Je (J') v ais Tu v as II v a Elle v a On v a Nous all ons Vous all ez IIs v ont Elles v ont	Je (J') suis allé(e) Tu es allé(e) Il est allé(e) Elle est allé(e) On est allé(e) Nous sommes allé(e/s) Vous êtes allé(e/s) Ils sont allé(e/s) Elles sont allé(e/s)	Je (J') vais aller Tu vas aller Il va aller Elle va aller On va aller Nous allons aller Vous allez aller Ils vont aller Elles vont aller	r Je(J') ir ais r Tu ir ais r II ir ait r Elle ir ait r On ir ait r Nous ir ions r Vous ir iez r Ils ir aient r Elles ir aient	Je (J') ir ai Tu ir as Il ir a Elle ir a On ir a Nous ir ons Vous ir ez Ils ir ont Elles ir ont	Je (J')allaisTuallaisIIallaitElleallaitOnallaitNousallionsVousalliezIlsallaientEllesallaient	Je (J')étaisallé(e)Tuétaisallé(e)IIétaitallé(e)Elleétaitallé(e)Onétaitallé(e)Nousétionsallé(e)sVousétiezallé(e/s)Ilsétaient allé(e/s)Ellesétaient allé(e/s)	Je (J')seraisallé(e)Tuseraisallé(e)IIseraitallé(e)Elleseraitallé(e)Onseraitallé(e)Nousserionsallé(e/s)Vousseriezallé(e/s)Ilsseraient allé(e/s)Ellesseraient allé(e/s)		
	-		INFINITIVE: faire = to	do / make (Irregular)					
I am doing/ I do	I have done / I did	I am going to do	I would do	l will do	I was doing / I used to do	I had done	I would have done		
Je (J') f ais Tu f ais II f ait Elle f ait On f ait Nous f aisons Vous f aitez IIs f ont Elles f ont	Je (J') ai fait Tu as fait Il a fait Elle a fait On a fait Nous avons fait Vous avez fait Ils ont fait Elles ont fait	Je (J') vais faire Tu vas faire II va faire Elle va faire On va faire Nous allons faire Vous allez faire Ils vont faire Elles vont faire	Je (J')fer aisTufer aisIIfer aitEllefer aitOnfer aitNousfer ionsVousfer iezIIsfer aientEllesfer aient	Je (J') fer ai Tu fer as Il fer a Elle fer a On fer a Nous fer ons Vous fer ez Ils fer ont Elles fer ont	Je (J') fais ais Tu fais ais II fais ait Elle fais ait On fais ait Nous fais ions Vous fais iez IIs fais aient Elles fais aient	Je (J') avais fait Tu avais fait II avait fait Elle avait fait On avait fait Nous avions fait Vous aviez fait Ils avaient fait Elles avaient fait	Je (J') aurais fait Tu aurais fait II aurait fait Elle aurait fait On aurait fait Nous aurions fait Vous auriez fait Ils auraient fait Elles auraient fait		
DR/MRS VANDERTRAM Descendre – je suis des Rester – je suis resté(e Monter – je suis monte Revenir – je suis reven Sortir – je suis sorti(e)(MP verbs take <u>être</u> not <u>a</u> scendu(e)(s) - to come do)(s) - to stay ś(e)(s) - to climb u (e)(s) - to return s) - to go out	<mark>ivoir</mark> own (stairs) Ver Alle Na De Ent Rei	nir – Je suis venue (e)(s) - er – je suis allé(e)(s) - to g ître - je suis né(e)(s) - to b venir – je suis devenu(e)(s trer – je suis entré(e)(s) - t ntrer – je suis rentré(e)(s)	to come o e born :) - to become o enter - to re-enter	Tomber – je suis tomb Retourner – je suis ret Arriver- je suis arrivé(e Mourir – je suis mort(e Partir – je suis parti(e)	ié(e)(s) - to fall :ourné(e)(s) - to return e)(s) - to arrive e)(s) - to die (s) - to leave			

Art

Expressionism

CYCLE 2

YEAR 9

German Expressionism

German expressionism was an early twentieth century German art movement that emphasized the artist's inner feelings or ideas over replicating reality, and was characterised by simplified shapes, bright colours and gestural marks or brushstrokes





Ernst Ludwig Kirchner

- The aim was to establish a group with the intention of creating "a bridge between the turbulent internal world of the artist and the external world of the viewer."
- Ernst Ludwig Kirchner who was born on the 6th May, in 1880 co-founded the group 'Die Brücke' or The Bridge group in Dresden in 1905, with fellow painters and printmakers Erich Heckel, Karl Schmidt-Rottluff and Fritz Bleyl.
- Die Brucke employed strong contrasting colours and distorted forms to reflect the tension and anxiety of living as an emotional individual in the mechanized modern world and to affect their audiences on a psychological level.
- The group only lasted until 1913, and much of its output was derided by the Nazis in the years leading up to World War II. However, Kirchner and co's ambitions were largely successful, as the group is widely regarded as the founders of German Expressionism
- The group only lasted until 1913, and much of its output was derided by the Nazis in the years leading
 up to World War II. However, Kirchner and co's ambitions were largely successful, as the group is
 widely regarded as the founders of German Expressionism
- In many ways, the movement was a reaction to and a product of the mechanized society; Expressionist artists favoured antique techniques, such as the woodcut and primitive art.

Key Terms And Vocabulary Expression – To communicate what you are feeling through your art.

Mark-Making – Different ways of using your pencil, brush etc.

Grotesque – To create a strange or mysterious image normally seen in a face or portrait.

Complementary Colours – Opposite colours on the colour wheel that bring out the best in each other.

Abstraction – The process of breaking down real objects in an artwork so that they ae no longer recognisable.

Mood – The may an artwork makes you feel.

Composition – The way an artist organises their page. Composition can be used to attract the viewer to a particular part of an artwork.



CYCLE 2 **DESIGN TECHNOLOGY** YEAR 9 **BOX 3: Marking out tools BOX 1: Surface Finishes** There are a wide range of surface finishes for wood that are available, these include paint and wax. Surface finishes can protect the wood and also add decoration. Surface finishes for wood Marking Gauge Sanding Sealer Wax Paint For marking out parallel lines along the Used to SEAL the Applied with cloth and Available in a wide edges of wood. Can be used when Try square wood surface polished to a sheen. range of colours. marking out wood joints for example For marking out accurate before applying a Wax Polish dries very Applied with brush or marking the depth of a corner halving right angles and checking surface finish. quickly. spray can. if work is square when joint. Applied with brush and needs to be gluing up. lightly sanded before applying **BOX 4: Clamping and holding tools BOX 5: Finishing tools and equipment** final surface finish **Glass Paper** Used to remove scratches from the surface of wood. Glass paper is available in a wide range of Sash Clamp/Cramp grades for removing deep For holding work securely when scratches to fine surface drilling holes on the pillar drill. finishing. Belt Sander Used to sand and shape the edges of wood. The sanding belt is very course and will G Clamp/Cramp **BOX 2: Cutting and shaping tools** remove waste guickly. A Used to hold work together sliding fence can be used when whilst gluing and holding sanding at a required angle. work securely on a bench The belt sander is suitable for sanding wider pieces of wood Disc Sander or pillar drill. as the guard is positioned Used to sand and shape the Tenon Saw above the work piece. edges of wood. The sanding Used for making straight cuts disc is very course and will in wood. remove waste guickly. A sliding fence can be used when Bench Hook Woodworking Vice sanding at a required angle. To hold the wood To hold the wood securely The disc sander is suitable for securely when sanding smaller pieces of when cutting, chiseling, making straight cuts drilling etc. wood. with the Tenon Saw



ІТ	DNENT 1	CYCLE 2	Year 9		
 BOX 1: User Accessibility Needs Visual: Limited vision can give many individual requi interface. High contrast colour schemes aid limited vision & Resizable icons etc. makes it easier to see & read Text to speech software supports total vision loss text. Avoid using colour alone to provide user feedbace 	 BOX 4: User Accessibility Needs Motor: People with a mobility impairment may require certain features to a user interface. Provide resizable/larger icons to make it easier to actually point at & select. Provide input options other than mouse/keyboard, e.g. speech input. Don't use timed tasks or allow for pausing to not discriminate unfairly. Ensure functionality can be accessed through the keyboard without a mouse 				
 BOX 2: User Accessibility Needs Speech: While GUI interfaces don't rely on speech, so Notably speech interfaces. Provide alternative options to speech-only input. Allow control over microphone sensitivity and speech use literal language for the voice commands and Allow for pauses in speech and shaky/broken speech 	 BOX 5: User Accessibility Needs Cognitive: Interfaces should make sensible alterations for those with cognitive disabilities. Avoid the use of complicated language and large blocks of text. Provide text to speech software so text can be read out. Ensure simplicity of navigation & interaction in the interface for ease-of-use. 				
 BOX 3: User Accessibility Needs Hearing: Those with limited or total loss of hearing a user interface. Ensure transcripts/captions are available for audi Provide sign language options or use simple langu Avoid having content that is solely expressed three 	are still affected by your o/video content. Jage. Dugh time-based media.	Ensure time-based m	edia or timed events can b	e slowed or paused.	

IT COMP		DNENT 1	CYCLE 2	Year 9			
BOX 6: User Skills		BOX 8: Design Princip	es				
Users will have different levels of experience with IT. their ability to use new interfaces.	This will affect	Colours: Your colour se represent the business	cheme is extremely impor 5′ brand image.	tant. It must look nice &			
Expert: Lots of experience with lots of tech. Confident intuit the functionality.	t in use & able to	 Use a limited range of colours- Too many colours can be distracting & unattractive. 					
Regular: Good experience with common tech. May ne generally able to figure out new interfaces.	eed some help but	Use the business hore represent their ima	ouse style- Most business' ge.	have chosen colours that			
Occasional: Some experience with common tech. Will experience to use effectively.	 Ensure colours don't clash- Certain colours that highly contrast can be unpleasant to view. 						
Novice: Little experience with most tech. Likely to nee ongoing support to use.	ed training &	• Use textures appropriately- The right texture can add to the aesthetic style of your interface.					
BOX 7: Domographics		BOX 9: Design Princip	05				
The individual characteristics of your target audience interface design.	should affect the	Font Style/Size: The for readable. It also can re	ont is important in ensurin present the brand image.	g text is attractive &			
Age: The very young & old are less likely to be experie interface should consider its target audience's age.	enced IT users. An	Ensure text is reada read. Your font mus	ble- Some fonts may look t be legible, even in large	good but be confusing to blocks of text.			
Beliefs/Values: Some groups beliefs or values may mean less IT experience. Some content may offend values.		• Use sans serif fonts- Sans serif fonts (those without the little ticks at the end of strokes e.g. Text) are better for reading on screen.					
Culture: Some symbols may mean different things to different cultures. Languages will vary between cultures too.		• Avoid decorative fonts- These fonts may look interesting and cool but are usually very difficult to read. E.g. <i>This text is difficult to read.</i>					
Experiences: Past experiences will make certain inter	faces easier to adapt						
to.							

Health	& Social Care	Component 1 Humar	n Lifespan Development	CYCLE 2	YEAR 9		
1. Life Stages: 'Are distin	nct phases of life that each pers	on passes through'.	4. Different types of life event (Expected and Unexpected).				
Infancy - (0-2 years) Early Childhood (3-8 years) Adolescence (9-18 years) Early adulthood (19-45 years) Middle adulthood (46-65 years) Later adulthood (65+ years) Cater adulthood (9-45 years) Cater adulthood (46-65 year	Still dependent on parents/carers physical skills. Becoming increasingly independe learning how to develop friendsh Onset of puberty, which brings gu Leaving home, making own choic Having more time to travel, socia may be leaving the home, beginn The aging process continues, whi I I I I I I I I I I I I I I I I I I I	s but growing quickly and developing ent, improving thought processes and ips. rowth spurts and emotional changes. es about a career and may start a family. lise and take up hobbies as any children ing of the menopause and aging process. ch may affect memory and mobility. The menopause and aging process. ch may affect memory and mobility.	 Life events can be grouped under different types relating to relation and weinlight, relationship changes of life circumstances. Some events happen to most people such as starting school. Other events, such as a serious accident, don't happen to everyone, and come as a shock. All events have some impact on growth and development. Health & wellbeing events cause changes to the body, physical or mental health or mobility. Relationship changes are the building or breakdown of friendships or relationships. Life circumstances refer to the way a person lives, their day-to-day life and choices they make. Health and Wellbeing events Accident/injury. Physical illness Mental and emotional wellbeing. Relationship Changes New relationships Marriage and civil partnerships Divorce and separation Parenthood Bereavement 				
3. Factors affecting gro	owth and development.		5. Coping with change cau	used by <i>life events</i> .			
Physical Factors Emol Inherited conditions II Illness and Disease III Mental Illness III Disabilities III Sensory Impairment IIII Cultural Factors IIII Religion Gender Identity Gender Roles Sexual Orientation Community & Race IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Social Factors Social Factors Fear Suppor Anxiety/worry relation Jpset/Sadness Social Grief/Bereavement inclusid Happiness/Contentment Bullyin Security Discrin Attachment Environmental Factor • Housing • Hone environmen • Pollution • Pollution	tors Lifestyle Factors tive/Unsupportive Nutrition nships Physical activity Smoking on/exclusion Alcohol g nination Economic Factors Economic Factors Employment situation t Financial resources	Character traits that influence how • Resilience • Self esteem • Emotional intelligence • Disposition • Disposition • Family • Friends • Partners • Community groups • Multi-disciplinary and agencies	of support A I botional critical help.	PSA is a Pearson Set Assessment. You will complete 'A Set Assessment' under examination conditions. After all assignments in the PSA are complete Pearson will check all tasks have been marked fairly.		

Enterprise **Component 1** CYCLE 2 YEAR 9 BOX 1: Learning Aim C: Investigate the factors that contribute to the success of an enterprise. (internal factors) The impact of internal factors on costs: markets and customer satisfaction. Internal Factors – Factors inside the business which they can control. Key Words: Internal, SME, Primary & Secondary Research, Qualitative and Quantitative Research BOX 2 BOX 3 Internal Factor 1: How can you understand the market? Primary Research: Questionnaires, Surveys, Taste tests, Interviews and Focus Groups. Understanding the market It is important you know what the customer wants. Secondary Research: Internet, Trade Magazines, Local Newspapers and Published accounts. You know how much they will pay. How can you ensure customer satisfaction? Internal Factor 2: **Excellent Customer Service. Customer Satisfaction** Good range of products and services Customers will return. Keeping good stock levels Customers will tell others Quality products Customers will consider buying other products/services you offer. USP (Unique Selling Point). Internal Factor 3: How can you plan effectively? **Effective Planning** Having efficient booking systems Customer orders can be taken efficiently Checking stock regularly Anticipating times when demand may be higher (eg Christmas). Stock is available when needed. Deliveries are made on time. Bookings are placed correctly. How can you ensure your finances are effective? Using retained profits from your sales. Internal Factor 4: Loans from a bank/building society. Effective Finance Funds from investors. You can buy raw materials You can pay staff How do you deal with unforseen human resource costs? You can pay for marketing and advertising. Have a contingency plan – plan for things that you hope will not happen. Have a contingency fund – keep some money in reserve in case there is a problem. Internal Factor 5: Unforeseen Human Resource Costs You can cover the costs of staff who are ill. Pay to advertise for new staff when others leave. Cover maternity/paternity leave.

Enterprise	Component 1	CYCLE 2	YEAR 9					
SOX 4: Learning Aim C: Investigate the factors that contribute to the success of an enterprise. (external factors) External Factors – Factors from outside the business which they cannot control. Cey Words: External, SME, Revenue, Legislation, Taxation & Success.								
 External Factors: Changing Costs: Cost of raw materials, Energy costs, Cost of born premises. 	rowing or Cost of Find cheaper mat	How can a business react to external factors? Changing Costs Increase prices to changing costs. Find cheaper materials/premises						
 Changes in Taxation: Income Tax rates can change, National insi change, VAT can change and Corporation Tax can change. 	urance rates can Changes in Taxat Pay more taxes to	Look at different energy suppliers. <u>Changes in Taxation</u> Pay more taxes to the government.						
 Changes in Revenue: Competitors change prices – may lose cust Consumer confidence is low – less likely to spend money on luxu & fashions can change. 	omers, Businesses have t If VAT increases, r Changes in Rever	Businesses have to pay National insurance for every employee. If VAT increases, materials/goods get more expensive.						
 Changes in Legislation: Some things which were previously allow allowed and changes in how products can packed, labelled or ad 	ved are – Not Monitor competit vertised. Lower prices/char Monitor current t	tor prices and match them. nge products. rrends and fashions.	VAT					
Changes in Government Relations: BREXIT, Minimum wage rate Protection regulation.	s and Data Changes in Legisla Ensure that regula Failing to follow re Change labelling/ Changes in Goven Brexit – supplies, Pay staff more, ei Falling to follow r	ation ations are followed. egulations = fine/prison advertising. rmment Relations suppliers, staff, laws and import/export ther raise prices or make less profit. egulations -= fine/prison.	affected.					

Sport Science		R180 –Reducing the risk of injury	CYCLE 2	Year 9/10/11		
Вох	Extrinsic and intrinsic factors which influence the risk of i	ıjury				
Α	Extrinsic factors that can increase the chance of injury are factors that you cannot control. These are outside of a player's control.	Examples of extrinsic factors are: environment; equipment; coaching/instructing/leading; types of sports.	Coaching can cause injury by a playe technique, for example, being taught	r being taught the incorrect a bad tackle technique at rugby.		
	Protective Equipment can help reduce injury by players having the correct protective equipment for example shin pads, gum shields and helmets if required. Lack of these can contribute to injuries	e injury by players having the correct n pads, gum shields and helmets if to injuries Intrinsic factors are things that a player can control and these can then player.		Examples of intrinsic factors are: wearing protective equipment, warming up correctly and wearing the correct clothing/ footwear.		
	Individual variables are what makes a person unique and impact the sport they can participate or make the susceptible to injuries.	Examples of individual variables are: Gender; age; ;experience; weight; fitness levels; techniques/abilities; nutrition/hydration; medical condition; sleep; previous injuries.	If a participant has an injury, such as shin splints. Competing before it has healed will cause more damage and poor technique/performance. It will cause lasting damage too.			
Вох	Psychological factors which increase the risk of injury					
В	There are four psychological factors that impact on an athletes performance: Motivation, Aggression (Direct and Channelled, Arousal and Anxiety.	Arousal is a player's level of excitement and readiness to perform.	There are three mental strategies that can support a perform Mental Rehearsal; imagery; selective attention.			
	Direct aggression is any form of behaviour that directed towards the goal of harming another player or person such as a two footed tackle in football.	Channelled aggression such as a boxer can assist with a successful outcome for a boxer. It can also be channelled to support a performance to win.	Reasons for aggression can be: Level of performance; retali pressures to win; officials decisions; performance enhancin drugs.			
	Over arousal is when a player feels over 'psyched' up for a game. This can be harmful to a player's performance and technique at performing skills in a game.	Under arousal is the opposite where a player feels 'sluggish' or 'lazy' – this can lead to a player not fully preparing and this can lead to injury.	Anxiety is the feeling of being ne performance. This can lead to performance is not fully focussed.	ervous or worrying about a oor performance or injury as a		
Вох	Warm up and Cool Down					
С	Warming up and cooling down routines can help prevent injuries to players.	Four phases of a warm up are: pulse raiser, mobility, dynamic movement, and skill rehearsal. This is the same regardless of the sport you are playing.	Pulse raiser: exercises that slowly increase the heart rate and bod temperature of a player. Examples of a pulse raiser are: jogging, si cycling.			
	Mobility: exercises that take the joint through the full range of movement. Examples of dynamic movements are arm swings and hip circles.	Dynamic movements: this is changing of speed and direction. For example, sprinting towards a cone and changing direction then sprinting to another. Dynamic examples – walking lunges, high knees.	The use of suitable components and examples, in the design of the up routines and exercises/stretches that target different muscles/, the body.			
	Skill rehearsal: This is rehearsing common skills and movements that will be used in a game situation or the activity. For example passing in football, dribbling in basketball or shooting in netball.	Physical benefits of a warm up include: increased body temperature, increased blood flow, increased flexibility of muscle, increase in pliability of ligaments, s and increased range of movement in joints.	Psychological benefits of a warm up nerves, improves concentration, incr the 'zone' through mental strategies	include: heightens arousal, settles eases confidence and gets players in		

Sport Science		R180 –Reducing the risk of injury		CYCLE 2	Year 9/10/11			
Вох	Types, causes and treatments of common sports injuries							
D	 Acute injuries are injuries that happen because of an immediate impact or trauma and cause immediate pain. For example, a fracture, a strain or sprain. A sprain is when a ligament has been stretched twisted or torn. Symptoms of a sprain are; swelling, pain and bruising. Treat with R.I.C.E. A strain is when muscles tendon have been torn or stretched. Symptoms of a strain are; swelling, pain, loss of movement and bruising. Treat with R.I.C.E. Open, closed and stress are different types fractures. Dislocations are where the bone detaches from it's joint. Hard (skeletal) Vs Soft tissue (Muscular) Concussion is a sudden trauma to the head that causes a short loss of mental functions. It can also cause unconsciousness. Can lead to Dementia & Alzheimer's. Skin damage – Abrasions, Contusions (bruises) and blisters are examples of acute injuries. Chronic injuries are injuries that happen over a long period of time pain. They are also known as overuse injuries. Chronic injuries are; injuries that happen over a long period of time pain. They are also known as overuse injuries. Chronic injuries are; injuries that happen over a long period of time pain. They are also known as overuse injuries. Examples of chronic injuries are; shin splints Tendonitis – In the; Achilles, Shoulder (rotator cuff) or Knee (Pate pictures – Repetitive strain on an area can lead to a stress a short loss of mental functions. It can also cause unconsciousness. Can lead to Dementia & Alzheimer's. Skin damage – Abrasions, Contusions (bruises) and blisters are examples of acute injuries. There are Different psychological effects of dealing with injuries are conditions including treatment and long term rehabilitation. 							
Box E	Measures taken to prevent injury There are Safety Checks taken to decrease the risk of injury these include– Risk assessments, level of risk. Control measures, medicals, screening, NGB policies. Emergency Action Plans prevent injury and include emergency personnel (people who are identified to support in case of an emergency such as first aiders), emergency communication (the telephone numbers and email addresses of who to contact such as the local police, the CEO or the hospital) and emergency equipment (defibrillator , evacuation chair) SALTAPs (on field assessment routine)– See, Ask, Look, Touch, Passive, Strength DRABC – Danger, Response, Airways, Breathing, Circulation. Place in Recovery position if unconscious but breathing. PRICE – Protect, rest, Ice, Elevate. Use of X-rays to detect injury.							
Вох	Medical Condition & Cause	Symptom	Symptom		atment			
F	Asthma – Environment, intense exercise, cold weather	Coughing, wheezing, shortness of breath		Inhaler/nebulizer, reassurance.				
	Diabetes : Age (type 1) Lifestyle (type 2). Type 1 (unable to produce insulin. Type 2 does not produce enough insulin.	pe 2). Type 1 (unable to Increased thirst, urinating often, extreme tiredness, weight loss, cuts take a long time to heal.		Insulin/Glucose intake, lifestyle Monitoring blood levels (Hyper low blood sugar levels).	changes, diet, exercise. glycemia is high, hypoglycemia is			
	Epilepsy – Severe head injury, anxiety/stress/lack of sleep	Eyes/Mouth/Limbs.	AED's (Anti- or Ketogeni		can reduce the amount seizures)			
	SCA (Sudden Cardiac Arrest) Is a heart attack caused by a malfunction in electrical impulses sent to the heart.	Unconscious or breathing difficulties.		Need to call 999, defibrillator a	nd lifestyle changes.			
	Hypothermia – When the body drops below 35 degrees. If the body is exposed to cold/wet conditions for a long time.	Shivering, blue lips, pale skin, slurred speech, tiredness/confusion, slow breathing.	Shivering, blue lips, pale skin, slurred speech, tiredness/confusion, slow breathing.		Remove wet clothing, wrap in warm or sugary drink.		planket, DO NOT use hot bath. Give	
	Heat Exhaustion – When body is above 38 degrees, strenuous activity, not enough water intake.	Excessive sweating, headache/dizziness, being thirsty being sick, rapid pulse or breathing.	Excessive sweating, headache/dizziness, being thirsty, feeling or being sick, rapid pulse or breathing.		Move to a cool place, cool skin, drink plenty of water.			
	Dehydration – Loss of bodily fluids	Feeling thirsty, fatigued, dark yellow urine and infreq urination, dry mouth and lips.	nfrequent Drink water before exercise, keep hydrated. If of water to make up for losses.		ep hydrated. If diabetic drink lots			