100% book - Year 9 Mainstream

Aim to memorise 100% of the knowledge on these Knowledge Organisers



Term 2

Swindon	Academy 2025-26
Name:	
Tutor Group:	
Tutor & Room:	

"If you are not willing to learn, no one can help you.

If you are determined to learn, no one can stop you."











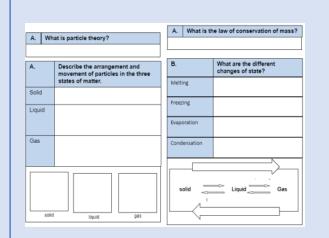
Using your Knowledge Organiser and Quizzable Knowledge Organiser

Knowledge Organisers

Knowledge Organisers contain the essential knowledge that you MUST know in order to be successful this year and in all subsequent years.

They will help you learn, revise and retain what you have learnt in lessons in order to move the knowledge from your short-term memory to long-term memory.

Quizzable Knowledge Organisers



These are designed to help you quiz yourself on the essential Knowledge.

Use them to test yourself or get someone else to test you, until you are confident you can recall the information from memory.

Top Tip

Don't write on your Quizzable Knowledge Organisers! Quiz yourself by writing the missing words in your prep book. That way you can quiz yourself again and again!

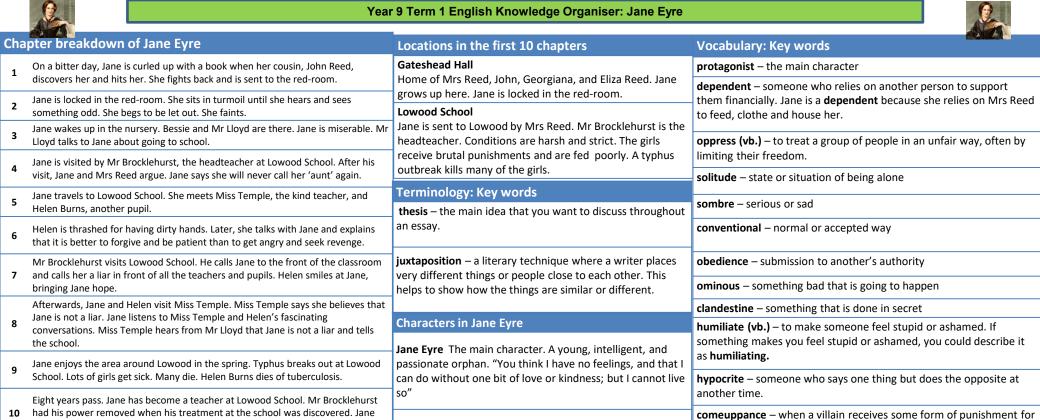
Expectations for Prep and for using your Knowledge Organisers

- 1. Complete all prep work set in your subject prep book.
- 2. Bring your prep book to every lesson and ensure that you have completed all work by the deadline.
- 3. Take pride in your prep book keep it neat and tidy.
- 4. Present work in your prep book to the same standard you are expected to do in class.
- 5. Ensure that your use of SPAG is accurate.
- 6. Write in blue or black pen and sketch in pencil.
- 7. Ensure every piece of work has a title and date.
- 8. Use a ruler for straight lines.
- If you are unsure about the prep, speak to your teacher.
- 10. Review your prep work in green pen using the mark scheme.

How do I complete Knowledge Organiser Prep?

Step 1	Step 2	Step 3
Check Epraise and identify what words /definitions/facts you have been asked to learn. Find the Knowledge Organiser you need to use. Planer Debta Mark Mark	Write today's date and the title from your Knowledge Organiser in your Prep Book. A What is particle theory The theory that all matter is made up of particles. A Describe the arrangement and movement of particles are arranged randomly but state of matter. Solid In a regular patient paticles can viorate in a find position. Lugal Particles are arranged randomly but can slide past each of the rand move around. Cas Particles are the part and are arranged in a large particle special patient of an in a light speed. Cas Particles are larged and offer and move around in a large patient of an in the particles and arranged in a large patient of an in a large patient of an in a large patient of an incompanient of a large patient of an in a large patient of a large pat	Write out the keywords/definitions/facts from your Knowledge Organiser in FULL. 29th May 2020 Properties of the states of matter Particle theory = all matter is made of particles Solid = regular patter particles vibrate in fixed position Liquid = particles are arranged randomly but one still touching each other Particles can slide past each other and make cround. Gas = Particles are far spart and are arranged randomly. Particles carry a late of energy
Step 4	Step 5	Step 6
Read the keywords/definitions/facts out loud to yourself again and again and write the keywords/definitions/facts at least 3 times. Solid = regular pattern	Open your quizzable Knowledge Organiser. Write the missing words from your quizzable Knowledge organiser in your prep book. A What is particle theory? A What is the law of conservation of mass? B. What is the law of conservation of mass? A What is the law of conservation of mass? B. What is the law of conservation of mass? A What is the law of conservation of mass? B. What is the law of conservation of mass? A What is the law of conservation of mass?	Check your answers using your Knowledge Organiser. Repeat Steps 3 to 5 with any questions you got wrong until you are confident. Particle theory = all metter is node of particles Solid = regular pattern particles vibrate in fixed position Liquid = particles are arranged randomly but are still touching each other and more ground Gas = Particles are for sport and are to arranged randomly, Particled carry = lite of energy

Make sure you bring in your completed Prep notes to demonstrate that you have completed your prep.



Mrs Reed - Jane's aunt She neglects and abuses Jane and

is glad to send her away to Lowood School. "Guard against

Mr Brocklehurst - The governor of Lowood school A cruel

and hypocritical Christian. He believes in driving evil from

children through harsh discipline. "Punish her body to save

Helen Burns – Jane's friend A kind and forgiving Christian.

She inspires Jane to be more patient and accepting. She

that curse you; do good to them that hate you and

Miss Temple The kind and understanding teacher at

shall be publicly cleared from every imputation: to me,

Lowood. Offers care and affection to Jane and Helen. "You

dies of tuberculosis at 14. "Love your enemies; bless them

her worst fault, a tendency to deceit"

her soul"

despitefully use you."

Jane, you are clear now."

what they did.

rational being.

Biographical information

school and as a young woman.

Victorian attitudes to childhood

A child is a blank slate and can be trained to develop into a

A child is born completely **innocent** and **pure**. They are only

The child is born evil and must therefore be controlled and

punished in order to submit to the rules of God and society.

Parts of 'Jane Eyre' were influenced by Brontë's experiences at

'Jane Eyre' was unusual when it was published because it is

written in the first-person from a female perspective.

contaminated by contact with corrupt forces.

1 'Jane Eyre' written in 1847 by Charlotte Brontë.

applies to be a governess for a family at Milcote.

Lowood is harsh and corrupt – religious hypocrisy.

Her relationships with others help her grow.

Religion as a form of oppression. In the novel.

abuse by John Reed, her 'master'

women are powerless.

Social Class: Jane is an orphan and dependent on the charity of her

extended family. Jane is poor and of low class – powerless. She suffers

2 back on her childhood in the novel. She learns to manage her emotions.

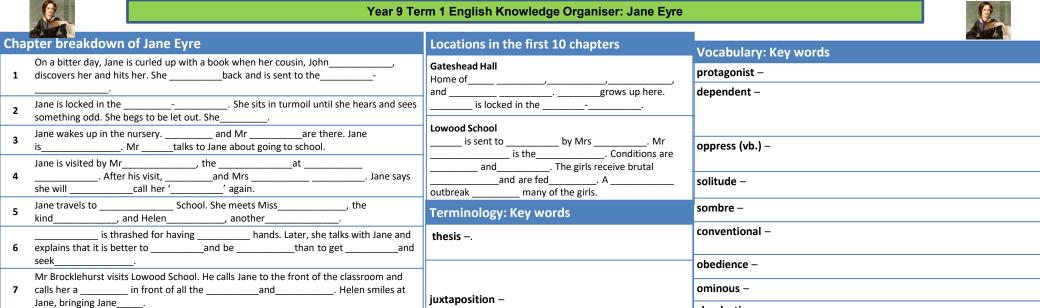
Growth: Jane is constantly growing and maturing. She is an adult reflecting

Oppression: Oppression of women. Jane's abusive childhood is a form of oppression. Adults oppressing children in a huge theme in the novel.

Role of women in society: Jane is angry at her place in society. Lowood is

4 an all-girls' school. Women as governesses, teachers, servants. Low class

The Big Ideas:



Characters in Jane Eyre

Mrs Reed - Jane's aunt

Helen Burns – Jane's friend

Miss Temple

Mr Brocklehurst - The governor of Lowood school

Jane Eyre

Afterwards, _______and _____visit Miss Temple. Miss Temple says she believes

_____ pass. Jane has become a _____ at _____

______. Mr_____ had his ______ when his at the school was . Jane applies to be a governess for a

 Social Class: Jane is an _______ and ______ on the ______ of her extended family. Jane is _____ and of ______ class - ______ . She

suffers by John Reed, her 'master'. Lowood is harsh and –

Growth: Jane is constantly _____ and _____. She is an adult

back on her in the novel. She learns to manage her . Her with help her

Oppression: Oppression of ______. Jane's _____ childhood is a

3 form of oppression. Adults oppressing in a huge theme in the novel.

4 Lowood is an all-girls' school. Women as governesses, teachers, servants. Low

as a form of oppression in the novel.

Role of women in society: Jane is at her place in

. Miss Temple hears from Mr that Jane is not a

that Jane is a . Jane listens to Miss Temple and Helen's

Jane ______ in the _____.

_____ breaks out at Lowood School. Lots of girls get_____.

Many_____ . Helen Burns _____ of_____.

and tells the

family at Milcote.

religious_____.

class women as _____

The Big Ideas:

clandestine -

hypocrite -

comeuppance -

Victorian attitudes to childhood

2 A child is born completely innocent and pure...

1 'Jane Eyre' written in ______by Charlotte____

and as a young______.

Parts of 'Jane Eyre' were influenced by Brontë's experiences at

'Jane Eyre' was unusual when it was published because it is

1 A child is a blank slate...

3 The child is born evil...

Biographical information

3 written in the

humiliate (vb.) -



Year 9 Term 2 Science/Chemistry: Topic 9CE Energetics and Rates



What we are learning this term:

A. Types of reaction

C. Energy in Reactions

B. Catalysts

5 Key Words for this term

- Decomposition
 Oxidation
- 4. Endothermic5. Displacement

3. Exothermic

A.

What is a chemical reaction?

The breaking of bonds in reactants and making of bonds to for products. A new substance is formed

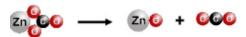
What is Thermal Decomposition?

Thermal decomposition is a chemical reaction where heat is used to break down a substance.

Does a thermal decompostion reaction give out energy, or take in energy from its surroundings?

Thermal decomposition is an endothermic reaction - it takes in more energy than it gives out

Examples: Zinc Carbonate \rightarrow Zinc Oxide + Carbon dioxide $ZnCO_3 \rightarrow ZnO + CO_2$



Magnesium carbonate \rightarrow Magnesium Oxide + Carbon dioxide ${\rm MgCO_3} \rightarrow {\rm MgO} + {\rm CO_2}$



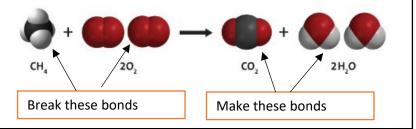
A. What is Combustion?

A chemical reaction where a fuel reacts with oxygen to make carbon dioxide and water

Does a combustion reaction give out energy, or take in energy from its surroundings?

Combustion is a exothermic reaction- it gives energy into the surroundings. It gives out more energy than it takes in.

Examples: methane + oxygen \rightarrow carbon dioxide + water $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$



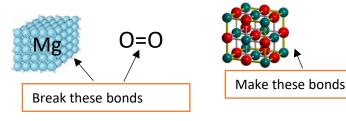
A. What is oxidation?

Oxidation is a chemical reaction where an element or compound reacts with oxygen

Does an oxidation reaction give out energy, or take in energy from its surroundings?

Oxidation reactions are mostly exothermic reactions- giving energy to the surrounding. It gives out more energy than it takes in

Examples: Magnesium + Oxygen → Magnesium Oxide
Mg + Oxygen → MgO





Year 9 Term 2 Science/Chemistry: Topic 9CE Energetics and Rates



What we are learning this term:

A. Types of reaction

C. Energy in Reactions

B. Catalysts

5 Key Words for this term

1. 2. 4.

3.

5.

A. What is a chemical reaction?

A What is Thermal Decomposition?

Does a thermal decompostion reaction give out energy, or take in energy from its surroundings?

Examples: Zinc Carbonate →

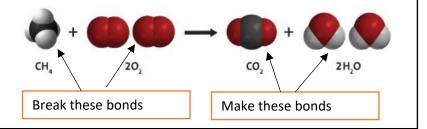
Magnesium carbonate →



A. What is Combustion?

Does a combustion reaction give out energy, or take in energy from its surroundings?

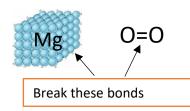
Examples: methane + oxygen →

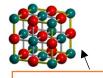


A. What is oxidation?

 $\label{eq:continuous} \textbf{Does an oxidation reaction give out energy, or take in energy from its surroundings?}$

Examples: Magnesium + Oxygen →





Make these bonds



Year 9 Term 2 Science/Chemistry: Topic 9CE Energetics and Rates



B. What 2 things do you need for a successful reaction to happen?

- 1. Particles to collide
- 2. Sufficient energy for a reaction to occur (activation energy)

B. What is the rate of a reaction?

The rate of reaction is the speed at which a chemical reaction is happening. This can vary hugely from reaction to reaction.

What factors can affect rate of reaction?

- 1. Changing temperature
- 2. Changing the concentration of a solution
- 3. Changing the surface area of a solid
- 4. Adding a catalyst

B. What is a catalyst?

A catalyst is a substance which speeds up a chemical reaction without being used up.

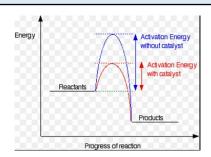
They are specific to each reaction

B. How do catalysts work?

Catalysts speeds up a reaction by:

- · Lowering the activation energy
- More particles will now have sufficient energy to react

How can you show this on a reaction profile?



B. Why aren't catalysts written in the chemical equation of a reaction?

Catalysts are not included in a chemical equation as they are not used up in a chemical reaction.

C. What is Activation energy?

The minimum energy required for a successful collision between reactants

What is a reaction profile?

A graph which show the energies of the reactants and products at different stages of the chemical reaction

C.	What are exc	othermic and endothermic reactions?			
What are they?		Exothermic reactions	Endothermic Reactions		
		A reaction in which energy is transferred from the reacting substances to their surroundings	A reaction in which energy is transferred to the reacting substances from their surroundings.		
		Heat Energy Reactants Products	Reactants Products		
Do thir	ngs warm up or own?	Temperature increases : Energy is transferred to surroundings	Temperature decreases : Energy is absorbed from the surroundings		
Bond making or breaking? Reaction profile		Bond making is an exothermic process	Bond breaking is an endothermic process		
		Reactants Energy change Products Progress of reaction	Activation energy Reactants Products Energy change Progress of reaction		



Year 9 Term 2 Science/Chemistry : Topic 9CE Energetics and Rates



			1			
В.	What 2 things to happen	ngs do you need for a successful reaction ?	C.	What is Activ	ation energy?	
1.	•					
2.			What is	s a reaction p	rofile?	
В.	What is the	rate of a reaction?				
			C.	What are exc	othermic and endothermic reactions?	
	factors can	1.				
affect reacti	rate of	2. 3.			Exothermic reactions	Endothermic Reactions
10000		4.	What ar	re they?		
В.	What is a	catalyst?				
B. How do catalysts work?						
How	can you shov	w this on a reaction profile?	Do thing	gs warm up or wn?		
			Bond m breaking	aking or g?		
			Reaction	n profile		
В.	Why aren't	t catalysts written in the chemical of a reaction?				





What we are learning this term:

- A. Movement
- Breathing and Fitness
- C. Effect of drugs
- Aerobic and Anaerobic respiration
- Reproduction and Heredity

6 Key Words for this term

- 1. Chromosomes
- 4. Respiration
- Exchange Anaerobic
- 6. Cilia

5. Aerobically

What are the 4 functions of the Skeletal System?

Movement, support, protection and making red blood cells

Support – what is the main function of the spine?

The spine supports the upper body and allows us to stand upright.

Protection – what is the function of the following:

Ribcage	Protects the heart and lungs		
Cranium (skull)	Protects the brain		

Making blood cells - what part of the bone makes blood cells?

Bone marrow produces:

- **Red blood cells** (which transport O₂ and CO₂)
- White blood cells (some of which fight disease)
- Platelets (which cause blood clotting e.g. when we cut ourselves)

Why are bones hollow?

Long bones in the body are **hollow** – in the middle of the bone is a marrow cavity. The cavity contains bone marrow, from which blood is produced.

A. Movement and muscles

What are the following:

Ligaments

Muscles	A collection of tissues which can contract and relax, causing other body parts (including bones) to move.
Tendons	Muscles are attached to bones by tendons . They are a strong, flexible tissue attaching a muscle to a bone.

How does the muscular system help us move?

This system allows us to move by contracting and relaxing our muscles

A. How do your muscles move your bones?

Muscles exert a force on bones to move them.

A. What is Biomechanics?

Biomechanics is the working together of the skeletal system and the muscular system to help us move.

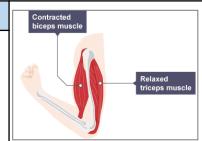
Bones are attached to each other by ligaments.

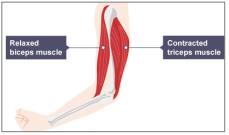
Α What are antagonistic muscles?

In order to move bones in two directions (e.g. bending then stretching your arm), muscles are paired antagonistically (one moves the bone in one direction, the other in the opposite direction).

How do they work?

- To raise the forearm, the biceps contracts and the triceps relaxes.
- To lower the forearm again, the triceps contracts and the biceps relaxes.





A. What is Osteoporosis

Osteoporosis is a condition in which someone loses bone density, making their bones fragile so they are more likely to break bones.

What are rickets?

Rickets can be caused by a deficiency of calcium or vitamin D. Rickets causes bone pain, and soft bones which can deform

A. What happens if you overstretch a tendon?

Over-stretching a tendon can cause it to snap. Tendons will heal themselves but become shorter in the process because the two severed ends overlap to heal, reducing flexibility

What is Tendonitis?

As the body tries to heal a tendon, it will swell and become painful. This is called tendonitis, and includes tennis elbow.





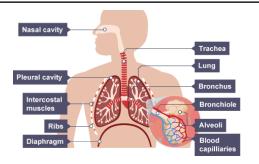
What we are	learning this term:	A.	Мо	ovement and muscles		
A. Movemer B. Breathing C. Effect of	g and Fitness	What are the		lowing:		
D. Aerobic a	and Anaerobic respiration ction and Heredity	Muscles				
6 Key Words	for this term	Tendons				
1. 2. 3.	4. 5. 6.	A. How	does	s the muscular system help us move?	A	. How do your muscles move your bones?
A. What	t are the 4 functions of the Skeletal System?	A .	Wha	at is Biomechanics?		
		Α	WI	hat are antagonistic muscles?		
A Suppor	rt – what is the main function of the spine?					
		How do the	y wo	Contracted		
	vhat is the function of the following:			biceps muscle		
Ribcage Cranium (skull))				Relaxed	
					triceps i	muscle
A Making blood o	g blood cells – what part of the bone makes cells?					
		A. Wh	at is (Osteoporosis	A.	What happens if you overstretch a tendon?
Why are bones hollow?		What are rickets?		-	What	is Tandonitis?
					vvnat	is Tendonitis?





B. What is the Respiratory System?

The organ system responsible for exchanging gases with the environment.



How does the respiratory system work?

- Air enters the body through the nasal cavity.
- · Travels down the trachea, then one of two bronchi,
- Travels to one of many bronchioles and ends up in the alveoli.
- Oxygen diffuses into the blood stream.
- Carbon dioxide diffuses in the opposite direction,
- It then follows the reverse of the above journey, to leave the body.

B.	Measuring lung capacity: what do the following terms mean?				
Vital capacity		The volume of air you can breathe out after breathing in as much as you can.			
Residual volume		Volume of air left in the lungs after breathing out as much as you can.			
Tidal volume		Volume of air in a normal breath (in or out).			

What can you use to measure Lung Capacity?

A spirometer

What is the equation for lung capacity?

 $Lung\ capacity = vital\ capacity + residual\ volume$

B. What is Ventilation?

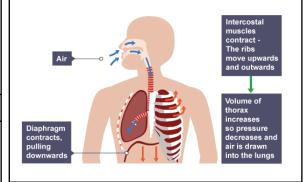
Ventilation is the process of bringing gas in and expelling gas from the body.

Why are ventilation and Respiration different?

Respiration is a chemical reaction which happens in the body's cells and releases energy.

Ventilation is the process of bringing gas in and

Ventilation is the process of bringing gas in and expelling gas from the body.



B. What is Asthma?

Asthma is a disease where airways become inflamed. The muscles around the bronchioles **contract**, constricting the airways and making breathing difficult.

What triggers Asthma?

Asthma is **non-communicable** but can be **triggered** by environmental factors such as infections, allergies and exercise

How can it be treated?

Asthma is treated using steroids.

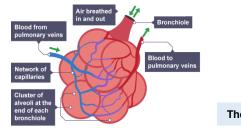
B. Where does gas exchange happen?

The lungs are the site of gas exchange between the body and the environment.

Oxygen for respiration diffuses into the bloodstream and waste carbon dioxide diffuses out of the blood into the alveoli, from where it is expelled in ventilation.

What are Alveoli?

Balloon-like structures which are responsible for exchanging oxygen and carbon dioxide between the blood and the lung cavity



The alveoli

What adaptations do the alveoli have?

- 1. High surface area thanks to their balloon-like shape
- Many capillaries give a good blood supply for gas exchange
- B. Walls only one cell thick
- **4. Moist** walls pick up gases (gases dissolve in water)

What is Diffusion?

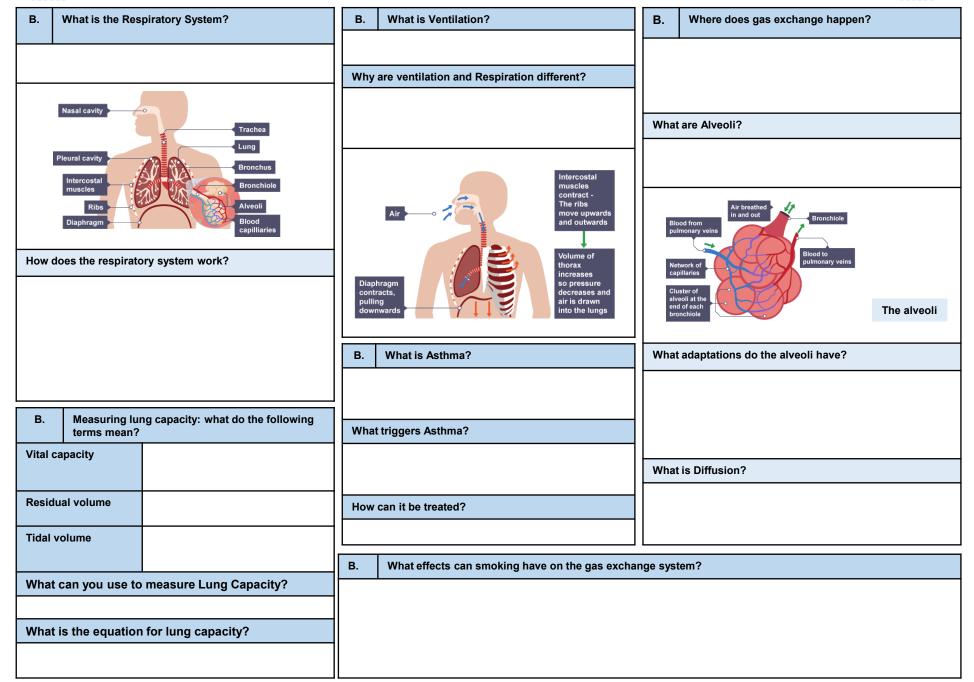
Diffusion is the net movement of anything (for example, atom, ions, molecules) from a region of higher concentration to a region of lower concentration.

B. What effects can smoking have on the gas exchange system?

- Destroys cilia in the airways so they are less able to sweep mucus containing pathogens out of the lungs, leading to smoker's cough
- 2. Irritates the **bronchi**, causing **bronchitis**
- 3. Destroys alveoli, reducing the surface area for gas exchange and causing **emphysema**
- 4. Cigarette smoke contains **carbon monoxide** (CO) which binds to red blood cells, so they can carry less oxygen to cells and the **heart has to work harder**
- 5. Increases the risk of lung, throat, mouth and oesophagus cancers











What benefits come from regular exercise?

Regular training has the following effects:

- Heart muscles are strengthened
- Cardiac output increases
- Resting heart rate is lower (fewer beats needed because heart muscles are stronger)
- Recovery (returning to resting heart rate) happens more quickly after exercise

Why do you breathe quicker during exercise?

More oxygen is required as body is working harder.

C. What is a drug?

A drug is a substance that affects the way your body works

	C.	What are the 2 types of recreational drugs, and what effect do they have on the body?					
Stimulants			Depressants				
Stimulants cause the nervous system to carry nerve impulses faster		lses faster	Depressants cause the nervous system to slow downThey can decrease reaction times				
	,	can increase reaction times	They can stop vital organs working, and stop parts if the brain working.				

Examples include: Caffeine, Cocaine, Ecstasy

body

D. What is Respiration?

Respiration is a chemical reaction that releases energy from food molecules.

Why is respiration important?

An organism can the use the energy produced by respiration is several different ways including:

- To build large molecules from smaller ones (grow)
- To move

D.

To keep warm

What are the 2 types of respiration?

	Aerobic	Anaerobic
Main difference?	With Oxygen	Without Oxygen
Where does it take place?	Mitochondria	Cytoplasm
What is the equation?	glucose + oxygen → carbon dioxide + water	In animals: glucose → lactic acid In plants/yeast: glucose → ethanol and carbon dioxide
Which produces the most energy?	Aerobic respiration produces more energy	Anaerobic produces less energy

What happens when Lactic Acid builds up in muscles from anaerobic respiration?

If lactic acid builds up in muscle cells it causes fatigue.

How does the body get rid of lactic acid?

We continue to have an elevated heart rate and breathing rate after exercise so that more oxygen enters the cells. This oxygen reacts with the lactic acid removing it from our muscles allowing them to work efficiently again.

What is fermentation?

When plants/yeast respire anaerobically, they produce ethanol and carbon dioxide.

What are the uses of fermentation?

Examples include: Alcohol. Heroin, Solvents

It is useful as the ethanol can be used to make alcoholic drinks and the carbon dioxide is what makes bread rise

Who discovered DNA?

Rosalind Franklin and Maurice Wilkins 1952

Using x-ray photography, Franklin and Wilkins produced high-resolution photographs of DNA fibres. They used these to deduce that DNA had a helical structure and that the outside of the molecule contained phosphates

James Watson and Francis Crick 1953

Using the x-ray data from Wilkins and Franklin, and using models, Watson and Crick managed to discover the double-helix structure of DNA. They and Wilkins were awarded the Nobel Prize in 1962

What is DNA?

Deoxyribonucleic acid - the genetic material of all organisms

What is a double helix?

Two helical strands wound around each other



Д	Ø	
I	E:MC ²	5
¢;	200	8

В.	What benefits come from	n regular exercise?	C.	What is a drug?		
		C.	. What are the 2 types of recreational drugs, and		d what effect do they have on the body?	
) (A //						
vvny d	you breathe quicker durin	ig exercise?				
			<u> </u>			
D.	What is Respiration?				D.	What is fermentation?
Why is	respiration important?				Wha	t are the uses of fermentation?
					_	l
What a	re the 2 types of respirat	ion?			E.	Who discovered DNA?
Main d	fference?					
Where	does it take place?					
What is	the equation?					
	produces the most					
energy	? 				E.	What is DNA?
D. What happens when Lactic Acid builds up in muscles from anaerobic respiration?						
				Wha	t is a double helix?	
How d	How does the body get rid of lactic acid?					
i						





E. What makes up DNA?

- DNA has a **double helix** structure with two sugar-phosphate backbones wound around each other.
- Pairs of complementary bases connect the two backbones (strands)

What are the 4 bases and how are they paired?

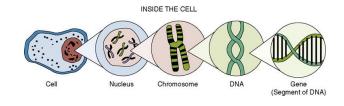
- The bases are adenine, thymine, cytosine and guanine (A, T, C, and G)
- · A has a complementary shape to T
- C has a complementary shape to G

What are Chromosomes?

DNA wound up tightly. There are 23 pairs in human cells (but a different number of pairs in other species)

What are Genes?

A short section of DNA which codes for characteristics



E.	What are the different types of reproduction and how are they different?					
		Sexual reproduction Asexual reproduc				
How ma	any parents?	2 parents	1 parent			
Will offspring inherit features from parents?		Offspring have features of both parents	Offspring are clones of the 1 parent			

E. What is Heredity?

Heredity is the process by which genetic information is transmitted from one generation to the next

What is a Genetic Disease?

Genetic diseases are passed on from parents to children through their genetic material. Children will be born with the disease

E. What is Gestation?

Gestation describes the development of a foetus in the womb.

What does a foetus need to develop?

In order to do all of this growing, the foetus needs to get **nutrients** and **oxygen**.

How does a foetus get what it needs to develop?

Since they can't eat or breathe, they get this from the mother's blood.

Nutrients and oxygen **diffuse** from the mother's blood into the baby's blood vessels, then **umbilical cord** in the **placenta**.

prenatal week Embryonic stage						Fetal stage			Full term
3	4	5	6	7	8	9	16	32	38
_	CENTRAL	NERVOUS S	/STEM						
$\overline{}$	HEART		$\overline{}$						
	UPPER	LIMBS							
	EYE	S			5				
	LOW	ER LIMBS							
			(TEETH					
			(PALATE					
				ЕХП	ERNAL GENI	TALIA			
	EA	RS							
					1			1	1

What is the Placenta?

Cigarettes

An organ which develops during pregnancy, and supplies the developing foetus with oxygen and nutrients, while also removing waste.

A tube which connects the baby to the placenta.

What is the Umbilical cord?

E. How can an expectant mother's behaviour affect her unborn baby?

The mother's behaviour during gestation can affect the development of the unborn baby because of the transfer of substances across the placenta.

Alcohol

What problems can be caused by different drugs during gestation?

Reduces the volume of oxygen which reaches the baby's cells, affecting their ability to release energy. (Nicotine narrows blood vessels, Carbon monoxide in smoke inhibits red blood cells from carrying oxygen)

- Increases the risk of **premature** (early) birth, **stillbirth** (death of the foetus), **cot death** (death of the new-born) and **low birth weight** caused by growth impairment
- Children whose mothers smoked during gestation are more likely to experience:
 - · learning disorders
 - · behavioural problems
 - low IQ
 - asthma

Physical defects e.g. small head size, low birth weight

- Cerebral palsy (movement and coordination problems)
- Behavioural differences including autistic traits and attention-deficit hyperactivity disorder (ADHD)
- Problems with organs including the liver, kidneys, and heart
- Learning difficulties

Other illegal drugs

Neonatal abstinence syndrome occurs when a mother has taken a drug which causes **dependency**, during gestation. The baby is born with a dependency on the drug.





E.	What makes u	ıp DNA?		E.	What is Gestation?			
	are the 4 bases a	and how are they paired	?		does a foetus need to develop? does a foetus get what it needs to develop?	Petal stage		
What a	re Genes?							
				What	is the Placenta?	What is the Umbilical cord?		
Cell Nucleus Chromosome DNA Gene (Segment of DNA)			E.	How can an expectant mother's behaviour affo	ect her unborn baby?			
E.	What are the	different types of reprod	luction and how are	What problems can be caused by different drugs during gestation?				
	they different	? 		Cigaret	arettes Alcohol			
E.	What is Hered	lity?						
						Other illegal druge		
What is a Genetic Disease?					Other illegal drugs			





E. What makes up DNA?

- DNA has a **double helix** structure with two sugar-phosphate backbones wound around each other.
- Pairs of complementary bases connect the two backbones (strands)

What are the 4 bases and how are they paired?

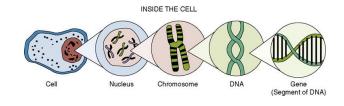
- The bases are adenine, thymine, cytosine and guanine (A, T, C, and G)
- · A has a complementary shape to T
- C has a complementary shape to G

What are Chromosomes?

DNA wound up tightly. There are 23 pairs in human cells (but a different number of pairs in other species)

What are Genes?

A short section of DNA which codes for characteristics



E.	What are the different types of reproduction and how are they different?					
		Sexual reproduction Asexual reproduc				
How ma	any parents?	2 parents	1 parent			
Will offspring inherit features from parents?		Offspring have features of both parents	Offspring are clones of the 1 parent			

E. What is Heredity?

Heredity is the process by which genetic information is transmitted from one generation to the next

What is a Genetic Disease?

Genetic diseases are passed on from parents to children through their genetic material. Children will be born with the disease

E. What is Gestation?

Gestation describes the development of a foetus in the womb.

What does a foetus need to develop?

In order to do all of this growing, the foetus needs to get **nutrients** and **oxygen**.

How does a foetus get what it needs to develop?

Since they can't eat or breathe, they get this from the mother's blood.

Nutrients and oxygen **diffuse** from the mother's blood into the baby's blood vessels, then **umbilical cord** in the **placenta**.

prenatal week Embryonic stage						Fetal stage			Full term
3	4	5	6	7	8	9	16	32	38
_	CENTRAL	NERVOUS S	/STEM						
$\overline{}$	HEART		$\overline{}$						
	UPPER	LIMBS							
	EYE	S			5				
	LOW	ER LIMBS							
			(TEETH					
			(PALATE					
				ЕХП	ERNAL GENI	TALIA			
	EA	RS							
					1			1	1

What is the Placenta?

Cigarettes

An organ which develops during pregnancy, and supplies the developing foetus with oxygen and nutrients, while also removing waste.

A tube which connects the baby to the placenta.

What is the Umbilical cord?

E. How can an expectant mother's behaviour affect her unborn baby?

The mother's behaviour during gestation can affect the development of the unborn baby because of the transfer of substances across the placenta.

Alcohol

What problems can be caused by different drugs during gestation?

Reduces the volume of oxygen which reaches the baby's cells, affecting their ability to release energy. (Nicotine narrows blood vessels, Carbon monoxide in smoke inhibits red blood cells from carrying oxygen)

- Increases the risk of **premature** (early) birth, **stillbirth** (death of the foetus), **cot death** (death of the new-born) and **low birth weight** caused by growth impairment
- Children whose mothers smoked during gestation are more likely to experience:
 - · learning disorders
 - · behavioural problems
 - low IQ
 - asthma

Physical defects e.g. small head size, low birth weight

- Cerebral palsy (movement and coordination problems)
- Behavioural differences including autistic traits and attention-deficit hyperactivity disorder (ADHD)
- Problems with organs including the liver, kidneys, and heart
- Learning difficulties

Other illegal drugs

Neonatal abstinence syndrome occurs when a mother has taken a drug which causes **dependency**, during gestation. The baby is born with a dependency on the drug.

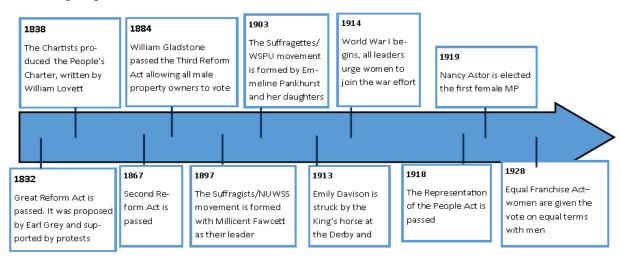
Climate Change

Back	ground:			C. Natu	ıral clima	ate change (3)	D.	Human-in	duced	climate change (5)				
1. 2. 3.	Since then the Celsius.			n the climate globally has increased by 0.8°		n the climate globally has increased by 0.8°		Volcanic eruptions	block The s	om volcanic eruptions can sunlight, making it colder. un can give out more energy	Greenhouse effect		The way that gases in the atmosphere trap heat from the sun. Like glass in a greenhouse they let heat in, but prevent most from escaping.	
4.	Climate scientists can use methods to find out about the global climate before we started recording it. (B) From this evidence we can see that the planet has always gone through periods of warming and cooling. (A)			Spots Orbital change	The o	p an increase in sun spots. rbit of the sun changes from ellipse) to circular approx.	Greenho	use gases		s like carbon dioxide and methane that eat around the Earth, leading to climate ge.				
5.	atmosphere fr	rom bur	ncrease of carbon dioxide in the rning fossil fuels, is causing the	E. Effe	98,000 cts on p	0 yrs. eople (6)	Transpo	rt		cars, so more CO ₂ causing the enhanced house effect.				
6.		d green	house effect is causing changes to the	Tropical st	orms	Increase in frequency and intensity so more damage.	Farming			ing livestock produces methane, this is a house gas.				
7.	planet, such as the melting of Artic sea ice, rising temperatures, and an increase in extreme weather events such as tropical storms. <i>(E, F)</i> 7. Countries are trying to resolve the climate change issue by		Sea-level	rise	Increased risk of floods, damaging property and businesses.	Energy			energy required, meaning more fossil burnt, so more CO ₂ .					
	limiting the an	nount o	f carbon dioxide released into the nown as mitigation. (G, H)	Melting Ar	ctic ice	Affects trading routes in the Arctic Circle.	F.	F. Effects on the environment (4)						
8.	• • • • • • • • • • • • • • • • • • • •		More drou floods	ghts/	Crop failure, could lead to starvation and famine.	Sea tem	ea temperature rises		Coral bleaching and destruction of marine ecosystems.					
			spe disa		Governments have to spend more money on disasters instead of developing.	More dro	More droughts		Migration/ death of species which can not survive drought conditions.					
Α.	Changes in cl	limate (Environmental Refugees		Pressure on countries to accept refugees.	0 0			Will send more fresh water into the sea, causing the sea level to rise.				
	te change		The process of the Earth's climate changing over time.	G. Strategies to resolve climate change (4)		Melting Arctic ice			Loss of habitats for animals, such as polar bears.					
	al periods glacial periods		Cold periods. Warm periods.	Adaptation		Adapting to climate change to make life easier.	H.	Place spe	cific ex	xamples (2)				
B.	Measuring cl	limate c	hange (3)	Adaptation		Building flood defences.	Adaption	<u> </u> า	The	e Thames Barrier.				
Ice co	Each layer of ice in a core represents a different year. CO ₂ can be measured in each layer, and therefore the temperature.		tr 3 w		Growing new crops to suit he new climate. Irrigation channels, sending water from areas of surplus to deficit.	·		Pos leve	sitive: Stops flooding due to rising sea					
Tree r	Tree rings Each ring represents a different year. Thicker rings show a warmer climate.		fi		Trying to stop climate change from happening by reducing greenhouse gases.	Mitigation		The Paris Agreement. Positive: Countries are trying to lower CO ₂ emissions.						
Histor evider			diaries e.g. paintings of ice fairs on the es 500 years ago.	Mitigation examples	(3) 2	International agreements. Alternative energies. Carbon capture.				Negative: The USA pulled out and China did not sign up.				

Climate Change Natural climate change (3) D. Human-induced climate change (5) Volcanic Greenhouse effect Background: eruptions Sun spots Since the 1860s the global climate has been recorded. 2. Since then the climate globally has increased by 0.8° Greenhouse gases Orbital Celsius. change 3. Climate scientists can use methods to find out about the global climate before we started recording it. (B) Effects on people (6) Transport From this evidence we can see that the planet has always 4. gone through periods of warming and cooling. (A) Tropical storms However, the rapid increase of carbon dioxide in the atmosphere from burning fossil fuels, is causing the Farming enhanced greenhouse effect. (D) Sea-level rise The enhanced greenhouse effect is causing changes to the 6. planet, such as the melting of Artic sea ice, rising Energy Melting Arctic ice temperatures, and an increase in extreme weather events such as tropical storms. (E, F) More droughts/ Countries are trying to resolve the climate change issue by F. Effects on the environment (4) floods limiting the amount of carbon dioxide released into the atmosphere, this is known as mitigation. (G, H) Sea temperature rises Some countries are trying to adapt to climate change by 8. Cost of defence building flood barriers and growing drought resistant crops. (G, H) Environmental More droughts Refugees Changes in climate (3) A. Melting glaciers (ice rivers) Strategies to resolve climate change (4) Climate change Melting Arctic ice Adaptation Glacial periods H. Place specific examples (2) Adaptation examples (3) Inter-glacial periods В. Measuring climate change (3) Adaption Mitigation Ice cores Mitigation examples (3) Mitigation Tree rings Historical evidence

Unit 2: The Suffragettes

Knowledge Organiser



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

Key concep	Key concept: Causation				
Longterm	Factor(s) that were around or happened significantly before hand. E.g. Success of protests for male suffrage, demands of the Chartists				
Short term	Factor(s) that happen relatively close to the event you are studying. E.g. Militant actions of the Suffragettes				
Spark or Trig- ger	A significant factor or turning point, that has an immediate impact that sets a sequence of events in motion that won't turn back. E.g WW 1 and changing role of women.				

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

How do Luse my knowledge organiser?

Have you learnt the key dates of this unit?

Can you put the dates into chronological order

Have you mastered the keywords?

Can you spell them?

Can you define them?

Have you understood the key concept?

Unit 2: The Suffragettes	Ke	y concept: Causation		
Knowledge Organiser	Lon	ong term		
	Sho	Short term		
	Spa	rk or Trigger		
		<u> </u>		
		Key people		
Keywords		Nancy Astor		
Reywords		Emily Davison		
Act	Propaganda			
		Benjamin Disraeli		
Ballot	Reform			
		Millicent Fawcett		
a written statement of the rights of a specified	Representation	William Gladstone		
group of people				
Domocratic	a haraugh that was able to also			
Democracy	a borough that was able to elect an MP despite having very few voters, the choice of MP	Earl Grey		
	typically being in the hands of one person or family.			
Enfranchisement	Strike	Annie Kenney		
Manifesto	Suffrage	William Lovett		
- Maintesto	Jamage			
		Christabel Pankhurst		
a group of people who make the laws for	Tactics			
their country				
Petition		Emmeline Pankhurst		

<u>Y9 RE</u>

1	Morality	Principles concerning the distinction between right and wrong or good and bad behaviour.	11	Relative	Depending on the situation or the context, opposite of relative.		
2	Ethics	Moral principles that govern a person's behaviour or the conducting of an activity.	12	Agape	Unconditional love, "the highest form of love, charity" and "the love of God for man and of man for God".		
3	Sanctity of Life	The view that all life is sacred because it is made by God.	13	Abortion	A procedure to end a pregnancy.		
4	Quality of Life	The standard of health, comfort, and happiness experienced by an individual or group.	14	Pro-Life	Against abortion and euthanasia.		
5	Rules	Regulations or principles governing behaviour.	15	Pro-Choice	Supporting the legal right of a woman to choose whether or not she will have an abortion.		
6	Natural Moral Law	A system of laws based on close observation of human nature, given to humans by God and proposed by Aquinas.	16	Euthanasia	The painless killing of a patient suffering from an incurable and painful disease or in an irreversible coma.		
7	Precept	A rule made to regulate behaviour or thought.	17	Capital Punishment	The legally authorized killing of someone as punishment for a crime, death penalty.		
8	Reason	The power of the mind to think, understand, and form judgements logically.	18	Animal Rights	the rights of animals to live free from human exploitation and abuse.		
9	Absolute	A rule or principle which is seen as universally valid and should be applied all the time, no matter what.	19	Dominion	To be in charge of something or rule over it.		
10	Situation Ethics	The view that there should be flexibility in the application of moral laws according to circumstances.	20	Stewardship	The job of supervising or taking care of something.		



SPANISH Year 9 Term 2 Knowledge Organiser: Topic = Food, drink and sports



What we are learning this term:

- Free time activites
- В. Food and Drink
- C. Sports
- D. Foods
- E. Sports
- Key words across topics

6 Key Words for this term

- Almuerzo
- 2. Ceno
- 3. Desavuno
- 4. Peligroso
- 5. evitar 6. cambiar

A. 3.1H Hablando del tiempo libre

aburrido/a agradable al aire libre batería la canción dar un paseo de vez en cuando Desafiante divertido/a Emocionante entretenido/a la entrevista estar en forma grabar la letra relajante la rutina la tarde

el terror

borina pleasant in the open air drums song to go for a walk From time to time Challenging fun exciting entertaining interview to be fit to record lyrics, words relaxing routine afternoon, evening horror

B. 3.2G Comer y beber

el agua (mineral) (mineral) water to drink beber el bocadillo sandwich la carne meat la cena evening meal cenar to eat evening meal comer to eat la comida lunch, food, meal desavunar to have breakfast breakfast el desayuno afterwards después el perrito caliente hot dog el pollo chicken el postre dessert, pudding el queso cheese **Tomar** to take, to have (food, drink) la tortilla omelette la tostada toast

C. 3.3G ¿Haces deporte?

alass

activo/a al aire libre

el vaso

ayudar el baloncesto el campo la cancha los deberes la equitación el estadio montar a caballo montar en bicicleta la natación pasar el patinaje la pista de hielo el polideportivo tranquilo/a

active in the open air. outdoors to help basketball countryside, field court (tennis) homework horse ridina stadium to ride a horse to ride a bike Swimming to spend time skating ice rink sports centre peaceful, quiet

Key Verbs						
Ser To be	Tener To have	Present	<u>Past</u>	<u>Future</u>		
Soy	Tengo	Hablo	Hablé	Voy a Hablar		
= I am	= I have	I speak	I spoke	I am going to speak		
Eres	Tienes	Como Comí		Voy a comer		
= You are	= You have	I eat I ate		I am going to eat		
Es	Tiene	Voy	Fui/fue	Voy a ir		
= s/he is	= s/he has	I go	I am/it was	I am going to go		
Somos	Tenemos	Soy	Fui	Voy a ser		
= We are	= We have	I am	I was	I am going to be		
Son = They	Tienen	Tengo	Tuve	Voy a tener		
are	= They have	I have	I had	I am going to have		

D. 3.2HUna cena especial

	la aceituna	olive		
	la basura	rubbish, junk		
	el bocadillo	Sandwich		
	el/la camarero/a	waiter		
	dejar	to leave, to let,		
I	escoger	to choose		
I	los espaguetis	Spaghetti		
I	el/la esposo/a	husband, wife		
I	el gusto	taste		
I	la lata	tin, can		
I	las legumbres	Pulses (lentils)		
I	optar por	to opt for		
ı				

E. 3.3F ¿Qué deportes harás?

el alpinismo rock climbing cansado/a tired la carrera race el concurso Competition(contest) durante during el entrenamiento training entrenar to train el equipo team ganar to win el jugador plaver mañana tomorrow el miembro member el partido match

F. Key Words across Topics?

to have = tener to be = ser to go = ir to do = hacer to play =jugar to see = ver to listen=escuchar to buy =comprar to live =vivir to speak= hablar to have to = deber to want to=querer to visit = visitar to eat - =comer to drink = beber to go out = salir to read = leer to work = trabajar to think = pensar to write =escribir

Aburrido – boring Util - useful Inutil - useless Comodo - comfy Interestanteinteresting Entretenido entertaining Emocionante exciting Guay - cool Genial – great Soso - dull Asqueroso disgusting Malo-bad Bueno - good Arriesgado- risky Educativoeducational Estimulatestimulating Peligroso-

dangerous

Divertido – fun





G. Translation Practice	
For lunch, and for breakfast I	реа, уре
drink tea	dbt
The prawns are delicious	lgsd
The chips are cold	lpfsf
The food is bad	lcem
Normally I eat salad everyday	ncetld
The soup is tasty	Ises
The salads are delicious	lesd
I think that chicken is more	pqepem
tasty than pork	sqec
I think salad is more healthy than ice cream	pqeemsq h
I believe that ice cream is	cqhemg
more fatty than salad	qe
We are going to go out to eat	vasac
They are going to buy a	vacur
present	
We are going to celebrate my	vacecd
grandma's birthday	m a
I am going to prepare a healthy hot dog	vapupcs
Often they play basketball in	amjabel
the free time	t
Usually we listen to music	amemtl
every day	d
I hope to visit my grandma's house	evlcdma
I'm going to cook chicken and chips	vacpcpf
I have to cook every day	tqctld
I'm thinking of watching TV tonight	pvlthplt
For breakfast, I drink milk	ped, bly c
and eat a sandwich	lub
For desert, they eat cake	рер, ср
For breakfast, I take salad	ped, tey
·	ped, tey p Epdffb

	H . Key Questions: Answe	er the following in your own words. Use these model answers				
	¿Qué deberías hacer para mejor proteger tu forma/tu salud? What should you do to improve your health?	Debería hacer ejercicio físico durante 30 minutos cada día. Para mejorar tu salud, hay que comer cinco raciones de verdura o fruta cada día, no tienes que comer demasiada carne roja/caramelos/gaseosas, no deberías fumar cigarrillos o porros, no debes consumir tanta grasa en la comida, no debes tomar las drogas duras/blandas.				
	¿Qué deberían hacer en los colegios para mejorar la salud de los jóvenes? What should schools do to improve health of Young people?	En los colegios, solo deben vender comida sana, no deberían vender gaseosas/bebidas azucaradas/deben mejorar la cantidad de fruta y verdura/deben mejorar la cantidad de ejercicio físico que tienes que hacer durante la semana.				
	¿Qué comes para el desayuno, la cena, tu almuerzo? ¿es sano? What do you eat for breakfast, dinner, lunch? Is it helahty?	Para el desayuno, como normalmente los cereales que son deliciosos con zumo de naranja. Para la cena como normalmente carne con patatas y verduras con mi familia en casa que es un poco sano. Para mi almuerzo, como un bocadillo con jamón y queso en el colegio con agua o coca. Ayer desayuné cené comí para mi almuerzo				
	¿Tomas demasiadas bebidas azucaradas? Do you drink too many fizzy drinks?	Si, tomo demasiadas bebidas azucaradas porque son deliciosas y muy dulces/me dan energía/todos mis amigos las beben, pero lo sé que son muy malas para la salud/para mi cuerpo.				
	I. Key Questions: Try	I. Key Questions: Try to translate the model answers using words from the KO				
	¿Qué te gusta comer/beber? What do you like to eat/drink	For breakfast I like to eat toast but I never eat cereals because they aren't tasty. For lunch I eat a sandwich with ham or cheese or I eat pizza with ham or sausage. For my main meal normally I eat chips with meat or fish or vegetables with potatoes				
	¿Eres Sano? About your family	I think I'm healthy because I don't smoke and I like to eat lots of fruit. I like to eat vegetables but I have to eat more vegetables and I have to eat less sweets				
	¿Qué es tu opinión de fumar? What is your opinion on smoking	I do not like smoking because I think that it is stupid. My brother smokes and it smells bad. Also, it causes cancer and is really dangerous				
	¿Qué te gusta hacer en tu tiempo libre y por qué? What do you like doing in your free time	Normally in my free time I like to play football. I play football after school every day and from time to time I play rugby. I don't like to dance because it's boring and I love to play computer games because they are exciting				
l						

J. Key Grammar			
Make sure adjectives agree eg blanco/blanca/blancos/blancas	Mi casa es blanca = My house is white Mi perro es blanco = My dog is white		
Using verbs correctly in the present tense	Hablar hablo, hablas, hablamos, habláis, hablan Como, comes, come, comemos, coméis, comen		
Comparatives More /less Better/worse The best/the worst	Más/menos que – more/less than Mejor/peor que – better/worse tan Lo mejor/lo peor = the best/the worst		

Marie VARIA A Partie VIV

What we are learning this term:

- A. Ines Kouidis
- B. Michael Volpicelli

it will become.

inspiration.

Who does she make collages of?

C. Techniques and skills

A.	How has lines Kouldis created this image?
2	What materials has she used? Ines uses a range of scrap materials including envelopes, scrap paper, newspapers, old magazines and cardboard.
3	How has she torn the material? Ines doesn't use scissors often, but more she tears the material so to get a rough edge to her work. A type of uneven and rustic approach to her outcomes.
4	What impact do smaller pieces of material have? She is very particular about the size of pieces she is collaging. Smaller and more detailed pieces can form darker areas and shadows. Lagers and lighter pieces are the highlights. The smaller the pieces, the longer it will take her- however the more intricate

She usually makes collages of famous people in history, who

and have had an impact on Ines' live. They are her main

might be dead or alive today. These people influence her making

	E ALL MAIN THE LAND STATE OF	- 6
F.	Keywords	
Appropriate	Suitable for a particular person, place or condition	
Highlight	An area of lightness in an image	
Shadow	When an objector artwork intercepts light and causes an obscurity	
intricate	Having many complexly arranged element	
relevant	Having a bearing or connection with the subject or matter	

C How to make a collage.

Collage: is a form of art by cutting and ripping paper to create interesting artworks.

Steps for making your collage:

- Start by having an image as a source, something you will use as a guide to follow or for inspiration
- 2. Use a range of different types of paper, such as; scrap paper, newspaper, card, coloured paper.
- 3. Tear the paper to get a jagged edge, cut with scissors to get a straight edge.
- 4. The smaller the pieces of paper, the more detailed the outcome.
- 5. Darker paper in more shaded areas. Lighter paper in highlighted areas.
- 6. Add additional details on the face and in the background, following the same technique as step 2 and 3.

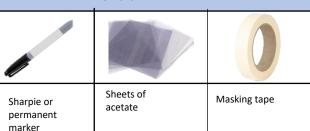
What each tool is used for:

Cutting mat	To protect the table from damage.		
Glue stick	To cleanly stick the shapes onto paper.		

Looking at the image drawn by Michael Vollpicelli, how does he create.....

- 1. Darker areas? Michael creates darker areas on the portrait by doing smaller words that are closer to one another to create shadowing.
- 2. Lighter areas? Words further apart and larger will be lighter

C. Name the following equipment.



B. Answer the following questions about Michaels work and how he works.

What part of the body does Michael focus in drawing?	Michael focuses in on the face and facial features. This is called portraiture.		
What effect do the larger words make?	The larger words make highlighted areas on the face		
How would you describe his work?	Meaningful, cultural identities, typography, portrait,		
What is significant about the words he uses to make up the drawing?	The words he uses are meaningful to that particular person. They might be words that describe them, or what they do, what impact they have or their personality.		



7 1 3 2 4 3	CITY TO COMPANY CONTRACTOR OF SUIT
B.	About the work of artist Michael Volpicelli
WHAT?	Michael creates word art using a variety of sizes to make up a portrait of a person.
HOW?	Use uses a fine permanent marker to draw with words. Larger words create a highlight and smaller more scrammed words create shadows and darkness.
WHY?	Michael draws people using words he thinks describes them. Kind and thoughtful words to spread the kindness.

What we are learning this term: A. Ines Kouidis B. Michael Volpicelli C. Techniques and skills How has Ines Kouidis created this image? What materials has she used? How has she torn the What impact do smaller pieces of material have? Who does she make collages of? Keywords F. Appropriate Highlight Shadow intricate relevant

v			STATE OF THE PARTY AND				April 1 have been been been been been been been be			
Á	С		nake a collage.		В.	Ans and	wer the follo how he worl	wing questio	ns about Mid	chaels work
	Colla Steps		g your collage:		body	part of does M in drav	lichael			
do allo	2.					effect o	do the make?			
としる。	3.				How v descri	vould y be his	ou work?			
	4.			į.	about	o make	ficant ords he e up the			
3	5.					10		A	A.W	
3		t each tool i	is used for:		44	6	13		752EA(
1		stick .			1)	ĬΚ,	Spir			
ć	3	4	LANG		Y	3	36			(3)
		Vollpicell	at the image drawn by ii, how does he create.	Michael	1	3			S ofth	
- N N I		arker areas? ter areas?								
	C. Nan	ne the follow	ring equipment.		À	3.	About the	work of artist	Michael Vol	picelli
111111111111111111111111111111111111111					HO\					
30.00) A(1.5	·/O				

WHY?

YEAR 9 GRAPHIC COMMUNICATION

What are we learning this term?

Logos Typography

C Computer skills

D Key words

Evaluation

D| Key words

Merchandise Branded products used to promote and sell a product

Combined Logo A logo that uses both images and text

Photoshop A software for editing photos and graphics.
It is used for image editing, making illustrations or web design.

Photo Editing The act of image and enhancement and manipulation

A | Logos

What is a logo?

A graphic design element that includes words and images, shapes, symbols or colour.

How does Alex Trochut design logos?

Alex Trochut collaborates with brands to create new catchy designs. He uses text and imagery to create visual art. The viewer first notices the imagery but looks closer to find a hidden message through typography.

B | Typography

Draw your initials in the typographic style of designer Alex Trochut work



C | Computer skills

What is the shortcut for copy?

Ctrl + C

What is the shortcut for paste?

Ctrl + V

What does this symbol stand for?



Photoshop

What does this symbol mean?



Cropping

E | Evaluation

Evaluation: To judge or give an opinion

Designers will evaluate their products to see what works well and what doesn't. This way they can make any improvements on their current designs to ensure a high-quality product.

When writing an evaluation it is important to include the following three things:

- 1. Positives what works well
- 2. Negatives what doesn't work well
- 3. Possible improvements how could you make it better? **For example:**

My tote bag looks great, the colours are bright which appeals to the audience of the festival. However, I have not designed a combined logo. One improvement I could make is to use images and text to create a combined logo.

YEAR 9 GRAPHIC COMMUNICATION

What are we learning this term?				D Key words		
A Logos	B Typography	C Computer skills	D Key words	E Evaluation	Merchandise	
A Logos					Combined Logo	
What is a logo?					Photoshop	
How does Alex Troc	:hut design logos?				Photo Editing	
D T b		C I C-			E Evaluation	
B Typography		C Coi	mputer skills			ge or give an opinion
Please use pencil fo	r the drawing of your o	What i	s the shortcut fo s the shortcut fo does this symbol does this symbol	r paste? stand for?	following three the following three the following three the following three three following three three three following three three three following three three three following three three following three three three following three followin	



Year 9 PRODUCT DESIGN Rotation Knowledge Organiser



What we are learning this term: A. Workshop Tools C. Key concepts D. Key Words E. Types of Cams **B.** Materials **Workshop Tools** Steel Rule **Tri-Square Laser Cutter** Mitre square **Tenon Saw** Pillar Drill **Bandfacer**

	D.	Key Word	Key Words			
	Prototype ()		An early model or sample of a product used to test a concept			
	Tolerar	tce +	The margin of error allowed for a dimension without negatively impacting a product			
	Depth stop		A part on a tool which is used to help cut or drill a specific depth.			
	Assemble		Creating a product by bringing several components together.			
_		1_				

Materials

Timbers come from trees



Scots pine - which you used for your box walls - is a softwood

Softwoods come in planks and boards

Manufactured Boards come from wood pulp



Plywood - which you used as your base and Lid- is a manufactured board

Manufactured Boards come in sheets

Polymers come from crude oil



Acrylic - which you used as your lid decoration for your trinket box – is a polymer

Polymers come in sheets, graduals and filament

Key concepts

Designers research and investigate resources and materials to help inspire ideas.

Computer-aided design (CAD) is the process of using computer software to create 2D or 3D designs.

Advantages	Disadvantages
Designs can be created , saved and edited quickly, saving time	CAD takes a long time to learn
Designs or parts of design can be easily viewed from different angles, copied or repeated	Software can be very expensive
CAD is very accurate	CAD files can become corrupted or lost

Hazards - these are something that could potentially harm you. There are many such as:

- Bags and chairs acting as a trip hazard
- Untucked shirts, baggy clothes and untied hair are common things to get caught on tools and machines.
- Drinks and liquids, if spilled can become slip hazards

Preventative measures – rules put in place to minimize the likelihood of a hazard occurring.

- No food and drink in workshops
- Bags and chairs stored neatly in designated areas
- Long hair must be tied up and correct uniform worn.

Personal protective equipment (PPE)

The three used most often are aprons, safety goggles and ear defenders

Types of Cams

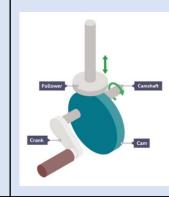
Cam mechanism

A cam mechanism has two main parts:

- A cam attached to a crankshaft which rotates
- A Follower touches the cam and follows the shape, moving up and down

Cam shapes are important for the movement of the follower.

- Off set circular gradually moves the follower up and down
- Pear shaped keeps the follower at the same height for half a rotation before quickly moving it up and down.
- Snail Cam allows the follower to rise before abruptly dropping, this cam can only rotate one way
- 4-lobed rises and drops the follower 4 times per rotation and can only go one way



Off-set circular Cam

Snail Cam



Pear shaped Cam





4-lobed Cam





Year 9 PRODUCT DESIGN Rotation Knowledge Organiser



	Ø-//							
Wha	t we are learning this terr	n:			D.	Key W	ords	
Α.	Workshop Tools B. N	laterials C. Key concepts	D. Key Words	E. Evaluating Work	Prototy	pe 📆	Ā	
A.	Workshop Tools			*	Toleran	ice +		
					Depth s	₹ ~	<u> </u>	
					Assemi	ble 🐔		
В.	Materials		C. Key concep	ts	E.	Types	s of Cams	
Tim	nbers come from	Scots pine – which you used for your box walls – is	Designers research a		Cam mechai	nism	A cam mechanism has t	
		a softwood Softwoods come in	Advantages	Disadvantages	• Off			Į,
Mai	nufactured Boards come	Plywood – which you used as your base and Lid– is a manufactured board Manufactured Boards come in	Hazards – these are so harm you. There are m	omething that could potentially any such as:		il Cam -		Follower Camshutt
Pol	ymers come from							
		Acrylic – which you used as your lid decoration for your trinket box – is a polymer	Preventative measure the likelihood of a haza	es – rules put in place to minimize rd occurring.				
		Polymers come in	Personal protective e The three used most of	quipment (PPE) ften are	-			

What we are learning this term:

- A. Health, safety and hygiene in the kitchen
- B. The Eatwell guide and nutrients
- C. The Dietary requirements of a teenager

4 Healthy

Jewellery can harbour

touch equipment.

from touching you.

bacteria and could fall off into

Hair could fall into the food or

To remove any germs and

bacteria from your hands and

To protect you from the food

and equipment and the food

Explain the main four things that you should do when you enter the kitchen

the food.

nails.

6 Cross Contamination

- Skills testing
- E. Healthy cooking
- F. Chopping Board Colours

6 Key Words for this term

2 Dietary Requirements 5 Teenager

1 Hygiene

3 Skills Test

area.

Remove all of

your jewellery.

Tie back your hair

Wash your hands

Put on and apron and tie it back.

with hot soapy

water.

. Can you list 5 of the dietary requirements of a teen

- 1 A diet high in carbohydrate as a teenager is normally an energetic person.
- 2 A diet with 2-3 potions of protein to maintain muscle growth and cell repair
- 3 A diet with 2 -3 sources of calcium to build developing teeth and bones.
- 4 A diet low in fat to avoid becoming obese or developing other health problems.

Year 9 - High Skills

5 Drinking 2 litres of water a day.

FOOD SAFETY CHOPPING BOARDS If used correctly, colour coded chopping boards can eliminate or reduce the risk of cross contamination during food preparation RAW MEAT RAW FISH COOKED MEATS SALAD & FRUIT PRODUCTS VEGETABLE PRODUCTS BAKERY & DAIRY PRODUCTS Clean and store chopping boards correctly after use

A What is cross contamination and how can it be prevented?

Cross contamination happens when you use the wrong chopping board or equipment to prepare food which can therefore result in food poisoning. You must use the correct equipment for the correct ingredients. You must also ensure that you are always following good hygiene practices when cooking.

B. What do the following terms mean?	
Grilling	Using the top part of the oven. It involves a significant amount of direct, radiant heat, and tends to be used for cooking meat and vegetables quickly. It is also a healthier method of cooking meat products.
Baking	Baking is a method of

preparing food that uses dry
heat, normally in an oven. Heat
is gradually transferred from
the surface of cakes, cookies,
and breads to their centre.

Frying Frying is the cooking of food in

oil or another fat. It is usually done in a frying pan using the hob of the cooker. It also known to be unhealthy.

Can you list 5 reasons for why we cook food and why it is important?

Curio Enteredit The management of the control of t

Rule

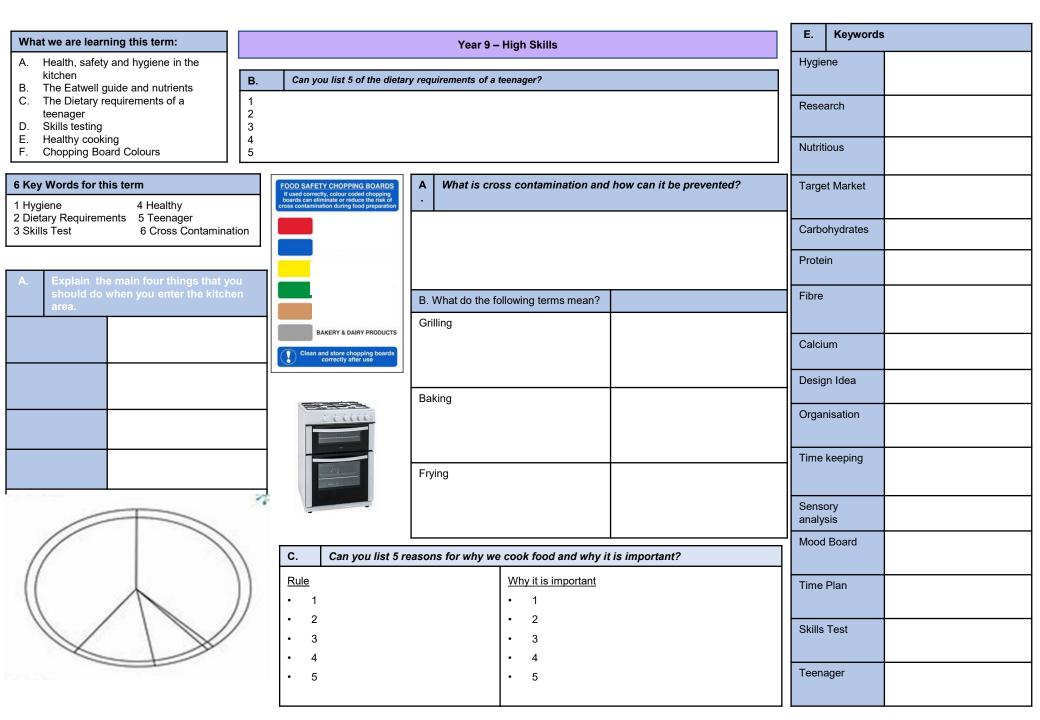
C.

- 1 to get rid of bacteria on the food
- 2 to make the food taste better
- 3 to make food chewable
- 4 to ensure that food is not raw
- 5 to add colour to the food

Why it is important

- 1 to stop food poisoning
- 2 to make the food more appealing
- 3 it could be raw or a choking hazard
- 4 to stop food poisoning
- 5 to make it look more appetising or change its use

E.	Keywords			
Hygiene		A method of keeping yourself and equipment clean		
Research		Information that you find out to help you with a project		
Nutrit	ious	A meal that is healthy and contains vital nutrients.		
Targe	et Market	The age or type of person you re creating a product for.		
Carbo	ohydrates	Foods that give you energy		
Prote	in	Food that grow and repair your muscles		
Fibre		Foods that keep your digestive system healthy and avoid constipation.		
Calci	um	Foods that make your teeth and bones strong		
Design Idea		A sketch or plan of how you are hoping a project to turn out.		
Organisation		Having everything ready for a lesson and following instructions		
Time	keeping	Using the time to remain organised.		
Senso analy		Use your senses to taste and describe a product		
Mood Board		A collage of photos and key words based on a project		
Time Plan		Instructions of wat you are going to do and how long it should take.		
Skills Test		Demonstrating your knowledge of a cooking term.		
Teenager		Someone between the age of 13 – 19.		





9-1, 9GS, 9-4, 9-6 Only

Year 9: How do we make an EDM banger!?

Term 2



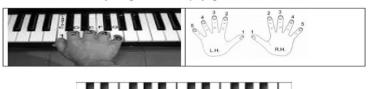
What we are learning this term:

- A. Learn about EDM music and how it's made
- B. Compose your own EDM piece of music in Soundtrap
- C. Analysis of EDM music to understand its structure, instruments and features

F	Keywords
Piano Roll	The space where you can add notes to a MIDI instrument
Velocity	How loud or quiet a note is played in a DAW e.g. High velocity = Louder notes.
EDM	Electronic Dance Music is a genre of music that uses synthesised sounds, drum machines and vocals.
MIDI	Instruments that are played in a DAW (soundtrap) are MIDI isntruments. This means <i>Musical instrument Digital Input</i>
DAW	Digital Audio Workstation is a program used to create music (Soundtrap)
4 to the floor	A rhythm that is primarly used in EDM music, where there is a kick drum on every beat.
Sampling	When a sound or part of a song is taken and changed so it can be used in another song, for example, sampling vocals.
Automation	A tool in DAWs where you can change the volume/effect automatically. For example a guitar could fade in and out.
Quantize	A tool in DAWs that can make notes in time.
Build up	The part of an EDM piece where the music builds up to another section.
Drop	The part of an EDM song where the main beat comes in. This usually comes after the build up
Bass Line	The lowest sequence of notes in a piece of music. Usually played with a bass instrument i.e 808

C Playing the Keyboard

Remember to use your right hand when playing notes in the treble clef



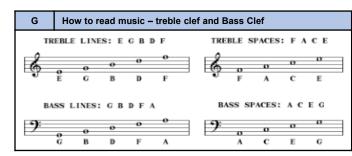


Riff	A catchy phrase in a piece of music, shorter than the melody.
Phrase	A small section of music, this can be repeated throughout a piece of music.
Hook	A catch phrase in a piece of music, usually sung.
Syncopation	A musical technique where the weak beats are emphasised / off beat rhythms
Structure	How a song is put together, like a blueprint.
Loop	A repeating section of sound, this can be a melody or a drum beat
Remix	A retelling of a piece of music where elements of the original song are combined with new elements

C Chord Progressions Ideas

Here are some popular chord progressions you can use for your EDM piece!

VI	IV	V	ı
VI	V	I	IV
VI	IV	1	V
I	V	VI	IV



EDM song structure

Intro Build-up Pre Hook Hook Bridge Pre Hook Hook Outro

The EDM or "Banger" structure follows a structure of builds and drops. Rather than using standard verses, this structure instead has (usually) to main builds where tension increases over time before being released in the hooks. What's key here is the use of rhythm to create tension and build energy between the hooks.

Here is a useful video to help you get started:







What we are learning this term:

- A. Learn about EDM music and how it's made
- B. Compose your own EDM piece of music in Soundtrap
- C. Analysis of EDM music



C Playing the Keyboard

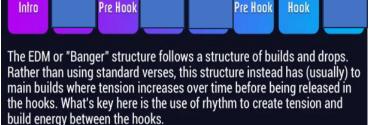
Remember to use your right hand when playing notes in the treble clef





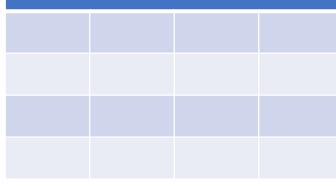
KIII	
Phrase	
Hook	
Structure	
Loop	
Remix	

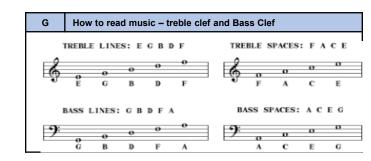
EDM song structure



C Chord Progressions

Here are some popular chord progressions you can use for your EDM piece!





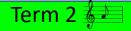
Here is a useful video to help you get started:





9-3, 9-5, 9-2 only

Year 9: What Makes a Good Song?



Α	What we are learning about this term
1 2	Popular song structure Lyrics , hooks and riffs in popular music
3	Melody – conjunct and disjunct
4	Range, instruments and lead sheets in pop music



В	Keywords
Lyrics	The words of a song – split into verses and choruses
Hook	the 'catchy bit' of the song that you will remember. It is short and repeated in different places throughout the song.
Riff (Ostinato)	Short, repeated musical pattern often used in the introduction and instrumental breaks in a song.
Melody	The tune – usually lead singer has this
Counter- melody	An 'extra' melody often performed 'on top of' the main melody to compliment it
Homophonic (texture)	A texture that has a melody and accompaniment (e.g chords/bassline)
Lead Sheet	Form of notation that only shows the essential parts (eg lyrics, bassline and chords) to perform from
Arrangement	Adapting songs to be performed by other instruments or in a different style
Cover Version	A new performance by someone OTHER than the original artist /songwriter

C Instruments in popular music





Pop Bands often feature a **DRUM KIT** and **PERCUSSION** to provide the rhythm along with **ELECTRIC GUITARS** (**LEAD GUITAR**, **RHYTHM GUITAR** and **BASS GUITAR**) and **KEYBOARDS**. Sometimes **ACOUSTIC INSTRUMENTS** are used such as



the PIANO or ACOUSTIC GUITAR. ORCHESTRAL INSTRUMENTS are often found in pop songs such as the STRINGS, SAXOPHONE, TROMBONE and TRUMPET. Singers are essential to a pop song - LEAD SINGER - Often the "frontline" member of the band (most famous) who sings most of the melody line to the song. BACKING SINGERS support the lead singer providing HARMONY or a COUNTER-MELODY (a melody that is often higher in pitch and different, but still

'fits with' the main melody) and do not sing all the time but just at certain points within a pop song e.g. in the chorus.



D Exploring Conjunct and Disjunct Melodies

CONJUNCT MELODIC MOTION – Melodies which move mainly by step or use notes which are next to or close to one another.

Conjunct



SCAN ME

DISJUNCT MELODIC MOTION – Melodies which move mainly by leap or use notes which are not next to or close to one another.



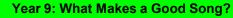


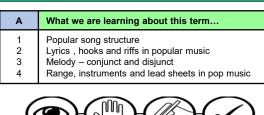
MELODIC RANGE – The distance between the lowest and highest note in a melody

F	Note Values and Dotted Note Values

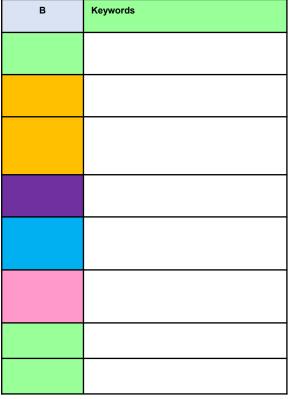
Note	Name	Beats	Rest	Note	Name	Beats	Rest
0	Semibreve, Whole Note	4 beats	_	0.	Dotted Semibreve, Dotted Whole Note	6 beats	-
d	Minim, Half Note	2 beats	-	d.	Dotted Minim, Dotted Half Note	3 beats	-
١	Crotchet, Quarter Note	1 beat	ξ	J.	Dotted Crotchet, Dotted Quarter Note	1% beats	ξ.
•	Quaver, Eighth Note	1/2 beat	7	J.	Dotted Quaver, Dotted Eighth Note	3/4 beat	7.

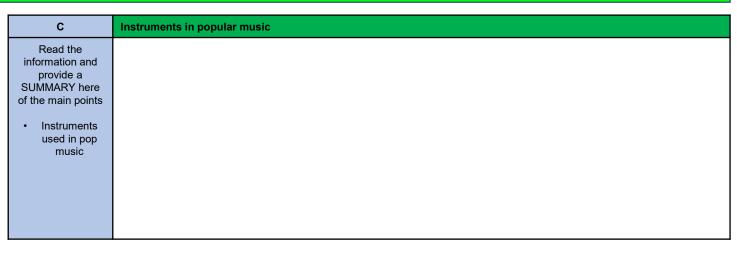
G	Describing music	Describing music – MAD T SHIRT									
M	Α	D	Т	S	Н	l l	R	Т			
Melody	Articulation	Dynamics	Texture	Structure	Harmony/Tonality	Instruments	Rhythm	Tempo			
The tune	How notes are played	Loud/quiet and any other volume changes	Layers of sound / how they fit together	The sections and organising	Chords used / the mood	Types of instruments heard	Pattern of notes	The speed			

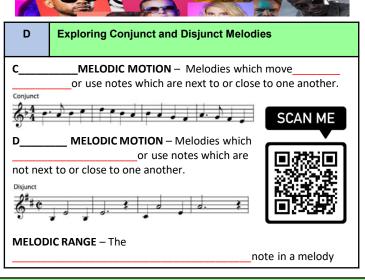


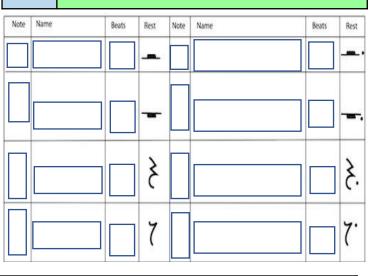




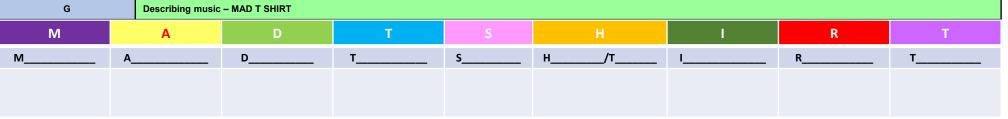








Note Values and Dotted Note Values



Drama - Year 9 Improvisation

Links to Comp 1 and 2

Improvisation

improvising is inventing and creating content spontaneously. It's a great way to generate new ideas and for creating and developing characters, using a variety of useful techniques.

Spontaneous improvisation which is completely unplanned can generate dialogue or scenarios that you feel work for the piece you are creating. This can then be refined, rehearsed and included in your finished **devised** piece.

A **constraint** is a condition that you must apply to a scene, so that you're improvising within a set of rules. Here are some ideas for working with constraints when improvising.

Space

A very small space, such as a lift. Characters must behave as they would normally but within a tiny playing area.

A vast space, such as across a giant mountain range. Consider how changing **proximity** affects body language, vocal tone and volume and interaction, between characters. There may be something that works and could be included in your devised piece.





This improvisational exercise is excellent for creating entirely new and unplanned characters and scenarios.

Where, who, what?

Choose a location, eg a supermarket or a roller coaster. Select characters, eg an astronaut or an I.T. manager. Finally, choose a motivation for the character, eg they are looking for a partner or want to be famous at any cost. Each piece of information should be randomly selected, so that they don't necessarily match up. This can make for interesting and very humorous drama.

- Improvisational Theater (improv): is a form of theater where most or all of what is performed is created at the moment it is performed.
- In its purest form, the dialogue, the action, the story and the characters are created collaboratively by the players as the improvisation unfolds.
- Improv exists in performance as a range of styles of improvisational comedy as well as some non-comedic theatrical performances.
- It is sometimes used in film and television, both to develop characters and scripts and occasionally as part of the final product.



<u>Examples – Mock the Week, Whose Line Is it Anyway? Outnumbered. The Office.</u>

Tips for success

-Listen to your partner.

A scene will often 'go stale' if the people involved are not responding genuinely to each other. Improv is all about **teamwork** and the relationship you have with each other. The better the relationship, the better the scene will be to the audience.

-Use 'yes, and...".

When your partner tells you something in an improv scene, accept it and then add something to the conversation. If you're partner starts by asking you why you've come to a party dressed as a pineapple, don't tell them that you think they're seeing things. Ask them why they're the only one who hasn't come dressed as a giant piece of fruit and that you have a spare costume in your car if they need it. Scenes where actors deny what their partners are saying often go dry very quickly and offer nothing for the audience. It's also a good way to annoy your partners.

- Don't necessarily try to be funny.

Sure, comedy is great, but one person trying to make the audience laugh often alienates the others on stage.

-Accept your mistakes.

Like any learning process, you will make mistakes. It's how you learn. Don't beat yourself up if you forgot a key rule of improv or your scene wasn't particularly good. Make some general notes for yourself and put it behind you. Next time you get up to improvise, treat it like a fresh start and be positive.

Drama – Year 9 Improvisation

Improvisation

improvising is and content spontaneously. It's a great way to generate and developing , using a variety of useful techniques.

and for creating

Links to Comp 1 and 2

Spontaneous improvisation-

A ______ is a condition that you must apply to a scene, so that you're improvising within a set of rules. Here are some ideas for working with constraints when improvising.

A very small s , such as a lift. Characters must behave as they would normally but within a tiny playing area.

A vast space, such as across a giant mountain range.

Consider how changing **p** affects body language, vocal tone and volume and interaction, between characters. There may be something that works and could be included in your devised piece.





Where, who, what?
Location-

Create your own

Character-

Motivation-

- Improvisational Theater (improv): is a form of theater where most or all of what is performed is created at the moment it is performed.
- In its purest form, the dialogue, the action, the story and the characters are created collaboratively by the players as the improvisation unfolds.
- Improv exists in performance as a range of styles of improvisational comedy as well as some non-comedic theatrical performances.
- It is sometimes used in film and television, both to develop characters and scripts and occasionally as part of the final product.

Tips for success

What are the 5 tips for successful improvisation and why are these important?

<u>Examples – Can you name any tv shows that are improvised?</u>



SWINDON ACADEMY READING CANON Year 7 Year 9 Year 10 Year 8 The Curious Incident of the Dog in the Night-Time a THE STREET The Diary of a Young Girl Rani and Sukh The Amazing Maurice The Outsiders The Art of Being Normal Sir Gawain and the Green Knight Witch Child #ReadingisPower