2024/2025

Cycle 1 Knowledge Navigator

Morning meeting homework

100% Sheets

Year 9

Name:

Form:

Determination | Integrity | Trust

DIXONS COTTINGLEY ACADEMY

YEAR 9 KNOWLEDGE NAVIGATOR
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DIXONS COTTINGLEY ACADEMY

YEAR 9

CYCLE 1 HOMEWORK

French	TRAVEL AND TOURISM	CYCLE 1	Year 9

Week 1		Week 2		Week 2		Week 3			
Weather		**Countries / Places**		**Nationalities**		**Forms of Travel**		**Adjectives**	
le météo	the weather forecast	aux États-Unis	in/to the USA	marocain	Moroccan	en avion	by plane	loin	far
il fait beau	it's nice	au Maroc	in/to Morrocco	belge	Belgian	en train	by train	cher / moins cher	expensive/ cheap
il y fait du soleil	it's sunny	en Suisse	in /to Switzerland	chinois	Chinese	en autobus	by bus	rapide	quick
il fait chaud	it is hot	en Espagne	in/to Spain	francophone	French speaking	en car	by coach	lent	slow
il fait froid	it is cold	en Angleterre	in/to England	québécois	From Québec (Canada)	en voiture	by car	vif	lively
il pleut	it's raining	au Pays de Galles	in/to the USA	suisse	Switzerland	en bateau	by boat	sympa	nice
il neige	it's snowing	en Tunisie	in/to Tunisia	arabe	Arabic	en TGV	by high speed train	confortable	comfortable
il fait du vent	it's windy	en Belgique	in/to Belgium	africain	African	à pied	on foot	étroit	narrow
la pluie / la neige	rain / snow	en Écosse	in/to Scotland	mondial	global	à vélo	by bike	relaxant	relaxing
le brouillard	fog	la Manche	the Channel			à métro	by underground	intéressant	interesting

Week 4		Week 4		Week 5					
Places to stay and visit		**Hotel facilities**		**Verbs**		**Nouns**		**Activities**	
un gite	a holiday home	une vue	a view	rester	to stay	la frontière	the border	aller à la montagne	to go to the mountains
une tente	a tent	une piscine	a swimming pool	louer	to hire	la valise	the suitcase	aller à un parc d'attractions	to go to an amusement park
un château	a castle	la plage	the beach	partir	to leave	l'addition	the bill	visiter un musée	to visit a museum
un chalet	a wooden house in the mountains	la climatisation	air con	voler	to steal	le plat	the dish	acheter des souvenirs	to buy souvenirs
au bord de la mer	by the sea	une douche/ un bain	a shower / a bath	profiter de	to make the most of	le vol	the flight	faire une promenade	to go on a walk
une chambre	a room	un grand lit	a double bed	dormir	to sleep	le séjour	the stay	faire les magasins	to go shopping
une île	an island	la porte	door	passer du temps	to spend time	l'argent	money	faire du tourisme	to do tourist activities
un spectacle	a show	l'accueil	reception / welcome	voyager	to travel	le retour	the return	sortir en ville	to go out into the town
le pont	the bridge	l'étage	floor	perdre	to lose	le logement	accommodation	essayer voir	to try to see

French	WHERE PEOPLE LIVE	CYCLE 1	Year 9

Week 6 — Conditional / Simple Future

J'irais	I would go
Je visiterais	I would visit
Je dormirais	I would sleep
Je jouerais	I would play
Je sortirais	I would go out
Je voyagerai	I will travel
Je mangerai	I will eat
Je louerai	I will hire
Je jouerai	I will play
Je traduirai	I will translate
J'inclurai	I will include

Week 7 — Past Perfect

Je suis allé	I went
Je suis resté	I stayed
J'ai fait	I did
J'ai nagé	I swam
J'ai commandé	I ordered
J'ai traversé	I crossed
J'ai rêvé	I dreamt
J'ai dormi	I slept
J'ai acheté	I bought
J'ai organisé	I organised
J'ai rémarqué	I noticed

Week 8 — Town - Key Nouns

une maison	house	la circulation	traffic
un appartement	apartment	l'abre	tree
une chambre	room	le coin	corner
une fenêtre	window	la rue	street
une ferme	farm	la route	road
le voisin	neighbour	le ciel	sky
le lieu	place	l'arrêt	stop
le mur	wall	l'abri	shelter
le chômage	unemployment	le printemps	spring
les Pyrénées	the Pyrenees	l'été	summer
Le champ	field, realm	le citoyen	citizen

Week 9 — Verbs

aller	to go
aider	to help
conduire	to drive
donner	to give
se situer	to be situated
travailler	to work
traverser	to cross
utiliser	to use
vendre	to sell
vivre	to live
trouver	to find

Week 10 — Places in Town

une bibiothèque	a library	un cinéma	cinema
une église	church	une usine	factory
un château	castle	un marché	market
une piscine	swimming pool	un magasin	shop
une patinoire	ice rink	une mosquée	mosque
un bâtiment	building	un hôpital	hospital
un musée	museum	un jardin	garden
un stade	stadium	une rivière	river
un collège	secondary school	un côte	coast
une boulangerie	bakery	un chemin	way/path
un centre commercial	shopping centre	un tour	tower
une gare	Train station	Une sortie	exit

Week 11 — Advantages & Disadvantages / Useful Words

il y a	there is / are
il n'y a pas de	there is / are not
on peut	you can
on ne peut pas	you cannot
il y avait	there used to be
c'est / c'était	it is
l'avantage	the advantage
l'inconvénient	the disadvantage
chez moi	at my house
derrière / devant	behind / in front
proche	near
voici	here is

French	WHERE PEOPLE LIVE	CYCLE 1	Year 9

Week 12

Adjectives

sale	dirty	vivant	alive, living
propre	clean	peuplé	populated
grand/petit	big / small	calme	quiet
moderne/vieux	modern / old	vif	lively
joli	pretty	industriel	industrial
tranquille	quiet	désagreable	unpleasant
vide	empty	égal	equal
ancien	former, ancient	intéressant	interesting
étroit	narrow	jeune	young
beau/belle	beautiful	actuel	current

Week 13

Future Plans

J'irai	I will go
J'habiterai	I will live
Je rencontrai	I will meet
Il y aura	There will be
Je mangerai	I will eat
Je sortirai	I will go out
Je jouerai	I will play
Je regarderai	I will watch
Je relaxerai	I will relax

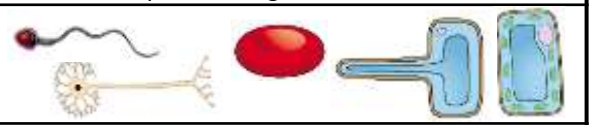
Ideal Town - Conditional

J'irais	I would go	Je visiterais	I would visit
Je ferais	I would do	J'aurais	I would have
Je voudrais	I would like	Je remplacerais	I would replace
J'aimerais	I would like	Je sauverais	I would save
Je mangerais	I would eat	J'achèterais	I would buy
Je pourrais	I could	Je élirais	I would elect
Ce serait	It would be	Je défendrais	I would defend
J'habiterais	I would live	Je contribuerais	I would contribute
Il y aurait	There would be	Je louerais	I would hire

1. Cell structure

Organelle	Function
Nucleus	Contains genetic material (DNA) which controls the cell's activities.
Cell membrane	Surrounds the cell and controls movement of substances in and out.
Cytoplasm	Jelly-like substance where most chemical processes happen.
Mitochondria	Site of respiration, where energy is released from food molecules.
Ribosomes	Site of protein synthesis.
Cell wall	Supports & strengthens the cell, in plant cells it is made of cellulose.
Chloroplast	Absorbs light energy so the plant can make food.
Vacuole	Contains liquid, and used to keep the cell rigid and store substances.

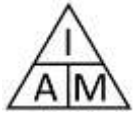
Cells may be specialised to carry out a particular function:
- sperm cells, nerve cells and muscle cells in animals
- root hair cells, xylem and phloem cells in plants.



As an organism develops, cells differentiate to form different types of cells.
- Most types of animal cell differentiate at an early stage.
- Many types of plant cells retain the ability to differentiate throughout life.

In mature animals, cell division is mainly restricted to repair and replacement. As a cell differentiates it acquires different sub-cellular structures to enable it to carry out a certain function. It has become a specialised cell.

An electron microscope has much higher magnification and resolving power than a light microscope. This means that it can be used to study cells in much finer detail. This has enabled biologists to see and understand many more sub-cellular structures.
Magnification (M) = size of image (I) / size of actual object (A)



2. Cell division

The nucleus of a cell contains chromosomes made of DNA molecules. Each chromosome carries a large number of genes. In body cells the chromosomes are normally found in pairs.

During the cell cycle the genetic material is doubled and then divided into two identical cells.
Before a cell can divide it needs to grow and increase the number of sub-cellular structures such as ribosomes and mitochondria. The DNA replicates to form two copies of each chromosome.
In mitosis one set of chromosomes is pulled to each end of the cell and the nucleus divides.
Finally the cytoplasm and cell membranes divide to form two identical cells.
Cell division by mitosis is important in the growth and development of multicellular organisms.

3. Transport in cells

Diffusion is the spreading out of the particles of any substance in solution, or particles of a gas, resulting in a net movement from an area of higher concentration to an area of lower concentration.
Some of the substances transported in and out of cells by diffusion are oxygen and carbon dioxide in gas exchange, and of the waste product urea from cells into the blood plasma for excretion in the kidney.
Factors which affect the rate of diffusion are:
- the difference in concentrations (concentration gradient)
- the temperature
- the surface area of the membrane.

A single-celled organism has a relatively large surface area to volume ratio. This allows sufficient transport of molecules into and out of the cell to meet the needs of the organism.

In multicellular organisms, surfaces and organ systems are specialised for exchanging materials. This is to allow sufficient molecules to be transported into and out of cells for the organism's needs. The 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 animals, for gaseous exchange) being ventilated.

Water may move across cell membranes via osmosis. Osmosis is the diffusion of water from a dilute solution to a concentrated solution through a partially permeable membrane.

Active transport moves substances from a more dilute solution to a more concentrated solution (against a concentration gradient). This requires energy from respiration.
Active transport allows mineral ions to be absorbed into plant root hairs from very dilute solutions in the soil. Plants require ions for healthy growth.
It also allows sugar molecules to be absorbed from lower concentrations in the gut into the blood which has a higher sugar concentration. Sugar molecules are used for cell respiration.

4. Stem cells

A stem cell is an undifferentiated cell of an organism which is capable of becoming other types of cells.
Stem cells from human embryos can be cloned & made to differentiate into most different types of human cells.
Stem cells from adult bone marrow can form many types of cells including blood cells.
Meristem tissue in plants can differentiate into any type of plant cell, throughout the life of the plant. Treatment with stem cells may be able to help conditions such as diabetes and paralysis.
Stem cells from meristems in plants can be used to produce clones of plants quickly and economically.

1. Levels of organisation

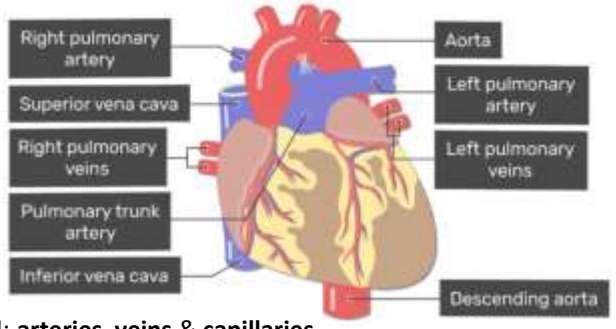
Cells are the basic building blocks of all living organisms.
A tissue is a group of cells with a similar structure and function.
Organs are aggregations of tissues performing specific functions.
Organs are organised into organ systems, which work together to form organisms.

2. Digestive juices

The digestive system is an example of an organ system in which several organs work together to digest and absorb food. Enzymes catalyse specific reactions in living organisms due to the shape of their active site.
Digestive enzymes convert food into small soluble molecules that can be absorbed into the bloodstream.
Carbohydrases break down carbohydrates to simple **sugars**. Amylase is a carbohydrase that breaks down starch.
Proteases break down proteins to **amino acids**.
Lipases break down lipids (fats) to **glycerol and fatty acids**.
These digested products are used to build new carbohydrates, lipids and proteins. Glucose is used in respiration.
Bile is made in the liver and stored in the gall bladder. It is alkaline to neutralise hydrochloric acid from the stomach. It also emulsifies fat to form small droplets which increases the surface area. The alkaline conditions and large surface area increase the rate of fat breakdown by lipase.

3. The heart and blood vessels

The heart is an organ that pumps blood around the body in a double circulatory system. The right ventricle pumps blood to the lungs for gas exchange. The left ventricle pumps blood around the rest of the body.
The natural resting heart rate is controlled by a group of cells located in the right atrium that act as a pacemaker. Artificial pacemakers are electrical devices used to correct irregularities in the heart rate.



The body contains three different types of blood vessel: **arteries, veins** & **capillaries**.
Blood is a tissue consisting of liquid plasma, with red blood cells, white blood cells & platelets suspended in it.

4. Health issues

Health is the state of physical and mental well-being.
Diseases, both communicable and non-communicable, are major causes of ill health. Other factors including diet, stress and life situations may have a profound effect on both physical and mental health.
Different types of disease may interact.

- Defects in the immune system mean that an individual is more likely to suffer from infectious diseases.
- Viruses living in cells can be the trigger for cancers.
- Immune reactions initially caused by a pathogen can trigger allergies such as skin rashes and asthma.
- Severe physical ill health can lead to depression and other mental illness.

5. Coronary heart disease: a non communicable disease

In coronary heart disease layers of fatty material build up inside the coronary arteries, narrowing them. This reduces the flow of blood through the coronary arteries, resulting in a lack of oxygen for the heart muscle. Stents are used to keep the coronary arteries open. Statins are widely used to reduce blood cholesterol levels which slows down the rate of fatty material deposit.
In some people heart valves may become faulty, preventing the valve from opening fully, or the heart valve might develop a leak. Faulty heart valves can be replaced using biological or mechanical valves.
In the case of heart failure a donor heart, or heart and lungs can be transplanted. Artificial hearts are occasionally used to keep patients alive whilst waiting for a heart transplant, or to allow the heart to rest as an aid to recovery.

6. The effect of lifestyle on some non-communicable diseases

Many diseases are caused by the interaction of a number of factors.
A causal mechanism has been proven for some risk factors, but not in others.

- The effects of diet, smoking and exercise on cardiovascular disease.
- Obesity as a risk factor for Type 2 diabetes.
- The effect of alcohol on the liver and brain function (and unborn babies).
- The effect of smoking on lung disease and lung cancer (and unborn babies).
- Carcinogens, including ionising radiation, as risk factors in cancer.

7. Cancer

Cancer can lead to uncontrolled growth and division of cells.
Benign tumours are abnormal cells which are contained in one area. They do not invade other parts of the body.
Malignant tumour cells are cancers. They invade neighbouring tissues and spread to different parts of the body in the blood where they form secondary tumours.

8. Plant tissues, organs and systems

The leaf is a plant organ.
Plant tissues include: epidermal tissues, palisade mesophyll, spongy mesophyll, xylem and phloem, meristem tissue found at the growing tips of shoots and roots.
The roots, stem and leaves form a plant organ system for transport of substances around the plant.
Root hair cells are adapted for the efficient uptake of water by osmosis, and mineral ions by active transport.
Xylem tissue transports water and mineral ions from the roots to the stems and leaves. It is composed of hollow tubes strengthened by lignin adapted for the transport of water in the transpiration stream.
The role of **stomata** and **guard cells** are to control gas exchange and water loss.
Phloem tissue transports dissolved sugars from the leaves to the rest of the plant for immediate use or storage.
The movement of food molecules through phloem tissue is called translocation.
Phloem is composed of tubes of elongated cells. Cell sap can move from one phloem cell to the next through pores in the end walls.

1. Atoms, mixtures and compounds

All substances are made of atoms. An atom is the smallest part of an element that can exist.

Atoms of each element are represented by a chemical symbol, eg O for oxygen or Na for sodium.

There are about 100 different elements. Elements are shown in the periodic table.

Compounds are formed from elements by chemical reactions. Chemical reactions always involve the formation of one or more new substances. Compounds contain two or more elements chemically combined. Compounds can only be separated into elements by chemical reactions.

A mixture consists of two or more elements or compounds not chemically combined together. The chemical properties of each substance in the mixture are unchanged. Mixtures can be separated by physical processes such as filtration, crystallisation, simple distillation, fractional distillation and chromatography.

2. History of the atom

Early model	Tiny spheres that could not be divided
Electron discovered	Plum pudding model – atom was ball of positive charge with negative electrons spread around inside it
Rutherford and Marsden scattering experiment	Plum pudding model is replaced with nuclear model – small central positive nucleus with negative electrons orbiting
Niels Bohr	Electrons orbit at specific distances
Later experiments	Positive charge in nucleus can be subdivided – protons
James Chadwick	Discovers neutron

3. Sub-atomic particles

The relative electrical charges and relative masses of the particles in atoms are:

Name of particle	Proton	Neutron	Electron
Relative charge	+1	0	-1
Relative mass	1	1	Very small

In an atom, the number of electrons is equal to the number of protons in the nucleus.

Atoms have no overall electrical charge.

The number of protons in an atom of an element is its atomic number.

Almost all of the mass of an atom is in the nucleus.

The sum of the protons and neutrons in an atom is its mass number.

Atoms of the same element can have different numbers of neutrons; these atoms are called isotopes.

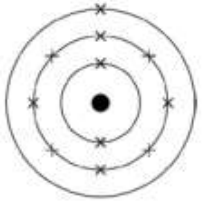
Atoms are very small, having a radius of about 0.1 nm (1 x 10-10 m).

The radius of a nucleus is less than 1/10 000 of that of the atom (about 1 x 10-14 m).

4. Representing atoms

Atoms can be represented as shown in this example: (Mass number) 23, (Atomic number) 11 Na

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.

5. The periodic table

The elements in the periodic table are arranged in order of atomic (proton) number and so that elements with similar properties are in columns, known as groups. The table is called a periodic table because similar properties occur at regular intervals.

Elements in the same group in the periodic table have the same number of electrons in their outer shell (outer electrons) and this gives them similar chemical properties.

The early periodic tables were incomplete and some elements were placed in inappropriate groups if the strict order of atomic weights was followed.

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.

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 molecules because their atoms have stable arrangements of electrons. The noble gases have eight electrons in their 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.

A more reactive halogen can displace a less reactive halogen from an aqueous solution of its salt.

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 catalysts.

1. Density of materials

The density of a material is defined by the equation: Density (in kg/m^3) = mass (in kg) / volume (in m^3) [**ρ = m/V**]
The particle model can be used to explain

- the different states of matter
- differences in density.

2. Changes in state

Changes of state are physical changes which differ from chemical changes because the material recovers its original properties if the change is reversed.

Melting	Freezing	Boiling	Evaporating	Condense	Sublimating
Solid → liquid	Liquid → solid	Liquid → gas	Liquid → gas	Gas → liquid	Solid → gas

3. Internal energy and energy transfers

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)
[**ΔE = m c Δθ**] The specific heat capacity of a substance is the amount of energy required to raise the temperature of one kilogram of the substance by one degree Celsius.

If a change of state happens:
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 vaporisation – change of state from liquid to vapour

4. Particle motion in gases

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.

5. Pressure in gases

A gas can be compressed or expanded by pressure changes. The pressure produces a net force at right angles to the wall of the gas container (or any surface).

For a fixed mass of gas held at a constant temperature:

pressure (in Pa) × volume (in m^3) = constant [p V = constant pressure]

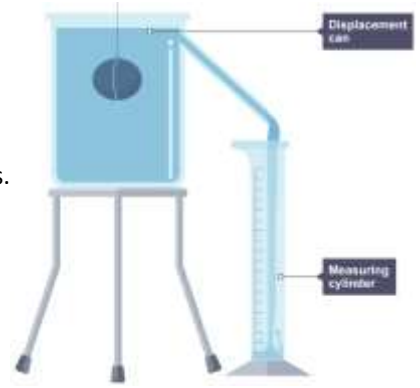
Work is the transfer of energy by a force. Doing work on a gas increases the internal energy of the gas and can cause an increase in the temperature of the gas.

PHYSICS REQUIRED PRACTICAL - Density

Aim of the experiment
To measure the density of various materials.

Method 1: Regular solids

1. Use a ruler to measure the length (l), width (w) and height (h) of a steel cube.
2. Place the steel cube on the top pan balance and measure its mass.
3. Calculate the volume of the cube using (l × w × h).
4. Use the measurements to calculate the density of the metal.
5. Use vernier callipers to measure the diameter of the sphere.
6. Place the metal sphere on the top pan balance and measure its mass.
7. Calculate the volume of the sphere using $\frac{4}{3}\pi r^3$
8. Use the measurements to calculate the density of the metal.



Method 2: Stone or other irregular shaped object

1. Place the stone on the top pan balance and measure its mass.
2. Fill the displacement can until the water is level with the bottom of the pipe.
3. Place a measuring cylinder under the pipe ready to collect the displaced water.
4. Carefully drop the stone into the can and wait until no more water runs into the cylinder.
5. Measure the volume of the displaced water.
6. Use the measurements to calculate the density of the stone.

History	Nature of Imperialism	CYCLE 1	Year 9

Week	Key Knowledge to learn – **Enquiry Question How did the Indian population resist British rule?**

Section A

Overview of the British Empire

In the 16th 17th & 18th Britain began to expand its social, economic and political interests across the globe. By 1913 it held power to varying degrees over 412 million people, 23% of the worlds population at this time and held 24% of the Earths total land area. A well known 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 known and unknown world.

Colony	A country or area under the full or partial control of another country
Colonise	Send settlers to a place to take control of it
Empire	An extensive group of states ruled over by a single monarch or sovereign state
Imperialism	Extending a countries power and influence through colonisation or military force
Merchant / trader	Someone who buys and sells goods
Indigenous	The original occupants of colonies

Section B Cause of Empire

Exploration	Between 1497 and 1763 English Seaman set out on journeys of exploration, they began to reach places Europeans had never seen before. Christopher Columbus was 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, finding new lands in the Americas. It was known as the Age of Discovery.
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 17th 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.
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 18th century Britain fought a number of wars against France and took control of many French colonies as a result.
Trade	By the 17th 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 behalf of the government who received lucrative taxes from trade.

Section C Attitudes to Empire

British Attitudes Towards Empire 16th to 19th Century (For)	Many British people supported the growth of Empire. They thought they were doing the right thing by taking British political values and Christianity to the rest of the world. Some thought they were genuinely helping others and were doing the right thing by helping people become more like the British and improve.
British Attitudes Towards Empire 16th to 19th Century (Against)	Some British people thought they were wrong that colonies had their own traditions and culture before the British arrived and these should be preserved. Some disapproved of using warfare and a way of controlling and expanding the empire.
Present Attitudes	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.

Attitudes of Colonists

Many were deeply unhappy with being under British rule, facing political and economic inequality the decline in their cultural and religion. Many colonists tried to rebel against British rule, such as 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.

History	Britain and the Slave Trade	CYCLE 1	Year 9

Week	Key Knowledge to learn		
Section D, E, F India	**Section D Significance of India** • India became part of the British Empire in 1858 and took over the lands that were controlled by the East India Company. • The British got rid of many independent states in India and formed laws and policies of their own. Eventually the entire Indian 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 • Indians were also looked down upon by the British and their culture was treated as inferior to European culture. • Indian workers provided the British with inexpensive labor. • India was so Important to the British Empire because of its trade links with China, primarily tea, silk and opium	**Section E Ghandi & Independence Movement** • 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. **Section E Jinnah & Independence Movement** • Jinnah served as the leader of the All-India Muslim League from 1913 until the creation of Pakistan on 14 August 1947. • He is revered in Pakistan as the *Quaid-i-Azam* ("Great Leader") and *Baba-i-Qaum* ("Father of the Nation"). • He believed the only fair wat for India to gain independence would be for Muslims to have their own land.	**Section F Partition** • The **partition of India** split British India into the countries of India and Pakistan (East and West Pakistan) in 1947. • The partition was caused in part by the two-nation theory presented by Syed Ahmed Khan. Pakistan became a Muslim country, and India became a majority Hindu but secular country. • The main spokesman for the partition was Muhammad Ali Jinnah. He became the first Governor-General of Pakistan. • Once the lines were established, about 14.5 million people crossed the borders to what they hoped was the safety of their religious majority. • Approximately 14.5 million felt forced to move across the new borders of each country, one of the largest in history • The newly formed governments were unable to deal with forced migration of such huge numbers. Violence occurred from all sides, hundreds of thousands died.
Section G – Overview	**Time Line of British India (Control & Resistance)** **1617** - East India Company Wins trading rights with Mughal Empire **1757 –** Robert Clive wins decisive victory at Plassey, taking territorial and political control of large part of India **1765 –** Treaty of Allahabad and Duel Government created.	**1773 –** Warren Hastings becomes first Governor of India, taking away power from Nawabs **1857 –** Sepoy Rebellion break out against treatment of Indian soldiers serving under British. **1858 –** The British Parliament put India directly under their political control **1885 –** Indian National Congress formed to Fight peacefully for independence	**1906 –** Muslim League Organised aiming for a Muslim independent state. **1919** – Amritzar Massacre the British army opens Fire on thousands of peaceful Indians **1930** – The Salt March to end British monopoly On the salt trade

Geography	The Future	Cycle 1	Year 9

Week	Key Knowledge to learn	
1 – Future Misconceptions and The Future of the EU	**Future Misconceptions** • In all LICs across the world today, 60% of girls finish primary school • Majority of the world live in NEEs • In the last 20 years, the proportion of the world population in extreme poverty has almost halved • The average life expectancy is the world is 70 years • 80% of the worlds 1-year old children today have been vaccinated against some disease • 80% of people in the world have some access to electricity	• 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.
2 – Brexit and Problem with Energy	**Reasons for Leaving the EU** • We get control over all laws created • We get control over immigration **within** the EU • Don't pay £50 million a week membership fee • We may have to pay to enter EU countries • Goods imported to the UK may become more expensive • 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 fish we can take from the sea.	**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.
3 – **Solving the energy problem and the problem with food**	**Solving the energy problem** **Energy Consumption - The amount of energy or power used** **Renewable Energy** - is naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat Examples of Renewable energy include: Solar, Hydroelectric power and wind power	**The Problem with Food** • **Malnutrition -** lack of proper nutrition, caused by not having enough to eat, not eating enough of the right things. • 1 billion in 2012 are hungry in the world which means 1 person out of 7. • Our planet has enough food so hunger shouldn't exist. • Bolivia, Democratic Republic of Congo and Ethiopia are struggling with hunger though they have lots of food and mostly work in agriculture. These countries have the highest rate of malnutrition. 41% of Ethiopians are undernourished. • 60% of people globally that are hungry tend to work in farming. • USA has lower rates of hunger and they struggle with obesity.

Geography	The Future	Cycle 1	Year 9

Week	Key Knowledge to learn	
4 – **Solving the problem of Food and the Plastic Crisis**	**Solving the problem of Food** **Lab Grown Food** more and more companies are beginning to produce meat in labs as a way to combat such issues as greenhouse gases emissions, overfishing and animal welfare concerns. They use stem cells to produce this meat **Insects as a food source** Some countries have been eating insects for centuries and it isn't a new thing for example, countries in central America and Asia. 2 billion eat insects as part of their diet. Insects are very nutritious, have valuable fatty acids and are high in calcium. However some insects may cause an allergic reaction.	**Plastic Crisis** • 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.
5 – Causes and Impacts of Plastic	**Causes of Plastic Pollution** **Fishing Nets** - Commercial fishing is an economic necessity for many parts of the world. However, the nets used for certain large-scale trolling operations are usually made of plastic. These leaking toxins at will, but they also often get broken up or lost. **It is Overused** - As plastic is less expensive, it is one of the most widely available and overused item in the world today. When disposed of, it does not decompose easily and pollutes the land or air. **Disposing of Plastic and Garbage** - Because plastic is meant to last, it is nearly impossible to break down. Burning plastic is incredibly toxic and can lead to harmful atmospheric conditions and deadly illness. Therefore, if it is in a landfill, it will never stop releasing toxins in that area.	**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**
6 – HS2	**Advantages and disadvantages of HS2** Journey times from London to Birmingham will be less than one hour. The £2-£3bn annual capital investment will help create jobs The environmental impact will be mitigated by 'green tunnels' and planting of trees The costs of HS2 continue to rise. Initially, in 2015, the project was forecast to cost £56bn but could now the total cost could soar to over £100bn Forecasts for passenger numbers are uncertain Noise pollution is a concern also . 	**Bradford Regeneration** **Urban decline - i**s the deterioration of the inner **city** often caused by lack of investment and maintenance. **Regeneration -** means improving an area that has been experiencing a period of decline. Examples of how Bradford has been regenerated are as follows: The Broadway Shopping Centre; Lister Mills renovation into flats; Plans for a new Bradford Food Market; and Sunbridge wells bars and pubs.

Year 9 Cycle 1 – Knowledge Organiser – English

Drama		Rhetorical Structure		Language Terminology	
1.Act	A 'section' of a play – Shakespearean plays contain 5, modern plays often either 2 or 3.	1.hook	an **opening sentence** intended to **catch the reader's attention.**	1.Word Class	The classification of words – noun, pronoun, adjective, verb, adverb, preposition, connective.
2.Scene	A smaller 'section' of a play – usually separated by place, time, or plot point.	2.introduction	a way to **introduce** your key **information.**	2.Phrases	Descriptive Noun Phrases – a phrase containing adjectives and a noun. Adverbial Phrases – a phrase that places something in time or space.
3.Iam	A pair of syllables in which the first is unstressed and the second is stressed.	3.main points	**reasons** and **examples** used to **argue** your **view.**	3.Metaphor	Describing something as if it is something else.
4.Iambic Pentameter	5 sets of iams per line of text – 10 syllables per line. Used by Shakespeare's characters.	4.counter and smash	an **opposing view** followed by **reasons** why yours is **superior.**	4.Simile	Comparing something to another thing using 'like' or 'as' to do so.
5.Blank verse	Lines that do not rhyme in a text. Shakespeare's characters often use this whilst using iambic pentameter.	5.conclusion	a **summary** of your **main ideas.**	5.Personification	Giving a non-human thing human qualities.
6.Prose	When characters speak in 'normal speech', using paragraphs and no obvious metre.	Rhetoric		6.Figurative Language	Any use of a metaphor, simile, or personification.
7.Metre	The rhythm or structure of the text's lines.	1.Rhetoric	A term derived from Greek to literally mean "to persuade".	7.Emotive Language	Any language use that evokes a particular emotional response (e.g. sympathy) from the audience.
8. Soliloquy	An extended speech giving by one character that is directed to the audience, not to another character.	2. ethos	Persuasion based on your character – who you are and why you are creditable.	8.Repetition	The use of the same word, sound, structure, or idea over and over (repeatedly).
9. Monologue	One character speaking for an extended period of time – mono means one!	3. pathos	Persuasion based on emotional response – evoking a sense of pity from the audience.	9.Alliteration	The repetition of a sound.
10. Dialogue	A discussion between a number of characters – di means two!	4. logos	Persuasion based on logical assertions – facts, statistics, reason.	10.Juxtaposition	Two contrasting images or ideas – things that are presented as opposites.
Contextual Links to texts		1. Jacobean Era	The time of King James 1 and Shakespeare's plays.	2. Capitalism	A political belief system based on ideas of individualism and making your own money.
3. Socialism	A political belief system based on ideas of community, social welfare, and working together.	4. Class System	A hierarchical system of ranking people based on their education, job, and wealth.	5. Tragic Cycle	A form developed by Ancient Greeks where a likeable hero has a downfall based on a 'tragic flaw'.

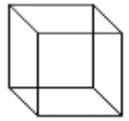
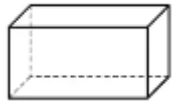
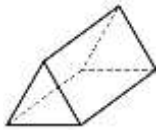
WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
1. believe	1. beneath	1. buried	1. business	1. caught
2. disappear	2. disappoint	2. embarrass	2. energy	2. engagement
3. interesting	3. interrupt	3. issue	3. jealous	3. knowledge
4. sieve	4. design	4. simmering	4. dairy	4. vitamins
5. bibliography	5. series	5. book	5. system	5. catalogue
6. commemorate	6. commission	6. committee	6. compatible	6. comparative
7. feasible	7. February	7. foreign	7. humorous	7. irreparable
8. output	8. cursor	8. password	8. delete	8. preview
9. tourist	9. globalisation	9. tourism	9. habitat	9. transport
10. vertical	10. amount	10. minus	10. volume	10. approximately
WEEK 6	**WEEK 7**	**WEEK 8**	**WEEK 9**	**WEEK 10**
1. chocolate	1. climb	1. column	1. concentration	1. material
2. enquire	2. environment	2. evaluation	2. evidence	2. potential
3. listening	3. lonely	3. lovely	3. marriage	3. sincerely
4. diet	4. water	4. evaluation	4. weight	4. fats
5. thesaurus	5. chapter	5. classification	5. content	5. copyright
6. connoisseur	6. corroborate	6. courteous	6. accommodate	6. assassin
7. livelihood	7. maintenance	7. strategy	7. stratagem	7. truly
8. digital	8. processor	8. program	8. documents	8. programming
9. human	9. transportation	9. igneous	9. tsunami	9. industry
10. multiply	10. weight	10. average	10. multiplication	10. axis
WEEK 11	**WEEK 12**	**WEEK 13**		
1. honorary	1. humorous	1. hypocrisy		
2. illiterate	2. immigrant	2. incidentally		
3. indispensable	3. irrelevant	3. irreparable		
4. weighing	4. fermentation	4. whisking		
5. dedication	5. dictionary	5. editor		
6. acknowledge	6. accidental	6. knowledge		
7. twelfth	7. withhold	7. valuable		
8. graphic	8. scanner	8. hardware		
9. urban	9. infrastructure	9. volcano		
10. axes	10. negative	10. calculate		

CYCLE 1 SPELLINGS

CYCLE 1		SUBJECT	MATHS		YEAR GROUP	9

BOX 1: Three dimensional shapes

3D SOLIDS: PRISMS

Prism	A 3D solid with a consistent **cross section.**	
Cube	**6** faces. **12** edges. **8** vertices.	
Cuboid	**6** faces. **12** edges. **8** vertices.	
Triangular Prism	**5** faces. **9** edges. **6** vertices.	
Cylinder	**3** faces. **2** edges. **No** vertices.	

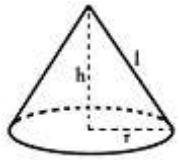
3D SOLIDS: OTHERS

Sphere	**1** face. **No** edges. **No** vertices	
Frustum	A frustum is a solid (usually a **cone** or **pyramid**) with the **top removed.**	

PROPERTIES

Surface	The **outside layer** of an object. It has an area and can be flat or curved.
Face	Any of the individual **flat surfaces** of a solid object.
Edge	For a 3D shape, the **line segment** where two **faces** meet.
Vertex (vertices)	For a 3D shape, **point** where two or more **edges** meet. A **corner**.

SURFACE AREA

Surface area	The **total area** of all the **surfaces** on a **3D shape**.	
Surface area method	Find the **area of each face** separately, then **add** them together.	
Surface area of a sphere	$A = 4\pi r^2$	
Surface area of a cone	Curved surface area = πrl Circle base area = πr^2 **Add** these together.	

2D REPRESENTATIONS OF 3D SHAPES

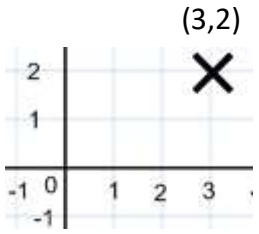
Plan	A **2D view** of a 3D solid as viewed from **above**. **Birds-eye view**.
Elevation	The **2D view** of a 3D solid from the **front** or the **side.**
Net	A **pattern** that you can cut and fold to make a **model** of a 3D shape.

VOLUME

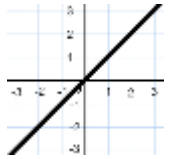
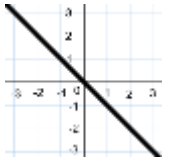
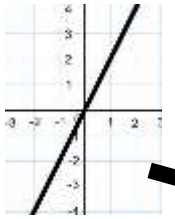
Volume	The amount of **space a 3D shape** takes up.	
Volume units	**mm^3, cm^3, m^3…**	
Prism	Volume = **area of cross section x length**	
Cube	Volume = **one side cubed** (or, **area of square x length of prism**)	$V = l^3$
Cuboid	Volume = **area of rectangle x length of prism**	$V = lbh$
Triangular Prism	Volume = **area of triangle x length of prism**	$V = \frac{lbh}{2}$
Cylinder	Volume = **area of circle x length of prism**	$V = \pi r^2 h$
Pyramid	Volume = $\frac{1}{3}$ **x area of cross section x length**	
Square based pyramid	Volume = $\frac{1}{3}$ **x area of square base x height of pyramid**	$V = \frac{lwh}{3}$
Cone	Volume = $\frac{1}{3}$ **x area of circle base x height of cone**	$V = \frac{\pi r^2 h}{3}$
Sphere	$V = \frac{4}{3}\pi r^3$	

CYCLE 1		SUBJECT	MATHS		YEAR GROUP	9

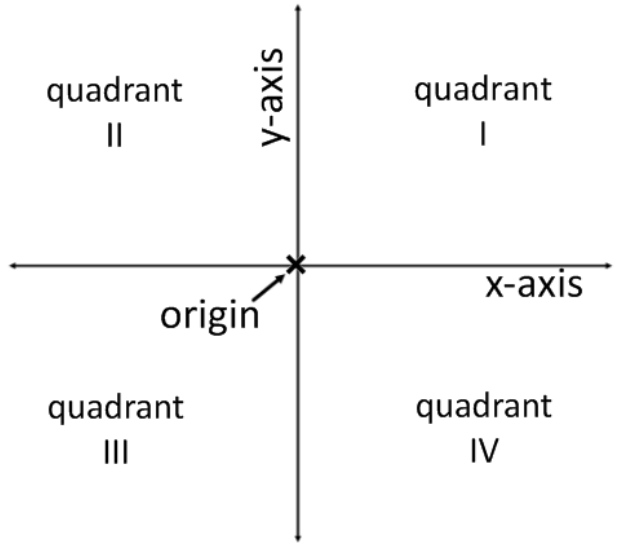
BOX 2: Straight line graphs

COORDINATES		
Axis (plural: axes)	The **x** axis is horizontal. The **y** axis is vertical.	
Quadrant	The **four regions** separated by the axes.	
Coordinate	Give a **position** of a **point** on a grid. The first number (**x**) moves **left** (-) or **right** (+). The second number (**y**) moves **up** (+) or **down** (-). (**x**, **y**) *e.g. (3,2) means the **point** that is 3 to the right and 2 up from the origin.*	
Origin	The coordinate **(0, 0)**	
Line Segment	A line joining **two points**.	
Midpoint	The **middle** of a line segment.	

Links to: DIRECT PROPORTION	
Direct Proportion	If two quantities are in direct proportion, as one increases, the other **increases** at the same rate If y is directly proportional to x, this can be written as **$y \propto x$**
y = kx	An equation of the form **y=kx** represents direct proportion, where k is the **constant of proportionality**.

LINEAR GRAPHS		
y = x	Every point on this line, the y coordinate is **equal to** the x coordinate. *e.g. (3,3), (-2,-2), (0,0)*	
y = -x	Every point on this line, the y coordinate is **equal to** the **negative** of the x coordinate *e.g. (3, -3), (-2,2)*	
y = a	These lines are always **horizontal**. *For example y = 2* *Every point on this graph, the y coordinate equals 2* *e.g. (0,**2**), (5,**2**)*	
x = a	These lines are always **vertical**. *For example x = 2* *Every point on this graph, the x coordinate equals 2* *e.g. (**2**,0), (**2**,5)*	
y = kx	These lines always go through the **origin.** *For example y = 2x* *Every point on this graph, the y coordinate is double the x coordinate*	

LINEAR GRAPHS	
y = mx + c	The general equation of a linear graph, where **m** is the **gradient** and **c** is the **y-intercept.**
Gradient	How **steep** a line is. Can be positive or negative. **(Change in y)** **(Change in x)** It gives the **rate of change**.
y- intercept	Where the line **crosses** the **y-axis**



Links to: SEQUENCES	
Linear Sequence	A sequence where the **difference between terms** is the **same** each time, can be increasing or decreasing. Also known as a **Arithmetic** Sequence. *Algebraically:* $x_n = \boldsymbol{an + b}$

CYCLE 1		SUBJECT	MATHS		YEAR GROUP	9

BOX 3: Forming and solving equations

INSTRUCTIONS: EQUATIONS	
Solve	**Find the value** of an unknown or variable. We use **inverse** operations and the **balance** method.
Rearrange	**Changing the subject** of a formula. Sometimes called **transposing.** We use **inverse** operations and the **balance** method, like when we solve an equation.
Inverse	The **opposite.**
Balance *an equation*	Do the **same** to **both sides of the "="** We use this to **solve** an equation, or **rearrange** an equation.
Subject *of an equation*	A **single** unknown or variable that everything else is **equal** to.
Solution *of an equation*	A **value** we can put in place of a variable that makes the equation **true.**
Elimination	To **remove** or **get rid** of something.

Expand and simplify

$$5(x+3)+6(x-4)$$

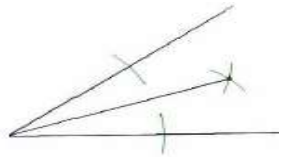
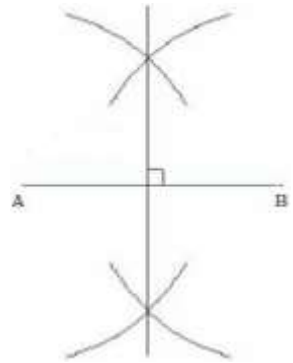
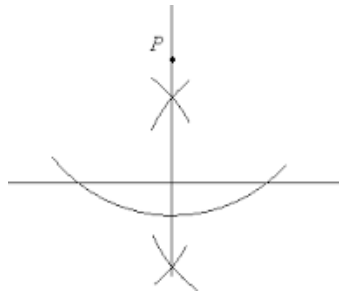
$$5x+15+6x-24$$

$$11x-9$$

BOX 4: Constructions and congruency

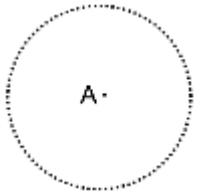
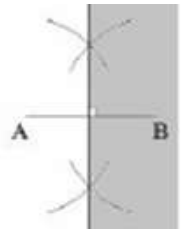
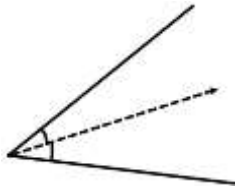
CONSTRUCTIONS VOCABULARY	
Point	A defined **location** in space
Line segment	A part of a line. (mathematical language for '**line**')
Parallel Lines	Lines with the same **gradient** They **never meet**. They are always the **same distance apart**.
Perpendicular Lines	Lines are perpendicular when they meet or intersect at a **right angle** (**90°**)
Right angle	A **90°** angle
Bisect	Cut **exactly** in **half**

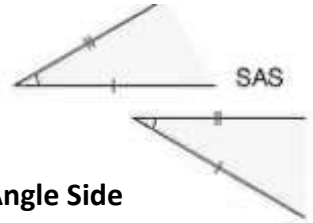
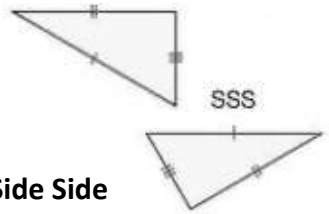
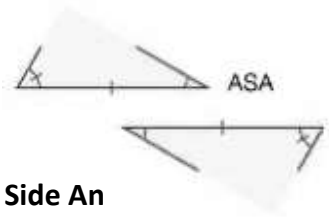
LOCI VOCABULARY	
Loci	A locus is a **path of points** that follow a rule.
Equidistant	**Equal** distance

CONSTRUCTIONS		
Construct	To build or make. In maths, it means to make an **accurate drawing**, using a **ruler, protractor** and **compass**.	
Angle bisector	Cut an **angle** exactly in **half**	
Perpendicular bisector of a line segment	Cut a **line** exactly in **half**, making a **right angle.**	
The perpendicular distance from a point to a line	The **shortest distance** from a point to that line.	

CYCLE 1		SUBJECT	MATHS		YEAR GROUP	9

BOX 4: Constructions and congruency

LOCI		
Locus of points equidistant from A	A **circle** with **A at the centre**	
Locus of points closer to B than A	**Perpendicular bisector** of AB, shade the side closest to **B**	
Locus of points equidistant from two lines	An **angle bisector**	
Locus of points a set distance from a line	Create two **semi-circle**s at either end joined by two **parallel lines**	

CONGRUENT TRIANGLES		
There are three ways to be able to construct a triangle		
 **Side Angle Side**	 **Side Side Side**	 **Angle Side An**
Use a **ruler** and **protractor**	Use a **ruler** and **compass**	Use a **ruler** and **protractor**

BOX 5: Numbers

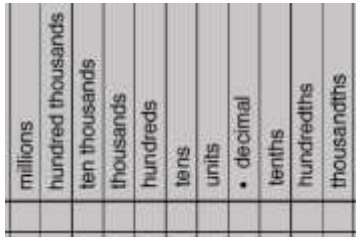
STANDARD FORM: NOTATION	
Allows us to write very large or very small numbers without lots of zeros. Numbers written in the form **A x 10^n**. A is between **1 and 10.** N is any **integer**	
'n' is positive	**Large** number (≥ 1)
'n' is negative	**Small** number (< 1)

MULTIPLES, FACTORS AND PRIME NUMBERS	
Multiple	The result of **multiplying** a number by an integer. *E.g. The 3rd multiple of 7 is* ***21.***
Lowest Common Multiple (LCM)	The **lowest common number** in the **multiplication tables** of two or more different numbers.
Factor	A quantity which **divides equally** into a number. *E.g. factors of 8 are* ***1, 2, 4 and 8.***
Highest Common Factor (HCF)	The **highest factor** which belongs to two or more numbers.

CYCLE 2		SUBJECT	MATHS	FOUNDATION	YEAR GROUP	9

BOX 5: Numbers

NUMBER SENSE

Integer	A **whole number**. Can be positive or negative.
Place Value	The **value** of a digit in a number based on **where it lies**. 
Decimal	**Not** a whole number. It has a **decimal point** in it. Can be positive or negative.
Terminating Decimals	Decimals which have a **finite** number of place values.
Recurring Decimals	Decimals with **repeating** digits or **repeating patterns** of digits.
Negative	A number that is **less than zero**. Can be decimals.
Ascending	Numbers ordered from **smallest to largest**.
Descending	Numbers ordered from **largest to smallest**.
Fraction	Represents the **division** of one integer by another. *E.g.* $\frac{2}{3}$= ***2÷3***
Mixed Number	A number formed of both an **integer** part and a **fractional** part. *E.g.* $3\frac{2}{5}$

SURDS

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.g.* $\sqrt{2}$
Rational Number	An **integer**, **terminating decimal** or **recurring decimal** (can be negative)**.** They can be represented as fraction in the form $\frac{p}{q}$. where p and q are integers and $q \neq 0$.
Irrational Number	Any number that is **not rational**. It has an **infinite** number of decimal places, that **don't repeat.** *E.g.* $\pi, \sqrt{3}$

FRACTIONS: OPERATIONS

Add	You need a **common denominator**	$\frac{A}{B}+\frac{C}{B}=\frac{\boldsymbol{A+C}}{\boldsymbol{B}}$
Subtract	You need a **common denominator**	$\frac{A}{B}-\frac{C}{B}=\frac{\boldsymbol{A-C}}{\boldsymbol{B}}$
Multiply	Multiply the **numerators** Multiply the **denominators**	$\frac{A}{B}\times\frac{C}{D}=\frac{\boldsymbol{AC}}{\boldsymbol{BD}}$
Divide	Keep the **first fraction** Change the **÷ to x** Flip the **second fraction**	$\frac{A}{B}\div\frac{C}{D}=\frac{\boldsymbol{A}}{\boldsymbol{B}}\times\frac{\boldsymbol{D}}{\boldsymbol{C}}=\frac{\boldsymbol{AD}}{\boldsymbol{BC}}$

SURDS: LAWS

Multiplying Surds	$\sqrt{ab}=\sqrt{\boldsymbol{a}}\times\sqrt{\boldsymbol{b}}$ *Special case:* $\sqrt{a}\times\sqrt{a}=\boldsymbol{a}$
Dividing Surds	$\sqrt{\frac{a}{b}}=\frac{\sqrt{\boldsymbol{a}}}{\sqrt{\boldsymbol{b}}}$
Simplifying surds	Using **square number** factors to get the smallest number possible in the surd
Rationalising the denominator	When you **remove a surd** in the **denominator** by writing an equivalent fraction (usually with a surd in the numerator)

STANDARD FORM: LAWS (MULTIPLY & DIVIDE)

Multiplication	$A\times10^{n}\times B\times10^{m}$ $=(\boldsymbol{A}\times\boldsymbol{B})\times10^{\boldsymbol{n+m}}$
Division	$A\times10^{n}\div B\times10^{m}$ $=(\boldsymbol{A}\div\boldsymbol{B})\times10^{\boldsymbol{n-m}}$
Remember to check if your answer is in standard form and adjust if necessary	

RE	Christian Beliefs	Cycle 1	Year 9

Week	Key Knowledge to learn
1 – Christian beliefs: Nature of God	• Omnipotent – this means that God is all powerful. Nothing is impossible for God. • The creation story shows the power of God as does the story of Noah's flood in the Old Testament where God flooded the earth for 40 days. Some Christians see the stories as literal truth and others see them as metaphors • Omnibenevolent means all loving, so God is the source of all goodness and love in the world. • *"God so loved the world that He have His only son." John 3:16.* • *The Parable of the Prodigal Son* also shows the love of God. A spoiled son was welcomed home by his Father even though he doesn't deserve it. • Just means fair. God provides fair justice for all. • Christians believe that God does not discriminate. • *The 10 commandments* are rules given by God to Moses to ensure that people lived a good and fair life. • The *Parable of the Sheep and Goats* teaches that all people will be judged on how they have lived their life • These beliefs influence Christians by: -encouraging them to look after the world as stewards because their all powerful God has created it. -Praying for the sick because they believe a loving and powerful God might provide a cure. -Treating others as they want to be treated with love following the example of God.
2 – Christian Beliefs: The Trinity	• Christianity is monotheistic meaning that they only worship one God. • God's nature is explained through the mystery of the Trinity and its three persons. • The first person of the Trinity is God the Father who is the creator and sustainer of the Universe. • The second person of the Trinity is God the Son. He is the loving nature of God. The son was ever present but became man in the form of Jesus through the incarnation. • The third person is the Holy Spirit which is the presence of the God in the world. It gives them a source of strength in their lives. • During Jesus' baptism a voice from Heaven said, *"You are my beloved Son".* At the same time the Holy Spirit descended as a dove. All three persons of the Trinity were present at this time. • During baptism Christians are baptised *"in the name of the Father and of the Son and of the Holy Spirit."*
3 - Christian beliefs: Creation	• God created the universe in six days and rested on the seventh. • God took great care over creating the universe and all life on earth. • God created humans *"in his image"* to have dominion over the rest of his creatures. • The first humans were Adam and Eve according to the *Book of Genesis.* • God gave humans dominion over the earth. This means that they were in control of it. • Christian's should act as God's stewards. This means that they must care for and protect the earth. • Christians will care for the environment e.g. by giving to green charities or using low emission vehicles. • Christians will reflect on the beauty and wonder of nature as a reflection of God's almighty power. • Christians see humankind as a reflection of God so will care about every life and issues like human rights • Quote 1 Omnipotence: *'Great is our Lord and mighty in power.' (Psalm 147:5)* • Quote 2 "*God created the world from nothing in seven days."* (Genesis) • Quote 3 Benevolence: *'For God so loved the world that he gave his only Son, so that whoever believes in Him shall not die, but shall have eternal life.' (John 3:16)*

Week	Key Knowledge to learn
4 – Christian beliefs: Incarnation	• God became man in the form of Jesus. This is celebrated at the festival of Christmas. • Jesus was fully human AND fully God. *"He was begotten not made" Creed* • Jesus came to free humans from sin and death, this is called atonement. • Jesus came to show people how to live according to God's laws. • The incarnation shows that God loves humanity that he was prepared to become one of us and share our suffering. *"He came from heaven and by the Holy Spirit was made incarnate of the Virgin Mary." Creed* • The incarnation gives them hope that they can overcome temptation and sin and achieve salvation. • The incarnation means they will obey God's law/believe in Jesus/be active in the Church community, to gain eternal life opened up by Jesus' incarnation. • Quote 1 *"Jesus is inseparably true God and true man."* (Catechism of the Roman Catholic Church) • Quote 2 *"The Word became flesh and lived amongst us." (John 1:14)* • Quote 3 *'If anyone acknowledges that Jesus is Son of God, God lives in him and he in God." (1 John 4:15)*
5 – Jesus as Son of God	**Miracles** • A miracle is an extraordinary event that is not explainable by scientific law and is therefore attributed to God. • Christians believe that Jesus (God incarnate) performed many miracles in his lifetime. • Examples of Jesus' miracles recorded in the Bible include: 1. The Calming of the Storm 2. The healing of the Paralysed Man 3. The raising of Lazarus • For Christians, miracles are a sign that God exists because the miraculous event does not seem to be explainable by scientific law. • For Christians, miracles are a sign of what God is like e.g. all-powerful, caring, all loving and all-knowing. • They might give Christians reassurance that God will be there to help them when they need it. • It teaches Christians how they should act in difficult situations e.g. to help others that are ill. **Parables** • Jesus' teachings and parables can be found in the New Testament of the Bible in the gospels of Matthew, Mark, Luke and John. • A parable is a simple story used to tell a moral, spiritual or religious lesson. • Examples of Jesus parables are: 1. The Good Samaritan 2. The Rich Fool 3. The Sheep and the Goats.
6 - Christian Beliefs: Crucifixion	• Jesus died on a Friday. • Christians call this day Good Friday. • Crucifixion was a painful death. He was condemned to death by the Roman Governor Pontius Pilate. • One of Jesus own disciples called Judas betrayed him. • Jesus died asking God the Father to forgive his killers. • Christians believe that Jesus died to atone for the sins of humanity. Atone means to put right. • It was a painful death used for political prisoners as well as criminals. Jesus was crucified beside two common criminals. • Christians will be forgiving of others as Jesus forgave his persecutors/killers. • The crucifixion show's Jesus unconditional love for humankind as he was willing to suffer to save us from sin. • It encourages Christians to risk suffering to stand up for what they believe is right. • Quote 1 *"Truly I tell you today you will be with me in Paradise." Jesus to criminal crucified beside him. (Luke 23:42)* • Quote 2 *"Father forgive them, for they know not what they do." Jesus on the cross, speaking about his killers (Luke 23:34)*

RE	Christian Beliefs	Cycle 1	Year 9

Week	Key Knowledge to learn
7 – Christian beliefs: Resurrection	• Resurrection means rising from the dead. • Jesus rose from the dead three days after death on the cross. • Christians call this day Easter Sunday and it is one of the most important days of the Christian calendar. • Jesus was seen alive by many hundreds of witnesses according to the Bible. • The first to see the risen Jesus were the women who came to visit his tomb according to the Bible. Mary Magdalene was the first. (Mark 16) • Christians believe that Jesus then appeared to his disciples who he told must spread the word of God as he had commanded them too. *"Go into the world and spread the Good News." (Mark 16)* • One disciple called Thomas did not believe in the resurrection until he had seen him with his own eyes. • Two more disciples met the risen Jesus on the road to Emmaus. • The Resurrection proves to them that Jesus was God's son, so gives authority to his teaching and example. • Quote 1 *"See my hands and my feet, that it is I myself. Touch me, and see. For a spirit does not have flesh and bones as you see that I have." (Luke 24:39)*
8 – Christian Beliefs: Ascension	• Christians believe that after he rose from the dead Jesus later ascended (went up into) heaven. • Some believe that this was a physical ascent and others claim that it is symbolic to show that Jesus' time on earth was over. • It is significant because it marks the time when Jesus left earth in a physical way but the Holy Spirit was left behind to lead and guide Christians today. • Ascension Day celebrates Jesus' ascension to heaven after he was resurrected on Easter Day. • Quote 1: *"Then Jesus said to the apostles: 'Go forth to every part of the world, and proclaim the good news to the whole creation. Those who believe it and receive baptism will find salvation" Mark 16* • Quote 2:*"So after talking with them the Lord Jesus was taken up into heaven, and he took his seat at the right hand of God." Mark 16*
9 - Christian beliefs: Original Sin	• A sin is an action that goes against the teachings and will of God. • Christians believe that failure to believe in God is the biggest sin. • Christians believe that breaking God's law or Jesus teachings are sins. • Christians believe that all people are born and remain sinners. • Christians believe that sin separates humans from God. • Christians believe that the story of Adam and Eve tells them about Original Sin. • Original Sin is a Christian belief of that states that sin has existed since the fall of the first man. • In the book of Genesis, Adam and Even are said to have disobeyed God by eating from the Tree of Knowledge of Good and Evil. (Genesis 3) • This sin was the original sin which broke the relationship between God and humans. • God sent Adam and Eve from the Garden of Eden after their first sin and said that they would now die and return to dust.

Week	Key Knowledge to learn
10 – Atonement	• Jesus sacrificed himself to atone for our sins. • Jesus sacrificed himself by dying on the cross as a human. • Christians believe that Jesus paid the price for human sin and allowed the relationship between God and humanity to be healed. • Some Protestant Christians believe that humans atone for their sins through proclaiming a belief in Jesus as God and Saviour. • Roman Catholic Christians believe that atonement must come through active participation in the Sacraments. • Roman Catholics believe that there are seven sacraments. • The Church of England believes that there are two sacraments; Baptism and Eucharist. • Quote 1: *"My grace is all you need." Jesus (2 Corinthians 12)*
11 - Salvation	• Salvation is being saved from the consequences of our sin, ie death. • Salvation is given by God's grace because Jesus sacrificed himself for us by dying on the cross. • Salvation can be achieved through following God's law, relying on God's grace, or living according to the Holy Spirit within us. • Christians will pray for salvation and eternal life and show gratitude through worship / following God's law. • Christians know that we all have the spirit of God in us so have the ability to live as He wants and go to heaven. • Source 1: *Parable of the Prodigal Son.* • Source 2 "*For if you forgive other people when they sin against you, your heavenly Father will also forgive you." (Matthew 6:14)* • Source 3 *"For all have sinned and fall short of the glory of God." (Romans 3:23)* • Source 4 *"This is my blood of the covenant, which is poured out for many for the forgiveness of sins." (Matthew 26:28)*
12 - Judgement	• Everyone will be judged after death / resurrection. • Judgement Day decides if you go to heaven or hell. • Judgement is based on how you lived your life and followed Jesus' teachings/God's laws. • Christians believe that one of the natures of God is that he shows mercy and will therefore forgive. • Christians will try to follow Jesus' teachings and God's laws so that they go to heaven on Judgment Day. They believe that Jesus death atoned for their sins. *"Love God and Love your Neighbour" (Matthew 22)* • Christians will worship God to make sure he knows they love him and respect him and so will go to heaven. Only those that worship him and accept Jesus' salvation are assured a place in Heaven. • Christians know that God's grace and mercy will mean their sins can be forgiven and they can go to heaven. • *The Parable of the Sheep and Goats* (Matthew 25) explain that Christians will be judged based on their actions on earth. • *The Nicene Creed says that "Jesus will come again to judge the living and the dead."*
13 - Heaven & Hell	• Those who have achieved salvation will go to heaven for eternity. • Heaven is God's kingdom, reward for passing God's judgement – close to God. • Heaven is a place of peace and love, with no conflict or pain or suffering. • Heaven inspires Christians to follow God's law and repent of their sins. • Heaven gives them hope of justice in the afterlife for suffering in this life. Some believe Heaven is a physical place, others a spiritual state of being with God. • Hell is a place of suffering where unrepentant sinners go after judgement. Suffering is through being separated from God and physical torment e.g. burning. Hell is ruled by the devil and his angels. • Purgatory is the a Catholic belief. A place where souls go to wait before they can get to Heaven. • Hell Quote: *'A place of a fiery furnace, with weeping and gnashing of teeth" (Matthew 13:50).* • Heaven Quote *'My Kingdom is not of this world….' (John 18:36). "There are many places in my Fathers house and I have prepared a place for you." (John 14)*

French	Key Information	CYCLE 1	All Years

Les jours de la semaine

- lundi
- mardi
- mercredi
- jeudi
- vendredi
- samedi
- dimanche

Les mois

- janvier
- février
- mars
- avril
- mai
- juin
- juillet
- août
- septmebre
- octobre
- novembre
- décembre

Les nombres en français

0	zero	10	dix	20	vingt	30	trente
1	un	11	onze	21	vingt-et-un	31	trente-et-un
2	deux	12	douze	22	vingt-deux	32	trente-deux
3	trois	13	treize	23	vingt-trois	33	trente-trois
4	quatre	14	quatorze	24	vingt-quatre	34	trente-quatre
5	cinq	15	quinze	25	vingt-cinq	35	trente-cinq
6	six	16	seize	26	vingt-six	36	trente-six
7	sept	17	dix-sept	27	vingt-sept	37	trente-sept
8	huit	18	dix-huit	28	vingt-huit	38	trente-huit
9	neuf	19	dix-neuf	29	vingt-neuf	39	trente-neuf
40	quarante	50	cinquante	60	soixante	70	soixante-dix
41	quarante-et-un	51	cinquante-et-un	61	soixante-et-un	71	soixante-onze
42	quarante-deux	52	cinquante-deux	62	soixante-deux	72	soixante-douze
43	quarante-trois	53	cinquante-trois	63	soixante-trois	73	soixante-treize
44	quarante-quatre	54	cinquante-quatre	64	soixante-quatre	74	soixante-quatorze
45	quarante-cinq	55	cinquante-cinq	65	soixante-cinq	75	soixante-quinze
46	quarante-six	56	cinquante-six	66	soixante-six	76	soixante-seize
47	quarante-sept	57	cinquante-sept	67	soixante-sept	77	soixante-dix-sept
48	quarante-huit	58	cinquante-huit	68	soixante-huit	78	soixante-dix-huit
49	quarante-neuf	59	cinquante-neuf	69	soixante-neuf	79	soixante-dix-neuf

80	quatre-vingt	90	quatre-vingt-dix
81	quatre-vingt-et-un	91	quatre-vingt-onze
82	quatre-vingt-et-deux	92	quatre-vingt-douze
83	quatre-vingt-et-trois	93	quatre-vingt-treize
84	quatre-vingt-et-quatre	94	quatre-vingt-quatorze
85	quatre-vingt-et-cinq	95	quatre-vingt-quinze
86	quatre-vingt-et-six	96	quatre-vingt-seize
87	quatre-vingt-et-sept	97	quatre-vingt-sept
88	quatre-vingt-et-huit	98	quatre-vingt-dix-huit
89	quatre-vingt-et-neuf	99	quatre-vingt-dix-neuf

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-neuf	1,500	mille cinq cents	100,000	cent mille
300	trois cents	800	huit cents	181	cent quatre-vingt-un	1,766	sept cent soixante-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
500	cinq cents	1,000	mille	565	cinq cent soixante-cinq	40,000	quarante mille	1,000,000,000	un-millard

French	Marking Sticker	CYCLE 1	All Years

Title:					
Detail	**WWW**	**EBI**	**Tenses**	**WWW**	**EBI**
Connectives	1 2 3		Present tense	1 2 3	
Opinions	1 2 3		Past Perfect	1 2 3	
Reasons (adjectives)	1 2 3		Imperfect	1 2 3	
Intensifiers	1 2 3		Conditional	1 2 3	
Time expressions	1 2 3		Simple Future	1 2 3	
Adverbs	1 2 3		Pluperfect	1 2 3	
Negatives	1 2 3		Perfect Conditional	1 2 3	
			Subjunctive	1	
Comparatives	plus moins		Modal Verbs	1	
Superlatives	le plus le moins le pire le meilleur		Other Persons	1 2 3	
			Quality of Work	Si j'avais le choix	
Si clause	1 2 3				
Openers	1 2 3		**1 Excellent**	Quand j'étais plus jeune	
Exclamation	1 2 3		**2 Good**	Pour que je sois contente	
Questions	1 2 3			Quand je serai plus âgé	
Total:			**4 Poor**	vu que	
				tandis que	
				Si je pourrais	
				Pour que je puisse	

French	French Literacy Mat	CYCLE 1	All Years

Connectives
car / parce que = because
mais = but
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
tandis que = whereas
vu que = considering that
Malgré = despite
Afin que = so that
Pourvu que = given that
Sauf = except
En outre = furthermore
Pour que = so that

Openers
D'abord = Firstly
Par contre = On the other hand
Premièrement = Firstly
Deuxièment = Secondly
Troisièmement = Thirdly
Finalement = Finally
Pour moi = As for me

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 essential that there is…
Il est necessaire qu'on fasse = it is necessary that we do

Questions
Pourquoi? = Why
Qui? = Who?
Quand? = When?
Comment? = How?
Quel (le) = 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
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 that
Je trouve que = I find that
À mon avis = In my opinion
En ce qui me concerne = Concerning me
Je suis d'accord car = I agree because

Time Expressions
Aujourd'hui = Today
Hier = Yesterday
Demain = Tomorrow
En été = 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
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

Adverbs
d'habitude = usually
normalement = normally
quelquefois = sometimes
tous les jours = every day
généralement = generally

Superlatives
le / la moins = the least
le / la plus = the most
le / la pire = the worst
le / la meilleur (e) = the best

Exclamation
Quelle surprise! = What a surprise!
Quelle chance! = What luck!
Quel dommage! = What a shame!
Quelle horreur! = What horror!

Negatives
ne… pas = not
ne… jamais = never
ne… que = only
ni… ni = neither… nor
ne… plus = no longer/not anymore

Comparatives
plus… que = more… than
moins… que = less… than
mieux que = better than
pire que = worse than

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
épouvantable = dreadful
bizarre = strange
sale = dirty
propre = clean
bruyant = noisy
tranquille = calm
beau/joli = nice
cher = expensive
différent = different
ennuyeux = boring
mauvais/mal = bad
paresseux = lazy
vieux = old
propre = clean
facile = easy
moche/ laid = ugly
grand = big
petit = small

French	Tense Timeline	CYCLE 1	All Years

= MINUS tense

= PLUS tense

Imperfect

I used to play

Je jouais

Present

I play

Je joue

Simple Future

I will play

Je jouerai

Conditional Perfect

I would have played

J'aurais joué

Pluperfect

I had played

J'avais joué

Past Perfect

I played

J'ai joué

Near Future

I am going to play

Je vais jouer

Conditional

I would play

Je jouerais

French	Verbs	CYCLE 1	All Years

Present Tense Regular Verbs

ER verb habiter = to live			**IR verb** finir = to finish			**RE verb** attendre = to wait		
Je (J')	habit **e**	*I live*	**Je (J')**	fin **is**	*I finish*	**Je (J')**	attend **s**	*I wait*
Tu	habit **es**	*You live (s/informal)*	**Tu**	fin **is**	*You finish (s/informal)*	**Tu**	attend **s**	*You wait (s/informal)*
Il	habit **e**	*He lives*	**Il**	fin **it**	*He finishes*	**Il**	attend **_**	*He waits*
Elle	habit **e**	*She lives*	**Elle**	fin **it**	*She finishes*	**Elle**	attend **_**	*She waits*
On	habit **e**	*We live*	**On**	fin **it**	*We finish*	**On**	attend **_**	*We wait*
Nous	habit **ons**	*We live*	**Nous**	fin **issons**	*We finish*	**Nous**	attend **ons**	*We wait*
Vous	habit **ez**	*You live (pl/formal)*	**Vous**	fin **issez**	*You finish (pl/formal)*	**Vous**	attend **ez**	*You wait (pl/formal)*
Ils	habit **ent**	*They live (m/mixed)*	**Ils**	fin **issent**	*They finish (m/mixed)*	**Ils**	attend **ent**	*They wait (m/mixed)*
Elles	habit **ent**	*They live (f)*	**Elles**	fin **issent**	*They finish (f)*	**Elles**	attend **ent**	*They wait (f)*

Present Tense Irregular Verbs

avoir = to have			**être = to be**			**faire = to do**			**aller = to visit**		
Je (J')	**ai**	*I have*	**Je (J')**	**suis**	*I am*	**Je (J')**	**fais**	*I do*	**Je (J')**	**vais**	*I go*
Tu	**as**	*You have (s/informal)*	**Tu**	**es**	*You are (s/informal)*	**Tu**	**fais**	*You do (s/informal)*	**Tu**	**vais**	*You go (s/informal)*
Il	**a**	*He has*	**Il**	**est**	*He is*	**Il**	**fait**	*He does*	**Il**	**va**	*He goes*
Elle	**a**	*She has*	**Elle**	**est**	*She is*	**Elle**	**fait**	*She does*	**Elle**	**va**	*She goes*
On	**a**	*We have*	**On**	**est**	*We are*	**On**	**fait**	*We do*	**On**	**va**	*We go*
Nous	**avons**	*We have*	**Nous**	**sommes**	*We are*	**Nous**	**faisons**	*We do*	**Nous**	**allons**	*We go*
Vous	**avez**	*You have (pl/formal)*	**Vous**	**êtes**	*You are (pl/formal)*	**Vous**	**faites**	*You do (pl/formal)*	**Vous**	**allez**	*You go (pl/formal)*
Ils	**ont**	*They have (m/mixed)*	**Ils**	**sont**	*They are (m/mixed)*	**Ils**	**font**	*They do (m)*	**Ils**	**vont**	*They go (m/mixed)*
Elles	**ont**	*They have (f)*	**Elles**	**sont**	*They are (f)*	**Elles**	**font**	*They do (f)*	**Elles**	**vont**	*They go (f)*

French | Verbs | CYCLE 1 | All Years

INFINITIVE: porter = to wear (Regular er)

Pluperfect	Past Imperfect	Past Perfect	Present Tense	Near Future	Simple Future	Conditional	Perfect Conditional
I had worn	I used to wear	I wore	I am wearing/I wear	I am going to wear	I will wear	I would wear	I would have worn
Je (J') avais **porté**	**Je (J')** port **ais**	**Je (J')** ai **porté**	**Je (J')** port **e**	**Je (J')** vais **porter**	**Je (J')** porter **ai**	**Je (J')** porter **ais**	**Je (J')** aurais **porté**
Tu avais **porté**	**Tu** port **ais**	**Tu** as **porté**	**Tu** port **es**	**Tu** vas **porter**	**Tu** porter **as**	**Tu** porter **ais**	**Tu** aurais **porté**
Il avait **porté**	**Il** port **ait**	**Il** a **porté**	**Il** port **e**	**Il** va **porter**	**Il** porter **a**	**Il** porter **ait**	**Il** aurait **porté**
Elle avait **porté**	**Elle** port **ait**	**Elle** a **porté**	**Elle** port **e**	**Elle** va **porter**	**Elle** porter **a**	**Elle** porter **ait**	**Elle** aurait **porté**
On avait **porté**	**On** port **ait**	**On** a **porté**	**On** port **e**	**On** va **porter**	**On** porter **a**	**On** porter **ait**	**On** aurait **porté**
Nous avions **porté**	**Nous** port **ions**	**Nous** avons **porté**	**Nous** port **ons**	**Nous** allons **porter**	**Nous** porter **ons**	**Nous** porter **ions**	**Nous** aurions **porté**
Vous aviez **porté**	**Vous** port **iez**	**Vous** avez **porté**	**Vous** port **ez**	**Vous** allez **porter**	**Vous** porter **ez**	**Vous** porter **iez**	**Vous** auriez **porté**
Ils avaient **porté**	**Ils** port **aient**	**Ils** ont **porté**	**Ils** port **ent**	**Ils** vont **porter**	**Ils** porter **ont**	**Ils** porter **aient**	**Ils** auraient **porté**
Elles avaient **porté**	**Elles** port **aient**	**Elles** ont **porté**	**Elles** port **ent**	**Elles** vont **porter**	**Elles** porter **ont**	**Elles** porter **aient**	**Elles** auraient **porté**

INFINITIVE: finir = to finish (ir)

I had finished	I used to finish	I finished	I am finishing/ I finish	I am going to finish	I will finish	I would finish	I would have finished
Je (J') avais **fini**	**Je (J')** finiss **ais**	**Je (J')** ai **fini**	**Je (J')** fin **is**	**Je (J')** vais **finir**	**Je (J')** finir **ai**	**Je (J')** finir **ais**	**Je (J')** aurais **fini**
Tu avais **fini**	**Tu** finiss **ais**	**Tu** as **fini**	**Tu** fin **is**	**Tu** vas **finir**	**Tu** finir **as**	**Tu** finir **ais**	**Tu** aurais **fini**
Il avait **fini**	**Il** port **ait**	**Il** a **fini**	**Il** fin **it**	**Il** va **finir**	**Il** finir **a**	**Il** finir **ait**	**Il** aurait **fini**
Elle avait **fini**	**Elle** finiss **ait**	**Elle** a **fini**	**Elle** fin **it**	**Elle** va **finir**	**Elle** finir **a**	**Elle** finir **ait**	**Elle** aurait **fini**
On avait **fini**	**On** finiss **ait**	**On** a **fini**	**On** fin **it**	**On** va **finir**	**On** finir **a**	**On** finir **ait**	**On** aurait **fini**
Nous avions **fini**	**Nous** finiss **ions**	**Nous** avons **fini**	**Nous** fin **issons**	**Nous** allons **finir**	**Nous** finir **ons**	**Nous** finir **ions**	**Nous** aurions **fini**
Vous aviez **fini**	**Vous** finiss **iez**	**Vous** avez **fini**	**Vous** fin **issez**	**Vous** allez **finir**	**Vous** finir **ez**	**Vous** finir **iez**	**Vous** auriez **fini**
Ils avaient **fini**	**Ils** finiss **aient**	**Ils** ont **fini**	**Ils** fin **issent**	**Ils** vont **finir**	**Ils** finir **ont**	**Ils** finir **aient**	**Ils** auraient **fini**
Elles avaient **Fini**	**Elles** finiss **aient**	**Elles** ont **fini**	**Elles** fin **issent**	**Elles** vont **finir**	**Elles** finir **ont**	**Elles** finir **aient**	**Elles** auraient **fini**

INFINITIVE: attendre = to wait (re)

I had waited	I used to wait	I 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**	**Je (J')** attend **ais**	**Je (J')** ai **attendu**	**Je (J')** attend **s**	**Je (J')** vais **attendre**	**Je (J')** attendr **ai**	**Je (J')** attendr **ais**	**Je (J')** aurais **attendu**
Tu avais **attendu**	**Tu** attend **ais**	**Tu** as **attendu**	**Tu** attend **s**	**Tu** vas **attendre**	**Tu** attendr **as**	**Tu** attendr **ais**	**Tu** aurais **attendu**
Il avait **attendu**	**Il** attend **ait**	**Il** a **attendu**	**Il** attend _	**Il** va **attendre**	**Il** attendr **a**	**Il** attendr **ait**	**Il** aurait **attendu**
Elle avait **attendu**	**Elle** attend **ait**	**Elle** a **attendu**	**Elle** attend _	**Elle** va **attendre**	**Elle** attendr **a**	**Elle** attendr **ait**	**Elle** aurait **attendu**
On avait **attendu**	**On** attend **ait**	**On** a **attendu**	**On** attend _	**On** va **attendre**	**On** attendr **a**	**On** attendr **ait**	**On** aurait **attendu**
Nous avions **attendu**	**Nous** attend **ions**	**Nous** avons **attendu**	**Nous** attend **ons**	**Nous** allons **attendre**	**Nous** attendr **ons**	**Nous** attendr **ions**	**Nous** aurions **attendu**
Vous aviez **attendu**	**Vous** attend **iez**	**Vous** avez **attendu**	**Vous** attend **ez**	**Vous** allez **attendre**	**Vous** attendr **ez**	**Vous** attendr **iez**	**Vous** auriez **attendu**
Ils avaient **attendu**	**Ils** attend **aient**	**Ils** ont **attendu**	**Ils** attend **ent**	**Ils** vont **attendre**	**Ils** attendr **ont**	**Ils** attendr **aient**	**Ils** auraient **attendu**
Elles avaient **attendu**	**Elles** attend **aient**	**Elles** ont **attendu**	**Elles** attend **ent**	**Elles** vont **attendre**	**Elles** attendr **ont**	**Elles** attendr **aient**	**Elles** auraient **attendu**

INFINITIVE: aller = to go **(Irregular)**

Past Pluperfect	Past Imperfect	Past Perfect	Present	Near Future	Simple Future	Conditional	Perfect Conditional
I had gone	I was going / I used to go	I have gone / I went	I am going / I go	I am going to go	I will go	I would go	I would have gone
Je (J') étais **allé(e)**	**Je (J')** all **ais**	**Je (J')** suis **allé(e)**	**Je (J')** v **ais**	**Je (J')** vais **aller**	**Je (J')** ir **ai**	**Je (J')** ir **ais**	**Je (J')** serais **allé(e)**
Tu étais **allé(e)**	**Tu** all **ais**	**Tu** es **allé(e)**	**Tu** v **as**	**Tu** vas **aller**	**Tu** ir **as**	**Tu** ir **ais**	**Tu** serais **allé(e)**
Il / Elle / On était **allé(e)**	**Il / Elle / On** all **ait**	**Il / Elle / On** est **allé(e)**	**Il / Elle / On** v **a**	**Il / Elle / On** va **aller**	**Il / Elle / On** ir **a**	**Il / Elle / On** ir **ait**	**Il / Elle / On** serait **allé(e)**
Nous étions **allé(e/s)**	**Nous** all **ions**	**Nous** sommes **allé(e/s)**	**Nous** all **ons**	**Nous** allons **aller**	**Nous** ir **ons**	**Nous** ir **ions**	**Nous** serions **allé(e/s)**
Vous étiez **allé(e/s)**	**Vous** all **iez**	**Vous** êtes **allé(e/s)**	**Vous** all **ez**	**Vous** allez **aller**	**Vous** ir **ez**	**Vous** ir **iez**	**Vous** seriez **allé(e/s)**
Ils / Elles étaient **allé(e/s)**	**Ils / Elles** all **aient**	**Ils / Elles** sont **allé(e/s)**	**Ils / Elles** v **ont**	**Ils / Elles** vont **aller**	**Ils / Elles** ir **ont**	**Ils / Elles** ir **aient**	**Ils / Elles** seraient **allé(e/s)**

INFINITIVE: faire = to do / make **(Irregular)**

I had done	I was doing / I used to do	I have done / I did	I am doing/ I do	I am going to do	I will do	I would do	I would have done
Je (J') avais **fait**	**Je (J')** fais **ais**	**Je (J')** ai **fait**	**Je (J')** f **ais**	**Je (J')** vais **faire**	**Je (J')** fer **ai**	**Je (J')** fer **ais**	**Je (J')** aurais **fait**
Tu avais **fait**	**Tu** fais **ais**	**Tu** as **fait**	**Tu** f **ais**	**Tu** vas **faire**	**Tu** fer **as**	**Tu** fer **ais**	**Tu** aurais **fait**
Il / Elle / On avait **fait**	**Il / Elle / On** fais **ait**	**Il / Elle / On** a **fait**	**Il / Elle / On** f **ait**	**Il / Elle / On** va **faire**	**Il / Elle / On** fer **a**	**Il / Elle / On** fer **ait**	**Il / Elle / On** aurait **fait**
Nous avions **fait**	**Nous** fais **ions**	**Nous** avons **fait**	**Nous** f **aisons**	**Nous** allons **faire**	**Nous** fer **ons**	**Nous** fer **ions**	**Nous** aurions **fait**
Vous aviez **fait**	**Vous** fais **iez**	**Vous** avez **fait**	**Vous** f **aitez**	**Vous** allez **faire**	**Vous** fer **ez**	**Vous** fer **iez**	**Vous** auriez **fait**
Ils / Elles avaient **fait**	**Ils / Elles** fais **aient**	**Ils / Elles** ont **fait**	**Ils / Elles** f **ont**	**Ils / Elles** vont **faire**	**Ils / Elles** fer **ont**	**Ils / Elles** fer **aient**	**Ils / Elles** auraient **fait**

DR/MRS VANDERTRAMP verbs take <u>être</u> not <u>avoir</u>

Descendre – je suis descendu(e)(s) - to come down (stairs)
Rester – je suis resté(e)(s) - to stay
Monter – je suis monté(e)(s) - to climb
Revenir – je suis revenu (e)(s) - to return
Sortir – je suis sorti(e)(s) - to go out
Venir – Je suis venue (e)(s) - to come
Aller – je suis allé(e)(s) - to go
Naître - je suis né(e)(s) - to be born

Devenir – je suis devenu(e)(s) - to become
Entrer – je suis entré(e)(s) - to enter
Rentrer – je suis rentré(e)(s) - to re-enter
Tomber – je suis tombé(e)(s) - to fall
Retourner – je suis retourné(e)(s) - to return
Arriver- je suis arrivé(e)(s) - to arrive
Mourir – je suis mort(e)(s) - to die
Partir – je suis parti(e)(s) - to leave

French	TRAVEL AND TOURISM	CYCLE 1	Year 9

Week 1		Week 2		Week 2		Week 3			
Weather		**Countries / Places**		**Nationalities**		**Forms of Travel**		**Adjectives**	
le météo	the weather forecast	aux États-Unis	in/to the USA	marocain	Moroccan	en avion	by plane	loin	far
il fait beau	it's nice	au Maroc	in/to Morrocco	belge	Belgian	en train	by train	cher / moins cher	expensive/ cheap
il y fait du soleil	it's sunny	en Suisse	in /to Switzerland	chinois	Chinese	en autobus	by bus	rapide	quick
il fait chaud	it is hot	en Espagne	in/to Spain	francophone	French speaking	en car	by coach	lent	slow
il fait froid	it is cold	en Angleterre	in/to England	québécois	From Québec (Canada)	en voiture	by car	vif	lively
il pleut	it's raining	au Pays de Galles	in/to the USA	suisse	Switzerland	en bateau	by boat	sympa	nice
il neige	it's snowing	en Tunisie	in/to Tunisia	arabe	Arabic	en TGV	by high speed train	confortable	comfortable
il fait du vent	it's windy	en Belgique	in/to Belgium	africain	African	à pied	on foot	étroit	narrow
la pluie / la neige	rain / snow	en Écosse	in/to Scotland	mondial	global	à vélo	by bike	relaxant	relaxing
le brouillard	fog	la Manche	the Channel			à métro	by underground	intéressant	interesting

Week 4		Week 4		Week 5					
Places to stay and visit		**Hotel facilities**		**Verbs**		**Nouns**		**Activities**	
un gite	a holiday home	une vue	a view	rester	to stay	la frontière	the border	aller à la montagne	to go to the mountains
une tente	a tent	une piscine	a swimming pool	louer	to hire	la valise	the suitcase	aller à un parc d'attractions	to go to an amusement park
un château	a castle	la plage	the beach	partir	to leave	l'addition	the bill	visiter un musée	to visit a museum
un chalet	a wooden house in the mountains	la climatisation	air con	voler	to steal	le plat	the dish	acheter des souvenirs	to buy souvenirs
au bord de la mer	by the sea	une douche/ un bain	a shower / a bath	profiter de	to make the most of	le vol	the flight	faire une promenade	to go on a walk
une chambre	a room	un grand lit	a double bed	dormir	to sleep	le séjour	the stay	faire les magasins	to go shopping
une île	an island	la porte	door	passer du temps	to spend time	l'argent	money	faire du tourisme	to do tourist activities
un spectacle	a show	l'accueil	reception / welcome	voyager	to travel	le retour	the return	sortir en ville	to go out into the town
le pont	the bridge	l'étage	floor	perdre	to lose	le logement	accommodation	essayer voir	to try to see

Performing Arts - DRAMA	Essentials	CYCLE 1	Year 9

Box A – Drama Skills	Box B – Drama Techniques	Box C – Context
Body Language – Using your body to communicate your character. E.g. an old man would have hunched body language. **Facial Expressions** – Using your face to communicate your characters emotions. **Voice** – altering the tone, pitch, and pace of your voice to fit your character. **Levels** – How high or low your character is to the ground. Can be used to communicate status, class or power. **Proxemics** – How close or far away you stand to other characters on stage based on your relationship. **Posture** – How you stand during your performance to represent your character **Gestures** – using body parts to communicate non-verbally. e.g. waving, thumbs up, shaking head.	**Tableau –** Can also be called a freeze frame or still image. A moment of stillness in a performance, used to highlight key moments within a scene. **Thought Tracking** – Saying your characters thoughts out loud to the audience so they know what your character is thinking or feeling. **Forum Theatre** – a technique where the audience becomes the director. They can stop the performance at any time, give feedback, then rewind. Used during rehearsals to develop scenes. **Narration** – Reading part of the story aloud to the audience, either instead of acting it out or alongside mime. **Mime** – Using only your body to communicate, no talking. **Flash-forward** – A scene which is set further in the future. **Flashback** – A scene set in the past, sowing past events. **Cross Cutting** – Where two or more scenes happen on stage at the same time, switching between the two.	Social, Historical, Political and Cultural Contexts. Have you thought about the different contexts for your devising piece? These elements should build up your research section. Social Context – A social setting or environment which people live. Historical Context – A part of history which has happened (this could be when the play was set) Political Context – The political party in power at the time and how this impacted on society. Cultural Context – How culture can affect behaviour, choices and decisions for characters.
Box D – Evaluation Sentence Starters	**Box E – Roles and Responsibilities in Performing Arts**	**Box F - Stagecraft**
I have demonstrated multiple skills during my rehearsals. An example of this is when… During my performance, I was good at demonstrating drama skills such as…. This is important because… Within my work, I used a variety of drama techniques to improve my overall performance. For example, I used ….. This was effective because… One area I would like to improve on is … It is important to use this skill in performance because... I could improve on this skill by…	**Director -** The directors role is to bring to life the playwrights work. They are responsible for choosing the right cast, the right acting style and making sure the performance is well rehearsed. **Actor -** The actors role is to rehearse their lines before a rehearsal. They are responsible for performing as a certain role within the play, using the directors instructions. **Set Designer** - The set designer is responsible for creating a set which matches the location or time period the play is set in. They might need to make some set themselves or buy this. **Playwright** - playwrights role is to create and write the entire play. They are responsible for the entire story, setting, location and characters. **Costume Designer** – The costume designer will need to research the historical and social context of the play to make sure costumes reflect this. They will also need to measure the actors to ensure all costumes fit.	Every performance should have a clear starting position and a clear end position (freeze frame). You should NEVER have your back to the audience, we use the red cross rule. You must pronounce and enunciate your words clearly, even if you are playing a shy character. You should rehearse the exact lines you will say and exactly when you will say them. We work collaboratively, this means there is no director in the scene. No hands in pockets, even if it is part of your character, you must consider different ways of communicating this. Every character is aiming for an equal amount of lines to say and time on stage, the group must work collaboratively to achieve this.

Performing Arts - MUSIC	Popular Song and Music Theory	CYCLE 1	Year 9

Box A – The Elements of Music

Rhythm	The note lengths and pattern of different beats.
Pitch	How high or low a note is.
Harmony	How different chords sound together – Consonant Harmony (notes of the same chord) or Dissonant Harmony (notes that 'clash', or are not in the same chord).
Melody	The tune of a piece of Music.
Tempo	The speed (or bpm) of a piece of Music.
Structure	The order of the different sections in a piece of Music.
Dynamics	How loud or quiet a part or entire piece is.
Texture	How 'Thick' or 'Thin' a piece is, based on how many instruments are playing (and what part they are playing).
Timbre	The 'tone colour' of an instrument (how it sounds).

Box B – British Invasion – Key Musical Features

- Up-beat tempo
- Accented guitar chords
- Catchy melody
- Drum fills
- Instrumental section – often a guitar solo

Box C – Reggae – Key Musical Features

- Syncopated (off-beat) rhythms on guitar / 'bubble' organ.
- 'One-drop' - syncopated drum beat
- Thick texture – often uses brass section
- Relaxed mood and lyrics – often about love and humanity.
- Consonant Harmony

Box D – Britpop – Key Musical Features

- Syncopated (off-beat) rhythms on guitar / 'bubble' organ.
- 'One-drop' - syncopated drum beat
- Thick texture – often uses brass section
- Relaxed mood and lyrics – often about love and humanity.
- Consonant Harmony

Box E – Hip Hop – Key Musical Features

- Rapped vocals
- Sampled drum beats / fills
- Looped samples
- Scratching on turntables
- Beatboxed vocals

CYCLE 1	SUBJECT	ART	TOPICS	EXPRESSIONISM	YEAR GROUP	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
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- 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.

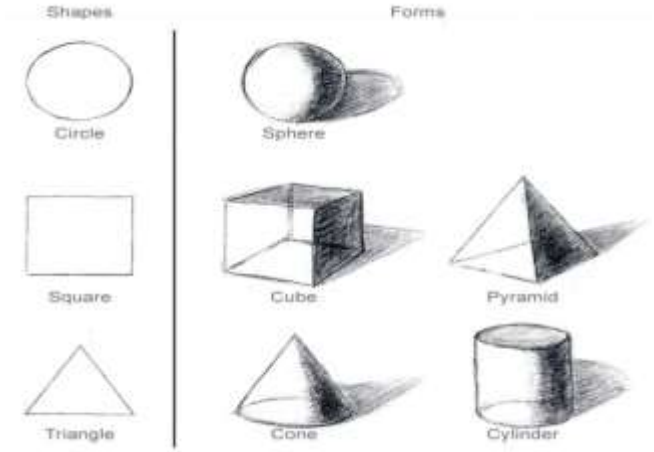
Mood – The may an artwork makes you feel.

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

CYCLE 1	SUBJECT	ART	TOPICS	EXPRESSIVE MARKMAKING	YEAR GROUP	9

3D FORM

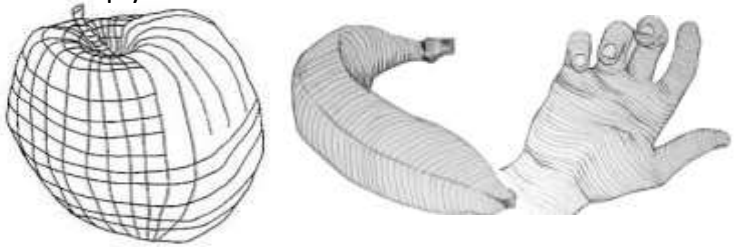
For a 3d object to look 3d on a page we need to marks that show light and dark tone.



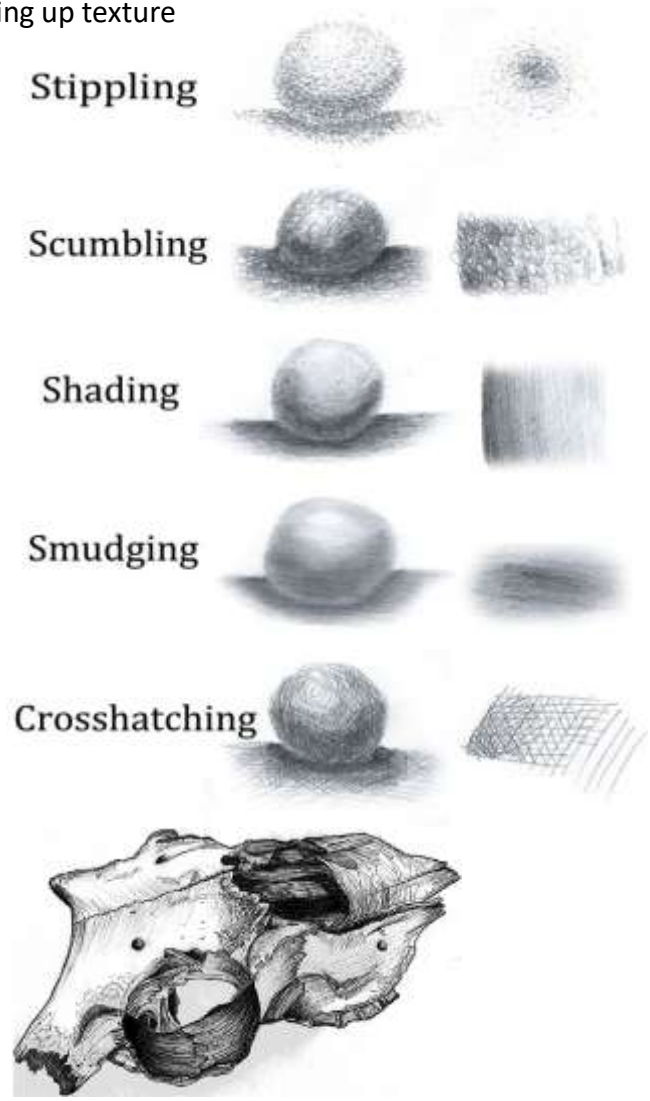
Shading can be smooth blended shading or other techniques like stippling. But which ever type of shading used it must show a range of TONES

Tonal Bar- showing different tones you can use in your drawing

Contour lines- that follow the shape of an object can help your work look 3d



Types of marks that can be used for tonal shading or building up texture



3d FORM: Shading applied to an object makes it look 3d

Dark tones recede, light tones project towards us so make it look 3d

Lino printing

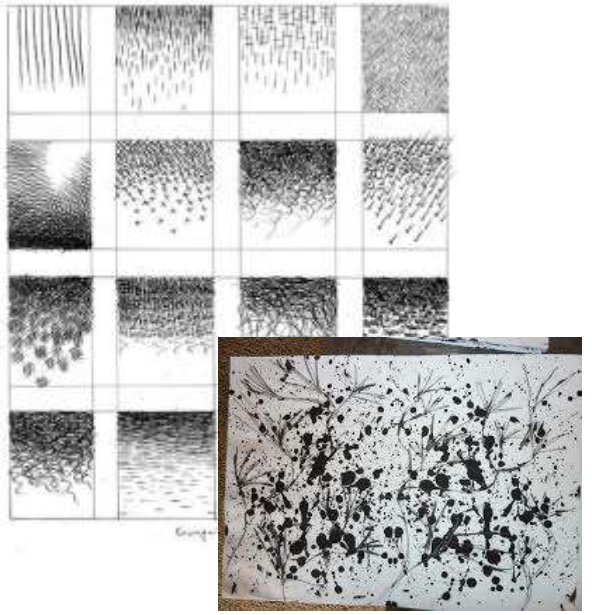
Max Beckmann

Linocut becomes popular in the UK, Europe and US. Linocuts were popular among the **German Expressionist** and Russian Constructivist movements in the beginning of the 20th century, including German artist Gerd Arntz, who liked the stark contrasts the technique offered.

Expressive marks can be used to show mood or emotion or express something that cannot be drawn .

The action of how you make a mark or the type of line you do might change how people view your work..

Eg paint might be sprayed on creating a disorganised random effect



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

Sanding Sealer
Used to SEAL the wood surface before applying a surface finish. Applied with brush and needs to be lightly sanded before applying final surface finish

Paint
Available in a wide range of colours. Applied with brush or spray can.

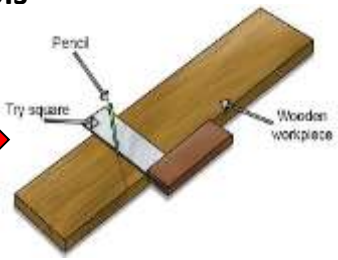
Wax
Applied with cloth and polished to a sheen. Wax Polish dries very quickly.

BOX 2: Cutting and shaping tools

Tenon Saw
Used for making straight cuts in wood.

Bench Hook
To hold the wood securely when making straight cuts with the Tenon Saw.

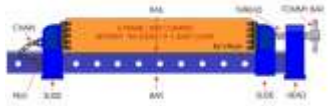
BOX 3: Marking out tools



Try square
For marking out accurate right angles and checking if work is square when gluing up.

Marking Gauge
For marking out parallel lines along the edges of wood. Can be used when marking out wood joints for example marking the depth of a corner halving joint.

BOX 4: Clamping and holding tools



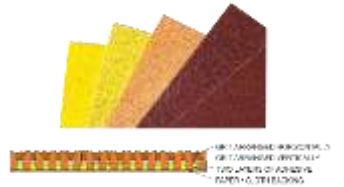
Sash Clamp/Cramp
For holding work securely when drilling holes on the pillar drill.

G Clamp/Cramp
Used to hold work together whilst gluing and holding work securely on a bench or pillar drill.

Woodworking Vice
To hold the wood securely when cutting, chiseling, drilling etc.

BOX 5: Finishing tools and equipment

Glass Paper
Used to remove scratches from the surface of wood. Glass paper is available in a wide range of grades for removing deep scratches to fine surface finishing.



Belt Sander
Used to sand and shape the edges of wood. The sanding belt is very course and will remove waste quickly. A sliding fence can be used when sanding at a required angle. The belt sander is suitable for sanding wider pieces of wood as the guard is positioned above the work piece.

Disc Sander
Used to sand and shape the edges of wood. The sanding disc is very course and will remove waste quickly. A sliding fence can be used when sanding at a required angle. The disc sander is suitable for sanding smaller pieces of wood.

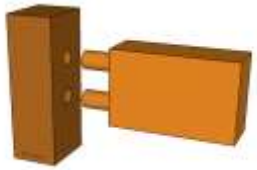
Wood joints can be either **PERMANENT** or T**EMPORARY** depending on the type and if glue is used.

BOX 6: Permanent Jointing Techniques

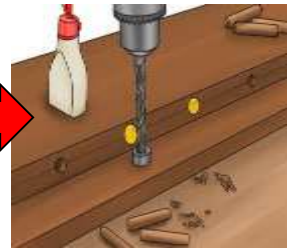
***Permanent Joint*:**
When we do not want to take the pieces apart again E.G. Glues & Jointing

The Dowel Joint

A dowel is a cylindrical rod, usually made from wood, plastic, or metal. Dowels are commonly used as structural reinforcements in furniture.



Accurate drilling of holes for wooden dowels. Dowel joint is then assembled using PVA glue

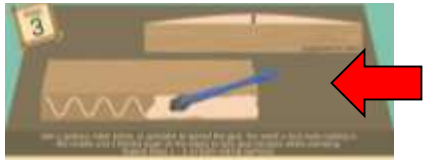


PVA or Wood Glue used to make permanent joints with wood.

Glued Joints

1. Ensure pieces fit together correctly and are smooth and free of any dust.

2. Apply wood glue/PVA to wood joint and ensure enough is applied to cover entire surface.



3. Spread glue using a spatula to evenly cover the entire surface.

4. Carefully apply pressure to the glued joint using clamps. Check the joint has closed up fully.

5. Remove excess glue with a damp cloth and allow the glue to dry over night.

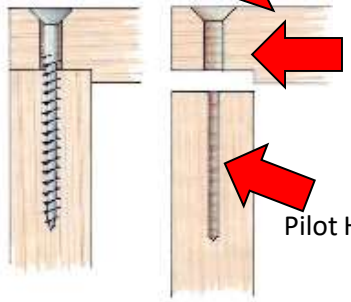
BOX 7: Temporary Jointing Techniques

Temporary Joint:
When we will, or might need to take pieces apart again E.G. Screws and nails

Wood Screws

A screw is a type of fastener typically made from metal with an external thread. Screws are available in a wide range of shapes/sizes and are commonly used to fasten wood together.

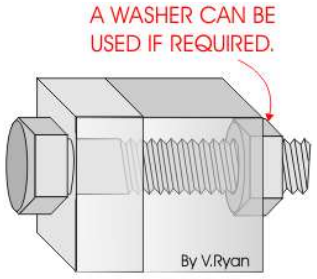
Wood screws are driven into the wood using a screwdriver or cordless screw driver/drill

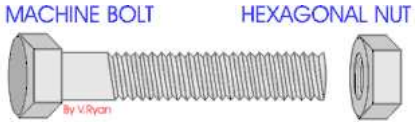


Wood screws are available in different head types including slotted, Phillips & Pozidriv.

Nuts & Bolts

Nuts and Bolts are used to join wood, metal and plastic together temporarily and can be taken apart if required. Many steel structures, including buildings, are simply bolted together. For example, the Eiffel Tower in Paris was originally a temporary structure and after twenty years it was to be dismantled.





Spanners are used to tighten the nuts and bolts, holding the parts together securely.

Wing nuts have two wings protruding from the nut, this makes it very easy to tighten/loosen by hand .

CYCLE 1	SUBJECT	IT	TOPICS	COMPONENT 1	YEAR GROUP	9

BOX 1: Key Concepts

User Interface:
A user interface is the means by which a person is able to interact with a computer system.
Human-Device Interaction:
How the software features facilitate human-device interaction.
Text-Based Interface:
Simple text on a plain background. Commands typed in via keyboard.
Menu-Based Interface
Presents the user with a list of options. User navigates sub-menus by choosing relevant options.

BOX 2: User Interface

Software Features:
- Visual - windows, icons, menus & pointers
- Audio - speech recognition & synthesis

Human Features:
- Accessibility - high contrast schemes, text/icon resizing & text to speech
- Usability – adaptive interfaces, intuitive layouts & user experience

BOX 3: Human-Device Interaction

- **Intuitiveness** – prompts for input and clear output improves ease-of-use.
- **Error Reduction** – identifies what you can/can't do to prevent mistakes.
- **Productivity** – simpler interaction makes tasks quicker to perform.

BOX 4: Text-Based Interface

Uses:
- Technical users for performing tasks like network admin.

Pros:
- Requires little processing power.
- If you know the commands, quick to perform actions.

Cons:
- Not very intuitive as you need to know the commands.

BOX 5: Menu-Based Interface

Uses:
- Self-service kiosks, such as ATMs or self-service tills.

Pros:
- Easy to use due to simplicity.
- Easily adaptable to individual needs.

Cons:
- Can be very tedious to perform actions.
- Limited options – not all tasks are possible.

CYCLE 1	SUBJECT	IT	TOPICS	COMPONENT 1	YEAR GROUP	9

BOX 6: Key Concepts

Graphic User Interface
Uses Windows, Icons Menus & Pointers. User clicks on object with pointer to input commands.
Speech Language Interface
Users input commands verbally using a microphone. Output is often auditory too.
Sensor Based Interface
Sensors that read physical data (e.g. temperature) to perform commands.

BOX 10: Factors Affecting Choice of Interface

The right user interface depends on your individual needs. Different factors must be considered.
Performance - how quickly to perform tasks?
Ease of Use - how intuitive & simple to perform tasks?
User Requirements - Does it allow to perform our tasks?
User Experience - have the users used this interface before?
Accessibility - are there individual needs to consider?
Storage Space - Do we have the storage for the interface?

BOX 7: Graphic User Interface

Uses:
- Everyday devices like PCs, tablets & game consoles.

Pros:
- Intuitive navigation – easier for beginners.
- Simple drag & drop to move data around.

Cons:
- Can be very memory & processor intensive.
- Often slower to perform simple tasks than other interfaces.

BOX 8: Speech Language Interface

Uses:
- Smart home speakers for easy hands free input.
- When driving to interact with on-board computers.

Pros:
- Can be used easily by people with visual impairments.
- Can be used when hands are unavailable.

Cons:
- Background noise can interfere with use.
- Limited in complexity of tasks that can be performed.

BOX 9: Sensor Based Interface

Uses:
- Smart/IoT devices like smart thermostats.

Pros:
- Constantly monitoring for changes in environment.
- Automatically performs actions based on readings.

Cons:
- Can only be used for specific, limited functionality.
- Often quite expensive to install.