



## Independent Study Booklet Year 9 Terms 3 & 4



### Independent study:

Completing Independent Study work that is linked to the learning in your lessons can increase the progress you make at school by an average of five months. (Education Endowment Foundation, 2001)



### At MWA students must:

- Complete independent study tasks to the best of your ability
- Submit work by the deadline set by your teacher
- Ask your teacher if you don't understand what to do
- Attend any support sessions offered by your teacher



### Your teachers will:

- Set independent study tasks on **Class Charts** for you to complete
- Check that you know how to complete independent study tasks.
- Award positive points for completed tasks



### Your parent/guardian could:

- Check what independent study you've been set
- Support you to complete your independent study at home
- Help you find a quiet space at home to complete your independent study

# Independent Study at MWA by subject:

Subject	What sort of Independent study tasks will I be set on ClassCharts?	My teacher hasn't set me any Independent study? OR I'd like to do extra Independent Study? What should I do?	What can I do to prepare for the next PPE/assessment window?
English	Approximately 1 hour per fortnight. You should work independently to learn new vocabulary and revise core knowledge	<ol style="list-style-type: none"> <li>1. Read a wide variety of texts</li> <li>2. Build a portfolio of creative writing pieces</li> </ol>	Use the knowledge organisers and your books to revise core knowledge and skills you have been learning.
Maths	Approximately 1 hour per fortnight. Your Maths teacher will always set a study task on SPARX	<p>Complete the extra tasks on the SPARX landing page:</p> <ol style="list-style-type: none"> <li>1. XP Boost – extra questions at the same level of difficulty</li> <li>2. Target – extra questions at a higher level of difficulty</li> </ol>	You will be able to find a revision list for your next assessment on ClassCharts. The list contains some codes that will direct you to revision activities on SPARX
Science	Approximately 30 minutes per fortnight. Complete the fortnightly key word and questions sheet.	Self-quizzing using the Science knowledge organisers	Self-quizzing using the Science knowledge organisers
Geography	Approximately 30 minutes per fortnight – you should focus on learning the key words in the Geography knowledge organiser	<p>Complete the following courses on Seneca <a href="https://senecalearning.com/en-GB">https://senecalearning.com/en-GB</a></p> <ol style="list-style-type: none"> <li>1. Climate change</li> <li>2. Analysis of Bangladesh</li> <li>3. Natural Resources</li> <li>4. Ecosystems</li> </ol>	Learn key words from the knowledge organiser. Look over the content list and revision materials provided on ClassCharts.

Subject	What sort of Independent study tasks will I be set on ClassCharts?	My teacher hasn't set me any Independent study? OR I'd like to do extra Independent Study? What should I do?	What can I do to prepare for the next PPE/assessment window?
History	Spend approximately 30 minutes a fortnight using your knowledge organiser to make flashcards to help prepare for the in-lesson quiz	Use BBC Bitesize or youtube videos to improve your knowledge of your current topic. Links can be found on Classcharts	Use the revision PowerPoints on Classcharts to make mindmaps and flashcards. Learn the key words and events on the knowledge organisers
Languages	Spend at least 30 minutes per fortnight learning phrases from the knowledge organiser which we have studied in class	Spend some time practicing French or Spanish on Linguascope. <a href="http://www.linguascope.com">www.linguascope.com</a> Username: mwa Login: happyhippo88	Revise the vocabulary from the knowledge organiser using mind maps and flashcards
DT/Food	You should be measuring and weighing your ingredients in preparation for your next food practical lesson	Use your knowledge organiser to help you revise for your next assessment	Use your knowledge organiser to help you revise for your next assessment
Art	For approximately 30 minutes every fortnight complete extension and embedding tasks or preparation tasks for your next art lesson	Improve your drawing skills – start with simple exercises, like sketching basic shapes or practicing shading then move onto simple still life arrangements	Continue practicing your drawing – it will strengthen your hand-eye coordination and fine motor skills
Music	For approximately 30 minutes per fortnight use the knowledge organisers to revise for music quizzes	If you have an instrument at home – practice! Use BBC Bitesize Music resources to explore as broader range of music as possible.	Book a practice room during social times to rehearse and prepare for performance assessments (the rooms are popular so be quick)
Dance & Drama	Drama – you will be expected to learn line and rehearse performances Dance – you will be expected to rehearse choreography to prepare for performances	Approach Mrs Gwilliam (Dance) or Mrs Coomer (Drama). Use BBC Bitesize to access additional online revision.	Use the knowledge organisers to revise key content in preparation for a test

# Monkton Wood Maths Department

**Sparx**

## Independent Study

For all Independent study at both KS3 and KS3 we use an online platform called Sparx.

Students have been created their own personal account using their name and date of birth and will have created their own password. Students are able to request a password reset should they forget their details.

Sparx is an intelligent online platform that sets the students work based on topics that they have previously covered in lessons. So that students continue to build on their previous knowledge it sets 40% of the questions on previously taught retrieval practice and 60% of the questions cover the most recent topic.

Sparx calculates what 1 hour of differentiated homework looks like for each student and will set them a range of questions that it deems to be at an appropriate level for the students. Week by week it adapts based on the work that they have completed.

We have seen that if parents are 'too helpful' with completing the tasks then it will instinctively increase the difficulty in the following weeks.

Every question on the platform comes with an associated help video, that gives the students modelled examples to support them if they get stuck.



The landing page will allow the students to access a range of tasks.

- Compulsory is the homework that **must** be completed. **The students need to get 100% of the questions correct to successfully complete their independent study.**
- XP Boost is an optional set of questions for additional practice at the same level.
- Target is an optional set of questions at a higher level.

If students struggle, we ask them to speak to their Maths teacher, who can find ways to help them complete these tasks.

Please email any enquiries about this to:

[maths.mwa@mwa.clf.uk](mailto:maths.mwa@mwa.clf.uk)



**Monkton  
Wood  
Academy**

## 1. Animal Cells

Animal cells are eukaryotic because they have a nucleus.



<b>cytoplasm</b>	site of "household" reactions in the cell	get the substance containing enzymes to catalyse the reactions
<b>nucleus</b>	stores genetic information (DNA)	controls the activities of the cell and codes for proteins
<b>cell membrane</b>	semi-permeable	controls the movement of substances in and out of the cell
<b>ribosome</b>	site of protein synthesis	mRNA is translated to an amino acid chain
<b>mitochondrion</b>	site of respiration	where energy is released for the cell to function

## CBI Key Concepts in Biology

### 4. Specialised Cells

There are some cells which are specialised (or adapted) to do different jobs in animals and plants.

cell	specialised for	adaptation
muscle	contracting	contains many mitochondria, large number of myofibrils, nucleus
nerve	conducting impulses	specialised with a long tail (axons) containing myelin sheath
epithelial	forming a barrier	thin layer of moving cells on the surface of the cells (epithelium)

## 2. Plant Cells

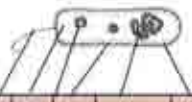
Plant cells are eukaryotic because they have a nucleus. Plant cells contain all of the animal parts plus a few extra:



<b>permanent vacuole</b>	contains cell sap	keeps cell turgid, contains sugars and salts in solution
<b>cell wall</b>	made of cellulose	supports and strengthens the cell
<b>chloroplast</b>	site of photosynthesis	contains chlorophyll, absorbs light energy

## 3. Bacteria Cells

Bacteria cells are prokaryotic because they do not have a nucleus. They are also much smaller than animal and plant cells.



<b>cytoplasm</b>	site of chemical reactions in the cell	get the substance containing enzymes to catalyse the reactions
<b>bacterial DNA</b>	one or several loops in the cytoplasm	controls the function of the cell. Can be found as chromosomal DNA and plasmid DNA (small loop)
<b>cell wall</b>	cellulose	supports and strengthens the cell
<b>cell membrane</b>	semi-permeable	controls the movement of substances in and out of the cell
<b>flagella</b>	whip like hair	allows the bacterial cell to move
<b>ribosome</b>	site of protein synthesis	mRNA is translated to an amino acid chain

## 5. Microscopes

You need to be able to label a microscope as well as describe how to use a light microscope.



Many parts of a cell were not discovered before the electron microscope was invented. This has a larger magnification and higher resolution compared to the light microscope.

To calculate magnification, you can multiply size of the eyepiece lens by the size of the objective lens.  
 eg. eyepiece lens = 10x  
 objective lens = 40x  
 = 400x



You can also divide an image size by the actual size.

## 7. Enzyme Action

The lock and key model is used to explain how enzymes work.



The substrate (key) fits into an active site (lock) which has a specific complementary shape.

Large changes in pH or temperature can cause an enzyme to stop working (denature). The active site changes shape so the substrate no longer fits.



## 8. Enzyme Activity

Enzymes increase the rate of specific reactions in living organisms. Enzyme activity is affected by temperature, pH and substrate concentration.



Enzymes have an optimum temperature

Enzymes have an optimum pH

Increasing substrate concentration increases rate. This is limited by number of active sites.

## 9. Transportation Processes

Diffusion	Osmosis	Active Transport
No energy required	No energy required	Energy required
Particles in solution or gas	Water particles	Movement of particles
Higher concentration to lower concentration	Dilute solution to more concentrated solution	Dilute solution to more concentrated solution
Oxygen and carbon dioxide during gas exchange in lungs	Water into roots via root hair cells	Mineral ions into plant roots. Glucose into the small intestine



### 1. Growth in Animals

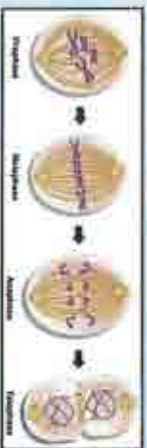
Growth is an increase in the number or size of cells. It can be measured by an increase in mass and an increase in length. At first, cells divide before differentiating to become specialised. Specific structures help specialised (differentiated) cells carry out a particular function.



## CB2 Cells and Control

### 4. Mitosis

Mitosis is part of the cell cycle and has 5 stages: prophase, metaphase, anaphase, telophase and cytokinesis. Interphase occurs before mitosis as part of the cell cycle.



**Interphase** – DNA replication makes copies of chromosomes

**Prophase** – nucleus breaks down and spindle fibres form

**Metaphase** – chromosomes line up at the equator (middle) of the spindle fibres

**Anaphase** – chromosome copies are pulled apart to opposite poles (ends) of the cell

**Telophase** – a new nuclear membrane forms around each set of chromosomes

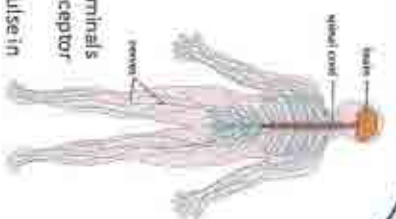
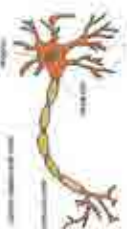
**Cytokinesis** – cell membrane forms to separate the cells

Some organisms can reproduce using one parent. This is known as asexual reproduction where the offspring are clones (genetically identical) of the parent. Asexual reproduction is faster but does not result in variation.

Uncontrolled cell division and growth results in the formation of tumours. This is how cancer develops.

### 7. Nerves and Nervous System

The Central Nervous System (CNS) is made up of the brain and spinal cord.



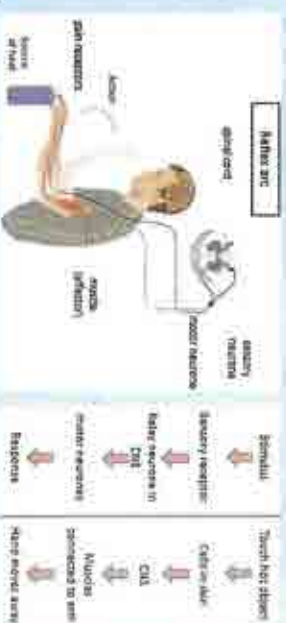
**Axon** – carries electrical impulse to axon terminals

**Dendron** – carries electrical impulse from receptor cells in sensory neurones

**Myelin sheath** – insulates the electrical impulse in the neurones

### 8. Reflex Arc

Reflexes are automatic and rapid. They do not involve the conscious part of the brain and can protect humans from harm.



### 9. Synapses

The gap between two neurones (nerve cells) is called a synapse.

When an impulse (electrical signal) reaches the end of a neurone, a chemical neurotransmitter is released.



It diffuses across the gap (synapse) and is detected by the next neurone which then triggers another impulse.

Synapses slow down neurotransmission but do ensure impulses only flow in one direction.

### 2. Growth in Plants

Groups of cells at the end of each shoot and root allow a plant to continue to grow. These groups of cells are called meristems. These cells divide by mitosis before increasing in length (elongating) and finally differentiating into specialised plant cells.

Palisade cells are located in the leaf of a plant. They contain a lot of chloroplasts for photosynthesis.

Root hair cells do not contain any chloroplasts. Instead, they have a large surface area to increase the uptake of water and nutrients from the soil.

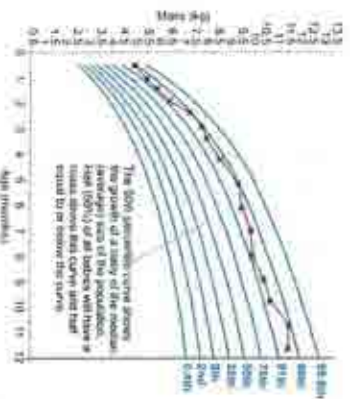


### 3. Percentile Charts

Percentile charts can be used to monitor growth.

The 50<sup>th</sup> percentile is the average growth of the population at that age.

The red line shows how the mass of one baby changes with age (in months old).



### 5. Stem Cells

Stem cells divide repeatedly before differentiating.

**Embryonic stem cells** – differentiate into any specialised cell

**Adult stem cells** – produce cells similar to those around them

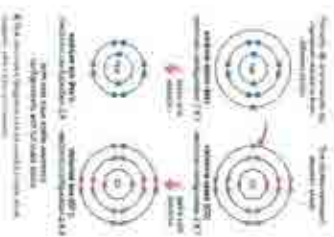
Stem cells are being used to treat a wide range of disease. However, when injected they are often 'rejected' or divide and cause cancer.

### 6. Asexual Reproduction

Some organisms can reproduce using one parent. This is known as asexual reproduction where the offspring are clones (genetically identical) of the parent. Asexual reproduction is faster but does not result in variation.

### 1. Ionic bonds

Atoms are more stable if they have an outer electron shell that is full. This can happen by atoms losing or gaining electrons. When this happens the atoms form an ion. Metal atoms lose electrons, forming positive ions. Non metal atoms gain electrons, forming negative ions. There are forces of attraction between positive and negative objects. These are called electrostatic forces and these are what hold ionic substances together.



### 2. Ionic lattices

These strong ionic bonds allow 'billions' of ions to be packed together in a regular repeating arrangement called a lattice structure.



Na<sup>+</sup> (a sodium ion) Cl<sup>-</sup> (a chloride ion)

### 3. Forming ionic compounds

Ionic compounds are electrically neutral. The formula of an ionic compound contains the same number of positive and negative charges. To work out the ionic formulae we need to balance the positive ions and the negative ions.

Element	Ion Formula	Magnitude of Charge	Ion Formula	Magnitude of Charge
lithium	Li <sup>+</sup>	1	fluoride	F <sup>-</sup>
potassium	K <sup>+</sup>	1	chloride	Cl <sup>-</sup>
sodium	Na <sup>+</sup>	1	bromide	Br <sup>-</sup>
calcium	Ca <sup>2+</sup>	2	sulfide	S <sup>2-</sup>
aluminium	Al <sup>3+</sup>	3	phosphide	P <sup>3-</sup>

Magnesium oxide contain Mg<sup>2+</sup> and O<sup>2-</sup> ions. As there is the same number of positive charges to negative charges then they are balanced. Therefore, the formula is MgO.

Sodium sulfide contain Na<sup>+</sup> and S<sup>2-</sup>. Therefore two Na<sup>+</sup> ions are needed to balance the S<sup>2-</sup>. The formula is Na<sub>2</sub>S.

### 4. Properties of ionic compounds

**High melting and boiling points**

Most ionic substances are solid at room temperature. The electrostatic forces of attraction create strong bonds which need lots of energy to break.

**Conducting electricity**

Ionic substances do not conduct electricity when they are a solid. When they are a liquid (melted) or when they dissolve in water they do conduct electricity. This is due to the delocalised electrons being free to carry a charge.

Ionic compound	Melting point (°C)	Boiling point (°C)
sodium bromide, NaBr	747	1390
sodium chloride, NaCl	801	1413
magnesium oxide, MgO	2852	3600

## CC5-6 Ionic and covalent Bonding

### 5. Covalent bonds

Molecular substances contain groups of atoms that are held together by strong bonds called **covalent bonds**. The number of atoms of each element bonded together in a simple molecule is shown by its **molecular formula**.

Covalent bonds are usually formed between non-metal atoms and are produced by sharing pairs of electrons. By forming the bond the atoms become more stable, because they can use the shared electrons to complete their **outer electron shells**. The reason why noble gases are so stable is because they have full outer electron shells.

The **dot and cross diagrams** in diagram B show how covalent bonds are formed. Counting the shared electrons, each atom now has a complete outer shell of electrons. Sometimes atoms share more than one pair of electrons to fill their outer shells. In oxygen and carbon dioxide the atoms share two pairs of electrons, to form **double bonds**.

### 7. Properties of covalent compounds

**Low melting and boiling points**

Water is an example of a covalent compound. There are strong forces of attraction between the atoms. However, the intermolecular forces between the molecules are weak. These require little energy to break.

**Do not conduct electricity**

As there are no charged particles there is nothing to carry the electric current. The electrons are shared between the atoms so are not delocalised (free to move) and cannot carry a charge.

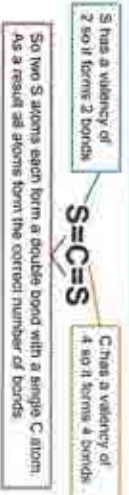
### 6. Working out molecular (covalent) formulae

#### Working out molecular formulae

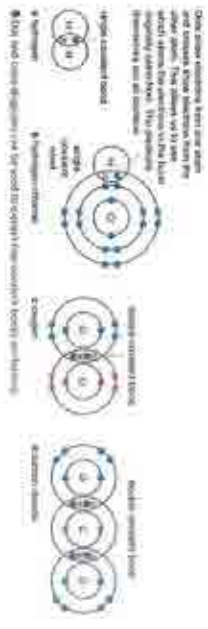
The numbers of covalent bonds formed by atoms of different elements are shown in table D. This is called the **valency** of the element. It is the same as the number of electrons needed to obtain a complete outer shell.

Group number	Examples	Outer electrons	Bonds formed	Valency
4	C and Si	4	4	4
5	N and P	5	3	3
6	O and S	6	2	2
7	F and Cl	7	1	1

#### D valencies of some elements



#### E Working out the formulae of carbon sulfide



## 2. Allotropes of carbon

The element carbon can form a number of different molecules. Different forms of the same element are called allotropes. The structure and bonding will influence the properties and uses.



A ball-and-stick model of a Fullerene

### Fullerenes

- A simple molecule
- 3 bonds between each carbon
- Either as a tube (nanotubes) or buckminsterfullerene (C<sub>60</sub>) bucky ball
- Low melting point

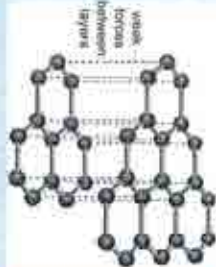
## Graphene

- A giant covalent molecule
- 3 bonds between each carbon
- A sheet is one atom thick therefore the lightest known material.
- As it only has 3 covalent bonds it conducts electricity



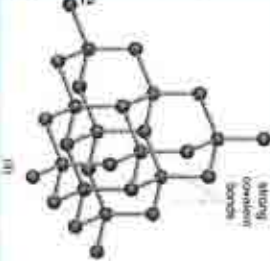
### Graphite

- A giant covalent molecule
- Layers of graphene stacked on top of each other.
- Weak forces between layers means it can be used as a carbon based lubricant. 3 bonds between each carbon
- Like graphene it can conduct electricity



## Diamond

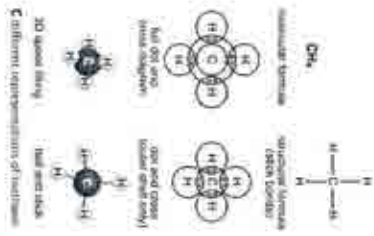
- A giant covalent molecule
- Each carbon atom has 4 bonds. Means it has no free charged particles therefore cannot conduct electricity.
- The tetrahedral (pyramidal) shape means it can be shaped to be very sharp and strong so can be used in cutting tools.



# CC7 Bonding models

## 1. Different models of a molecular substance

- **Molecular formula** Shows the number of each element. Does not show the bonds
- **Structural formula** Shows how many bonds between each atom. Does not show electron sharing
- **Dot and cross diagram** Shows electron sharing
- **3D space filling** Shows relative size of each atom, does not show bonds
- **Ball and stick** Shows relative size of each atom and bonds



## 3. Summary of different types of bonds

### ionic

Where found in most compounds containing metal and non-metal atoms. Bonding: ionic bonds formed by the loss and gain of electrons to produce oppositely charged ions that attract one another.

- Structure: lattices of ions held together in a lattice structure.
- Properties:
  - high melting/boiling points
  - many are soluble in water
  - conduct electricity when liquid or in solution but are not when solid.

### Simple molecular (covalent)

Where found in most non-metal containing and compounds. Bonding: covalent bonds formed when atoms share pairs of electrons. Structure: small, distinct groups of atoms.

- Properties:
  - low melting/boiling points
  - a few are soluble in water
  - most do not conduct electricity.

### Metallic

Where found in all metals. Bonding: metallic bonds are the electrostatic attraction between positive metal ions and negative delocalised electrons. Structure: lattices of ions held together in a giant lattice structure of positive ions in a sea of negative delocalised electrons.

- Properties:
  - high melting/boiling points
  - soluble in water
  - conduct electricity when solid or liquid

## 4. Properties of metals

### Metallic structure and bonding

The atoms in a metallic element are all the same size and are packed closely together.

Metal atoms have 1, 2, 3, electrons on the outer shell. These outer shell electrons are lost from each atom and become free to move randomly throughout the metal. This gives a sea of delocalised electrons which move in random directions.



**B** Metals consist of stacked layers of ions in a sea of delocalised (free) electrons.



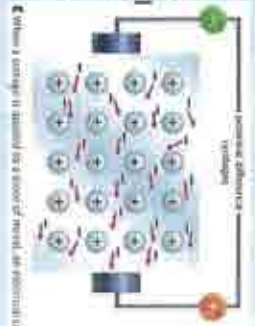
**C** When hit or bent, the layers of ions in a metal can slide over each other.

### Metals are malleable

They can be hammered or rolled into shape without shattering. Layers slide over each other. The sea of electrons hold the ions together.

### Metals are good conductors of electricity

They when a charge is passed through a metal this causes the sea of delocalised electrons to carry the electrical flow through the metal.



**E** When a charge is passed a sea of metal delocalised electrons flow through the metal.

The electrical conductivity of the metals increase as the number of delocalised electrons increase. Each sodium ion has one positive charge. And contributes 1 electron to the 'sea' of delocalised electrons. As Magnesium loses two electrons it has a higher electrical conductivity than sodium.





## Geography: Year 9 - Unit 2

### How long can we exploit the Earth's resources?

Word	Meaning	Word	Meaning	Word	Meaning
Atmosphere	the thin, fragile layer of gases that surrounds the Earth	Lithosphere	the rigid outer layer of the earth, made up of the top mantle and the crust	Quaternary Period	last 2.6 million years. The Holocene makes up the last 11,700 years of this period.
Biotic	a large community (large ecosystem) of plants and animals found in a major habitat such as rainforest, tundra etc.	Metamorphic rock	have been subjected to tremendous heat and/or pressure. They are usually resistant to weathering and erosion and are therefore very hard-wearing.	Anthropocene	refers to the current time period since 2000 in which people had the largest impact on Earth.
Biosphere	living matter on Earth, including all plant and animal life	Natural Resources	substances that are found in nature which can be used by humans, such as water, soil, coal, minerals, wood, animals etc.	Weathering	The breaking down of rocks in situ (in the same place) through biological, mechanical and chemical processes
Crude Oil	naturally occurring and unrefined petroleum that can be refined into diesel, petrol, gasoline, kerosene, and other petrochemicals	Non-renewable	substances which are limited and so will run out one day or cannot be replaced during our lifetime, such as natural gas, coal etc.	Permeable / Impermeable	Letting water through / not letting it through
Energy mix	relates to the different energy sources we use as a country and in what proportions. This is often split into renewable and non-renewable forms of energy.	Raw Materials	the basic materials or substances from which products can be made, such as wood can be transformed into furniture	Power station	a place where energy is made before being used by the national grid that powers the UK
Fossil Fuel	Petroleum (oil), coal or natural gas, which is formed by the fossilised (preserved) remains of ancient plants and animals that are deposited over millions of years	Renewable	resources that can be replaced over time, and will not run out, such as water, wind, forests, etc.	Net Zero	The UKs target to have no greenhouse gas emissions by 2050
Geological time	the long period of time occupied by the earth's geologic history	Sedimentary rock	sediments settled at the bottom of ancient lakes, seas or oceans and have been compressed. Sediment comes from eroded rocks carried by rivers or ice and from skeletons of sea creatures	Soil profile	The different layers of the soil beneath the ground
Geologists	expert scientists who study the structure of the Earth and its rocks	Stakeholder	someone with an interest in a particular issue	Alternative energy	Nuclear power. Use of radioactive material for power. It is not renewable but is considered better than fossil fuels
Hydrosphere	the water on the surface of the earth in oceans, rivers, lakes, rain and mist	Sustainability	when materials and resources are used in a way that will balance the needs of the present without compromising the future, the ability to maintain something such as economic growth	Energy insecurity	Not having enough energy for the needs of a population or location
Igneous rock	Formed from molten rock. Longer cooling makes larger crystals. Made inside the earth	Interdependent	depending on something else		

### WHAT will PROGRESS look like in this unit?

#### Deepening – independent and accurate

- Meet the criteria for on track with accuracy and independence
- In addition, students may demonstrate:
  - A clear understanding of the role of resources and how this links to a changing world and a clear view on why they are important

#### On track – relative accuracy with occasional support

- Describe and identify the spheres of earth – atmosphere, biosphere, hydrosphere, lithosphere
- Explaining in detail different examples of how the spheres are interdependent.
- Define and give examples of renewable resources - Air, water, wind, sunlight, living matter (not-specifically energy resources).
- Define non-renewable resources - Coal, oil, natural gas
- Accurately explain the difference between renewable and non-renewable energy and name examples such as fossil fuels (coal, oil, gas) and solar, wind and nuclear\* (\* alternative energy not renewable).
- Accurately describe the main types of energy used in the UK and how this mix is changing over time.
- Understand what the carbon footprint and ecological overshoot – resources are running out and being used in an unsustainable manner
- Understand the idea of geological time and its role in the formation of some natural resources
- Explore the formation of rocks, soil and oil
- Exploring world's reliance on fossil fuels – specifically looking at a pipeline of your choosing and the alternatives (getting fossil fuels from other countries, changing energy mix, increasing renewable resource options)
- Considering the role of stakeholder opinions in making an informed decision on how fossil fuel pipelines offer opportunities and challenges
- Evaluate the energy use of two differing countries - Comparison study – Future of energy use – China vs Costa Rica

#### Yet to be on track – not independent and will require regular support

- Do not meet the criteria for on track with due to infrequent use of accuracy and need for regular support and scaffolding.
- In addition, students may have needs around: numerical skills and literacy.

**Enquiry Question: How and why was the Holocaust happen?**

**Skill: What are you getting better at?**

<b>Interpretations:</b>	How people choose to present the past after an event.
<b>Opinion</b>	A view or judgement formed about an event
<b>Useful</b>	What historians can learn from a source.
<b>Selective</b>	choosing evidence to support your argument
<b>Convincing</b>	to be believable or true
<b>Provenance</b>	Who made the source.

<b>Evidence</b>	Sources of information about the past from the time period of study
<b>Sources</b>	Information about the past, e.g. diaries, photos, paintings
<b>Imply</b>	To suggest something
<b>Infer</b>	To work out something
<b>Utility</b>	How useful (what you can learn)
<b>Evidence</b>	Sources of information about the past from the time period of study
<b>Sources</b>	Information about the past, e.g. diaries, photos, paintings

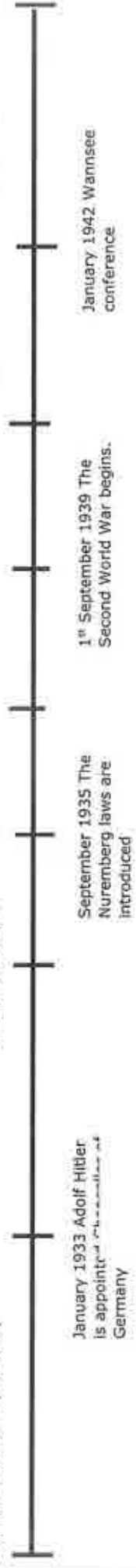
**Story: What you need to know about The Holocaust**

The Nazis came to power in **1933**, with Hitler as their leader. Shortly after coming to power The Nazi's began restricting the **rights and freedoms** of Jewish people. The first concentration camp was opened at **Dachau** in Germany **1933**. In **1935** they introduced the **Nuremberg Laws** which removed all rights and freedoms from Jewish people including their **citizenship**. **Anti-Semitic** violence reaches it's height in 1938 with **Kristallnacht** (night of broken glass). The expansion of Auschwitz 1 and the creation of Auschwitz Birkenau begins in **1941**. By 1945 more that **1.1 million** Jewish people were murdered there. At the Wannsee conference in **1942** the Nazis created a **final solution** to the 'Jewish problem'. More than **6 million** Jewish people were murdered by the Nazis.



<b>Key terms:</b>	
Aryan	White non Jewish people (bland and blue eyed)
Gestapo	Nazi Secret police
Prejudice	Judge someone without knowing them
Anti-Semitism	Disliking or being prejudiced against Jewish people
Genocide	Deliberate attempt to kill a religious or ethnic group.
Functional	Some historians argue that the Holocaust was not planned from the start but was just another function of Nazi control.
Intentional	Some historians argue that the Holocaust was entirely intentional and was planned from the start.

1170 - first recorded Act of Anti-Semitism (York, UK)



January 1933 Adolf Hitler is appointed Chancellor of Germany

March 1933 The first concentration camp at Dachau is opened.

September 1935 The Nuremberg laws are introduced

November 1938 Kristallnacht

1<sup>st</sup> September 1939 The Second World War begins.

October 1941 construction of Auschwitz Birkenau begins

January 1942 Wannsee conference

Jan 27<sup>th</sup> 1945 Auschwitz -Birkenau is liberated by the Russians

What was it like to live in Nazi Germany?

Skill: What are you *getting better at*?

**Similarity & Difference: Key words**

<b>Similarity</b>	points in history that share experiences or are opposites
<b>Difference</b>	identical, not different
Same	a different option or choice
Alternative	sudden or striking
Dramatic	a slow gradual change
Evolve	a range of difference
Diversity	

**Consequences : Key Words**

<b>Consequence</b>	Results of historical events, situations and changes
<b>Impact</b>	A measure of effect or influence
<b>Trends</b>	Patterns throughout history (long term)
<b>Long Term consequence</b>	Results happening over a long period of time after the event
<b>Short Term consequence</b>	Results immediately (less than 1 year) after the event

Story: What you need to know for: What was it like to live in Nazi Germany?

After the First World War there was a brief period of peace in Europe. However, by the end of the **1920s** we see an **economic decline** in Europe and the growth of right wing **Fascist** parties, particularly in **Germany and Italy**.

In Germany the Nazi's begin to gain support as early as 1923 with the **Munich Putsch** however, its not until **1933** that the Nazi party are able to secure enough votes in the **Reichstag** (parliament) to form a government.

Once the Nazi's had secured power Hitler became a **Dictator** by banning all other political parties and then began aggressively perusing **Nationalist** ideas.

Once in power the Nazi's focused their ideas on changing and controlling the lives of all people in Germany, but particularly those of **Children, Women and Workers**.

Germany became a terror state, with a secret police called the **Gestapo**. They also use **propaganda** to help **indoctrinate** the people of Germany into the Nazi belief systems.



**Key terms:**

Dictator	a ruler with total power over a country, typically one who has obtained control by force
Dictatorship	Country run by a dictator
Nationalism/ Nationalist	Support of your own country to the exclusion/detriment of others
Fascism	Right wing, political belief system which often supports nationalism and dictatorship. (Nazis were fascist)
Propaganda	Art of persuasion through variety of advertising techniques
Appeasement	Preventing of war by giving in to an aggressive countries demands
Indoctrinate	To teach a person to accept a set of beliefs without question
Reparations	Money paid by the losing country to pay for war damage

1919 Signing of Treaty Of Versailles.

1923 Hitler's Munich Putsch

1929 Wall Street Crash

1935 introduction of Nuremberg Laws (anti Jewish Laws) Germany

1939 outbreak of Second World War.

1923 Germany fail to make reparations payment, French and Belgian troops invade Ruhr.

1924 Dawes plan, to reduce reparations payments and secure German boarders

1933 Hitler comes to power in Germany

1938 German 'invades' Austria breaking Anschluss clause of Treaty of Versailles.

## YEAR 9 FOOD AP2 revision

Key Word	Definition
Nutrient	Substance essential for good health and well being
Macro nutrient	Nutrients eaten in large quantities - carbohydrate, protein and fat
Protein	Nutrient used for growth and repair
LBV	Low biological value protein- missing at least one essential amino acid.
HBV	High biological value protein. Contains all 10 essential amino acids
Fat	One of the macronutrients- used for protection and warmth
Saturated fat	Potentially harmful fat that should be restricted in our diet.
Carbohydrate	One of the macronutrients and should be the main source of energy in our diet
Micronutrient	A nutrient eaten in tiny amounts (minerals and vitamins)
Vitamin	Organic substance essential for health and well being
Mineral	Inorganic substance essential for the proper function of our bodies
Food Choice	What people decide to eat on a daily basis.
Vegetarian	A person who does not eat the flesh of animals
Vegan	A person who does not eat or use any products derived from animals

Food choice: The 'big 5' the most influential reasons for what we eat.

- Convenience - can we get the ingredients, can we make it, can someone else make it for us?
- Cost- with rocketing food prices most of us are making choices not on what we like, but what we can afford- how can I fill up the family on the budget I have.
- Culture – religion, food tradition and family favourites all play into what food we chose to eat
- Health – restricting our diet to keep the weight off, limiting foods that are harmful or eating 'super foods' for health gains.
- Environment – fish stocks are dwindling, battery chickens have a tough life and the planet is burning. What we eat has a huge impact on other animals and the environment.

### Different factors that influence food choice when planning a meal.



- Carbohydrate

- There are three types of carbohydrate: Starch, sugar and fibre

Starch is found in ingredients like cereals, rice and potatoes. These are made up of sugar molecules joined together which the body has to break down before they can be absorbed. These therefore give a slow release of energy which help us feel fuller for longer. Keep our blood sugar levels more constant and therefore help us to control how much we eat.

Sugar is found in fruit, milk and any sweet product where processed sugar has been added. Sugar improved flavour and gives us a quick boost of energy but eating too much sugar can effect our mood, our teeth and increased risk of Diabetes.

Fibre is another form of carbohydrate and is essential to good health. Dietary fibre found in plants, particularly cereal husks and the skins of fruit and vegetables help us to feel fuller for longer, aid digestion and help to prevent heart disease and bowel cancer.

Protein, Proteins are made up of amino acids. The body can make some of these amino acids but others it can't. We need to eat foods with all of these essential amino acids.

There are two types of protein. HBV (high biological value) contain all the essential amino acids our body needs. LBV (low biological value) are missing some of these amino acids.

HBV (high biological value) contain all the essential amino acids our body needs and are found in animal products such as meat, dairy and eggs. They can also be found in soya beans.

LBV (low biological value) are missing some of these amino acids. LBV proteins are typically found in cereals, peas, beans, nuts and seeds

Protein complementation:  
It is still possible to get all the amino acids you need by eating a range of LBV proteins. Beans on wholemeal toast is a really good example of where two LBV proteins can be combined to deliver all of the amino acids you need

### What is fat?

Fat is also a Macronutrient (one of the three)

When we talk about fats in cooking we refer to **fats**, which are solid at room temperature. And **oils**, which are liquid at room temperature.

When we talk about the chemical make up of different fats we can say that a fat is **saturated or unsaturated**

**Saturated fat** is more commonly found in animal products. These fat's can increase the bad cholesterol in our bodies and lead to health problems such as coronary heart disease and diabetes.

**Unsaturated fat** is easier for the body to digest and an important part of a healthy diet.

Unsaturated fat helps us to make good cholesterol, a good source vitamins and an important way for us to get energy.

Micronutrients are vitamins and minerals needed by the body in very small amounts. However, their impact on a body's health are critical, and deficiency in any of them can cause severe and even life-threatening conditions.

### What are vitamins?

They are **micronutrients** as they are needed in small amounts, on a daily basis. They are organic compounds and made by plants, animals and bacteria. As we can't make them we need to include them in our diet.

Vitamins are classified into 2 groups

**Fat soluble: vitamins found in foods containing fat (A, D, E and K).**

**We can store unused fat soluble vitamins in our body for later use so we don't need to have these vitamins every day.**

And

**Water soluble: vitamins found in foods with high water content (B group, C).**

These types of vitamins are lost in our urine and do not build up in our bodies so we need to top them up regularly through a healthy diet.

Minerals are inorganic naturally occurring substances. These play a vital role in the proper function of our bodies so we must include them in our diet.

Key vocabulary  
Organic- made by living things



- Calcium
- Iron
- Sodium

- Milk
- Red meat
- Bacon

- Strong Bones
- Healthy blood
- Fluid levels

- Vitamin A
- Vitamin B
- Vitamin C
- Vitamin D

- Carrots
- Meat
- Fresh fruit
- Oily fish

- Healthy eyes
- Energy from food
- Healing wounds
- Strong bones



**Art Visual elements**

<b>Colour</b>	What you see when light reflects off something. Red, Yellow and Blue are primary colours.	
<b>Line</b>	A mark which can be long, short, wiggly, straight etc.	
<b>Tone</b>	How light or dark something is.	
<b>Texture</b>	How something looks or feels – e.g. rough or smooth.	
<b>Pattern</b>	A symbol or shape that is repeated.	
<b>Shape</b>	A 2D area which is enclosed by a line – e.g. triangle.	
<b>Form</b>	Something which has 3 dimensions – e.g. a cube, sphere or sculpture	

**Themes: Year 9**

<b>Art History Movement</b>	A period of time where Artists have a similar style and philosophy.
<b>Portraiture</b>	The art of painting/drawing or taking photographs of faces.

**Equipment and Techniques: Year 9**

<b>Painting</b>	Acrylic paint, Chisel brush, Newspaper, Water.	Consistency, Application.
<b>Screen Printing</b>	Screen, Squeegee, Ink, Newspaper, Printing bed.	Stencil, Registration, Block Colours.
<b>Drawing</b>	Pencil: 2B, 4B, 6B. Rubber, Pencil Sharpener.	Blend, Tone, Shades, Highlights

**Artists: Year 9**

Banksy Keith Haring	
Adekunle Adeleke Jordan Andrew Carter	

**Assessment Objectives**

D	Exceptional: Sophisticated, Perceptive, Masterful, Imaginative.
O+	Confident: Refined, Assured, In-Depth, Thorough.
O	Competent: Sustained, Informed, Thoughtful, Detailed.
Y	Basic: Attempted, Some, Incomplete.
A	Limited: Partial, Inconsistent.

**Art Technique Key Words**

<b>Media/Medium</b>	The materials and tools used by an artist to create a piece of art.
<b>Technique</b>	The way an artist uses tools and materials to create a piece of art.
<b>Composition</b>	Where you place objects on the page.
<b>Highlight</b>	The bright or reflective area on an object or piece of art.
<b>Shadow/Shade</b>	The darker areas within a piece of art or object.
<b>Proportion</b>	The size relationship between different parts – e.g. height compared to width.

## Colour Vocab

**Primary colours** are the 3 main colours. They cannot be made, but are used to make all other colours.

**Secondary colours** are made by mixing 2 primary colours.

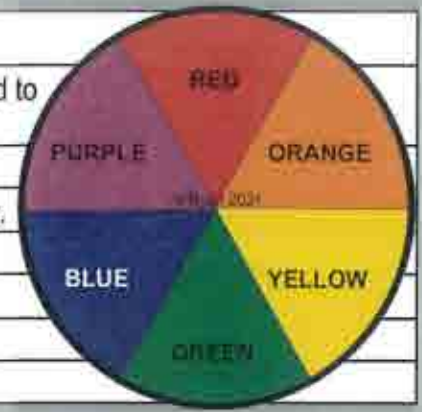
**Tertiary colours** are made by mixing primary and secondary colour together.

**Complementary colours** are opposite on the colour wheel.

**Harmonious colours** are next to each other on the colour wheel.

**Tint** – when you add white to a colour to make it lighter.

**Shade** – when you add black to a colour to make it darker.



**Still life** - a still life is a group of inanimate objects, such as bottles or plants.

**Composition** – This is the way that you place or position your objects. There are several different composition rules which are useful to know.

**Rule of thirds:** You divide up your paper horizontally and vertically into 9 equal sections, and by placing the focus of your image where the lines intersect, you create a balanced composition.

**The Rule of odds:** Suggests that an odd number of subjects in an image is more interesting to look at than an even number, and your eye is more likely to move around the image.

**Mark making** – To make your drawing look more realistic, you should try to use different marks to show textures and surfaces. You can do this by changing the direction, pressure or length of your marks.

## Coloured pencil technique

Hatching	Lines which are shaded in one direction.	
Cross Hatching	Lines which cross in two directions.	
Stippling	Dots which are close together or far apart.	
Overlay	Layering multiple colours with even shade.	
Scribbling	Random marks – close together or far apart.	
Burnishing	Blending colours using a white pencil.	

**Grades of Pencil** – Pencils come in different grades, the softer the pencil, the darker the tone.

H=Hard B=Black. In art the most useful pencils for shading are 2B and 4B. If your pencil has no grade, it is most likely HB (hard black) in the middle of the scale.



**Making objects look 3D** – To prevent your drawings from looking flat, you should use a range of tones and marks. Pressing harder and lighter and layering with your pencil creates different tones. Use the direction of your pencil to help enhance the 2D surface, and you can also include shadows which will also help objects appear 3D.

## Websites



[www.pinterest.co.uk](http://www.pinterest.co.uk)

[www.tate.org.uk/kids](http://www.tate.org.uk/kids)

[www.bbc.co.uk/bitesize/subjects/z6hs34j](http://www.bbc.co.uk/bitesize/subjects/z6hs34j)



Year 9

Theme: Signs of Our time

Visual Element: Form/Tone

Technique: Screen  
Printing/drawing

Artists: Banksy/Keith Haring

Students will be researching into Modern Art and how it reflects the events of the world. Students will explore how Form and Tone can be created with different medias, they will explore how artists have used art to express opinion and make the viewer think about political events and views that are currently happening in the world. Focusing on Banksy and Keith Haring who use their art as a platform to express opinion through their work and we will be asking students to be influenced by them to create their own piece using similar style and the technique of using stencils to create a piece that reflects what is happening in our world today.



**TASK 1:** A01 - Research into how ART reflects the events and political climate of the world and how these are shown through the Art Movements

**TASK 2:** A02 - Visual Element FORM – how this is used within a drawing to move a drawing from 2D to 3D

**TASK 3:** SPOT LIGHT ASSESSMENT A03

**CHOOSE ONE OF YOUR DRAWINGS TO CREATE AS AN A4 TONAL DRAWING**

**THIS WILL BE A TWO HOUR SILENT EXAM DRAWING**

**TASK 4:** A01 - History of Modern Art – understanding artist in this period of art

**TASK 5:** A01 – Critical Study on Banksy

Create a double page showing your understanding of Banksy. Complete a copy of a piece of work by Banksy, images of their work, description, your opinion and how it will influence you.

**TASK 6:** A01 – Critical study on Keith Haring

Create a Single page showing your understanding of their work

**TASK 7:** A02 – Visual and Word mind map of different events that are happening or have happened that effect the world around us and symbols that reflect them.

**TASK 8:** A02 – DESIGNS Create 2-3 designs influenced by an event and in the style of Haring and Banksy. Keep them simple as they will become a screen print.

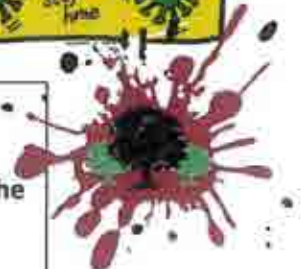
**TASK 9:** A02 – Choose ONE Of your design to become your FINAL DESIGN and add LIMITED COLOUR to the design.

**TASK 10:** A04 – Create your FINAL PIECE – this will be creating your final design as a SCREEN PRINT and understanding stencils and registration

**TASK 11:** DOOYA : Evaluate your Final Outcome



**REMEMBER** all work that you produce is building up towards your final piece. Therefore, you must complete all work and the independent study that is set.



# **KNOWLEDGE: Keywords** **for Year 9**

**Make sure you LEARN and UNDERSTAND this vocabulary and try and use it when describing and talking about artwork**

**VISUAL ELEMENT** - The Visual Elements of art are the building blocks used by artists to create a work of art.

**MODERN ART** – an art movement that emerged in the late 19th and early 20th centuries. It was characterized by a shift away from traditional styles to a more abstract, experimental approach to creating works of art.

**POLITICAL ART** – art works with overtly political subjects or messages made to express criticism of the existing state of affairs, whether it's local, national, or international topics.

**FORM** – Refers to an object that is 3 dimensional with height, width, and depth.

**MEDIA** – materials that we use to create art

**COMPOSITION** – where the objects are positioned in your layout (artwork)

**GRID METHOD** – Using a Grid to help draw you from an image accurately

**PROPORTION** – The size of an object/form that you are drawing/creating in your artwork

**GRAFFITI** – Writing or drawing on walls or other surfaces without permission

**SCREEN PRINTING** - the process of transferring a stencilled design onto a flat surface using a mesh screen, ink and a squeegee.

### Music For Moving Image Key Terms

- Sforzando** – A sudden increase in volume
- Cluster Chord** – A chord made of pitches close together
- Diatonic** – Only using pitches from the key
- Dissonance** – Music that uses clashing sounds
- Chromatic** – Using notes from outside the key
- Conjunct Melody** – Melody that uses steps
- Disjunct Melody** – Melody that uses leaps
- Pedal notes** – Repeating bass notes
- Leitmotif** – A short melody linked to a character/theme/place
- Ostinato** – A short repeating pattern
- Crescendo** – A gradual increase in volume
- Diminuendo** – A gradual decrease in volume
- Mickey Mousing** - Synchronising action on screen with music and sounds
- Tonality** – If the music is Major, minor or Atonal
- Texture** – the layers of sound
- Tempo** – the speed of the music set by the pulse
- Dynamics** – the volume of the music

## Y9 Music Music For Moving Image

- Film Genres:**
- Action
  - Adventure
  - Animation
  - Comedy
  - Drama
  - Fantasy
  - Horror
  - Musical
  - Period
  - Romance
  - Science Fiction
  - Thriller
  - Western

Note Pyramid:		
Name	Symbol	Rest Symbol   Value of each
Semibreve		4
Minim		2
Crotchet		1
Quaver		1/2
Semiquaver		1/4

D <sup>b</sup>	E <sup>b</sup>	G <sup>b</sup>	A <sup>b</sup>	B <sup>b</sup>	D <sup>b</sup>	E <sup>b</sup>	G <sup>b</sup>	A <sup>b</sup>
C <sup>#</sup>	D <sup>#</sup>	F <sup>#</sup>	G <sup>#</sup>	A <sup>#</sup>	C <sup>#</sup>	D <sup>#</sup>	F <sup>#</sup>	G <sup>#</sup>
C	D	E	F	G	A	B	C	D
E	F	G	A	B	C	D	E	F
G	A	B	C	D	E	F	G	A

Sharp raises the note by one semitone  
 Flat lowers the note by one semitone  
 Natural restores a note to its original pitch

**Treble Clef**

Treble Clef Notes  
C D E F G A B C D E F G A

Notes on the lines (up):  
E G B D F

Notes in the spaces (up):  
F A C E

**Bass Clef**

Bass Clef Notes  
G A B C D E F G A

Line Notes:  
G B D F A

Space Notes:  
A C E G

### STRINGS



### WOODWIND



### BRASS



### PERCUSSION

