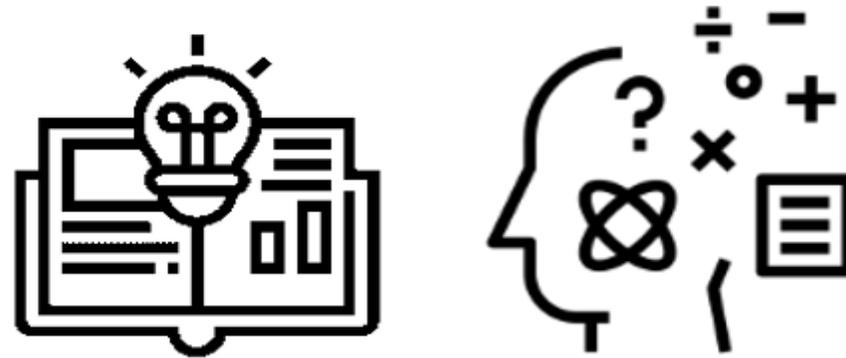


Year 11 Knowledge Organisers Term 2



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Knowledge Organisers at St. Anne's Academy

What is a Knowledge Organiser?

- A Knowledge Organiser is a tool which sets out exactly what knowledge is vital in the curriculum.
- It clarifies for everyone – pupil, parent and teacher– exactly what is being taught.
- It is not expected to cover the entirety of everything you may possibly cover in a topic – just what is vital.
- A Knowledge Organiser is a distillation of knowledge, not a textbook or step by step revision guide.

Benefits of Knowledge Organisers:

- For pupils they are a revision of ALL the key information the teacher has decided is necessary for the topic.
- Parents know what their children are learning and are able to get involved in supporting their revision through quizzing and testing at home.

The purpose of knowledge organiser at St. Anne's is very clear. They will:

- Support pupils to retain the key knowledge learned in lessons;
- Enable parents to support their children in their learning;
- Promote independence in learning;
- Promote a work ethic which will support success in further education;
- Support wider reading and study to support curriculum learning;
- Encourage practice of examined tasks and questions.

A Guide for Students and Parents

For each topic being taught in each subject a Knowledge Organiser has been produced outlining the key important knowledge required to fully understand a topic.

- Students should set aside time each day/evening dedicated to each subject they study.
- Students should use the knowledge organisers for independent study using the following method.



Look



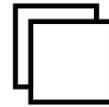
Read the specific important knowledge you need to learn for each subject.

Say



Read aloud the specific important knowledge you need to learn.

Cover



Cover your knowledge organiser.

Write



Write out everything you can remember from the specific part of the important knowledge you have been reading on a blank sheet of A4 paper.

Check



Check that you have all the content needed and it is correct. Any content that is missing or incorrect use another colour pen to illustrate the gaps in your knowledge that you have corrected.

Repeat



Fold you A4 sheet so that what you have just written is no longer visible. Repeat the steps above until you are 100% correct.



Vocabulary for section A

To emphasise:

Above all
In particular
Especially
Significantly
Notably



To further explain an idea:

Although
However
Yet

Similarity:

Equally
Likewise
Similarly
In the same way

To contrast:

whereas
Alternatively
Otherwise
Contrastingly
On the other hand

Assessment Objectives

AO 1: What (do you understand what the text is saying?)

AO2: How (do you understand how the text is communicating its message?)

AO3: Why (why is the text as it is? Why did the writer choose for it to be that way?)



Question 2 (8 marks, 10 minutes) 2/3 points

Examiner is looking for:

- Understanding of the text- including inferred meaning
- Use of detailed evidence from the text
- Comparison of the content of the texts

Top Tips

- ✓ Highlight the theme that the question is asking you to focus on.
- ✓ Write a single sentence summary of the difference of the treatment of this theme between the two texts

The difference between the treatment of {theme} in these two sources is..

- ✓ Choose a quotation from source A and imagine it is the caption beneath an image showing the representation of the theme in that text.
- ✓ Describe what it shows
- ✓ Use the quotation as evidence
- ✓ Include what you can infer about the theme from the image *“from this we can infer”*.
- ✓ Repeat steps 3-6 for source B- using comparative connectives to indicate your understanding of the comparison

“In contrast source B...”

- ✓ Write a conclusion summing up the differences between the two texts.

“So in conclusion whilst we can see that source A....source B on the other hand...”

- ✓ NOTE: Do not say that the differences are due to different time periods

Question 3 (12 Marks, 15 minutes) 3/4 points

Examiner is looking for:

- Explanation of the effect on the reader
- Use of detailed evidence from the text
- Use of appropriate terminology

Top Tips

- ✓ Highlight the theme
- ✓ Mark the section of the text you have been asked to refer to
- ✓ Open with a comment on the effect of the use of language on the reader.

“The author of source ...presents [theme] in a way that makes the reader feel...”

- ✓ Now choose one language feature that contributes to that feeling. Explain how that linguistic feature relates to the feeling it creates.
- ✓ Now explain in detail the impact of this feature on the reader.

“The impact of this on the reader is....furthermore...so it could be said that....”

- ✓ Repeat this process for 3 different language features.

Question 4 (16 marks, 20minutes)

Examiner is looking for :

- Understanding of the author’s attitudes
- Description of the author’s methods
- Sophisticated comparison

Top Tips

- ✓ Highlight the theme in the Question
- ✓ Answer the question in a couple of sentences:
“Whilst both sources write aboutthe attitudes of the authors are evidently different in that the author of source A would seem to.....whilst the author of Source B, in contrast, seems to feel...”
- ✓ Choose one source and state what you think the author’s view point is on the theme.
- ✓ Now explain how you know this using evidence from the text (quotations). Explain how each of your pieces of evidence relates to your understanding of the author’s intentions

“From the use of [what have you observed? Use terminology if helpful] we can see that the author’s attitude is...”

- ✓ Now repeat step 3-4 for the other source- use comparative connectives to show how you think it relates to the first source
- ✓ Now write a conclusion in which you sum up your understanding of the differences in the authors’ attitudes and view points on the them.

I think if the authors of these two sources were to discuss [theme] the author of source A would feel that the author of source B was....because... The author of source B would think that the author of source B wasbecause...

- ✓ NOTE: Do not say that the differences are due to different time periods

Question 1 (4 marks, 5 minutes)

Question

Select four correct statement

Top Tips

- ✓ Only use the **lines indicated**
- ✓ Stick to the **question**
- ✓ Go through **every statement**
- ✓ Highlight on your extract the statements as you go along



KS4 English Literature – A Christmas Carol by Charles Dickens

Language for Learning:

Supernatural
Miser
Misanthropic
Humility
Benevolent
Solitary
Indignant
Destitute
Apparition
Malevolent
Philanthropic
Redemption
Allegorical



Key Themes

1) Logic and Time. Scrooge's sense of logic is continually disturbed, helping to dismantle his cold and rational views of society. This change in Scrooge reflects Dickens' criticism of the heartless logic used to create the New Poor Law.

2) Isolation V's Family. We quickly learn that Scrooge ('solitary as an oyster') and Marley are isolated and unhappy characters. The warmth and emotional richness of family created in the novella conveys Dickens' message that family is the cornerstone to a happy society.

3) Poverty and Greed. Dickens wanted to highlight the plight of the poor in Victorian England and how they are exploited by the greed of the wealthy.

Stave 1	<ol style="list-style-type: none"> 1. Marley's Ghost. Scrooge is in his counting house on Christmas Eve. Scrooge is rude to his nephew Fred, refuses the charity workers and reluctantly allows his poorly paid clerk, Bob Cratchit, Christmas day off. Once home the ghost of his old business partner Jacob Marley appears to him. The chain wearing ghost warns Scrooge that three spirits will visit him to try and make him change his ways. 	
Stave 2	<ol style="list-style-type: none"> 1. The Ghost of Christmas Past. 2. The ghost takes Scrooge to his old schoolhouse where we see Scrooge as a left alone at Christmas. 3. We then see another Christmas where Scrooge's sister Fan comes to take him home. 4. We see Scrooge as a young man enjoying a Christmas party held by his first boss Fezziwig. 5. We see Scrooge and his fiancée Belle part ways because of his love for work and money. 	
Stave 3	<ol style="list-style-type: none"> 1. The Ghost of Christmas Present 2. Scrooge visits the Cratchit family Christmas where he sees that the poor can still be happy. 3. They visit his nephew Fred's house and see he too is happy even though he is not rich. 4. We begin to see that Scrooge's opinion about the 'idle poor' are beginning to change. 	
Stave 4	<ol style="list-style-type: none"> 1. The Ghost of Christmas Yet to Come. 2. The tone of the novel shifts with the arrival of the deathly Ghost of Christmas Yet to Come, who shows Scrooge a dark future where he has died a lonely man and the innocent Tiny Tim has passed away. 	
Stave 5	<ol style="list-style-type: none"> 1. Scrooge wakes on Christmas Day and is enlightened and transformed. 2. Scrooge is redeemed and forgiven. He goes to Fred's for dinner and rebuild his family ties. 3. He is the saviour of himself and also Tiny Tim. 	

Key context



Dicken's message on poverty.

1. Dickens had a comfortable childhood until the age of 12 when his father was sent to a debtors' prison and young Charles had to work in a factory. The harsh conditions made a lasting impression: through his works of social criticism, he sought to draw attention to the plight of the poor

The New Poor Law

1. In order to deter people from claiming financial help, the government made claimants live in workhouses. He spent 1843 touring factories and mines in England and wished to highlight the situation facing poor people. A Christmas Carol was published soon after-in December 1843.

The ingredients for a hit novella.

1. Dickens' previous novel had not sold well and so he needed a hit. He deliberately combined elements that he knew would appeal to Victorian readers; a parable; the supernatural; a happy conclusion and Christmas.

Dickens' construction of secular Christmas values.

1. Until the mid 1800s, Christmas was solely a religious festival. Dickens helped to popularise many of the cultural elements that we now associate with Christmas. This imagery (the food, the decorations, the music) is used throughout the novella. This has contributed to a more secular(non religious) Christmas, based on goodwill, benevolence and forgiveness



KS4 English Literature – A Christmas Carol by Charles Dickens.

Preparing you for GCSE Style Exam

Example exam question

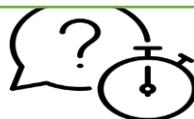
Read this extract from Stave Five and then answer the question. In this extract, Scrooge promises to help Bob and his family at the very end of the text.

"A merry Christmas, Bob," said Scrooge, with an earnestness that could not be mistaken, as he clapped him on the back. "A merrier Christmas, Bob, my good fellow, than I have given you for many a year. I'll raise your salary, and endeavour to assist your struggling family, and we will discuss your affairs this very afternoon, over a Christmas bowl of smoking bishop, Bob. Make up the fires, and buy another coal-scuttle before you dot another i, Bob Cratchit!" Scrooge was better than his word. He did it all, and infinitely more; and to Tiny Tim, who did not die, he was a second father. He became as good a friend, as good a master, and as good a man, as the good old city knew, or any other good old city, town, or borough, in the good old world. Some people laughed to see the alteration in him, but he let them laugh, and little heeded them; for he was wise enough to know that nothing ever happened on this globe, for good, at which some people did not have their fill of laughter in the outset; and knowing that such as these would be blind anyway, he thought it quite as well that they should wrinkle up their eyes in grins, as have the malady in less attractive forms. His own heart laughed: and that was quite enough for him.

He had no further intercourse with Spirits, but lived upon the Total Abstinence Principle, ever afterwards; and it was always said of him, that he knew how to keep Christmas well, if any man alive possessed the knowledge. May that be truly said of us, and all of us! And so, as Tiny Tim observed, God Bless Us, Every One!

Your question will be based on a key extract from the play. Use at least two quotations from here.

Read the question and highlight the keywords. You must refer to the rest of the play too.



30 Marks

You will always be given some information on where in the play the extract is from. Read this carefully.



What could you include:

AO1: Students could make comparisons between Scrooge's behaviour in this extract and how he is so rude and dismissive to a number of key characters in Stave One, before he rectifies his behaviour in Stave Five in a kind of cyclical structure.

Students could use quotes relating to Scrooge's ideas on charity and generosity from earlier on in the novella, **AO2:** Use of hyperbole from Bob Cratchit at the beginning to highlight his disbelief at Scrooge's transformation.

Repetition of 'good' in the third paragraph to emphasise Scrooge's transformation from selfish and cold hearted miser to generous and genuinely caring man. Use of metaphor and personification ("his own hearted laughed", "and knowing that such as these would be blind anyway") to accentuate Scrooge's happiness and his lack of concern regarding what others now think about him or his motives.

Allusions to earlier parts of the novella to provide a contrast with Scrooge's previous behaviour (Bob Cratchit and the coal from Stave One, Tiny Tim and his innocence from Stave Three).

AO3: Attitudes regarding to philanthropy and poverty in the Victorian period.

Attitudes regarding Christmas and celebrating during the festive period.

Other example questions:

Starting with this extract, how does Dickens present poverty?

Starting with this extract, how does Dickens present redemption?

Starting with this extract, how does Dickens present Scrooge as a changed man?

Starting with this extract how does Dickens present Christmas?

Starting with this Extract, how does Dickens explore the supernatural?

You could be asked about the following key themes:



- Redemption
- Compassion and forgiveness
- Logic and time
- The supernatural/ role of the spirits
- Christmas
- Family versus isolation
- Poverty and greed
- Transformation

Or the following key characters:

Scrooge- The protagonist who initially dismisses the goodwill and generosity associated with Christmas. After being forced to transform, he becomes a symbol of Christmas spirit in Stave Five. He is cheerful and benevolent.

Bob Cratchit and family Bob is Scrooge's downtrodden but loyal employee. His family are a symbol of Victorian poverty, cheerfulness in adversity, teamwork and Christmas spirit. Bob shows pity for Scrooge, and provides a contrast to Scrooge's isolation and meanness.

The Ghosts – they are the antagonists to Scrooge. They force him to view his selfish and greedy ways, and to admit how his behaviour will lead to a lonely death. They are a metaphor for how the greed of the wealthy middleclass will lead to a disastrous future.

Assessment objectives you are assessed on:

AO1- Your understanding of the text. This can be shown in your point/ topic sentence and the quotations you choose to support your point.

AO2- Language and structural analysis of key quotations.

AO3 – context (Victorian Era).



Year 11 Foundation Maths -Presenting, Interpreting and Measuring Data



Language for Learning

Frequency Table

Average

Mean

Median

Mode

Range

Data

Interpret

Grouped Data

Class intervals

Modal Class

Frequency Polygon

Frequency Tables

Score	Frequency
6	2
7	3
8	7
9	7
10	1

How "frequent"
Or how often

The data we are
interested in

The **total frequency** here is 20. We find this by adding up all the frequencies.

Stem and Leaf Diagrams

In an ordered stem and leaf diagram each piece of data must be in ascending order to make it easier to interpret the data

4	8 9
5	1 3 4 6 7 9
6	0 2 3 5 6 6 8 8
7	0 1 2 4

This piece of
data has a value
of 68

Key: $4/8 = 48$

A **key** is needed so we know how to **interpret** the values in the diagram

Averages

Averages help us to **summarise** the data. For example, the average score in a class of students will tell us roughly how well the class performed.

Mode is the **most common**.

We can find the mode by identifying the most common piece of data. From a frequency table the mode is the piece of data with the highest frequency.

Median is the **middle** value when the data is ordered from least to greatest.

Mean is calculated using the total divided by the number of pieces of data in the data set.

Extremely large or small pieces of data may affect the mean average making it a less reliable summary.

Range

The **range** helps us see how **spread** out the data is.

The **difference** between the largest and the smallest gives us the range

Grouped Data

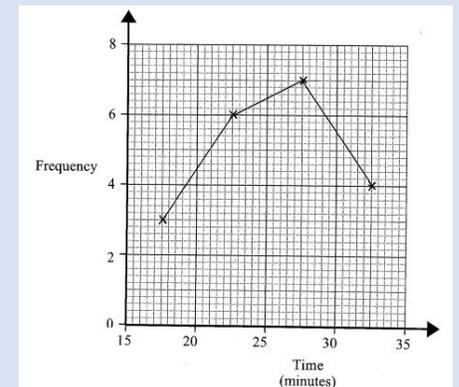
This data is in groups called **class intervals**

Time (minutes)	Frequency
$15 < t \leq 20$	3
$20 < t \leq 25$	6
$25 < t \leq 30$	7
$30 < t \leq 35$	4

Because the data is in class intervals we can only **estimate the mean**.

We would multiply the **midpoint** of each class interval by the frequency to find the total for each class. Then, we would **sum the totals** and divide by the **total frequency**.

The **modal class** is $25 < t < 30$ because this has the **highest frequency**



A **frequency polygon** is plotted using the coordinates (**midpoint, frequency**)



Year 11 Higher Maths - Presenting, Interpreting and Measuring Data



Language for Learning

- Average
- Mean, Median, Mode
- Class interval
- Continuous Data
- Discrete Data
- Cumulative Frequency
- Box Plot
- Quartiles
- Interquartile range
- Histogram
- Frequency Density
- Extreme Value

Grouped Data

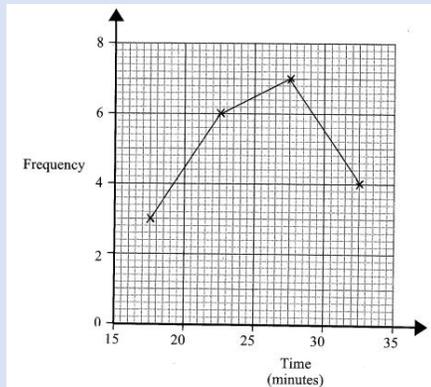
This data is in groups called **class intervals**

Time (minutes)	Frequency
$15 < t \leq 20$	3
$20 < t \leq 25$	6
$25 < t \leq 30$	7
$30 < t \leq 35$	4

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The **modal class** is $25 < t < 30$ because this has the **highest frequency**



A **frequency polygon** is plotted using the coordinates **(midpoint, frequency)**

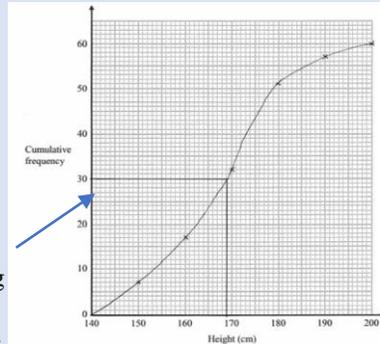
Cumulative Frequency

Height	Cumulative Frequency
$140 < h \leq 150$	7
$140 < h \leq 160$	17
$140 < h \leq 170$	32
$140 < h \leq 180$	51
$140 < h \leq 190$	57
$140 < h \leq 200$	60

17 students scored **Less than 160**

A cumulative frequency diagram is plotted using the coordinates **(Height, Upper class boundary)**

The **median** height is found by reading across from the $(n/2)$ th value on the **Cumulative frequency axis**

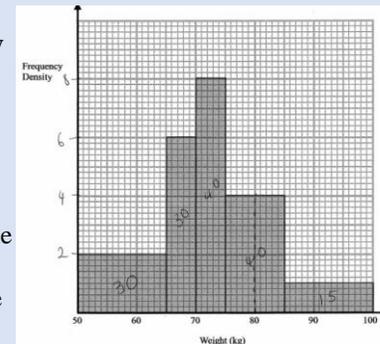


Histograms

Frequency density is calculated using

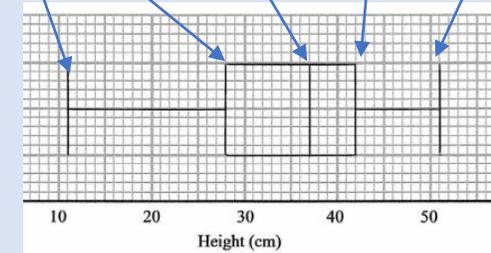
$$\frac{\text{Frequency}}{\text{Class Width}}$$

On a Histogram the frequencies are represented in the **area** of each bar.



Boxplots and IQR

Minimum	Lower Quartile	Median	Upper Quartile	Maximum
11	28	37	42	51



Interquartile range (IQR) is the difference between the upper and lower quartile. It is a measure of how spread out the data is, like the range. The data point within the interquartile range represent 50% of the population.

When **comparing** two boxplots we would use two statistics that best summarise the data.

1. The Median. The box with the higher median has a larger height on average.
2. The Interquartile range shows us which set has a larger spread.

Note: The interquartile range is a more useful measure of spread than the range since it doesn't take into account extreme values.



KS4 Chemistry, Paper 4, Topic 8 Fuels and Combustion

Language for Learning:



Acid rain
 Alkane
 Alkene: A hydrocarbon in which there are one or more double bonds between carbon atoms.
 Atmosphere The layer of gases that surrounds the Earth.
 Complete combustion
 Cracking
 Finite resources
 Fraction
 Greenhouse effect: The 'trapping' of warmth by greenhouse gases in the Earth's atmosphere due to radiation from the atmosphere warming the surface of the planet.
 Homologous series
 Hydrocarbon
 Incomplete combustion
 Non-renewable
 Pollutant: A substance that harms living organisms when released into the environment.
 Saturated: A molecule that contains only single bonds between the carbon atoms in a chain.
 Soot
 Structural formula: A diagram showing information about the positions of the atoms in a molecule and the bonds between them.
 Unsaturated: A molecule that contains one or more double bonds between carbon atoms in a chain.
 Viscosity: How thick or runny a liquid is. Low viscosity is very runny, high viscosity is thick

Hydrocarbons

Hydrocarbons are compounds which contain the elements hydrogen and carbon only.

Crude oil is a mixture of many different hydrocarbon compounds, but it is not useful on its own.

Crude oil is **finite** - not being made any more (or made very slowly).

Non renewable - it is being used up faster than it is being formed.

Alkanes

Alkanes are the simplest group of hydrocarbons.

Carbon can form 4 bonds. Hydrogen can form 1 bond.

As you increase the number of carbon atoms in the alkane the boiling point gets higher. Bigger molecules have

stronger intermolecular forces

which need more heat energy to overcome.

The alkanes are a **homologous series**

- They have the same general formula C_nH_{2n+2}
- They increase by CH_2 each time
- They have similar chemical reactions
- They show trends in physical properties

Fractional distillation

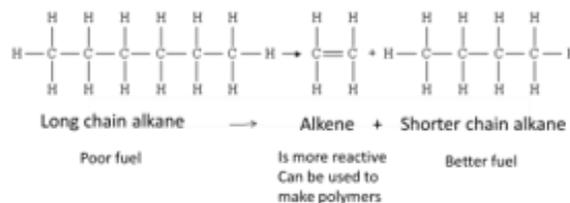
The hydrocarbons in crude oil are separated into **fractions** according to their boiling point. To do this, crude oil is heated up and passed into a column which has a temperature **gradient** – hot at the bottom cold at the top. Hydrocarbons form **covalently bonded** molecules. As the molecules get bigger the intermolecular forces holding them together get stronger and they have higher boiling points.

Cracking

Crude oil is a natural product and contains fixed amounts of **different fractions**. This causes oil companies problems as longer chain alkanes don't make as good fuels and their supply outstrips their demand.

To overcome this problem oil companies turn long chain alkanes into **short chain alkanes** and **alkenes** using **cracking**.

Cracking is a **thermal decomposition** reaction and needs a **catalyst**. You need to be able to complete symbol and picture equations for cracking



Combustion

Complete combustion

If there is plenty of oxygen, hydrocarbon fuels burn completely in oxygen to give carbon dioxide and water only e.g.



Complete combustion is a problem because it produces **carbon dioxide** which is a **greenhouse gas** and causes **global warming**.

Incomplete combustion

If there is **not enough of oxygen**, hydrocarbon fuels burn incompletely in oxygen to give **carbon monoxide**, **soot** and **water** e.g.



Carbon monoxide acts like oxygen and binds to **haemoglobin** in the blood, stops you getting oxygen and suffocates you. **Soot** causes building to turn black and breathing problems.

Global warming: Heat energy gets trapped by the atmosphere, increasing the **average temperature** of the Earth.

Gases involved: **greenhouse gases** – mostly carbon dioxide formed from combustion of fossil fuels

Acid rain: rain with a pH of less than 6.5

Gases involved: **carbon dioxide**, **sulphur dioxide**, **nitrogen oxides**. Carbon dioxide is a direct product of combustion.

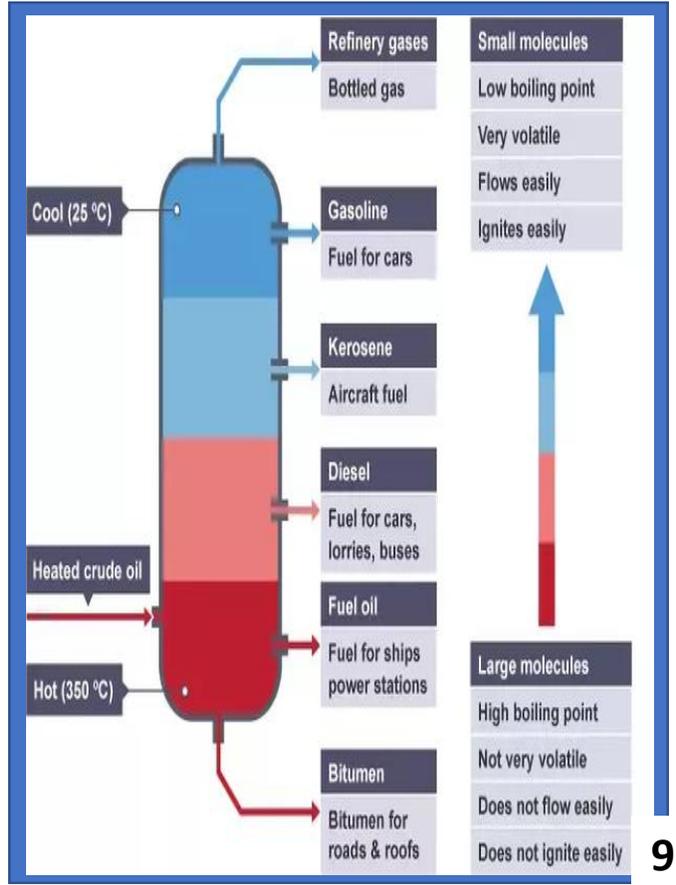
Sulphur is an **impurity** in fossil fuels. When fossil fuels are burnt the sulphur burns to make sulphur dioxide

Sulphur dioxide is an **acidic gas** which **dissolves** in water to make sulphuric acid. Oxides of nitrogen (NO_x) are formed when oxygen and nitrogen from the air are **combined inside engines** at high temperature.

8.1	Recall that hydrocarbons are compounds that contain carbon and hydrogen only
8.2	Describe crude oil as: a) a complex mixture of hydrocarbons b) containing molecules in which carbon atoms are in chains or rings (names, formulae and structures of specific ring molecules not required) c) an important source of useful substances (fuels and feedstock for the petrochemical industry) d) a finite resource
8.3	Describe and explain the separation of crude oil into simpler, more useful mixtures by the process of fractional distillation
8.4	Recall the names and uses of the following fractions: a) gases, used in domestic heating and cooking b) petrol, used as fuel for cars c) kerosene, used as fuel for aircraft d) diesel oil, used as fuel for some cars and trains e) fuel oil, used as fuel for large ships and in some power stations f) bitumen, used to surface roads and roofs
8.5	Explain how hydrocarbons in different fractions differ from each other in: a) the number of carbon and hydrogen atoms their molecules contain b) boiling points c) ease of ignition d) viscosity and are mostly members of the alkane homologous series
8.6	Explain an homologous series as a series of compounds which: a) have the same general formula b) differ by CH_2 in molecular formulae from neighbouring compounds c) show a gradual variation in physical properties, as exemplified by their boiling points d) have similar chemical properties
8.7	Describe the complete combustion of hydrocarbon fuels as a reaction in which: a carbon dioxide and water are produced b energy is given out
8.8	Explain why the incomplete combustion of hydrocarbons can produce carbon and carbon monoxide
8.9	Explain how carbon monoxide behaves as a toxic gas
8.10	Describe the problems caused by incomplete combustion producing carbon monoxide and soot in appliances that use carbon compounds as fuels
8.11	Explain how impurities in some hydrocarbon fuels result in the production of sulphur dioxide
8.12	Explain some problems associated with acid rain caused when sulfur dioxide dissolves in rain water
8.13	Explain why, when fuels are burned in engines, oxygen and nitrogen can react together at high temperatures to produce oxides of nitrogen, which are pollutants

8.14	Evaluate the advantages and disadvantages of using hydrogen, rather than petrol, as a fuel in cars
8.15	Recall that petrol, kerosene and diesel oil are non-renewable fossil fuels obtained from crude oil and methane is a non-renewable fossil fuel found in natural gas
8.16	Explain how cracking involves the breaking down of larger, saturated hydrocarbon molecules (alkanes) into smaller, more useful ones, some of which are unsaturated (alkenes)
8.17	Explain why cracking is necessary
8.18	Recall that the gases produced by volcanic activity formed the Earth's early atmosphere
8.19	Describe that the Earth's early atmosphere was thought to contain: a) little or no oxygen b) a large amount of carbon dioxide c) water vapour d) small amounts of other gases and interpret evidence relating to this
8.20	Explain how condensation of water vapour formed oceans
8.21	Explain how the amount of carbon dioxide in the atmosphere was decreased when carbon dioxide dissolved as the oceans formed
8.22	Explain how the growth of primitive plants used carbon dioxide and released oxygen by photosynthesis and consequently the amount of oxygen in the atmosphere gradually increased
8.23	Describe the chemical test for oxygen
8.24	Describe how various gases in the atmosphere, including carbon dioxide, methane and water vapour, absorb heat radiated from the Earth, subsequently releasing energy which keeps the Earth warm: this is known as the greenhouse effect
8.25	Evaluate the evidence for human activity causing climate change, considering: a) the correlation between the change in atmospheric carbon dioxide concentration, the consumption of fossil fuels and temperature change b) the uncertainties caused by the location where these measurements are taken and historical accuracy
8.26	Describe: a) the composition of today's atmosphere b) the potential effects on the climate of increased levels of carbon dioxide and methane generated by human activity, including burning fossil fuels and livestock farming c) that these effects may be mitigated: consider scale, risk and environmental implications

Seneca Assignments	Score (%)
8.1.1 Crude Oil	
8.1.2 Fractions	
8.1.3 Hydrocarbons	
8.1.4 Hydrocarbons 2	
8.2.1 Earth's early atmosphere	
8.2.2 Test for oxygen	
8.2.3 Global warming	
8.2.4 Global warming 2	
8.2.5 End of topic test	
8.2.6 Grade 9 – Fuels & Earth Science	





KS4 Physics, Paper 6, Topic 12 Particle Model & Matter Knowledge Organiser

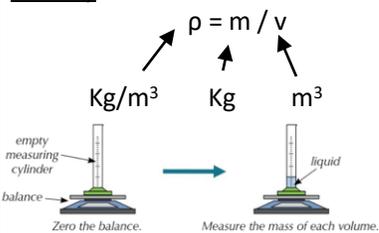
Bold text = higher content
Highlighted text = Triple Physics content

Language for Learning:

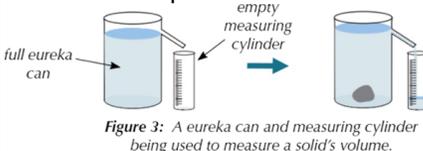
- Absolute zero** – The temperature at which the pressure of a gas drops to zero and the particles stop moving.
- Atmospheric pressure** – The pressure exerted by the weight of the air around us.
- Compress** – To squash something together to make it shorter or smaller.
- Conserved** – A quantity that is kept the same throughout, for example a substance does not change mass when it changes state.
- Density** – The mass of a substance per unit volume. It has units such as kg/m^3 or g/cm^3 .
- Direct proportion** – A linear relationship in which one variable doubles as the other does.
- Displace** – To push out of the way.
- Elastic** – A linear relationship in which one variable doubles as the other does.
- Extension** – The amount by which a spring or other stretchy material has stretched. It is worked out from the stretched length minus the original length.
- Inelastic** – An inelastic material changes shape when there is a force on it but does not return to its original shape when the force is removed.
- Kelvin** – The unit in the kelvin temperature scale. One kelvin (1 K) is the same temperature interval as 1°C .
- Kinetic theory** – The model that explains the properties of different states of matter in terms of the movement of particles.
- Linear relationship** – A relationship between two variables shown by a straight line on a graph. For a linear relationship, the line does not have to go through the origin.
- Non-linear relationship** – A relationship between two variables that does not produce a straight line on a graph.
- Normal** – At right angles to a surface.
- Pressure** – The force on a certain area. It is measured in pascals or N/m^2 .
- Specific heat capacity** – The energy needed to raise the temperature of 1 kg of a substance by 1°C .
- Specific latent heat** – The energy taken in or released when 1 kg of a substance changes state.
- Spring constant** – A measure of how stiff a spring is. The spring constant is the force needed to stretch a spring by 1 m.
- State of matter** – One of three different forms that a substance can have; solid, liquid or gas.
- Sublimation** – When a solid changes directly to a gas without becoming a liquid first.
- Temperature** – A measure of how hot something is.
- Upthrust** – A force that pushes things up in liquids and gases.



Density



Q: Which piece of equipment is used to find the volume of the liquid? Which piece of equipment is used to find the mass of the liquid?



Q: What is the volume of the water displaced equal to?

States of Matter

Solids vibrate in a fixed position where atoms are close together and have strong forces between them.

Liquids flow around one another where atoms are close together but have gaps.

Gases move around quickly and randomly. The atoms are far apart and have weak forces between them.

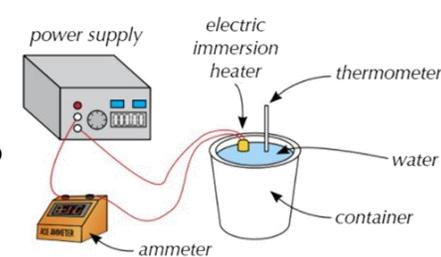
Temperature in K = Temperature in $^\circ\text{C}$ + 273

Temperature in $^\circ\text{C}$ = Temperature in K - 273

Specific Heat Capacity

$\Delta Q = m \times c \times \Delta\theta$

(J) (kg) (J/kg $^\circ\text{C}$) ($^\circ\text{C}$)



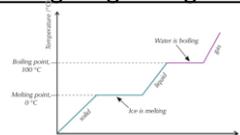
Q: How can the apparatus above be used to find the specific heat capacity of water?

Specific Latent Heat

$Q = m \times L$

(J) (kg) (J/kg)

Investigating Changes of State



Q: Why does the temperature of the water not change when it is melting and when it is boiling?

Gas Pressure

Gas particles collide with each other and the container. This leads to a force at right angles to the surface (pressure). The hotter the gas, the faster the particles move.

Q: What effect does this have on the pressure of the gas?

Pressure and Volume

$P_1 \times V_1 = P_2 \times V_2$

Doing work on a gas

Doing work on a gas increases its internal energy, which increases its temperature.

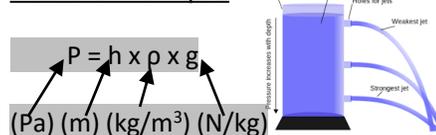
Pressure

$P = F / A$

(Pa) (N) (m^2)

Q: Explain the pressure exerted when using high heels and the pressure exerted when using snow shoes.

Pressure in a Liquid



$P = h \times \rho \times g$

(Pa) (m) (kg/m^3) (N/kg)

Atmospheric pressure decreases the further you go in the air and increases the deeper you go in the sea.

Upthrust

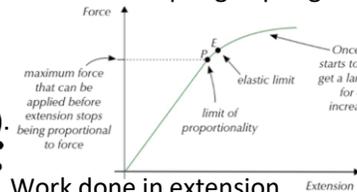
Q: Why do objects float?

Force and Extension

$F = k \times x$

(N) (N/m) (m)

Q: What apparatus would be needed to measure a spring's spring constant?



Work done in extension

$E = \frac{1}{2} \times k \times x^2$

(J) (N/m) (m)



KS4 Physics, Paper 6, Topic 12 Particle Model & Matter

Objectives		R	A	G
14.1	Use a simple kinetic theory model to explain the different states of matter (solids, liquids and gases) in terms of the movement and arrangement of particles			
14.2	Recall and use the equation: density = mass / volume			
14.3	Core Practical: Investigate the densities of solid and liquids			
14.4	Explain the differences in density between the different states of matter in terms of the arrangements of the atoms or molecules			
14.5	Describe that when substances melt, freeze, evaporate, boil, condense or sublimate mass is conserved and that these physical changes differ from some chemical changes because the material recovers its original properties if the change is reversed			
14.6	Explain how heating a system will change the energy stored within the system and raise its temperature or produce changes of state			
14.7	Define the terms specific heat capacity and specific latent heat and explain the differences between them			
14.8	Use the equation: $\Delta Q = m \times c \times \Delta\theta$			
14.9	Use the equation: $Q = m \times L$			
14.10	Explain ways of reducing unwanted energy transfer through thermal insulation			
14.11	Core Practical: Investigate the properties of water by determining the specific heat capacity of water and obtaining a temperature-time graph for melting ice			
14.12	Explain the pressure of a gas in terms of the motion of its particles			
14.13	Explain the effect of changing the temperature of a gas on the velocity of its particles and hence on the pressure produced by a fixed mass of gas at constant volume (qualitative only)			
14.14	Describe the term absolute zero, $-273\text{ }^{\circ}\text{C}$, in terms of the lack of movement of particles			
14.15	Convert between the kelvin and Celsius scales			
14.16P	Explain that gases can be compressed or expanded by pressure changes			
14.17P	Explain that the pressure of a gas produces a net force at right angles to any surface			
14.18P	Explain the effect of changing the volume of a gas on the rate at which its particles collide with the walls of its container and hence on the pressure produced by a fixed mass of gas at constant temperature			
14.19P	Use the equation: $P_1 \times V_1 = P_2 \times V_2$ to calculate pressure or volume for gases of fixed mass at constant temperature			
14.20P	Explain why doing work on a gas can increase its temperature, including a bicycle pump			
15.1	Explain, using springs and other elastic objects, that stretching, bending or compressing an object requires more than one force			

15.2	Describe the difference between elastic and inelastic distortion			
15.3	Recall and use the equation for linear elastic distortion including calculating the spring constant: $F = k \times x$			
15.4	Use the equation to calculate the work done in stretching a spring: $E = \frac{1}{2} \times k \times x^2$			
15.5	Describe the difference between linear and non-linear relationships between force and extension			
15.6	Core Practical: Investigate the extension and work done when applying forces to a spring			
15.7P	Explain why atmospheric pressure varies with height above the Earth's surface with reference to a simple model of the Earth's atmosphere			
15.8P	Describe the pressure in a fluid as being due to the fluid and atmospheric pressure			
15.9P	Recall that the pressure in fluids causes a force normal to any surface			
15.10P	Explain how pressure is related to force and area, using appropriate examples			
15.11P	Recall and use the equation: $P = F / A$			
15.12P	Describe how pressure in fluids increases with depth and density			
15.13P	Explain why the pressure in liquids varies with density and depth			
15.14P	Use the equation to calculate the magnitude of the pressure in liquids and calculate the differences in pressure at different depths in a liquid: $P = h \times \rho \times g$			
15.15P	Explain why an object in a fluid is subject to an upwards force (upthrust) and relate this to examples including objects that are fully immersed in a fluid (liquid or gas) or partially immersed in a liquid			
15.16P	Recall that the upthrust is equal to the weight of fluid displaced			
15.17P	Explain how the factors (upthrust, weight, density of fluid) influence whether an object will float or sink			

Seneca Assignment	Score (%)
14.1.1 Kinetic Theory Model	
14.1.2 Density	
14.1.3 Density 2	
14.2.1 Heat Capacity	
14.2.2 Latent Heat & Temperature	
14.2.3 Latent Heat Experiments	
14.2.4 End of Topic Test – Particle Model	
14.2.5 Grade 9 – Particle Models	

Seneca Assignment	Score (%)
15.1.1 Springs	
15.1.2 Hooke's Law	
15.1.3 Elastic Potential Energy	
15.2.1 Pressure	
15.2.2 Pressure in Gases	
15.2.3 Pressure in Liquids	
15.2.4 Pressure in Liquids 2	
15.2.5 Pressure in Liquids 3	
15.2.6 End of Topic Test – Forces & Matter	



Language for Learning:



Cellulose - Plant cell walls are made of tough cellulose, which support the cell and allow it to keep its shape.

Chloroplast - A green disc containing chlorophyll, found in plant cells.

This is where the plant makes glucose through photosynthesis.

Endothermic reaction - A type of reaction in which energy from the surroundings is transferred to the products, e.g. photosynthesis.

Gas exchange - A process in which one gas diffuses across a membrane and another gas diffuses in the opposite direction.

Glucose - The sugar produced by photosynthesis and needed for respiration.

Guard cell - A pair of guard cells open and close plant stomata.

Palisade cell - Tall, column-shaped cell near the upper surface of a plant leaf.

Photosynthesis - A series of enzyme-catalysed reactions carried out in the green parts of plants. Carbon dioxide and water combine to form glucose. This process requires energy transferred by light.

Respiration - A series of reactions occurring in all living cells, in which glucose is broken down to release energy.

Starch - A polymer carbohydrate that is made by the joining together of glucose molecules.

Stoma - A tiny pore in the lower surface of a leaf, which, when open, allows gases to diffuse into and out of the leaf. Plural is stomata.

Storage organ - A plant organ used to store energy-rich substances such as starch – for example, a potato.

Sucrose - The type of sugar found in the phloem of plants and used as table sugar.

Lignin - A type of polymer that is combined with cellulose in some plant cell walls to make the cells woody, e.g. in xylem cells.

Phloem tissue - Living tissue formed of sieve tubes and companion cells that transports sugars and other soluble compounds around a plant.

Potometer - A device used for measuring the rate of water uptake by a plant.

Sieve tube/cell - Tubes formed of phloem sieve cells (so called because the cells have holes in their ends). The tubes carry sugars and other soluble compounds around the plant.

Translocation - The transport of sugars (mainly sucrose) and other soluble compounds in the phloem tissue of a plant.

Transpiration - The flow of water into a root, up the stem and out of the leaves.

Xylem vessel/cell - A long, thick-walled tube found in plants, formed from many dead xylem cells. The vessels carry water and dissolved mineral salts through the plant.

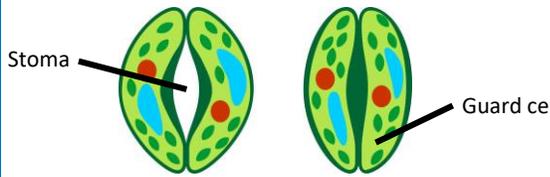
Photosynthesis

Occurs in the chloroplasts, light is absorbed by the green pigment chlorophyll.



Glucose is stored as starch in the chloroplasts, it is broken down into sucrose to be transported around the plant.

Pores called stomata are found on the bottom of a leaf, they are controlled by guard cells. Stomata open during the day to allow water and gases to enter and exit the leaf. They close at night to prevent water loss by evaporation.

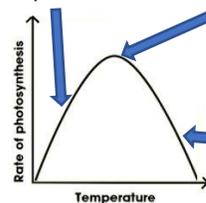


Leaves are adapted to carry out photosynthesis by having a large surface area, many chloroplasts and stomata.

Factors that limit photosynthesis

- Temperature
- Amount of carbon dioxide
- Light

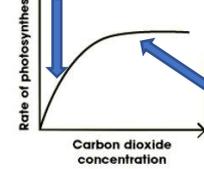
As temperature increases photosynthesis increases.



Optimum temperature for enzymes involved in photosynthesis.

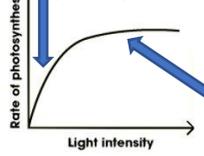
Further increase in temperature causes enzymes to denature and decreases the rate of photosynthesis.

As carbon dioxide concentration increases, photosynthesis increases.



The rate of reaction levels off because another factor is limiting the reaction (light or temperature), increasing carbon dioxide concentration will have no further effect.

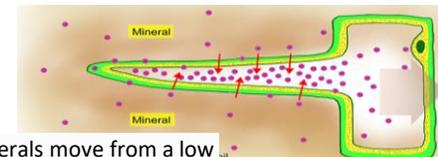
As light intensity increases, photosynthesis increases.



The rate of reaction levels off because another factor is limiting the reaction (carbon dioxide or temperature), increasing light intensity will have no further effect.

Absorbing water and mineral ions

Plants need water to keep cells rigid, to cool the leaves through evaporation and for photosynthesis. Plants absorb water and mineral ions through the root hair cells by active transport.



Minerals move from a low concentration to a high concentration.

Root hair cells have a large surface area and a thin cell wall. Active transport is the movement of particles **against** the concentration gradient and requires energy.

Translocation

The **xylem** transports water and mineral ions around the plant. Xylem cells die during their development so are rigid to withstand high water pressure. The top and bottom cell walls disintegrate to make a long hollow tube.

The **phloem** transports sugars around the plant, they have holes in the end of their cells to allow sugars to flow from one cell to another. They have no nucleus and little cytoplasm. They also have companion cells that make energy for active transport.

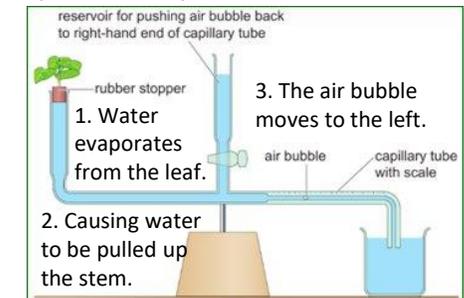
Transpiration

Is the flow of water into a root, up the stem and out of the leaves. Water moves up the xylem as an unbroken 'chain' due to the forces of attraction between water molecules. As water evaporates from the leaves, more water gets pulled up the stem.

The factors that affect transpiration are:

- Wind
- Humidity
- Temperature
- Light intensity

A **potometer** can be used to measure transpiration in a plant.



Inverse square law

To calculate a new light intensity (I_{new}) when the distance of a light source changes (from d_{orig} to d_{new}), we use:

$$I_{\text{new}} = \frac{I_{\text{orig}} \times d_{\text{orig}}^2}{d_{\text{new}}^2}$$

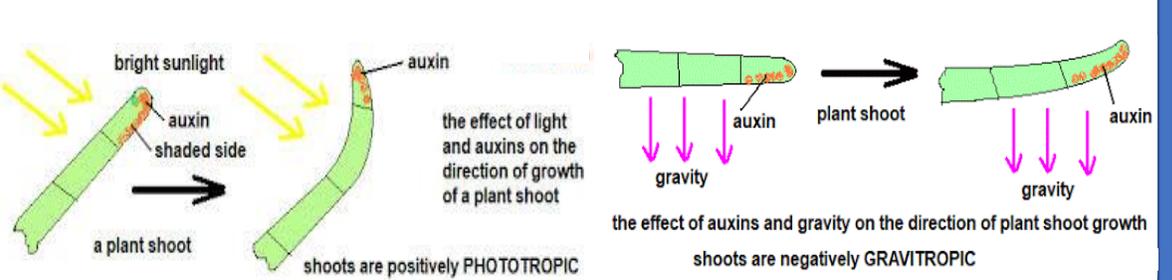
I_{new} is **inversely proportional** to d_{new}^2 (light intensity is inversely proportional to the new distance squared). Light intensity varies with distance according to the **inverse square law**.



Objective		RAG
6.1	Describe photosynthetic organisms as the main producers of food and therefore biomass	
6.2	Describe photosynthesis in plants and algae as an endothermic reaction that uses light energy to react carbon dioxide and water to produce glucose and oxygen	
6.3	Explain the effect of temperature, light intensity and carbon dioxide concentration as limiting factors on the rate of photosynthesis	
6.4	Explain the interactions of temperature, light intensity and carbon dioxide concentration in limiting the rate of photosynthesis	
6.5	Core Practical: Investigate the effect of light intensity on the rate of photosynthesis	
6.6	Explain how the rate of photosynthesis is directly proportional to light intensity and inversely proportional to the distance from a light source, including the use of the inverse square law calculation	
6.7	Explain how the structure of the root hair cells is adapted to absorb water and mineral ions	
6.8	Explain how the structures of the xylem and phloem are adapted to their function in the plant, including: a lignified dead cells in xylem transporting water and minerals through the plant b living cells in phloem using energy to transport sucrose around the plant	
6.9	Explain how water and mineral ions are transported through the plant by transpiration, including the structure and function of the stomata	
6.10	Describe how sucrose is transported around the plant by translocation	
6.12	Explain the effect of environmental factors on the rate of water uptake by a plant, to include light intensity, air movement and temperature	
6.13	Demonstrate an understanding of rate calculations for transpiration	

Seneca Assignment		Score (%)
Photosynthesis	6.1.1 Photosynthesis	
	6.1.2 Photosynthesis 2	
	6.1.3 Grade 9 – Photosynthesis Experiment	
Plant Transport	6.2.1 Water Transport	
	6.2.2 Stomata	
	6.2.3 Water Transport 2	
	6.2.4 Nutrient Transport	
	6.2.5 End of Topic Test - Plants	

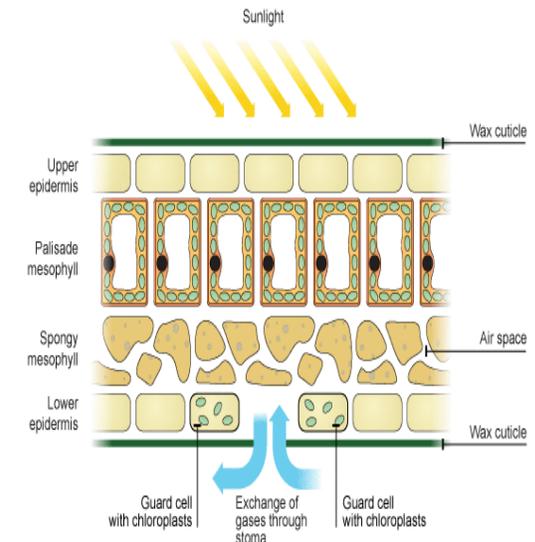
Triple Content – Plant Hormones



Uses of plant hormones

	Germination	Growth to Maturity	Flowering	Fruit Development	Abscission	Seed Dormancy
Gibberellin	✓	✓	✓	✓	✗	✗
Auxin	✗	✓	✓	✓	✗	✗

Adaptations of a leaf



Adaptation	Function
Large surface area	Most leaves are broad and so have a large surface area allowing them to absorb more light.
A thin shape	A thin shape means a short distance for carbon dioxide to diffuse in and oxygen to diffuse out easily.
Chlorophyll	This chemical gives the leaves their green color and transfers light energy to chemical energy.
Veins	Networks of veins support the structure of the leaf and transport substances to and from the cells in the leaf.
Stomata	These are small holes on the underside of the leaf that allow gases to diffuse in and out.



History Knowledge Organiser: Germany 1890-1945 Topic 1 - The Kaiser's Germany

Language for Learning

Kaiser, militarism, Bundesrat, Chancellor, Reichstag, industrialisation, trade union, SPD - Social Democratic Party, socialism, Weltpolitik, patriotic, mutiny, abdicate, November Criminals



Key individuals



Kaiser Wilhelm



Frederick Ebert

Key words

Make sure you understand what each word means and try to use it in a practice answer.

Structure of the constitution

Can you describe the German constitution? Who had the power?

4. Describe... 4 marks

- Describe two problems faced by Kaiser Wilhelm II's governments in ruling Germany up to 1914
- Describe two aims of the Kaiser up to 1914.

5. In what ways were... 8 marks

- In what ways were the lives of people in Germany affected by the First World War?
- In what ways were the lives of German people affected by industrialisation?

Key dates

1870	Germany is created
1888	The 29-year-old Wilhelm became Kaiser
1898 - 1912	Naval Laws increased spending to expand the Navy
1914	August, WW1 began
28/10/18	German naval mutiny at Kiel
9/11/18	Kaiser Wilhelm abdicated
11/11/18	Germany surrendered ending WW1

Life in Germany

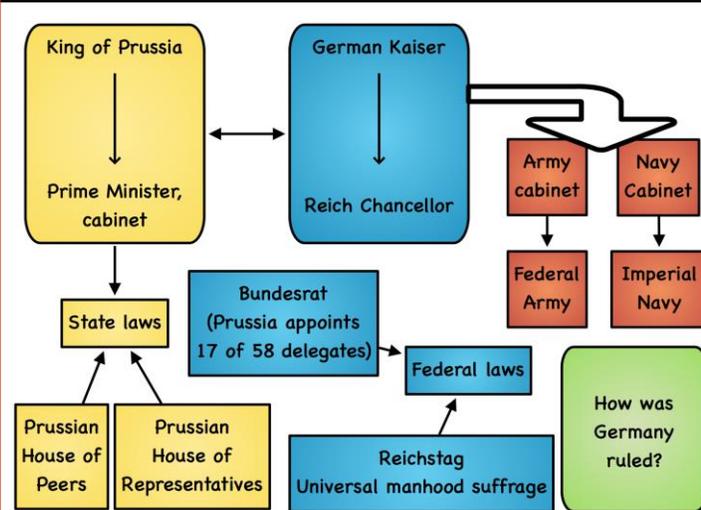
- Industrialisation took place rapidly.
- By 1913 Germany was producing more iron and steel and as much coal as Britain.
- They dominated the European electrical and chemical market.
- Workers were unhappy and joined trade unions to improve their conditions.
- This led to the growth of a new political party called the SPD.

'A place in the sun'

- The Kaiser wanted an empire to rival that of Britain's and this was known as Weltpolitik or world policy.
- The Kaiser believed in the power of the military and usually wore uniform.
- The empire included Togo, Camerons, East Africa and South West Africa.
- To protect the empire the Kaiser wanted a navy the size of Britain's. He introduced a series of Naval Laws to expand the navy and the army grew too. It was 5 million men by 1914.



How was Germany governed?



Sources - what is the point of view being shown in each source?





Language for learning:

Energy
Renewable
Recyclable
Non renewable
Sustainable
Biomass
Oil
Coal
Solar power
Wind turbines
Consumption
Demand
Environmental
Resource
Economic
Poverty
Inequality
Distribution
Fossil fuel
Finite
Fracking
Conflict
Exploiting
Extraction
Efficient
Diversifying
ecological



Why does the global pattern of energy use vary?

Economic Development	Developed countries/high-income countries (HICs) have a high demand for energy as many individuals have electronic goods, transport, heating/cooling buildings. Emerging economies e.g. India use it to power industry.
Economic Sectors	<ul style="list-style-type: none"> Low-income countries (LICs) e.g. Malawi focus largely on primary industries (farming/agriculture) therefore have a lower demand for energy. As a country develops there is a shift to a dominant secondary sector (manufacturing) where energy use drastically increases to power these processes. As a country develops further there is a switch to a largely tertiary economy (services). This means there is less industrial need for energy but more need in the home with increased technology and electrical goods.
Traditional Fuel Sources	In rural areas of developing countries many rely on burning biomass (firewood) for use in the home. These people that lack access to electricity are described as "energy-poor".

Oil Production Vs Consumption

Oil Production	Oil production is uneven. A small group of countries produce most of the world's oil e.g. Russia and Saudi Arabia. Oil is referred to as black gold because it is a valuable commodity. Peak oil (the point when half of the world's oil reserves have been used) changes as we discover new oil
Consumption	Consumption has peaked in HICs but will increase in emerging economies as car ownership increases.

What factors affect the price of oil?

Supply Vs Demand: The price of oil increases if there is more demand than there is supply (too little to go around). The price of oil falls if there is more supply than there is demand (too much oil). There are political and economic reasons that cause variations in supply and demand.

Over-supply	This can occur from poor international relations (relationships between countries). OPEC (Organisation of Petroleum Exporting Countries e.g. Saudi Arabia and Iran) have agreed targets on how much oil they will supply to the global market to ensure prices remain profitable. Failure to set targets and desire to increase sales has led to over-production (more supply than there is demand) and prices decrease.
Under-supply	Not enough oil to go around = price increases. Disruptions to supply (oil spills/political conflicts) can cause prices to increase. Increasing demand from emerging economies as they industrialise can cause prices to rise <i>rise</i> .
Periods of Recession	Less money in the economy meant people bought less goods. Demand for oil decreased. Price of oil decreased.

	Costs of renewable energies	Benefits of renewable energies
Wind	<ul style="list-style-type: none"> ✓ Landscape scarring/spoil view. ✓ Can kill birds. ✓ Expensive to transport energy from offshore windfarms. 	<ul style="list-style-type: none"> ✓ Does not produce CO2 emissions ✓ Can create large amounts of electricity. ✓ Cheapest renewable energy source.
Solar	<ul style="list-style-type: none"> ✓ Expensive to build. ✓ Take up a lot of space that could be used as farmland. ✓ Often in desert habitats which are fragile and damaged during construction. 	<ul style="list-style-type: none"> ✓ No noise created. ✓ Many jobs created worldwide. ✓ Little maintenance required.
Biofuels (made from plant oils)	<ul style="list-style-type: none"> ✓ Large quantities of water required to grow crops. ✓ Increase in deforestation in some countries to create room to farm biofuel crops. 	<ul style="list-style-type: none"> ✓ Less CO2 emissions than fossil fuels. ✓ Biofuels can be manufactured from what would be otherwise waste products e.g. crop waste + manure.
HEP	<ul style="list-style-type: none"> ✓ Dam construction is expensive. ✓ Flooding of land behind the dam (environmental – local scale) ✓ Displacement of people (social – local scale) 	<ul style="list-style-type: none"> ✓ Water can be stored for use in dry-seasons for irrigation of farm land (regional scale) ✓ Electricity can be supplied to large urban areas (national scale) ✓ Reliable and consistent supply of energy.
Hydrogen	<ul style="list-style-type: none"> ✓ Cost is currently extremely high as it is a future energy. ✓ Difficult to store hydrogen safely under pressure which is dangerous for hydrogen-fuelled cars. ✓ Energy is required to separate hydrogen from water which has a carbon footprint. 	<ul style="list-style-type: none"> ✓ Using it produces no greenhouse gases or air pollution. ✓ Does not rely on reserves of fossil fuels which some countries do not have access to.

Which factors affect a countries access to resources?

Distribution of energy resources has helped some countries become wealthy due to large reserves of fossil fuels (coal oil and gas). Access to resources is affected by **accessibility** (how easy it is to get to them) and levels of **technology**.

Geology	Fossil fuels (oil and gas) are found in sedimentary rocks. Saudi Arabia and Iran have 48% of the world's oil and 43% of the gas. Countries located on plate boundaries can take advantage of heat from volcanic activity, used to heat water and create electricity e.g. New Zealand and Iceland.
Relief and Climate	Places with high amounts of rainfall and steep valley sides are chosen for dam construction. Places with lots of sunlight or strong winds are chosen for solar and wind farms.
Accessibility and development	Lack of technology to access existing energy is a problem for some countries. Countries in Africa have huge potential to develop HEP, Geothermal and solar energy but is lacking the funds and investment. Many still rely on biomass (collecting firewood) for energy.



Data questions
(up to 4 marks)

The trend shows....I know this because.....
I can also see a data pattern between..... I
know this because (compare 2 pieces of data)



Knowledge questions
(up to 4 marks)



Explain two reasons for lower fossil fuel oil prices in some years.

- Name two clear reasons for lower fossil fuel prices.
- For each reason clearly give reasons how they reduce fossil fuel oil prices.
- Use key terms throughout your answer.
- Use connectives to make links between sentences.
- Ensure that your explanation is a development from your initial point.

Application questions
(up to 8 marks)



Assess the environmental impacts of exploiting Indonesia's energy resources.

- Follow the P.E.E structure to ensure that you get the maximum amount of marks.
- Underline the command word and define it.
- Circle any key terms in the answer, what is the question asking you?
- Make clear links back to the question.
- 3 clear paragraphs!

Mark schemes for 4 mark question.



For each reason, award 1 mark for a basic reason and one mark for expansion, up to a maximum of 2 marks.

Prices in Figure suggests falls could be triggered by peaks (1) showing commodity prices can rise / fall in cycles (1)

Consumers may seek out / be attracted to alternative energy sources (1) so oil producers lower prices to lure them back (1)

Prices fall in 2012 might be because supply increased (1) for instance due to political decisions by oil producers to increase output (1)

Prices fall in 2008 might be because demand fell (1) which may be linked to world events / happened in the global financial crisis (1)

Mark schemes for 8 mark question.

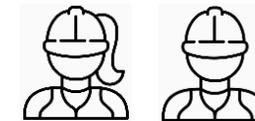


Level	Mark	Descriptor
	0	No acceptable response
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)



Topic 9: Questions to consider

1. Define the terms renewable, non-renewable and recyclable.
2. What does the term finite mean?
3. What will the UK's energy mix look like in the future?
4. How effective are renewable method of energy?
5. What is the relationship between supply and demand of energy?
6. Is it possible for homes to be fully energy efficient?



SENTENCE BUILDER: Relaciones con mi familia y amigos [Relationships with my family and friends]

Creo que [I think that]	me ayuda [he/she/it helps me]	cuando tengo un problema [when I have a problem]	sufro acoso [I am bullied] discuto con <u>mis amigos</u> [I argue with <u>my friends</u> con mis estudios [with my studies] en el colegio [at school]
	me ayudan [they help me]	cuando necesito hablar/dinero [when I need to talk/money]	
En mi opinión [In my opinion]		por la ropa que llevo/porque <u>no</u> me dan mucho dinero [because of the clothes I wear/because they don't give me much money] por culpa de las redes sociales [because of the social media] porque <u>no</u> me entienden cuando tengo un problema [because they don't understand me when I have a problem] porque <u>no</u> me dan buenos consejos [because they don't give me good advice] porque <u>no</u> me dejan salir/quiero más libertad [because they don't let me go out/I want more freedom]	
Diría qué [I would say that]			
Desde mi punto de vista [From my point of view]	me llevo bien [I get on well]		
Lo bueno es que [The good thing is that]	no me llevo bien [I don't get on well]		
Lo malo es que [The bad thing is that]	me llevo genial [I get on great]	siempre [always]	está de buen/mal humor [he/she is in a good/bad mood] me pone de los nervios [he/she gets on my nerves] me deja tranquila [he/she leaves me alone] me escucha [he/she listens to me] me critica/elogia [he/she criticises me/praises me] me pega [he/she hits me] me chilla [he/she shouts at me] me quita las cosas [he/she takes my things] me comprende [he/she understands me] me da privacidad [he/she gives me privacy] entra en mi habitación [he/she comes in my room] se queja [he/she moans/complains] se burla de mí [he/she makes fun of me] lo hace todo bien/mal [he/she does everything well/wrong] tiene paciencia [he/she does have patience] dice la verdad [he/she tells the truth]
Lo mejor es que [The best thing is that]	me llevo fatal [I get on terribly]	nunca [never]	
Lo peor es que [The worst thing is that]	discuto [I argue]	casi siempre [almost always]	
		ya que [because]	
		casi nunca [hardly ever]	

MIS NOTAS

ADJETIVOS POSITIVOS 

activo/a	[active]	alegre	[happy]
comprensivo/a	[understanding]	sincero/a	[sincere]
entretenido/a	[entertaining]	generoso/a	[generous]
educado/a	[polite]	solidario/a	[thoughtful/supportive]
humilde	[humble]	guapo/a	[handsome/pretty]
modesto/a	[modest]	inteligente	[intelligent]
simpático/a	[nice]	razonable	[reasonable]
tolerante	[tolerant]	agradable	[friendly/pleasant]
amable	[kind]	cariñoso/a	[affectionate]
honesto/a	[honest]	hablador/a	[talkative]

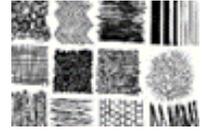
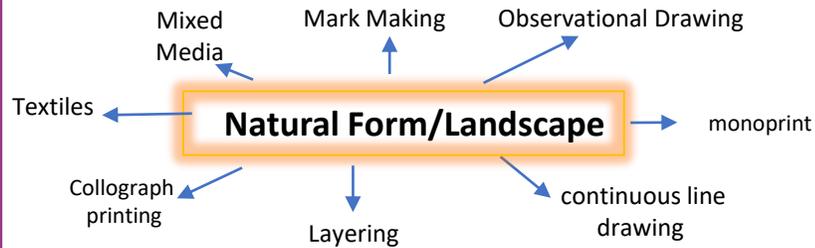
ADJETIVOS NEGATIVOS 

aburrido/a	[boring]	antipático/a	[mean]
creído/a	[big-headed]	despistado/a	[absent-minded, dopy]
estúpido/a	[stupid]	feo/a	[ugly]
malhumorado/a	[bad-tempered]	mentiroso/a	[liar]
mimado/a	[spoilt]	perezoso/a	[lazy]
tacaño/a	[stingy]	triste	[sad]
testarudo/a	[stubborn]	arrogante	[arrogant]
maleducado/a	[rude]	egoísta/a	[selfish]
intolerante	[intolerant]	travieso/a	[naughty]
tímido/a	[shy]	pesado/a – molesto/a	[annoying]



Language for Learning:

- Continuous Line
- Layers
- Merge
- Expressive
- Creative
- Proportion
- Tone
- Collograph
- Expressive
- Mixed media
- Refine
- Mono print
- Textiles
- Mark Making



Key Artists

Gretchen Kelly



Paula Brett



Kurt Jackson



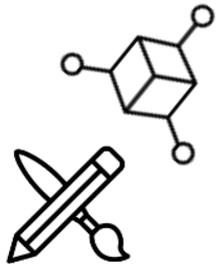
Natalie Ratcliffe



Bess Frimodig



AIM: To refine all portfolio work and add a final project to include a final piece for at least 1 project.



AIM: To develop a set of artist research sheets showing an understanding of the techniques and media used. To include elements of AO2 and AO3 through careful composition and creative presentation.....This will also from part of your portfolio.



CONTEXTUAL STUDIES CONT'D



Work from artists covered in your contextual studies booklet will be included as part of your final portfolio. You will be selective when deciding which artists you will research and where possible, find links between their work and your own.

PORTFOLIO PRESENTATION....is key!



Questions to consider.....



How	Can I create my own version of the artists' work? Can I express my own personality and opinions visually?
Explain how	You have developed your ideas. What techniques and media you have used and why these are appropriate to your personal journey.
What	Makes the artist' work successful. Have you used the same/similar media in a way that demonstrates the same success?
Which	Of the experiments you have chosen to develop further show the most effective used of media?
Explain	Who and what has inspired your ideas. Talk about your decisions and explain how you have modified your work.
Why	Did you select your theme and artists and why is the media you have used appropriate to the theme(s)?
What	Are the main characteristics of each artists work and what are their strengths?

How will you select and present your portfolio in a way that will showcase it best?





KS4 ART – Knowledge Organiser: PORTFOLIO DEVELOPMENT – Landscape/Natural Form

There are 4 assessment objectives in GCSE Art:

A01 Develop ideas through investigations, demonstrating critical understanding of sources	A02 Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes
DEVELOP INVESTIGATE	REFINE EXPERIMENT
EXPLAIN ARTISTS IDEAS ANNOTATE	EXPLORE TECHNIQUES AND SKILLS SELECT EXPLAIN
contextual research	PHOTOGRAPHS
EXPLORE	IDEAS
A03 Record ideas, observations and insights relevant to intentions as work progresses	A04 Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language
RECORD INTENTIONS	RESPONSE MEANINGFUL
LINK OBSERVATION IDEAS PLANNING	VISUAL LANGUAGE DEMONSTRATE
PRIMARY RESEARCH	UNDERSTANDING
RELEVANT	MAKE CONNECTIONS CONCLUSION

All 4 Assessment Objectives must all be covered in depth to achieve your potential.

To summarise:

AO1: Artist research and inspiration.

AO2: develop and refining experiments successful techniques.

AO3: Recording observations-taking lots of photographs and making notes

AO4 Making final outcome/s or response.

YOUR PORTFOLIO IS YOUR COURSEWORK. THIS IS 60% OF YOUR FINAL GRADE YOUR EXAM IS 40% OF YOUR FINAL GRADE

THE EXAM PAPERS ARE DISTRIBUTED IN JANUARY 2021. EXAM PREPARATION STARTS IMMEDIATELY AFTER THIS!

Sentence starter for annotation:

- I am interested in the work ofdue to their use of.....
- I am intrigued by the artisttheir use ofcreates an aesthetically pleasing outcome.
- The artistlinks well to my subject matter due to the way they.....I intend to develop this characteristic in my own work by experimenting with
- I aim to use the characteristics of.....within my work, to do this I am going to develop.....

EXTENDED LEARNING

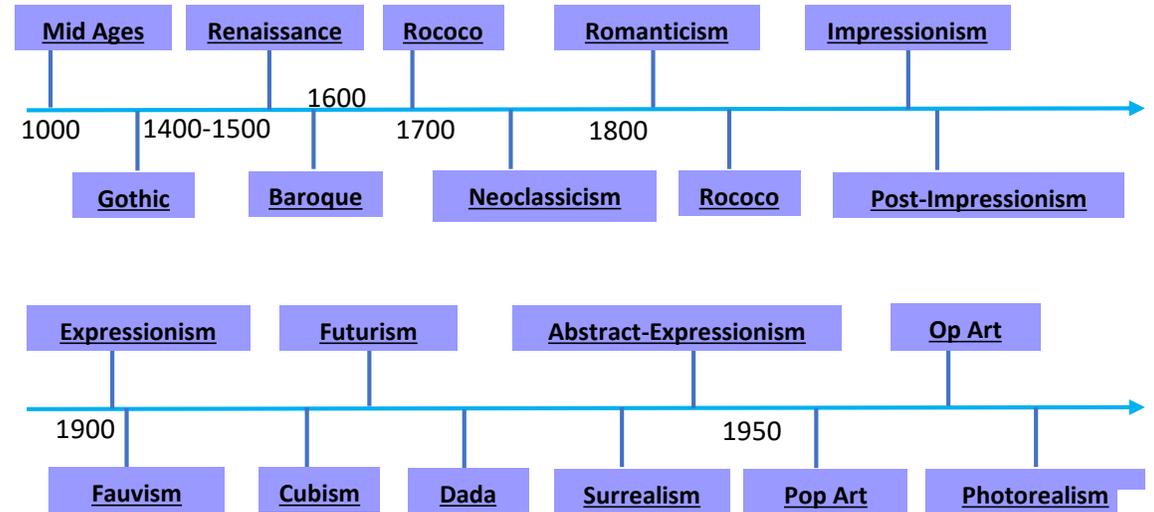
Anything that appeals to you creatively is acceptable to include in your portfolio. For example, if you use Pinterest and you see an image or project that appeals to you then have a go. There are many online exhibitions you can view and galleries you can follow which may also inspire you! Remember, your artwork can be anything – there is no right or wrong as long as you can show evidence of the assessment objectives through your work. Here is a list of galleries and exhibitions you may want to look and and some more artists who have been popular with our students over recent years.....

freartfridaymcr
manchestercraft
thelowry
Homemcr
mcrartgalery
Whitworthart
yppsculpture



frieze_magazine
friezeartfair
artnet
saachi_gallery
artforum
tate
Themuseumofmodernart

TIMELINE





Knowledge Organiser

BTEC Level 1/2 Tech Award in Health and Social Care

Component 3: Learning Aim B – Interpreting Health Indicators

Language for learning



Lifestyle data

- Smoking
- Alcohol
- Inactivity
- Poor diet
- Other substance abuse (legal or illegal)

Physiological data

- Pulse/heart rate
- Blood pressure
- Peak flow
- Body mass index (BMI)

Questions to consider



Question 3: Lifestyle and physiological indicators

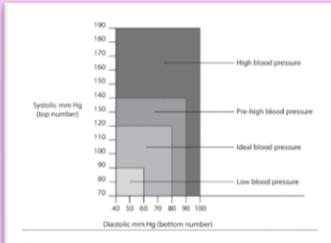
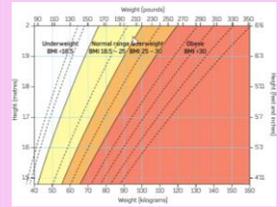
Explain what the data provided by the practice nurse suggests about the person's:

- Current physical health
- Risks to future physical health

The bigger picture

Can you think about recommended actions and short/long term targets to improve health and wellbeing?

Indicator	Smoking 	Alcohol 	Inactivity 	Poor diet 	Other substance abuse 
Healthy range	None	14 units per week	3-5 times per week (mod/int)	2000/2500 Kcal, Eatwell Guide, 5 a Day	None
Risks to current physical health	Breathing problems Smoker's cough, unfit May make asthma worse	Risky behaviour, hangover Mood swings Alcohol poisoning	Overweight, unfit Get out of breath easier Reduced metabolism	Overweight/underweight Malnourished, low energy Deficiency eg anaemia	Risky behaviour, accidents Mood swings Heart palpitations
Risks to future physical health	Cancer - lungs, mouth Addiction, lung disorders Heart attack, stroke	Liver disease/failure Addiction, mental health problems, heart attack	Heart disease, obesity Cancer Mobility issues, joint problems	Type 2 diabetes, obesity Eating disorder Cancer, heart disorders	Death, heart or brain damage Addiction Mental health problems

Indicator	Pulse/heart rate (bpm) 	Blood pressure (mmHg) 	Peak flow (L/min) 	Body mass index [BMI] (kg/m ²) 																																																																																																																																																																															
What it means	How fast your heart is beating	Pressure exerted by your blood against the walls of your arteries	How quickly you can blow air out of your lungs	Amount of fat in your body in relation to your height																																																																																																																																																																															
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Risks to current physical health	Poor fitness levels, harder to exercise. May have unhealthy lifestyle May feel dizzy/ sweaty. Heart is having to work harder.	Hypertension (too high) - May be stressed Hypotension (too low) - May feel dizzy/faint	Asthma may get worse Chest infection Breathing difficulties Shortness of breath Unable to exercise	Overweight - Tiredness, shortness of breath - Reduced mobility, harder to exercise Underweight - Potential eating disorder/undiagnosed illness																																																																																																																																																																															
Risks to future physical health	Heart disease Artery damage Premature death	Heart disease, heart failure, heart attack Kidney disease Strokes	Lung cancer Emphysema Respiratory infections e.g bronchitis	Heart disease, heart failure, heart attack Obesity, type 2 diabetes, stroke Joint problems/ arthritis Increased risks of cancer																																																																																																																																																																															



Preparation for the BTEC Examination External Assessment
BTEC Level 1/2 Tech Award in Health and Social Care
Component 3: Learning Aim B – Interpreting Health Indicators

From the specification: AO2 Interpret health indicators

For Level 2 Distinction: Learners They demonstrate the ability to interpret lifestyle and physiological data to explain factors that could potentially affect an individual's current and future physical health.

For Level 2 Pass: Learners demonstrate a high level of ability to interpret lifestyle and physiological data to explain clearly, and in detail, factors that could potentially affect an individual's current and future physical health.

Question 3

You will be provided with some lifestyle and physiological data about the individual. There will be three sections. One for 'lifestyle' data and then two separate physiological data sections (do not get these mixed up). For each section you must:

Explain what the data provided by the practice nurse suggests about the person's:

- Current physical health
- Risks to future physical health

Literacy signposts

Lifestyle indicators: interpret the information provided and identify if the person's habits are in a healthy range or not. Then explain the impact on current health and risks to future health.

Current health:

- *By smoking cigarettes he/she may have breathing problems/be unfit/have a smoker's cough.*
- *Drinking more than the recommended weekly units of alcohol will make him/her more likely to suffer from hangovers which cause headaches and a low mood.*
- *His/her inactivity suggests that he/she may be unfit/more likely to get out of breath easily/have a reduced metabolism which can make him/her more likely to be overweight.*

Risks to future health:

- *Smoking increases the risk of ...*
- *Drinking this much alcohol can cause future health problems including...*
- *If he/she does little exercise this can lead to ... in the future because ...*

Physiological indicators: interpret the data from the graph/table you have been given and identify if the measure is too high or low. Then explain the impact on current health and risks to future health.

Current health:

- *His/her pulse rate is too fast. This suggests that they may have poor fitness levels and ...*
- *His/her blood pressure is too high which could show that they are suffering from stress.*
- *His/her peak flow is low for her age suggesting he/she may have some breathing difficulties.*
- *The low BMI shows that ... is underweight. This could mean they are feeling tired and lack energy.*

Risks to future health:

- *This can result in ...*
- *This could lead to ...*
- *This puts him/her at a higher risk of ...*
- *In the future this could cause ...*

Mark scheme

Data must be interpreted accurately.

There is a clear and detailed explanation of current state of health.

There is a clear and detailed explanation of potential health risks.

Examiners' report

Learners must accurately interpret the physiological and lifestyle data, and not just directly quote them.

Learners must provide interpretation or analysis of the data to fully show their knowledge and understanding.

Learners must fully explain the impact on current physical health. Learners must fully explain the risks to future physical health.

Learners must not repeat similar risks across all three sections.

Learning Aim C- Implement a self-designed personal fitness training programme to achieve own goals and objectives

Wear correct training gear, safe and correct use of equipment, implementation of correct technique, awareness of wider safety issues e.g. personal safety if training outdoors.



Training diary for each session recording

- Date, time location of training undertaken
- Aims and objectives for each session
- Session duration
- Types of training undertaken- selected method/activity
- Programme details (FITT)
- Log of personal performances and achievements
- Resources required e.g. equipment
- Principles of progressive overload and how this has been achieved over the course of the programme
- Details of programme intensity using % HR max and RPE

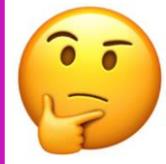
Measure for success

- Types of motivation (intrinsic and extrinsic)
- Motivation for training, including details in the diary of personal feelings before, during and after each training session
- Details of how the programme has been adapted to ensure continued commitment to training, e.g. using variation of activities/training methods
- Achievement against personal aims, goals and objectives, e.g. how performance has been taken to a higher level



Training Diary Example

Week 1 Training Diary			
Date: 28/11/18	Time: 3.00pm	Location: School fitness gym	Duration: 45 mins
Aims/objectives: To improve my aerobic endurance. <ul style="list-style-type: none"> • Take part in interval training • Stick to the plan I have made or make it harder • Try my best in every session 			
Training activities undertaken (including FITT): Warm up of: Pulse raiser – 2 mins jogging, 2 mins sidesteps, 1 minute of high knees. SAQ Ladders. Joint mobilization - 1 minute of walking lunges, 1 minute of shoulder rotation, 1 minute of hamstring walks Stretching - 1 minute of lunges and hold it for 2 seconds, 30 secs static stretch both quadriceps, 1 minute of side Lunges hold it for 2 seconds.			
Main session: Exercise bike- 2 minute at 50% MHR and then 1 min at 75% MHR X 6 Cool down: Pulse lowering activity - 2 minute of jogging, 2 minutes of sidesteps, 2 minutes of walking to lower pulse rate Stretching - Lunges 1 minute, Calf stretch, Quadriceps stretch			
Resources required for training activities: stopwatch, SAQ Ladders, exercise bike, kit, trainers			
What are your personal performances and achievements? (Comment on goals, aims and objectives) I couldn't do most of my warm up because we were in the fitness suite so I had to change it to 5 minutes jogging on the treadmill at RPE 10 and 5 minutes on the cross trainer at RPE 12. I completed all of the stretches though before I started the main bit. I met all of my objectives as I did interval training and I tried really hard. I completed all 6 repetitions of the interval training and managed to do a cool down in the time we had.			
Training intensity (% HR Max): 50% and then Approx 75% in the sprint		RPE during session: 15	
Comments on progressive overload and how you may need to change the next session: Next week I am going to ask Sir if I can add some SAQ ladders at the start of the session to make the session more interesting. The main bit of the session was pretty boring and I think I could work harder. I will decrease the rest (50% MHR) to 90 seconds rather than 2 minutes to make it harder next week.			
How did you feel before, during and after this session? I felt a bit nervous before starting the training session because I didn't know if I could manage to cycle for 18 minutes without stopping. I think this affected by intrinsic motivation in a good way because it made me want to try harder to finish the session. I was really tired at the end. Sir was really good when I was getting tired because he encouraged me to push myself. During the session I felt quite hot because I was indoors but I managed to keep going for the whole session. After a rest and a drink, I started cycling and after a minute or so I found a good rhythm, for the last minute I really found my legs hurting which I think was lactic acid.			



WWW
What went well

EBI
Even better if

Learning Aim D- Review a personal fitness training programme

Review programme

This should include short term physiological effects, improvements as a result of the programme to meet the activity/sport goal. **(Physiological effects should link back to learning aim B)**

- After each training session
- Evidence of modifying the programme to achieve planned personal goals

Strengths:

- Areas of the programme where and **how** personal aims and objectives have been achieved with **reference to measure of success.**

Areas for improvement:

- Where outcomes do not meet planned goals
- Recommendations for improving future training and performances**
 for example personal training needs, use of different training methods/activities or strategies, use of psychological training techniques to improving performance.

Comparison to previous test results

Test	Result	Component Tested	Rating
12 Min Cooper Run			
1 Minute Press Up Test			
1 Minute Sit Up Test			
Sit & Reach Test			
Vertical Jump Test			
BMI			

Video/Photographs Evidence
 You need to show evidence that you have completed training sessions. This can be through the use of video evidence by recording short clips of the activity you are performing whilst introducing yourself at the start.
 Annotated photographs can also be used as evidence showing you complete exercises

COMPONENT 3 BTEC TECH PERFORMING ARTS (ACTING)

Devise a performance in response to a stimulus provided by the exam board. Both parts of the task (written and performance) will be completed under supervision. There is a 12 week window for all parts to be completed. The component is marked out of 60.

Assessment objectives

AO1 - Understand how to respond to a brief. Discuss and practically **EXPLORE** the stimulus considering: target audience, performance space, planning and managing resources, running time and style of work.

Develop ideas considering: structure of work, style and genre used, skills required, creative intentions.

Work effectively as a member of the group making an individual contribution and responding to the contribution of others.

AO2 – Select and develop skills and techniques in response to a brief. Demonstrate **HOW** to select and develop skills and techniques that are needed for the performer and whole group and take part in the rehearsal process.

AO3 – Apply skills and techniques in a workshop performance in response to a brief

Contribute to a workshop performance using: vocal, physical and interpretative skills. (18 marks)

This performance will last

AO4 – Evaluate the development process and outcome in response to a brief

Evaluate the process and performance. Consider: the brief, stimulus and contribution from other group members. Reflect on: selection of skills used, individual strengths/areas for improvement, overall and individual contribution to the group, impact of the groups work.

Key vocabulary

Target audience – who you will perform to and why

Performance space – choosing where the performance will take place if not on the stage and why

Running time – length of the performance

Style of work – genre or practitioner who will influence your work

Vocal skills – ability to adapt voice to suit a character

Physical skills – movement, gestures, body language, facial expressions

Interpretative skills – presenting yourself to the audience and creating emotion

Commitment – how much effort you put in individually and as a group

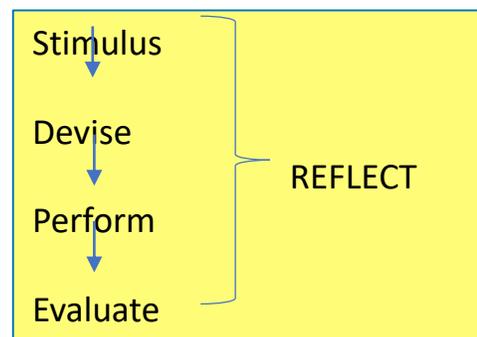
Rehearsal – practicing the performance

Blocking – deciding where an actor should stand

Performance – Showing of the piece of work to the target audience

Evaluate – identify strengths and areas for improvement of both the rehearsal and performance

Characterisation - creating a character through your movement and dynamic choices





Language for Learning

- Values
- Emotions
- Gender
- Sexuality
- Assertive communication consent
- Contraception
- Sexual health
- Exploitation
- Support
- Risk
- Safety
- First aid
- Lifestyle choices
- Screening and self-examination
- Vaccinations/ immunisation
- Blood, organ and STEM cell donation.
- Families
- Marriage
- Change
- Loss
- Bereavement.



CONSENT



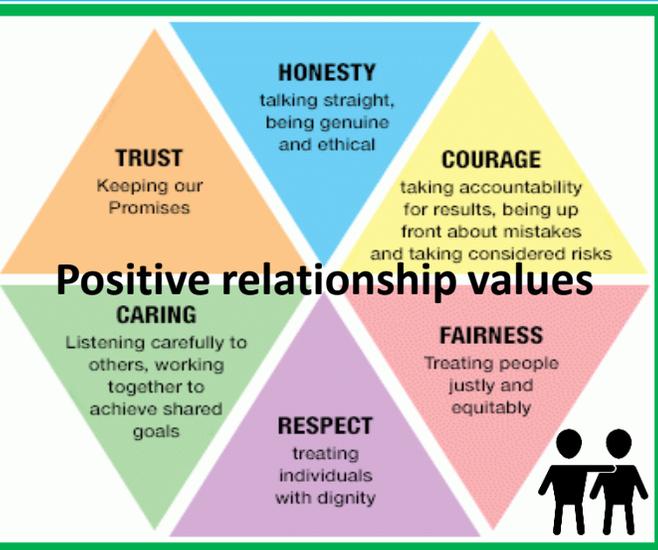
- Freely Given
- Reversible
- Informed
- Enthusiastic
- Specific

Personal Values are “broad desirable goals that motivate people's actions and serve as guiding principles in their lives. **Personal values** are desirable to an individual and represent what is important to someone. Examples include:

- Honesty
- Trust
- Justice
- Love



Christian values that will be embedded in PSHE lessons:
Compassion, Forgiveness, Friendship, Hope, Humility, Justice, Love, Peace, Thankfulness, Trust, Wisdom, Endurance



3 Ways to Practice Assertive Communication

Say what you mean.

The hallmark of assertive communication is being open and honest with our thoughts, balanced by care and concern for the other person.

Reflect on your conversational status.

Assertive communicators self-monitor during conversation to observe if respect is present on both sides.

Practice empathy often.

Treat others the way you would want to be treated—which is often called the Golden Rule.

(Luke 6:31)



LifeHopeandTruth.com

HOW VACCINES WORK



Vaccines contain a modified form of virus or bacteria that doesn't cause disease, but does "teach" your immune system what to do if you are ever attacked by the real, potentially dangerous virus or bacteria.

When you get vaccinated, your immune system responds just as it does to any other "intrusion", by creating antibodies to fight off the particular virus or bacteria.



For some diseases, more than one dose of the vaccine, or a booster dose later in life, may be needed to ensure full and lasting protection.



After vaccination your body remembers this specific intruder. If you ever come in contact with the real virus or bacteria, the right antibodies quickly destroy it – before it has the chance to make you sick.



Herd immunity



When you and nearly everyone else in your community is immune to a contagious disease, it cannot spread easily. Together you prevent the virus or bacteria from reaching those who cannot be vaccinated against it, including babies too young for the vaccine and individuals with health conditions or who are undergoing treatments that weaken their immune systems.



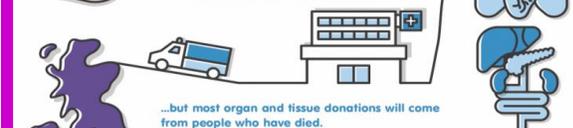
Consult your GP

Why should I become an organ donor?



Organ donation is the act of giving an organ to save or improve the life of someone who needs a transplant.

You are able to donate some organs while you're alive, for example, a kidney, or part of your liver...



...but most organ and tissue donations will come from people who have died.



More than 50,000 people are alive today, across the UK, due to the generosity of organ donors and their families.

But right now, around 6,000 seriously ill people are waiting for a life-saving transplant.



You can register your decision to donate by signing up as a donor on the NHS Organ Donor Register and informing your family of your decision.



Three people die each day in need of a transplant.

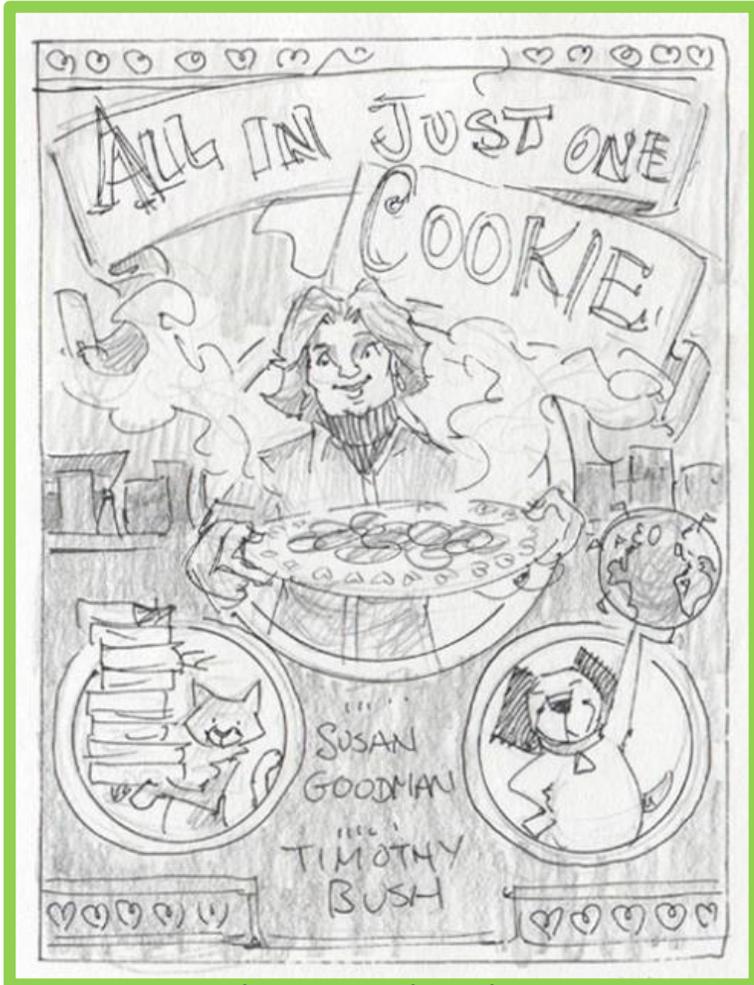
Please go to organ donation.nhs.uk and sign up now



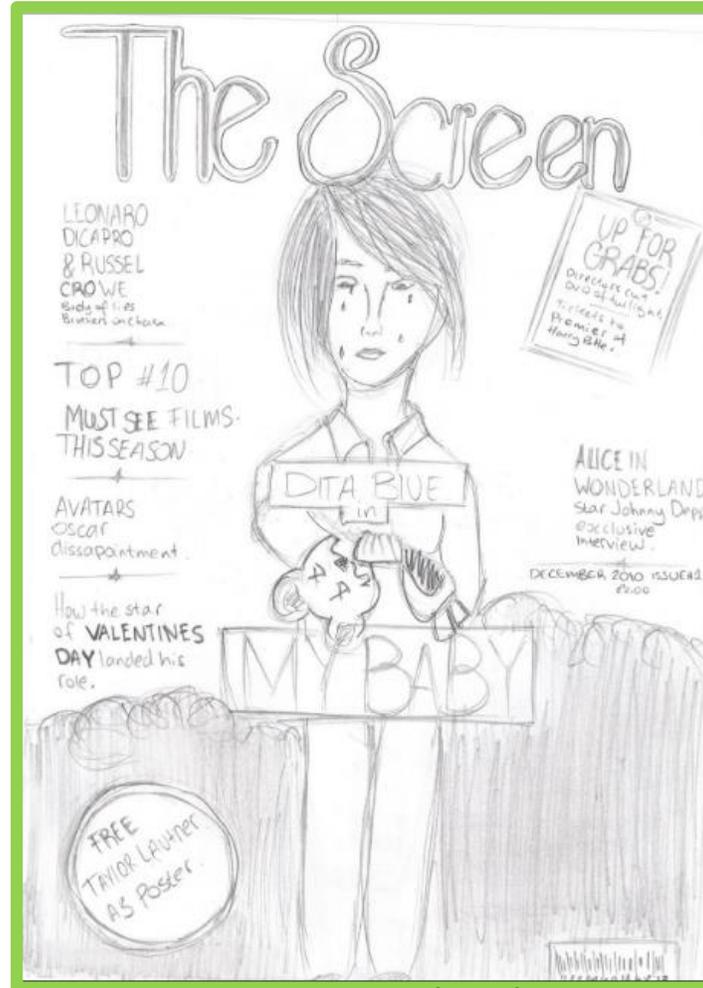
Sketch/Thumbnails

A sketch is a large detailed drawing of the final idea. It is often accompanied with annotated notes regarding key design ideas such as colour and font choice, and how these meet the brief or engage the audience.

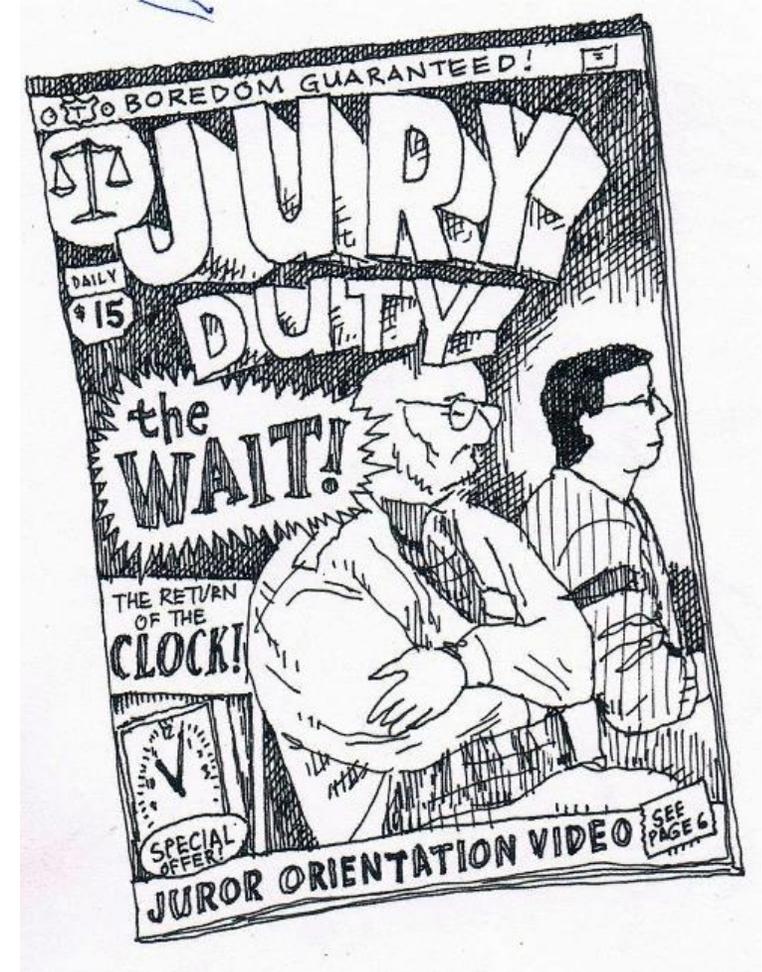
You will be asked to do them in component 2 and 3. Memorise the WAGOLL's below:



Book cover sketch



Magazine cover sketch



Comic book cover sketch



Flat Plan

The **flatplan** is a page plan of a publication that shows how the articles and adverts are laid out. You will be asked to do them in component 2. Memorise how to create a flat plan below:

A flatplan shows where all articles and adverts are laid out, and in what order. It allows complete control of the publication production process avoiding confusion.

Without a flatplan, the production director and advertisement director struggle to control which pages go where. This makes signing off a publication very difficult and time-consuming.

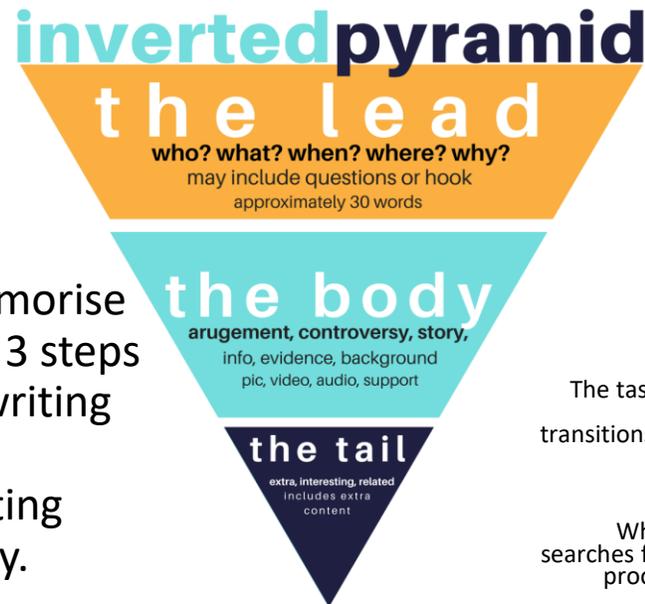
Flatplans started life drawn out on pieces of paper stuck to the wall of the production team. As pages moved around, and advertisements were booked (and cancelled) the pages were annotated and amended.

Nowadays, paper flatplans are being replaced by digital flatplans.



Writing and Editing Copy

The great **distinction** between **content writing** and **copywriting** lies in the purpose of **writing** it. **Copywriting** means **writing** for the sake of promotional advertising or marketing. The purpose of **content writing** is to entertain and entice the online audiences so they stay longer on websites and engage with the brand.



Step 2 - Copy editing

The tasks involved in copy editing include checking written material for grammar, spelling, style, and punctuation issues before it's prepared for proofreading. A copy editor may also do a rewrite, if necessary, to fix any problems with transitions, wordiness, jargon, and to ensure the style of the piece fits with the publication. This work is known as revision.

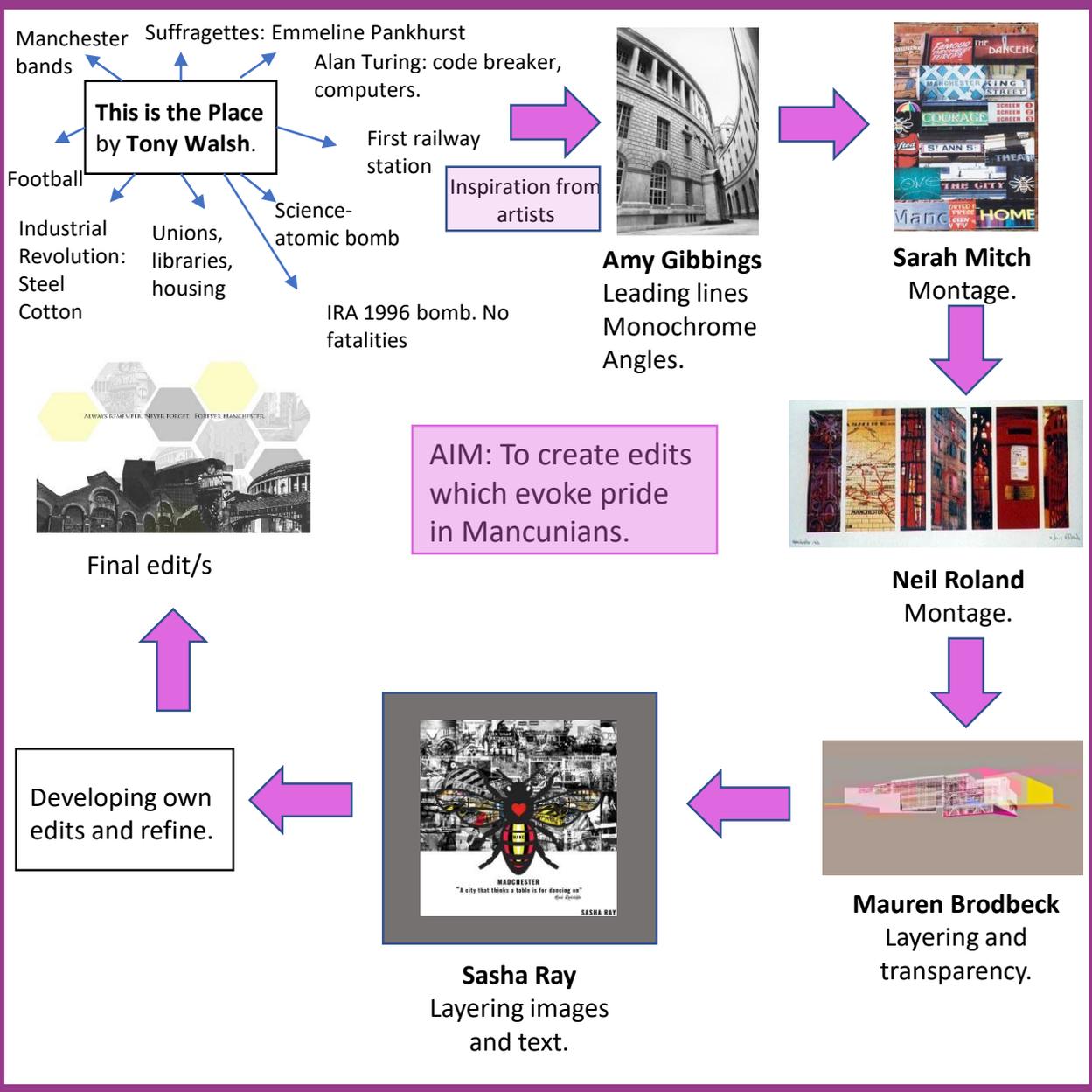
Step 3 - Proofreading

When the material is nearly a finished product, meaning it has been edited, laid out, and designed, the proofreader searches for typographical errors. The proofreader works with a facsimile of a finished product, or a *proof* (hence the term proofreading). Proofreaders don't suggest major changes to the text; rather, they look for minor text and formatting errors and confirm the material is ready for publication.



KS4 Photography GCSE – Topic 5: Manchester: This is The Place. Knowledge Organiser

- Language for Learning:**
- Aesthetics
 - Aesthetically
 - Alan Turing
 - Argh Kid
 - Amy Gibbings
 - Analogue camera
 - Characteristics
 - Commission
 - Composition
 - Contrasting
 - Darkroom
 - Develop
 - Digital
 - Emmeline Pankhurst
 - Evoke
 - Hexagon
 - Hive
 - Honeycomb structure
 - Focus
 - Imagery
 - Industrial Revolution
 - Inspiration
 - Inspired
 - IRA
 - James Wakefield
 - Mancunian
 - Mauren Brodbeck
 - Montage
 - Neil Roland
 - Ryan Williams
 - Sarah Mitch
 - Sasha Ray
 - Similarities
 - Subject Matter
 - Suffragettes
 - Tony Walsh



Questions to consider.....

How	will we illustrate the poem This is the Place through Photography? Look at the main points surrounding the title of the poem-how will we illustrate these?
Explain how	You will ensure your edit/s will make strong visual links to the work of the artist.
What	could make your compositions even more successful? Does the hive/honeycomb feature? Have you chosen an evocative phrase from the poem to add to your edit?
Which	characteristics have you taken from the artist to influence you in this edit?
Explain	which lines of the poem indicate the: industrial revolution/how the city is at the heart of innovation/ resilience of the people.
Why	Is Emmeline Pankhurst/Alan Turing an important figure to Manchester?
What	Are the main characteristics of each artists work?

Which factors link to today's learning? Social / historic/ political / artistic influence/ technical skills...	Who are the key artists?
How does this learning link to the big picture?	

KS4 Photography – Topic 5: Manchester-This is the Place Preparing you for GCSE Style Exam

There are 4 assessment objectives in GCSE Photography:

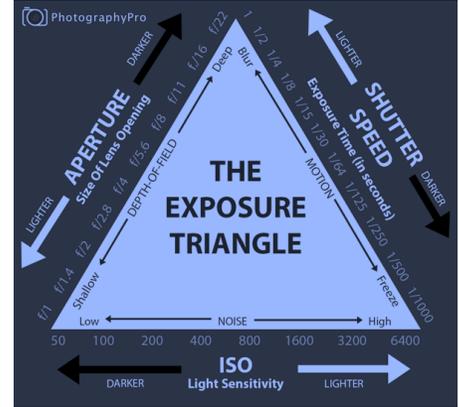
A01 Develop ideas through investigations, demonstrating critical understanding of sources	A02 Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes
DEVELOP INVESTIGATE EXPLAIN IDEAS ARTISTS ANNOTATE contextual research EXPLORE	REFINE EXPERIMENT EXPLORE TECHNIQUES AND SKILLS SELECT EXPLAIN PHOTOGRAPHS IDEAS
A03 Record ideas, observations and insights relevant to intentions as work progresses	A04 Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language
RECORD INTENTIONS LINK IDEAS OBSERVATION PLANNING PRIMARY RESEARCH RELEVANT	RESPONSE MEANINGFUL VISUAL LANGUAGE DEMONSTRATE UNDERSTANDING MAKE CONNECTIONS CONCLUSION

All 4 Assessment Objectives must all be covered in depth to achieve your potential.

To summarise:
 A01: Artist research and inspiration.
 A02: develop and refining both photoshoots and editing.
 A03: Recording observations-taking lots of photographs and making notes
 A04 Making final outcome/s or response.

- Photoshop Tools
-  Move tool
 -  Rectangular Marquee tool
 -  Polygonal Lasso tool
 -  Quick selection tool- sees Shape
 -  Magic Wand- sees colour
 -  Crop
 -  Eye dropper- selects colour
 -  Spot healing brush
 -  Healing brush
 -  Brush tool
 -  Gradient tool
 -  Eraser tool
 -  Pencil tool

- ISO
 - Aperture
 - Shutter speed
- 



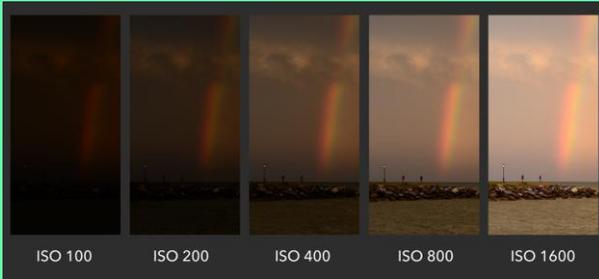
Aperture can be defined as the opening in a lens through which light passes to enter the camera. It is expressed in f-numbers like f/1.4, f/2, f/2.8 and so on to express the size of the lens opening.

Size of Aperture: Large vs Small Aperture



f/2.8 f/4 f/5.6 f/8 f/11 f/16

Camera settings

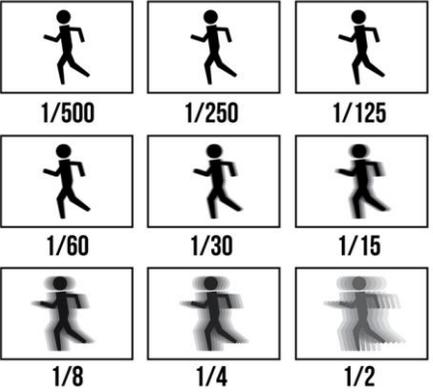


ISO 100 ISO 200 ISO 400 ISO 800 ISO 1600

ISO is simply a camera setting that will brighten or darken a photo.

The higher the ISO setting, the less amount of light needed to achieve the correct exposure.

The lower the ISO setting, more light is needed to achieve correct exposure.



1/500 1/250 1/125
 1/60 1/30 1/15
 1/8 1/4 1/2

The **shutter speed**, is just how long that barrier stays open to let light into the image.

Shutter speed is how long an image is exposed to light — it can be milliseconds, or even minutes.

- Sentence starter for annotation:**
- I am interested in the work ofdue to their use of.....
 - I am intrigued by the artisttheir use ofcreates an aesthetically pleasing outcome.
 - The artistlinks well to my subject matter due to the way they.....I intend to develop this characteristic in my own work by experimenting with
 - I aim to use the characteristics of.....within my work, to do this I am going to develop.....

VALUES

ASPIRATION I believe that having high aspirations can motivate me to work hard and achieve my goals without excuses. I have high expectations in everything I do. Aspiration is valuable because it allows me to look beyond my current experiences and to understand, interpret and change the world for the better. *“For I know the plans I have for you, declares the Lord, plans to prosper and not to harm you, to give you hope and a future” Jeremiah 29:11*

INTEGRITY I believe that living my life by high moral standards and values is important. I understand how values are grounded in faith and biblical teaching. I commit to doing the right thing in all circumstances, even if this makes things more difficult for me and when no one is watching. I take responsibility for myself and my community to help it improve for everyone. *“Whoever walks in integrity walks securely” Proverbs 10:9a*

RESPECT I believe that mutual respect is the most important element in a kind and cohesive community. Respect, and self-respect, means that I take things seriously. I care about myself and others and aim to do good as I go. Respect is valuable because it allows me to understand the differences in our community and to know how to behave in the best interests of that community. *“Love your neighbour as you love yourself” Matthew 22:39*

HARD WORK I believe that through hard work I can overcome challenges as I meet them. I am resilient and want to complete every task to the best of my ability. Hard work is valuable because it enables me to be the best I can be and the best I am meant to be. It builds the foundation of experience and learning for my future. *“With God all things are possible” Matthew 19:26*