Minsthorpe Community College

Knowledge Organiser
Year 10 – Spring Term 2

Name:

P&A group:

Knowledge Assessment: Friday 22nd May 2026 – Period 1

Vision

Minsthorpe Community College: A place where everyone plays a part in strengthening our learning community through **motivation, commitment** and **care**.

Motivation • Commitment • Care

Look

Look at the information carefully.
Read it three times.
It may help to **say** it as you read it.

Cover

Cover it with your hand or a piece of paper.

Write

Write it out from memory.

Check

Check what you have written matches the information exactly.
Have you got it correct?
If so, tick your work to show it is correct.

Correct

If it **doesn't match exactly,** use **a different coloured pen to correct it.**
Repeat.
When you get it 100% correct, move on to the **next** piece of information.

Subject: English

Week 1: Power of Nature

Storm on the Island

1. The poet shows us humans think they have power over nature.

QUOTATIONS - "We are prepared: we build our houses squat."

2. The poet shows us that nature is actually more powerful than humans.

QUOTATIONS - "The flung spray hits The very windows, spits like a tame cat Turned savage."

3. The poet shows us that nature's omnipotence should not be underestimated.

QUOTATIONS - "We are bombarded by the empty air. Strange, it is a huge nothing that we fear."

Ozymandias

1. The poet shows us that humans are not powerful, but life is temporary.

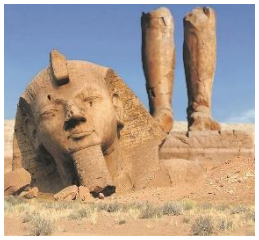
QUOTATIONS - "Two vast and trunkless legs of stone stand in the desert", "Half sunk a shattered visage lies."

2. The poet shows us the irony in some leaders feeling they are all powerful.

QUOTATIONS - "Sneer of cold command", "King of Kings", "Look on my works...and despair."

3. The poet shows us that nature is more powerful than the transience of humans.

QUOTATIONS - "Round the decay of that colossal wreck, boundless and bare the lone and level sands stretch far away."



KPOW: Power and Conflict Poetry

Week 2: Power of Nature

The Prelude

1. The poet shows us the power that nature has in allowing humans to escape the real world.

QUOTATIONS - "One summer evening (led by her) I found A little boat tied to a willow tree [...] glittering idly in the moon [...] sparkling light."

2. The poet shows us that even though nature is beautiful, its power shouldn't be underestimated.

QUOTATIONS - "a huge peak, black and huge [...] Upreared its head [...] Towered up between me and the stars [...] Strode after me."

3. The poet shows us that nature is much more powerful than people.

QUOTATIONS – "o'er my thoughts There hung a darkness, call it solitude or blank desertion."

Year 10: Spring Term 2

Week 3: Power of Humans

Tissue

1. The poet shows us that paper is fragile and not truly powerful.

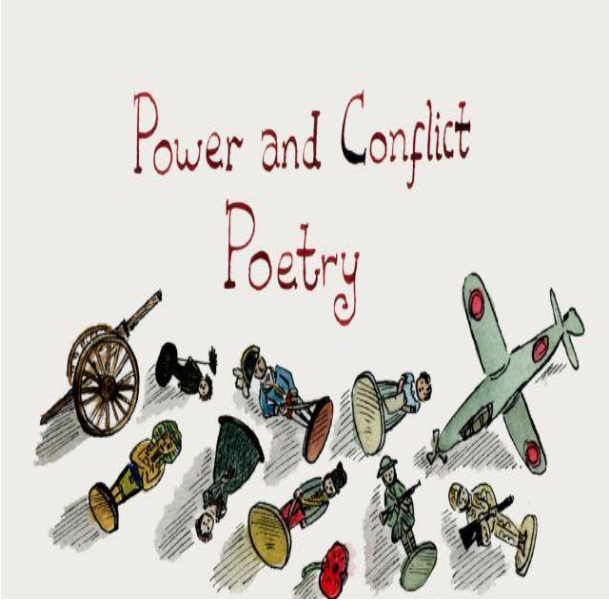
QUOTATIONS - "Paper that lets the light shine through [...] pages smoothed and stroked and turned transparent with attention."

2. The poet shows us that even though paper is not powerful, humans let it control their lives.

QUOTATIONS - "Maps too. The sun shines through their borderlines."

3. The poet shows us that human life if powerless and temporary like paper.

QUOTATIONS - "find a way to trace a grand design with living tissue, raise a structure never meant to last [...] turned into your skin."

Subject: English	KPOW: Power and Conflict Poetry	Year 10: Spring Term 2
Week 4: Power of Humans	**Week 5:** Power of Humans	
My Last Duchess 1. Browning highlights how those with power are often controlling and possessive. QUOTATIONS – "That's my last Duchess painted on the wall, Looking as if she were alive" "Will't please you sit and look at her? The curtain I have drawn for you." 2. Browning shows the arrogance and pride of those in powerful positions. QUOTATIONS – "She thanked men [...]as if she ranked My gift of a nine-hundred-years-old name With anybody's gift." 3. The poet shows how those with power often abuse their position. QUOTATIONS – "I gave commands; Then all smiles stopped together", "Notice Neptune, though, Taming a sea-horse." London 1. The poet shows us the power of the government and monarchy. QUOTATIONS - "I wander through each chartered street, near where the chartered Thames does flow." 2. The poet shows us the lack of power for the common man. QUOTATIONS - "Marks of weakness marks of woe." "Mind-forged manacles I hear." 3. The poet shows us the hypocrisy in the institutions thought to be powerful and trustworthy. QUOTATIONS - "Every black'ning church appals", "How the youthful harlot's curse Blasts the new-born infant's tear, And blights with plagues the marriage hearse."	Checking Out Me History 1. The poet shows us that white Europeans believe themselves to be more powerful. QUOTATIONS - "Dem tell me Dem tell me What dem want to tell me Bandage up me eye with me own history Blind me with my own identity." 2. The poet shows us how black, powerful figures have been neglected by history. QUOTATIONS – "Dem tell me bout ole King Cole was a merry ole soul but dem never tell me bout Mary Seacole", *"From Jamaica she travel far to the Crimean War she volunteer to go and even when de British said no she still brave the Russian snow a healing star among the wounded a yellow sunrise to the dying."* 3. The poet shows us individuals have the power to take control of their own lives. QUOTATIONS - "But now I checking out me own history I carving out me identity."	

Subject: Maths

Week 1 (H & F): Averages and range

To **compare** quantitative data, we can calculate averages.

Mode: Most frequent number.

Median: Quantity in the middle of ordered numbers, e.g.

7, 5, 6, 9, 8, 5

5, 5, 6, 7, 8, 9

Median = $\frac{6+7}{2} = \frac{13}{2} = 6.5$

Mean: Total amount shared evenly between the amount of data, e.g.

$$\frac{5+5+6+7+8+9}{6} = \frac{40}{6} = 6.666\ldots$$

The range is not an average; it is a measure of the spread of the data.

Range = highest value subtracted by the lowest value.

Ungrouped frequency table

Age	Frequency
17	8
18	10
19	15
20	7

Mode age = 19 years old

Range age = 20 – 17 = 3 years

Median = 40 people ÷ 2 = 20
20th person = 19 years old

Mean = total age ÷ 40 =
= 741 ÷ 40 = 18.525 years old

KPOW: Data

Week 2 (H) 2,3&4 (F): Data

Types of data

Qualitative data is worded information.
Quantitative data is numerical.
Quantitative data can be separated into two categories: continuous and discrete.

Presenting data

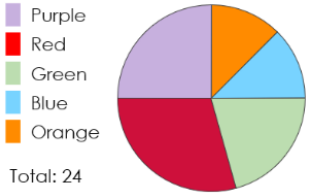
Bar charts

Key features of a bar chart:

- The bars must be the same width.
- The bars must be equally spaced.
- The scale must go up by the same amount.
- The axis and bars must be labelled.

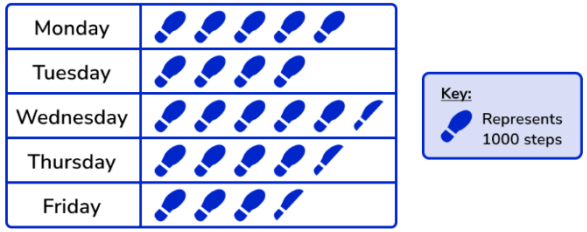
Pie charts

Pie charts show the proportion of each category.



Pictograms

A pictogram is a method of data visualisation.
Use a symbol to represent the frequency.



Here is one to show how many steps were walked in a week. As you can see from the key, one footprint is 1000 steps.

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Week 2 (H) 2,3,4 & 5 (F): Data

Correlation

We can describe the relationship between the two variables using positive or negative and weak or strong correlation.

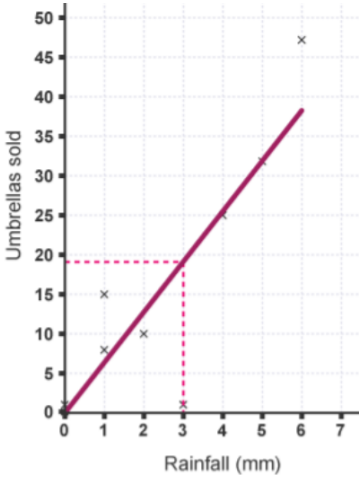
Positive Correlation
As one variable increases, the other increases.

Negative Correlation
As one variable increases, the other decreases.

No Correlation
As one variable increases, there is no effect.

Line of best fit

The line of best fit is a straight line that shows the general direction that a group of points seem to follow.



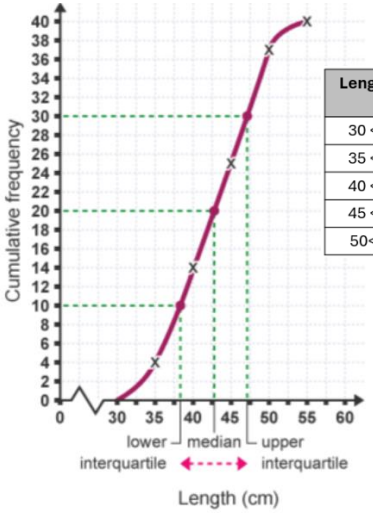
From the scatter graph, we can estimate how many umbrellas would be sold if there was 3mm of rainfall.

An estimate of 19 umbrellas would be sold if there was 3mm of rainfall.

Subject: Maths

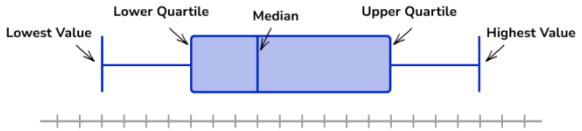
Week 3 (H): Further statistical diagrams

Cumulative frequency diagram creates a running table of values.



Length (cm)	Frequency	Cumulative frequency
30 < l ≤ 35	4	4
35 < l ≤ 40	10	14
40 < l ≤ 45	11	25
45 < l ≤ 50	12	37
50< l ≤ 55	3	40

When a cumulative frequency graph has been plotted, we can find the lower quartile, the median and the upper quartile.
The lower quartile is the value **halfway** between the median and the lowest value.
The upper quartile is **halfway** between the median and the highest value.
We use these values to plot a box plot:



Box plots are particularly useful for **data analysis**; it is easy to make visual comparisons of average (median) and spread (range and **interquartile range**).

KPOW: Data

Week 3 (H): Further statistical diagrams

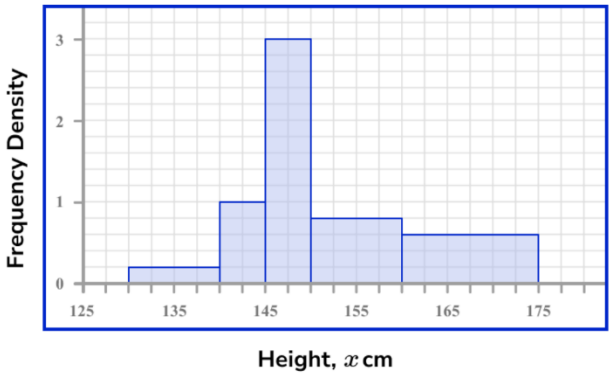
Histograms are similar to a bar chart but is used to display continuous data.

In a bar chart, the frequencies are shown by the height of the bar, whereas in a histogram the **area** of the bars represents the frequencies.

To plot a Histogram, you need to find the frequency density.

Frequency density = $\frac{Frequency}{Class\ width}$

Height, cm	Frequency	Frequency Density
$130 \leq x < 140$	2	0.2
$140 \leq x < 145$	5	1
$145 \leq x < 150$	15	3
$150 \leq x < 160$	8	0.8
$160 \leq x < 175$	9	0.6



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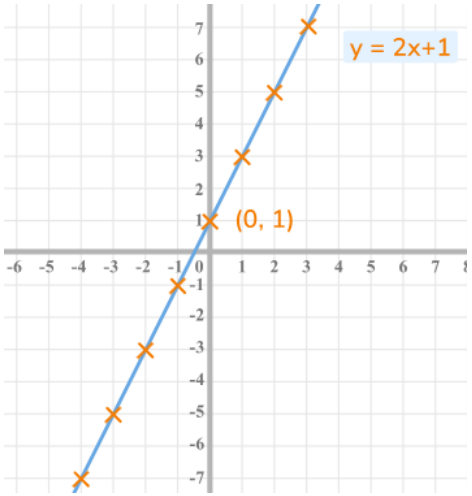
Week 4 & 5 (H): Linear graphs review

A straight-line graph is a visual representation of a linear function.

The general form is y = mx + c
Where m is the gradient (how steep a line is) and c is the y-intercept (where the line crosses the y-axis).



For example,

Here we can see that the gradient is 2. It crosses the y-axis at 1, so the equation of the line is y = 2x + 1

Parallel lines have the **same gradient**.

Therefore $y = 2x + 4$ is **parallel** to $y = 2x + 5$

Perpendicular lines (meet at a right angle) have a **gradient that is the negative reciprocal**.

.
Therefore $y = \frac{1}{2}x$ is **perpendicular** to $y = -2x$

Subject: Biology

Week 1 & 2: Inheritance, Variation & Evolution

Evidence of Evolution & Extinction

Evolution is the change of inherited characteristics within a population over time by natural selection.

There are many different types of evidence for evolution:

- Antibiotic Resistance in Bacteria
- Pentadactyl Limbs
- Fossils

There are 3 main types of fossil:

1. Mineral Replacement (e.g. cast and mold)
2. Preservation (e.g. ice or amber)
3. Traces (e.g. burrows or footprints)

Extinction is when there are no more living members of a species left alive. Extinction can be caused by:

- New Predators, Disease or Competitors
- Natural Disasters

Selective Breeding & Genetic Engineering

Selective breeding is where desirable characteristics of a species are amplified by only breeding those with the characteristic:

1. There is genetic variation in a population.
2. The organisms with the desirable characteristic(s) are chosen to breed.
3. Of their offspring, those with the most desirable characteristic are bred together.
4. This process is repeated over and again until all offspring are born with the desirable characteristic.

Genetic engineering is faster than selective breeding – instead the gene responsible for the desired characteristic is "cut out" from one organism and transferred into another organism's DNA.

KPOW: Natural Selection

Week 3 & 4: Inheritance, Variation & Evolution

Classification

Classification is the arrangement of organisms into groups based on their similarities.

Carl Linnaeus system of classification from the 1700s:

- Kingdom
- Phylum
- Class
- Order
- Family
- Genus
- Species

Due to continued advancements in Biology & Technology, Carl Woese proposed all organisms be divided into 3 Domains instead of 5 Kingdoms.

1. Eukarya (Cells with a nucleus)
2. Archaea (Primitive bacteria, Extremophiles)
3. Bacteria (Modern-day bacteria)

Communities

Levels of organisation continue after Organism, to Population, Community & Ecosystem. Living organisms interact with their surroundings.

Key terms:

Habitat - Where organisms live.

Population – All organisms of one species in a habitat.

Community – Populations of different species in a habitat.

Abiotic Factor – Non-living parts of an environment.

Biotic Factor – Living parts of an environment.

Ecosystem the interactions of a community of living organisms (biotic factors) with the non-living (abiotic) parts of their environment.

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Week 5: Ecology

Biotic, Abiotic Factors & Adaptation

Biotic Factors are the living parts of the environment:

- Food availability
- Competition between organisms
- New predators
- New pathogens (causing disease)

Abiotic Factors are the non-living parts of an environment:

- Light intensity
- Temperature
- Water availability
- Soil pH level
- Soil mineral ion content
- Wind intensity
- Carbon dioxide concentration
- Oxygen concentration in water

Extremophiles have a huge variety of adaptations to survive in extreme environments, such as extreme temperatures (high and low), high acidity & alkalinity.

Adaptations are features, characteristics or behaviours that allow an organism to survive in the conditions where they live.

Animal adaptations to the desert:

- Large surface area to volume ratio
- Long legs & large ears
- Minimal fat stores under skin
- Sand-coloured fur for camouflage

Animal adaptations to the arctic:

- Small surface area to volume ratio
- Short legs and small ears
- Lots of fat stored under skin
- Snow-coloured fur for camouflage

Subject: Chemistry

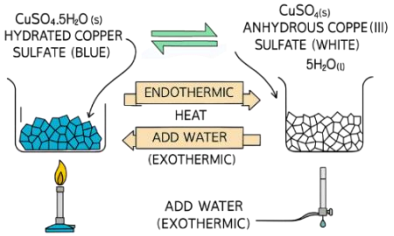
Year 10: Spring Term 2

Week 1 & Week 2: Reversible Reactions

Reversible reactions and equilibrium.

Vocabulary: **Reversible reaction** – A chemical reaction that can go in both directions: reactants can form products, and those products can turn back into the original reactants.

Knowledge: Chemists usually think of a reaction as starting with the reactants and ending with the products: Reactants → Products. However, some reactions are reversible! A + B ⇌ C + D represents a reversible reaction where reactants A and B form products C and D, then C and D can reform reactants A and B. An example of a reversible reaction is when you heat blue hydrated copper sulfate crystals, they become a white powder or anhydrous copper sulfate. The white power turns blue again when you add water.



If a reaction takes in energy, say 50kj, to go from reactants to products, it must release the same amount, when the products reform the reactants: +50 kJ ⇌ -50 kJ.

If a reversible reaction is carried out in a closed container so that the reactants and products cannot escape, a state of equilibrium can be established.

Vocabulary: **Dynamic Equilibrium** – The forward and backward reaction happen at the same rate. The concentrations of reactants and products remain the same. "Dynamic" means that the reaction is still happening, just in both directions at the same rate, so it would appear nothing is happening, when in fact it's constantly changing.

Week 3 & Week 4: Crude oil & Hydrocarbons

Organic chemistry – The study of carbon compounds.

Vocabulary: **Finite** – A finite resource is one that is used up at a faster rate than it is produced. Crude oil is an example of a finite resource.

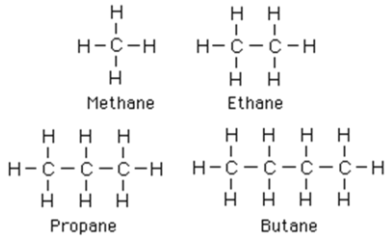
Hydrocarbon – A compound made of carbon and hydrogen atoms only.

Knowledge: **Crude oil** formed over millions of years from the effects of high pressures and temperatures on the remains of biomass (plants and animals), mainly plankton. Crude oil is a complex mixture of lots of different **hydrocarbon** compounds of different sizes. Carbon forms long chains of carbon atoms with hydrogen atoms attached. Crude oil contains a mixture of many different hydrocarbons that we call **alkanes**.

Name of alkane	Number of carbons	Chemical formula
Methane	1	CH_4
Ethane	2	C_2H_6
Propane	3	C_3H_8
Butane	4	C_4H_{10}

The first part of the name of each alkane tells you how many carbon atoms are in the molecule. Using the formula C_nH_{2n+2} you can also work out the number of hydrogen atoms. This is the general formula for alkanes.

If you have a hydrocarbon with 5 carbon atoms, to find the number of hydrogens, just double it and add 2 e.g. 5 x 2 = 10, 10 +2 = 12, giving the formula C_5H_{12}.



You also need to know the displayed formula for the first 4 alkanes, showing the connections (covalent bonds) between atoms.

Week 5: Fractional distillation

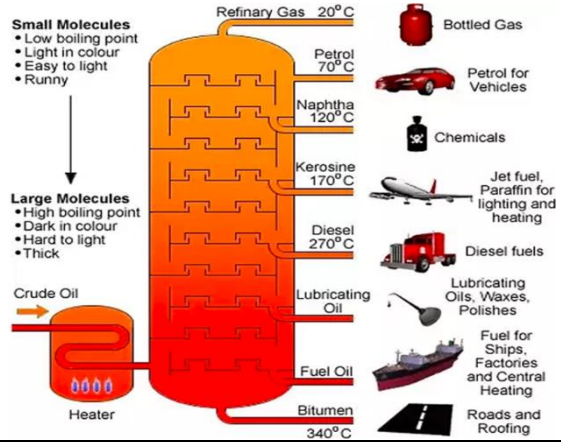
Fraction distillation and separating crude oil.

Vocabulary: **Fractional distillation** - The process used to separate mixtures of different substances, such as crude oil, by heating and evaporation, then collecting the different parts that condense at different temperatures.

Knowledge: Crude oil as a mixture is not very useful; we must separate it into its different, very useful parts. We can do this because all the different hydrocarbons in its mixture have different boiling points and therefore will condense at different temperatures.

Stages of fractional distillation

1. Crude oil is heated until it evaporates.
2. The vapour (gas) enters a tall column that is hot at the bottom and cool at the top.
3. Different substances condense at different levels depending on their boiling points.
   Small molecules with low boiling points are collected at the top, larger molecules with higher boiling points are collected at the bottom of the column.

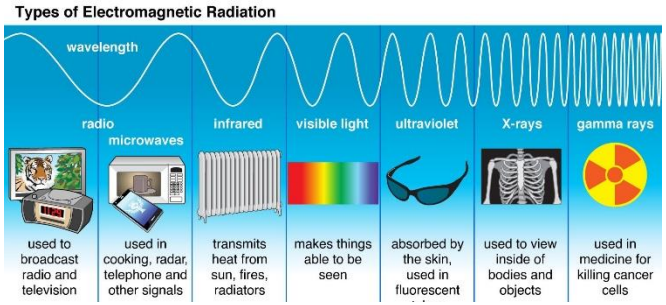


Subject: Physics

Year 10: Spring Term 2

Week 1 & 2: Electromagnetic waves

Electromagnetic waves are a group of 7 types of waves, forming a continuous **spectrum**.



As we go from left (radio waves) to right (gamma rays), the electromagnetic waves:

- Are **shorter** (smaller wavelength)
- **Vibrate** faster (higher frequency)
- Transfer more **energy**
- Become more **dangerous**

However, all electromagnetic waves have some **common** points:

- They are **transverse** waves
- They travel at the **speed** of light ($3x10^8 m/s$)
- They can travel in a **vacuum** (like **space**)
- They can be **diffracted** (scattered), **reflected** (bounce back) and **refracted** (change direction).

UV rays, **X-rays** and **gamma** rays transfer so much energy that they can **ionise** atoms in our **DNA**, which can lead to **mutations**. If this happens too often, it can result in genetic diseases such as **cancer**.

Week 3 & 4: Infrared Waves & Refraction

Infrared waves

All objects emit (give out) **infrared** radiation. **Hotter** objects emit **more** radiation than cooler objects.
The amount of infrared radiation given out by an object can be investigated using a **Leslie cube** - a hollow metal cube with **different colours** on each side:

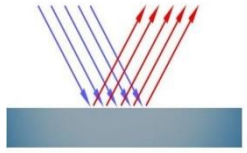
- Shiny black
- Matte black
- Shiny white/silver
- Matte white

To do this, you would fill the cube with **boiling water** and measure the **temperature** (or infrared radiation emitted) by each side, before drawing a **bar** chart to plot your results.

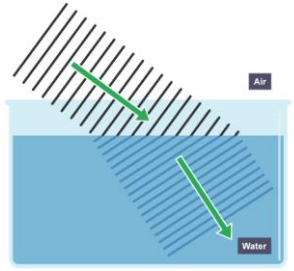
The **volume** and initial **temperature** of water are **control variables** (they must be kept the same).

Reflection & Refraction

When a wave hits a **flat** and **smooth** surface, it is **reflected** at the **same angle** it arrived on the surface (this is called **specular reflection**).



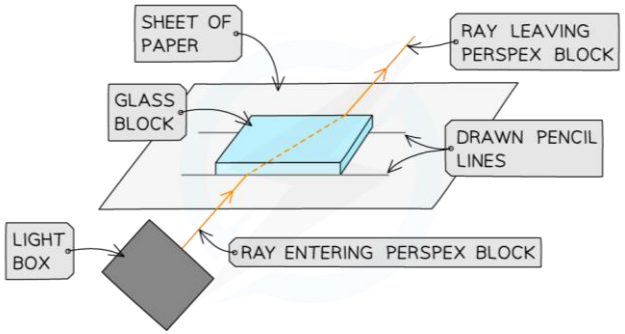
When a wave goes from one **medium** to another (for example, from air to water), it **changes speed**, which also causes it to **change direction** (this is called **refraction**).



Week 5: Investigating Refraction

One of your required practicals involves using a **ray box** and a **block** of glass or Perspex (transparent plastic) to investigate refraction.

The variables in this practical are the following:
Independent variable (**change**): angle of **incidence**
Dependent variable (**measure**): angle of **refraction**
Control variable (keep the **same**): type of **block** used



Complete method:

1. Place the block in the **middle** of the paper and draw around it. Remove the block.
2. At the top of the **outline**, draw the normal (dotted line at 90°).
3. With a protractor, **measure** and **draw** a 20° angle from the normal.
4. Place the block back on and **line** up the **ray** box so the light **follows** the line you have drawn.
5. Mark where the light comes out with **two crosses**.
6. Remove the ray box and block and **trace** all the lines.
7. **Measure** the angle of refraction with a **protractor**.
8. Repeat with different angles of incidence.

Subject: Separate Science

Year 10: Spring Term 2

Week 1 to 5: Biology

Charles Darwin: Proposed the theory of evolution by natural selection. His ideas were initially rejected due to a lack of evidence; the fact that inheritance and DNA had not been discovered fully and Darwin's ideas challenged the idea that God created all life (Creationism).

Alfred Russell Wallace: Published his theory of evolution by natural selection along with Darwin, but is best known for his theory of speciation:

1. Organisms of a species are isolated by a geographical barrier.
2. There is genetic variation in each group.
3. Some will be better adapted to their environment & natural selection occurs.
4. After many generations, each group are now so genetically different that they can no longer interbreed – a new species is formed.

Jean-Baptiste Lamarck: Proposed an alternative theory of evolution by acquired characteristics – a characteristic that is used more often becomes better or stronger. Characteristics not used would disappear.

Cloning -A clone is an organism that is genetically identical to its parent. Clones can be formed by:

- Plant Cuttings
- Plant Tissue Culture
- Animal Embryo Transplants
- Animal Adult Cell Cloning

Cloning advantages: increased yield, prevent extinction.

Cloning disadvantages: Reduces biodiversity, ethical concerns around human cloning.

Week 1 to 5: Chemistry

Dynamic Equilibrium – When a reaction takes placed in a closed system, a state of equilibrium is reached. The forwards and reverse reactions are happening at the same rate. At this point, the concentration of reactants and products remain the same.

Le Chatelier's Principle states: Anything disturbing equilibrium, the position of equilibrium shifts to counteract the change.

Take this reaction as an example, nitrogen and hydrogen react to produce ammonia. This is an industrial process.

REACTANTS	PRODUCTS
Nitrogen + Hydrogen	Ammonia
$N_2 + 3H_2 \rightleftharpoons$	$2NH_3$

Pressure.

THE EFFECT OF PRESSURE ON THE POSITION OF EQUILIBRIUM	
INCREASE PRESSURE	MOVES TO THE SIDE WITH FEWER GASEOUS MOLECULES
DECREASE PRESSURE	MOVES TO THE SIDE WITH MORE GASEOUS MOLECULES

If the pressure was increased, equilibrium shifts to the side of ammonia as this has the fewest gas molecules.

Concentration.

THE EFFECT OF CHANGING THE CONCENTRATION ON THE POSITION OF EQUILIBRIUM	
INCREASE CONCENTRATION OF A REACTANT	EQUILIBRIUM MOVES TO THE RIGHT
DECREASE CONCENTRATION OF A REACTANT	EQUILIBRIUM MOVES TO THE LEFT
INCREASE CONCENTRATION OF A PRODUCT	EQUILIBRIUM MOVES TO THE LEFT
DECREASE CONCENTRATION OF A PRODUCT	EQUILIBRIUM MOVES TO THE RIGHT

If nitrogen concentration was increased, equilibrium shifts to the side of ammonia, producing more ammonia and reducing the concentration of nitrogen.

Temperature.

REACTION TYPE	ΔH	INCREASE TEMP	DECREASE TEMP
EXOTHERMIC	-	TO THE LEFT	TO THE RIGHT
ENDOTHERMIC	+	TO THE RIGHT	TO THE LEFT

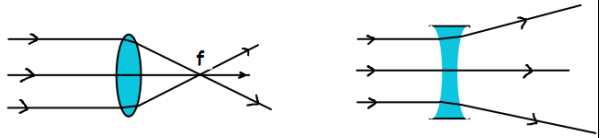
If temperature was increased in this exothermic reaction, equilibrium shifts in the endothermic direction, to the left, the side of the reactants.

Week 1 to 5: Physics

Lenses

Lenses are **curved** objects which cause light waves to **change direction** when they pass through. There are **two** types of lenses:

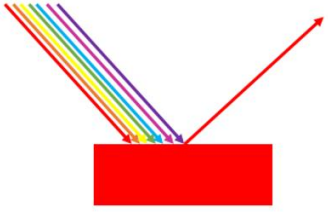
- A **convex** lens (left) makes the rays **converge** at a focal point.
- A **concave** lens (right) makes the rays **diverge** (spread out).



Lenses have **many uses**: glasses, cameras, magnifying glasses, telescopes, microscopes, etc.

Visible light and filters

White light contains the wavelength of **all the colours**. When light hits an object, part of it (or all of it) can be **absorbed** by that object. The light waves which are not absorbed bounce off the object (**reflection**), these are the ones **we can see** coming from the object.



For example, a **red object** looks red to us because it **reflects red** light, but it absorbs all the other colours.

This means that if you take an object which **looks red** and shine **pure blue** light on-it, it will look **black**, as blue light will be absorbed and there is no red light to be reflected.

Subject: French Foundation & Higher	KPOW: Work and careers	Year 10: Spring Term 2

Week 1: Adjectives

capable able, capable
égal equal
industriel industrial
inquiet / inquiète worried, anxious
intelligent intelligent
jeune young
juste right, true, correct, fair
méchant nasty, naughty, mean
moderne modern
paresseux lazy
riche rich
sérieux conscientious, responsible, serious
travailleur / travailleuse hard-working

Week 2: Feminine Nouns

L'activité activity
La carrière career
La chance luck
La confiance confidence, trust
La construction construction, building
L'égalité equality
L'entreprise company
L'équipe team
L'indépendance independence
L'inquiétude worry, anxiety
La mode way, fashion
L'occasion chance, opportunity
La politique politics
L'usine factory
Les affaires business, matters
L'aide help
La grève strike

Week 3: Masculine Nouns

L'acteur actor
L'adolescent / l'ado teenager, adolescent
L'aidant carer
L'ami friend
L'apprentissage apprenticeship
L'argent money
L'autobus / le bus bus
L'avenir future
Le boulot work, job
Le bureau desk, office
Le but goal, aim, objective, purpose
Le candidat candidate
Le chanteur singer
Le chef boss, cook
Le chemin way, path
Le choix choice

Week 4 : Masculine Nouns Continued

Le chômage unemployment
Le client customer, client
Le courage courage
L'échange exchange
L'écran screen
L'écrivain writer
L'emploi job
L'employé employee, worker
L'enseignement education, teaching
L'entretien interview, maintenance
L'espace space
L'expert expert
Le facteur postman
Le gouvernement government
L'influenceur influencer
L'intérêt interest
Le mail / e-mail email

Week 5: Masculine Nouns Continued

Le métier job, occupation
Le monde world
Le patron boss
Le portable policeman
Le président president
Le professeur/prof teacher
Le réunion meeting
Le rendez-vous appointment
Le rêve dream
Le roman novel
Le salaire salary
Le septembre september
Le serveur waiter, server
Le souci worry, concern
Le téléphone telephone
Le texte text
Le travail work, job, task
Le vote vote

Subject: French Higher	KPOW: Work and careers	Year 10: Spring Term 2
Week 1: Additional Foundation & Higher Nouns	**Week 2: Feminine Nouns**	**Week 3: Feminine Nouns Continued**
L'adulte adult L'artiste artist L'auteur author Le/la bénévole volunteer Le/la collègue colleague Le/la journaliste journalist Le/la médecin doctor Le/la partenaire partner Le policier/la policière police officer Le/la propriétaire owner Le/la scientifique scientist Le/la secrétaire secretary	La cheffe boss, cook (f) La coopération cooperation La direction direction, management La diversité diversity La durée length, duration L'échelle ladder, scale	L'économie economy L'enfance childhood L'enquête survey, investigation L'industrie industry La poche pocket La police police La responsabilité responsibility
Week 4 : Masculine Nouns	**Week 5: Masculine Nouns Continued**	
L'appel call L'avocat lawyer Le champ field, realm Le chercheur researcher Le commerce trade, commerce Le parlement parliament Le poème poem	Le rôle role Le service service Le soldat soldier Le soutien support Le terrain ground, terrain Le leader leader Le ministre minister Le porte-parole spokesperson	

Subject: Geography

Week 1-2: Tropical Rainforests – Deforestation

Deforestation is the **permanent removal of trees** on a large scale. The Amazon Rainforest is experiencing significant rates of deforestation and 20% has been lost already.

Causes:

- **Logging** – hardwoods like **mahogany** are sold to furniture companies. Smaller trees are used as fuel; wood or pulp (used to make paper).
- **Energy development** – with lots of rain and rivers **hydroelectric power dams** have been constructed, flooding large areas of rainforest.
- **Agriculture** (crops & cattle) – **cattle ranching** accounts for around **80% of deforestation**. Large areas are cleared to grow crops like soybeans and palm oil.
- **Population growth** – as more roads and industries are created, more people settlements are needed to house people.
- **Roads** – **Trans-Amazonian Highway** has made new parts of the Amazon accessible to further development.
- **Mineral extraction** – **mainly gold,** but also bauxite (aluminium's ore) and iron ore are mined.

Global impacts:

- **Global warming** & climate change.
- Loss of biodiversity (number of species in an area).

Local impacts:

- **Soil erosion**.
- Soil fertility.
- water pollution.
- Conflicts with indigenous tribes.
- **Job creation**.

KPOW: Living World

Week 3&4: Tropical Rainforests & Hot Deserts

Value of the Tropical Rainforest

- Many **indigenous people** (from that place) depend on the rainforest for their food, shelter and medicines.
- Around **25% of all medicines** used today come from rainforest flora (plants) and fauna (animals). Around 2/3 of all drugs to **treat cancer come** from plants found only in the rainforest.
- **Over 50%** of the world's species are found in rainforests making them one of the **most biodiverse** (lots of variety) places on the planet.

Sustainable Management of the Rainforest

Management of the rainforest needs to be carried out in a sustainable way, so the benefits from its resources can be had now, but it does not affect future generations.

Some strategies that have been used are:

- **Ecotourism.**
- Agroforestry.
- Forest reserves.
- **Selective logging**.

Hot Deserts

Hot deserts are generally found between **15° to 30° north and south of the Equator**. Temperatures can exceed 50°C, rainfall is **less than 250mm per year** and there is little vegetation. Plants & animals must adapt to these harsh conditions:

Plants adaptations:

- **long roots** to reach groundwater.
- small leaves to reduce water loss.

Animal adaptations:

- long eyelashes to keep sand out.
- can close nostrils to keep the sand out.
- **Nocturnal** so don't come out in the heat of the day.

Year 10: Spring Term 2

Week 5: Hot Deserts – Humans & the Desert

Opportunities & Challenges in the Hot Desert

The **Thar Desert** in NW India is one of the most populated deserts in the world due to the economic opportunities it provides, despite the challenges.

Economic opportunities include:

- ✓ Farming
- ✓ Tourism
- ✓ **Energy** – Jaisalmer Wind Park & solar Farm
- ✓ Mineral extraction – gypsum (used in plaster)

Challenges include:

- × **Extreme temperatures**
- × Poor accessibility
- × Water shortages

Desertification

Desertification is when soil quality degrades (declines) so much that the **land turns to desert**. Most of the areas at risk from desertification are on the **fringes** (edges) of existing deserts.

Causes of desertification:

- ➢ **Overgrazing.**
- ➢ Over cultivation.
- ➢ Collecting firewood.
- ➢ **Climate change.**

Desertification needs careful management of **land and water sources** to be reduced. One strategy is **tree planting** which helps to reduce soil erosion. The **Great Green Wall**, across the Sahel, Africa will hopefully:

- encourage **tree roots to bind the soil together**.
- reduce evaporation rates due to providing shade.
- be a source of sustainable fuelwood.
- **Provide jobs** for people.

Subject: History	KPOW: Full Cold War Exam Paper	Year 10: Spring Term 2
Week 1 & Week 2: Berlin and Cuba	**Week 3 & Week 4:** Cuba and The Prague Spring	**Week 5:** Prague and détente

Causes

1949–1961: 2.7 million East German citizens left East Berlin for West Berlin. Many were highly skilled = '**Brain Drain'**. This was a propaganda disaster for Khrushchev, and he gave US troops a 6 month ultimatum to leave Berlin.

Summits attempted to solve the problem, but stopped after the Paris Peace Summit.

Kennedy replaced Eisenhower in 1961; Khrushchev thought he could exploit his inexperience, but Kennedy increased US defence spending!

The building of the Berlin Wall

12 August 1961 East German troops started building the wall.

Impact on East–West relations:

The wall stopped the brain drain and avoided war without Khrushchev publicly backing down.

It was a visible symbol of the divide.

October 1961: standoff at **Checkpoint Charlie.**

Kennedy visited in 1963 and made his 'Ich bin ein Berliner' speech.

The Cuban Revolution 1959:

Fidel Castro overthrew Batista. He did not want American involvement and took back businesses.

America boycotted Cuban sugar so Cuba went to the USSR for help meaning they became allies.

Cuba was only 90 miles from the USA!

The Bay of Pigs 1961:

The CIA convinced JFK the only option was to **assassinate Castro**. However, the plan failed. It was a disaster, and the whole world knew. The USSR offered to protect Cuba and prepared missile bases.

The Cuban Missile Crisis

Kennedy announced a Naval blockade.

For **thirteen days,** the world stood on the brink of war.

Agreement: Khrushchev would remove the USSR's weapons and **Kennedy agreed to remove American weapons from Turkey, but this was kept secret.**

Impact on East–West relations:

Khrushchev faced criticism from the USSR.

1963: A **Hot Line** was set up between Washington and Moscow to improve communication.

The Partial Test Ban Treaty 1963: no further tests of missiles unless underground.

The Prague Spring

Czechoslovakia was a Soviet satellite state, run by the secret police. The standard of living was low and the leader, Novotny, was unpopular.

Dubcek became leader in 1968. He wanted 'socialism with a human face' and proposed a series of reforms which became known as **The Prague Spring.**

These included: legalisation of political opposition, relaxation of press censorship, and toleration of political criticism.

Response of the USSR

The Brezhnev Doctrine: A Soviet policy which stated the USSR had the right to invade any Eastern European country threatening the Eastern Bloc.

20 August 1968 – Soviet troops invaded. **Protestors met them with flowers, but were dealt with violently**; 100 were killed and 500 wounded.

Dubcek was arrested and signed the **Moscow Protocol,** which removed the reforms.

Impact on East–West relations

Other countries were horrified by the brutal actions of the USSR.

The USA and Western Europe condemned the invasion, but offered no military support.

Even **Western communist parties were outraged** and declared themselves independent of the USSR.

Yugoslavia and Romania condemned the invasion and formed an alliance with China.

However, some countries, such as East Germany and Poland, welcomed the invasion as they thought Czechoslovakia was too liberal.

Détente – a time of improving relations between the USA and USSR.

Sources of tension:

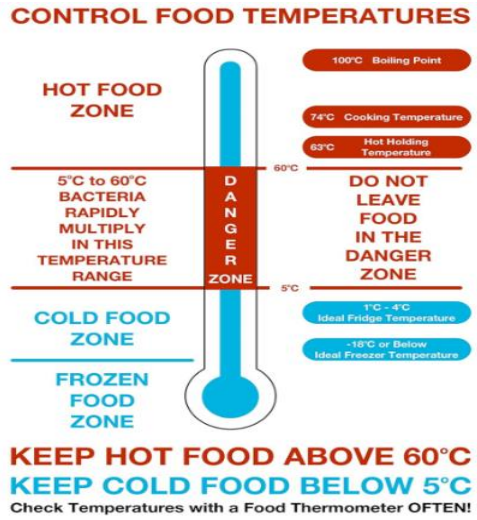
The Vietnam War; the lack of civil rights in the USSR and the brutal treatment of Hungary and Czechoslovakia.

Reasons for detente:

China–USSR relations were deteriorating; the Cuban Missile Crisis had proved neither side wanted to use nuclear weapons and Vietnam proved owning them did not guarantee success. **Both were spending billions** and the USSR was nearing bankruptcy.

Examples of detente:

- **SALT 1 1972**: ban on building new ballistic missiles.
- Brezhnev and Nixon worked well together.
- **Apollo-Soyuz 1975**: Joint space mission.
- Helsinki Agreement 1975: expectations on security, co-operation and human rights.

Subject: Hospitality and Catering	KPOW: Theory	Year 10: Spring Term 2
Week 1 & Week 2: Unit 1.2/1.3	Week 3 & Week 4: Unit 1.4	Week 5 Unit 1.4
Foodborne illnesses are usually caused by bacteria, viruses, parasites or chemical substances entering the body through contaminated food or water, these include:- Bacteria e.g. campylobacter found in raw poultry, Microbes, Chemicals / pesticides, Metals, Poisonous plants, Allergies and food intolerances. **Visible symptoms of food poisoning -**Bloating, Diarrhoea, Chills, Vomiting, Sweating, Fatigue (tiredness), Breathing difficulties, Sweating, Anaphylactic shock (e.g. from food allergen such as peanuts). **Non visible symptoms-** Stomach ache, Nausea, Aches and pains, Cramps, Fever and Chills, Wind, Painful Joints. **Food allergy** – Immune reaction e.g. anaphylactic shock. **Food Intolerance** – Difficulty digesting e.g. bloating- Certain groups of people are more at risk and are more vulnerable to food poisoning; this can be due to a number of reasons such as low immunity, being ill and not having a fully developed immune system to fight off infection, these groups are:- • Babies • Pregnant women • Elderly • Anyone who is ill	**CONTAMINATION=**The presence in food of any harmful or objectionable substance or object. **HAZARD=**Anything that could cause harm to consumers. These could be physical e.g. hair, chemical e.g. pesticide or biological e.g. campylobacter food poisoning. **Food Safety Act 1990** The responsibilities of food businesses under the Food Safety Act are: To ensure they don't add anything to food, remove anything from food, or treat food in any way that would damage people's health. Ensure that the food made or sold is of the nature and quality customers expect. Ensure that food is labelled, advertised and presented in a way that is not false or misleading.  	**Cross-contamination** occurs when pathogenic bacteria are transferred from a contaminated source to a high-risk food. **WAYS OF REDUCING CROSS CONTAMINATION AND FOOD POISONING** Wash hands regularly and especially after going to the toilet. Clean and sanitise work surfaces. Ensure storage facilities are at the correct temperature, and the food is kept where it needs to be i.e. raw meat at the bottom of a fridge. Ensure use by and best before dates are adhered to. Ensure food is not reheated under 63 degrees and held for more than 2 hours. **Environmental Health Officers (EHOs)** are employed to look after the safety and hygiene of food through all the stages of manufacture or production from distribution to storage and service. They instigate and enforce many laws and regulations are adhered to. **Types of Food poisoning** Campylobacter (raw meat – 1-10 days) Staphylococcus Aureus (Salads and other non-cooked foods - onset time 1-6 hours) Bacillus Cereus (associated with rice onset 1-6 hours), Salmonella (raw chicken 12-36 hours) E-Coli (untreated water 12-24 hours) Clostridium Perfringens (meat onset 8-22 hours) Clostridium Botulinum (can cause paralysis due to incorrect canning, onset 12-48 hours)) Listeria (found in prepacked sandwiches)

Subject: Product Design

Week 1 & Week 2: Tools and Equipment

Tool	Use
Pencil	Marking lines on timber.
Try Square	Marking out angles that are **90 degrees** to an edge.
Mitre Square	Marking out angles that are **45 degrees** to an edge.
Marking Gauge	Scratch **a line** that is parallel to an edge.

Cutting Timber

There are a great many saws used to cut timber - some suit long straight cuts on thicker planks, and others suit curves and complex shapes:

Rip Saw – For '**ripping**' through and rough cutting thicker planks and boards.

Tenon Saw - For cutting **straight lines** with accuracy; for cutting thinner pieces of timber and they can cope with curves.

Coping Saw, Jigsaw, Scroll Saw - For cutting thinner pieces of timber and curves.

Drilling Timber

A **pillar drill** is used to improve production speed and to drill through various **diameters** of timber.

The drill bit is inserted into the **chuck** of a pillar drill.

KPOW: Natural and Manufactured Timber

Week 3 & Week 4: Scales of Production

There are four terms used to describe the scale of production in relation to manufacturing a product:

- One off production
- Batch production
- Mass production
- Continuous production

Scale	Advantage	Disadvantage
One Off	High-quality craftsmanship	Expensive, requires specialist labour, time consuming.
Batch	Volumes are made for demand which reduces waste.	Downtime between batches.
Mass	High volumes can be produced; materials can be bulk purchased at cheaper rates.	Expensive to set up because of specialised equipment.
Continuous	24/7 production using an automated system, high volumes can be produced.	Expensive to set up because of specialised equipment, expensive machinery repairs.

Year 10: Spring Term 2

Week 5: Scales of Production

One Off Production or Prototyping

A custom-made or bespoke product that is made from timber could be based on a customer design specification. Products such as made-to-measure wardrobes or hand-crafted furniture are expensive because each piece of material has been designed and cut for that specific product, involving great skill and time.

Batch Production

Batch production is where many items of the same product are produced. An example relating to timber is where a set of chairs is required to match a dining room set.

Mass Production

Mass-produced products are manufactured in large volumes, often on assembly lines where workers fit standard components such as screws and hinges to parts. Examples of mass-produced timber products are mouldings, doors and pencils.

Continuous production

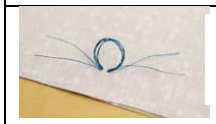
Continuous production takes place 24 hours a day, 7 days a week and, in some cases, 365 days a year. There is not generally the demand for a timber-based product to be made using continuous production, but stock sizes of timber and paper can be produced using continuous production methods.

Subject: Textiles

Week 1 & Week 2

Titles: Specialist tools

Marking out: Is making a mark on fabric so you know where to cut, stitch or assemble your material.

Different ways to mark out on fabric	
Method	Description
 Tracing wheel	Has serrated teeth that transfer markings from sewing patterns onto fabric.
 Tailors chalk	Used to transfer markings onto a fabric, that can be removed later.
 Tailors tack	A special loose looped stitch used for transferring pattern markings to fabric.

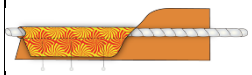
Templates: Used for drawing and cutting around materials.
Advantages: Consistency, accurate, quicker, can be adapted.
Commercial patterns: Made from tissue paper, come graded (different sizes on one pattern, pin on fabric & cut around.
Block patterns: Made from card/plastic, patterns are developed from basic blocks, produced in standardised sizes.
Cutting tools:
Laser cutter-Laser beam guided by a computer.
Die cutter-Metal shaped same as pattern piece.
Band knife-Cutting machine, can cut multiple layers.

KPOW: End of topic test

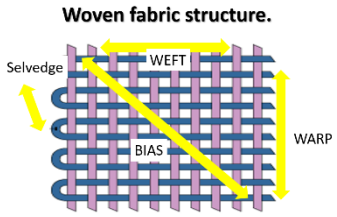
Week 3 & Week 4

Titles: Specialist Techniques and processes

Some textiles techniques below

Name	Picture	Description
Piping/piped seam		Covering cord with fabric & sewing into seam.
Free machine embroidery		A darning foot is used to "freely" sew.
Overlocking		A machine with a blade that cuts and wraps multiple threads.
Quilting bar		It is an arm that attaches to the needle bar to help lines of stitching to be parallel.

The bias represents the diagonal direction at 45 degrees. This is often used to create a natural stretch or so the garment hangs closer to the body.

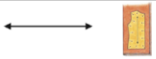
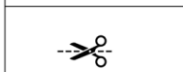
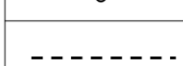


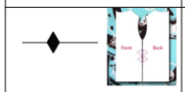
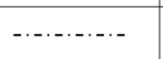
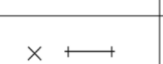
Year 10: Spring Term 2

Week 5

Titles: Specialist processes

Pattern symbols: Sewing pattern symbols are used to help you achieve accurate results when cutting, matching pieces and sewing.

PATTERN SYMBOL	MEANING	IMPORTANCE
	Lengthen/ shorten lines	Must be adjusted before using the pattern to maintain the proportion of a garment.
	Straight grain	Must be placed parallel to the selvedge of the fabric so pattern is in correct direction , hangs properly or lies flat.
	On the fold	The edge indicated has to be against a fold of fabric, as the piece is symmetrical and needs to open out.
	Cutting line	The line to cut along. Cutting too far in will make the product too small. Cutting too far outside the line will make it too big. If not cut precisely, the pieces will not fit together accurately.
	Stitching line	Shows where stitching should be when joining sections together.

PATTERN SYMBOL	MEANING	IMPORTANCE
	Seam allowance	Shows the distance between the cutting line and the stitching line, usually 1.5cm on a commercial pattern.
	Dot	Indicated a position, e.g. a gather, dart, pleat, tuck, pocket, end of zip.
	Notch or balance mark	Indicates which pieces fit together and how they need to be aligned. Also used to indicate position of gathers or pleats.
	Centre line	Indicates the centre front or centre back of a garment.
	Button and button hold position	The line is the buttonhole, and the x is where the button should be placed.

Subject: PE and Health and Fitness

Week 1: Health, Fitness + Wellbeing

Definition of health:

A state of complete emotional, physical and social wellbeing and not merely the absence of disease and infirmity.

Emotional Health
To do with your mind and how you feel about yourself.

Physical Health
To do with your body. How it looks and how you perform.

Social Health
To do with making friends and the qualities to be able to make friends.

Definition of fitness:

The ability to meet the demands of the environment.

KPOW: Key words

Week 2: Sedentary Lifestyle

Definition of Sedentary lifestyles:

A sedentary lifestyle is a lifestyle where there is very limited or no physical activity.

Consequences of a sedentary lifestyle:

POOHHD

Poor Posture
Obesity
Osteoporosis
Heart Disease
High Blood Pressure
Depression

Year 10: Spring Term 2

Week 3: Classification of skills

What is a classification skill?

A continuum is a line that goes between two extremes. Some skills can be classified easily as they are at one end or the other of a continuum. However, many skills fall between the two ends of a continuum.

You need to be able to classify skills on the following three continuum.

Open – Closed
Basic – Complex
Low Organisational – High Organisational

Week 4: Goal Setting

What is the value of setting goals?

1. Improved motivation
2. Improved focus
3. Improved monitoring of progress
4. Improved planning of training session

SMART Targets-

S- Specific
M- Measurable
A-Achievable
R- Realistic
T- Timebound

Week 5: Guidance

Types of Guidance-

1. **Verbal**- Verbal guidance is when the performer is told information about how to complete the correct technique.
2. **Visual**- Visual Guidance is when the performer is shown the skill. This can be done in a variety of ways.
3. **Mechanical**- Mechanical guidance is where the coach uses equipment to support the performer to help them with the technique.
4. **Manual**-Manual guidance is where the coach physically supports or moves the performer to help them get into the correct position.

Subject: Computer Science	KPOW: Topic 4	Year 10: Spring Term 2
Week 1 & Week 2:	Week 3 & Week 4:	Week 5:

Wired & Wireless Transmission

Wired:

Ethernet (Copper): Reliable, cheap, but signal can weaken over long distances.

Fibre Optic: Very fast, long-distance, unaffected by interference; expensive.

Wireless:

Wi-Fi: Uses radio waves; flexible, but less secure and more interference.

Bluetooth: Short-range, low-power device-to-device communication.

Factors Affecting Transmission: Bandwidth, interference, distance, obstacles.

Protocols

A set of rules for communication between devices.

Examples:

HTTP/HTTPS: Accessing web pages; HTTPS encrypted.

FTP: Transferring files between systems.

SMTP: Sending emails.

IMAP/POP3: Receiving emails.

TCP/IP: Breaks data into packets & routes across networks.

File Handling

Opening a file:

```
file = open("data.txt", "r")  # r = read, w = write, a = append
```

Reading:

```
text = file.read()
```

Writing

```
file = open("output.txt", "w")
file.write("Hello")
```

Addressing

MAC Address:

Unique hardware address on a NIC.

Used on a LAN for sending to the correct device.

Format: 6 pairs of hex digits.

IP Address (IPv4):

Logical address used to identify devices on a network/Internet.

Format: four numbers 0–255 (e.g., 192.168.1.10).

Static IP: Manually set, doesn't change.

Dynamic IP: Assigned by DHCP, changes over time.

Standards

Agreed rules ensuring devices/systems can work together (interoperability).

Layers (TCP/IP Model)

Breaks complex networking into smaller tasks.

The 4 Layers:

Application: Network apps & protocols (HTTP, HTTPS, FTP, SMTP).

Transport: Splits data into packets (TCP).

Network: Routing & addressing (IP).

Data Link: Physical transfer of data on a LAN (MAC addresses, Ethernet/Wi-Fi).

SQL

Structured Query Language used to manage and query data in databases.

SELECT – chooses which fields you want to retrieve.

FROM – states which table the data should come from.

WHERE – filters the results by applying a condition.

Network Threats

Malware: Malicious software (viruses, worms, trojans) that damages or disrupts systems.

Phishing: Fake emails/websites trick users into giving personal data.

Brute Force Attack: Automated password-guessing.

DDoS: Overloading a server with traffic to make it unavailable.

SQL Injection: Entering malicious SQL into input boxes to access or change data.

People (Human Error): Weak passwords, poor handling of data.

Threat Prevention

Firewall: Block unauthorised access to/from a network.

Anti-malware: Detects and removes malicious programs.

Encryption: Scrambles data so it can't be understood if intercepted.

User Access Levels: Limits what users can see/do.

Strong Passwords: Reduces risk of guessing attacks.

Network Policies: Rules for secure use of systems (e.g., backup routines, training).

Trace Tables

- Used to track variable values step-by-step through an algorithm.
- Helps identify logic errors and understand how a program works.
- Columns show each variable; rows show values after each line executes.
- Commonly used for selection, iteration, calculations, and dry-running code.

Subject: Creative iMedia

Week 1 & Week 2:

A **storyboard** is a **visual plan** for media products such as films, TV shows, comics, and video games. It **represents** the final product and shows events in the correct order.

Storyboards normally include:

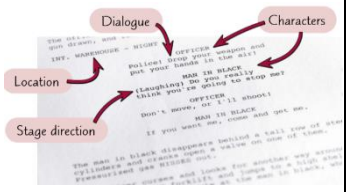
- The name of title
- Author (creator)
- Version number
- Scene number
- Sketch of scene
- Cam shots/angles /movements
- Scene Transitions
- Stage Directions

Title: Overdue!	Author: A. N. Other		
Scene 1, Shot 1 Length: 2 secs	Scene 1, Shot 2 Length: 3 secs	Scene 1, Shot 3 Length: 0.5 secs	Scene 1, Shot 4 Length: 1 sec
			
Transition: Fade in	Transition: Fade in	Transition: Jump cut	Transition: None
1. A lamp is turned on in a quiet library, late at night.	2. Medium close up on student studying late in library.	3. Close up on lamp as it suddenly turns off!	4. Extreme close up on eyes, terrified!

A **script** is a **written plan** for a media product that includes **dialogue, actions, and directions** for each scene. It tells **actors** what to say and do and guides the production team on how the scenes should be filmed or performed.

Scripts normally include:

- Tittle, author & date
- Locations of scene
- Characters' names
- Dialogue
- Camera techniques
- Transitions
- Sounds

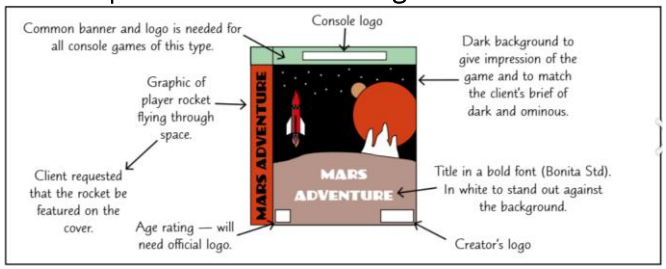


KPOW: Media Theory Part B

Week 3 & Week 4:

Before a final product is produced, a **final mock-up** is created. This means the client can check they're happy with it and knows what they are agreeing to. **Visualisation diagrams** are ideal for **static products** (products that don't move).

An example of a visualisation diagram is shown below.



A visualisation diagram usually includes:

Sketch	Annotations	Placeholders
Font sizes	Font types	Colours

Wireframes represent the layout of a product. Some products like websites and apps need to have the layout decided on before the content can be added. A **wireframe** layout shows where everything should go.

A wireframe usually includes:

- Titles
- Headings & subheadings
- Links
- Font styles
- Text blocks

Year 10: Spring Term 2

Week 5

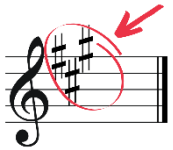
Lots of information is easily available in the media, but **personal information** should be kept **private.** Everyone has **individual privacy rights** to help protect them:

- Under **UK law**, permission **isn't** required to **film** or take **photographs** in **public places.**
- If you film on **private property**, you will need **permission** from the owner. Private property isn't just people's homes, it's also places like **shopping centres, agricultural land** and **train stations.**
- You **must ask the police for permission** if you intend to film on a **public road** or if dangerous **special effects** will be used.
- If you take a photo or record footage of an **actor, model** or **member of the public** that is to be used for **publishing** or **commercial purposes**, then a "**permission agreement"** should be made with them. This sets out how it will be used and gives details of any payment for them.
- **Defamation: (damaging** someone's **reputation** on purpose).
- It can harm a person's reputation when false information (**written or spoken**) is shared about them to the public.
- Defamation can happen through:
  - **Libel** – **False accusations** that are **written** or **published** in **print** or **online** (inc. social media).
  - **Slander** – There are **false accusations spoken in person** and **witnessed** by others or **recorded** at the time.

Subject: Music	KPOW: Component 2	Year 10: Spring Term 2
Week 1 & Week 2: Composition	Week 3 & Week 4: Melody Writing	Week 5: Bassline Writing

Key Signature = CRUTIAL!

A **key signature** tells you which **notes belong** in your piece and whether they are **sharp, flat, or natural.**



Choosing a **key signature** is important because it gives your music a **consistent** sound. It helps you **build chords and melodies** that fit together properly. It's like choosing the 'home base' for your composition so everything **stays in tune.**

Remember:
Major = Happy
Minor = Sad

List of Key signatures to choose from:

Major:

- **C Major (no sharps/flats)**
- **G Major (1 sharp)**
- **F Major (1 flat)**
- **D Major (2 sharps)**
- **Bb Major (2 flats)**

Minor:

- **A Minor (no sharps/flats)**
- **E Minor (1 sharp)**
- **D Minor (1 flat)**
- **B Minor (2 sharps)**
- **G Minor (2 flats)**

Melody = The Tune

The **Melody (tune)** is the most **IMPORTANT** part of a song!

It's the part you would **sing** along to. The part which is stuck in your head. We create melodies by using **the notes in the scale** of our chosen **key signature. THAT'S WHY** key signatures are **VERY important!**

Methods to Melody Writing:

Start on a strong note - Begin on the **root note** or another note from the chord. This helps the melody sound **secure**.

Use stepwise movement - Move by **steps (seconds)** for smooth melodies. Save **big jumps** for important moments.

Link melody to the chords - Use notes from the **chord** on strong beats. This makes the melody sound like it "fits".

Create a motif - A **motif** is a short musical idea. Repeat it, then change it slightly (rhythm, pitch, direction).

Use rhythm to add interest - Mix long and short notes. Don't use the same rhythm all the time.

Shape the melody - Let it **rise and fall**. Avoid jumping randomly.

End clearly - Finish on the **root note**. This makes the melody sound complete.

Bassline = LOW sequence of notes

THINK…. where is the basement of a house? **BOTTOM!**

How to create a bassline:

1. Start With the Chords

- Your bassline should match the chords of the song.
- If the chord is **C**, the bass note should be **C**.

2. Add Movement (If You Want)

- Use **passing notes** to connect chords smoothly.
- Example, if you are moving from a chord of C to Am your bassline could go C C C B | A A A A

3. Keep the Rhythm Simple

- A bassline should support the music, not distract from it.

Good beginner rhythms:

- Play on **every beat** (1, 2, 3, 4).
- Play on **beat 1 and 3.**
- Use **long notes** for slower sections.

4. Keep It Low!

- Basslines should stay in the lower notes of the instrument:
- On keyboard: play in the **lower left.**
- On guitar/bass: keep notes on the **low strings.**

Subject: Art

Year 10: Spring Term 2

Week 1 & Week 2:

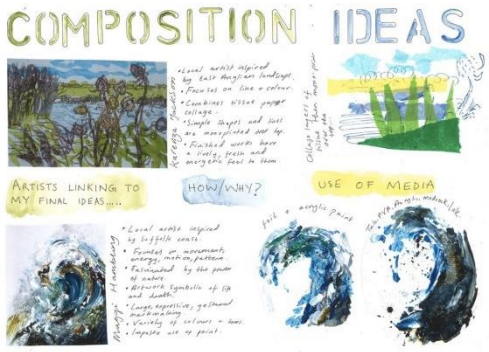
Keywords and ideas

Conclusion:

In Art, the conclusion refers to the final piece. It brings together key themes, inspiration, and techniques in a personal way.

Development:

The process of exploring, refining, and selecting ideas, techniques, and compositions to improve artwork and move toward a final, resolved piece.

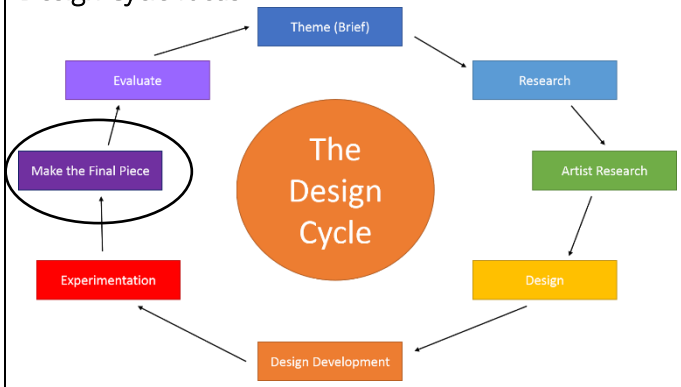


Refine:

Thoughtfully adjusted, improved and elevated by removing imperfections to achieve clarity and impact.

Week 3 & 4:

Design Cycle focus



Refining and planning

At every stage of the process, you should document your creative activities. This should include research, experimentations, testing, actions, choices and decisions.

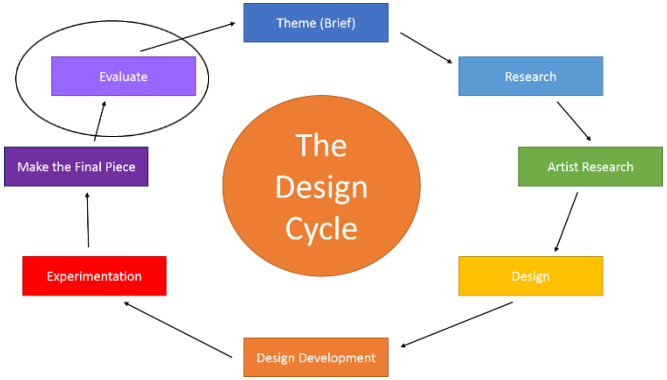
Annotations are written and should be used to record your ongoing reflections and evaluations to inform your planning and development.

Modify - in art, this refers to the deliberate process of altering or editing an existing artwork, object, or concept to generate new ideas, emotional impact, or interpretations.

Selecting - in art, this is the deliberate process of choosing which elements to include, exclude, emphasise, or distort to convey a specific message, emotion, or narrative.

Week 5

Design Cycle Focus



Outcome and conclusion

This will use your initial investigations (such as research) to communicate your response to the brief. The process of the design cycle will help you to draw conclusions by guiding you through artist research, experimentations, and investigations. Your outcome is a combination of the explorations into the theme that you have completed.

You should reflect on your outcome by communicating how you have met the brief. By following the design cycle, you have explored the requirements of the brief in depth.

Subject: Performing Arts – Acting

KPOW: C1 Scripted Performance

Year 10: Spring Term 2

Week 1:

Acting Workshop

Warm-ups: This is essential for focusing on both vocal and physical readiness and mental concentration.
Skill Building: Exploring Drama techniques and practitioners' work; focusing on character development and analysing scripts.
Improvisation: This encourages quick thinking and problem-solving through spontaneous improvisation tasks.
Performance & Feedback: Performers show their work to their peers and receive strengths and targets.

Week 2:

Productive Rehearsals

Punctuality - This sets a professional tone and a positive start for a rehearsal.
Contribution - Being actively involved, collaborating with others, offering ideas, and engaging in the process of refining the piece.
Prepare – Attend rehearsals with all necessary materials (scripts, props, lines are learnt). This ensures the rehearsal progresses efficiently.
Constructive Feedback: Maintain a culture of reflecting on your own and peers' work respectfully. Encourage members to share ideas without taking suggestions personally.

Week 3:

Refining Characters

Physicality: This term is about movement when portraying a character, such as body language, gesture and eye contact to convey emotion and purpose in a scene.
Vocal Expression: When an actor expresses their voice by using tone, pause, volume and accent to develop their character.

Week 4:

Dress Rehearsal - A full-scale rehearsal shortly before the first performance where the actors perform every detail of the performance in full costume.

Costume: Performers must wear their complete, final costumes ensuring they are accurate and have visual appearance under stage lights.
Rehearsing Changes: Specific focus is placed on practicing quick costume changes ensuring they are seamless and do not delay the show.
Finalising Details: It allows for last-minute adjustments to costumes, such as altering lengths, or fixing fasteners.

Week 5:

Technical Rehearsal - A *rehearsal that focuses on the lighting and aspects of the performance.*

- Actors learn where props are and how to navigate the set.
- Lighting cues are set to match the action and mood of the performance.
- Sound cues, music, and special effects are finalised.
- Set pieces are moved, and scene changes are practiced ensuring transitions are accurate.

Week 5 continued:

Performance

Stage presence – *A quality an actor projects that attracts the attention of the audience to the stage.*
Audience awareness – Positioning of an actor on stage so the audience can see them clearly.
Confidence - Self-assurance that radiates from the performer and helps them command the space effectively.

Subject: Religious Education

Week 1 & Week 2: Missionary Work

Please learn the information below:

Missionary work is also known as evangelising.

Both these words are referring to Christians who spend their time teaching others about Christianity with the aim of converting them to Christianity.

How do Christians know to evangelise?

- Jesus instructed the disciples to "Go into the world and preach the gospel to all creation."

How does a Christian evangelise?

- Sometimes by going door to door, telling strangers about Christianity.
- Sometimes by inviting people to church.
- Sometimes through music, e.g. Christian rock music might appeal to a younger audience.

Why is missionary work important to the Church?

- This is how Christianity continues to spread; it creates more Christians.
- It allows Christians all over the world to learn from each other and build stronger relationships.

Why is missionary work important to the individual?

- It allows them to fulfil their Christian duty; they are following Jesus' command.
- It allows them to share their faith with others out of love; it encourages them to be caring and kind.

Jesus said, "As the Father has sent me, I am sending you" (John 20)

KPOW: Mock Exam 3

Week 3 & Week 4: Key Words

Please learn the definitions of the following 12 words:

Big Bang	An explosion which caused the universe to come into existence.
Evolution	The idea that humans evolved from apes over millions of years.
Sanctity of Life	That life is sacred (holy) and belongs to God.
Abortion	The removal of a foetus from the womb before it can survive.
Pro-choice	That a woman has the right to make choices that affect her own body.
Pro-life	That abortion is wrong because the life of a baby cannot be ended.
Euthanasia	The painless killing of someone dying from a painful disease.
Palliative Care	Medical care that reduces suffering & improves the quality of life for the terminally ill.
Voluntary Euthanasia	When someone dying in pain asks another to end their life painlessly.
Stewardship	Looking after something so it can be passed onto the next generation.
Renewable Resources	Resources which do not run out e.g. hydroelectric power.
Commodity	An object, it can be bought or sold, something that is useful or valuable.

Year 10: Spring Term 2

Week 5: The Big Bang

Please learn the information below:

Science suggests that the world came into existence due to the Big Bang, here are some Christian views:

Some Christians...	**Creationists** Creationists are Christians who believe the Bible is correct and science is wrong. When God created the world, he made it look older than it was, e.g. trees would've been made with rings in them to suggest age.
Other Christians...	**Intelligent Design** Some Christians believe the Big Bang happened, but not by chance. The world is too complex; the universe depends on many interacting parts and if you remove one it would stop working. This means it must've been planned, designed and created by an intelligent designer – God.
.	**Compatibility Response** These Christians look to the creation story as a way of explaining how God is responsible for everything, they do not take it literally. They believe the Big Bang happened, but it was God who made it happen, just think on day 1 God says 'Let there be light' – this could easily be referring to the Big Bang.

Subject: Health and Social Care	KPOW: R032 Exam content	Year 10: Spring Term 2
Week 1: Verbal communication	**Week 2**: Nonverbal communication	**Week 3**: Active listening
Communication must be adapted to the situation and needs of the individual. **Clarity** – speaking in a clear and easy-to-understand way depending on the age and needs of the individual. **Empathy** – Service providers must understand how another person will feel in a situation. **Patience** – Things may take longer than expected, but the service provider must remain calm while explaining. **Appropriate vocabulary** –Using words suitable for the person they are talking to make it as simple as needed. **Tone** – Speak appropriately to ensure the patient doesn't feel patronised. **Volume** – How loud you speak depends on the person. **Pace** – ensure you don't talk too fast or too slowly. **Team working** – Sharing knowledge about individuals to benefit their care.	**Eye Contact –** Looking at an individual can help us see how a person is feeling and show we understand. **Facial Expressions –** These can help identify how someone is feeling. Expressions of the provider and the users are both important to ensure understanding. **Gestures –** Movements of hands and arms will help in situations like getting dressed, or where pain might be. **Positioning – space, height, and personal space-** Providers must think about all these things when talking to someone to relax the individual. **Positive body language –** This is important to show trust in someone and will help build relationships. **Sense of humour –** This can help reduce tension, but must be used appropriately to help build relationships.	Active listening is when you show you are fully listening to, paying attention to, and understanding what a person is communicating. It can be demonstrated by: **Clarifying –** Involves checking the understanding of the information given to the person. **Summarising –** Near the end, the service provider might summarise the key points given to check understanding. **Open, relaxed posture** – This will help the service users feel relaxed and at ease. **Eye Contact** – This shows you are interested in the service users. **Nodding agreement** – This can show that the individual understands. **Show Empathy –** This can help the service user understand how they might be feeling about a situation.
Week 4: Special methods of communication	**Week 5**: Effective communication and the impact of ineffective communication	
Not everyone can communicate in the same way so sometimes we need special methods to ensure that information is clearly understood by those involved in the care. An **Advocate** can speak for and support an individual. **Braille** is used by blind people to help read info. **British Sign Language is** used by deaf people to communicate. **Interpreters** will help someone who does not speak English by translating into their own language. **Makaton** is an easier version of BSL, and is often used alongside speech. **Voice-activated software** is a computer working in response to commands, or muscle movements.	Effective communication will support the PCV's and individual rights. It will: 1. Make them feel **empowered, reassured, valued, and respected** and will help develop trust between the service user and service provider. 2. It will **help meet all the needs** of the service user. 3. It will **protect the rights** of the service user. 4. Good communication will help the service user **feel informed** about the treatments and care they are being given. The service user will feel reassured if **appropriate vocabulary** is used that they understand.	If communication is poor it can lead to: 1. The service user **misunderstands** the information being given to them, meaning they might not get the right treatment. 2. The health of the service user might be affected. 3. The service user might **feel distressed** if they feel like the provider is **patronising** them. 4. The service user might not be able to take in all the information if it is given to them too fast which will **affect their understanding** of the treatment/care that they need.

Home Learning Schedule

Day	Subject to Learn	
Monday	English and Learning 4 Life	
Tuesday	Maths and Computing & Digital Media	Sparx Week B
Wednesday	Science	Educake Week A
Thursday	French, History and Geography	
Friday	Design Technology, PE & Creative	

Home Learning is set every **Monday** and will be submitted in **P&A Time** every **Monday.**

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