



I S C A A C A D E M Y

I N S P I R A T I O N F O R L I F E

SUMMER 2020

KNOWLEDGE BOOKLET

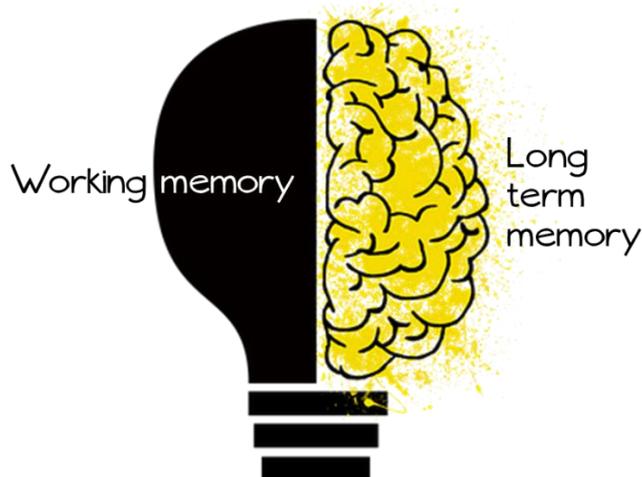
YEAR 8

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WHAT IS A KNOWLEDGE ORGANISER?

Your mind is split into two parts: the working-memory and the long-term memory. Everybody's working-memory is limited, and can very easily become overwhelmed and this is known as overload. Your long-term memory, on the other hand, is effectively a limitless storehouse for information.



You can support your working memory by storing key facts and processes in your long-term memory. These facts and processes can then be retrieved to stop your working memory becoming overloaded:

Let's look at an example, the basic number fact: $7 \times 8 = 56$

If you can instantly recall that $7 \times 8 = 56$, your working memory has more space to think about a more difficult problem, like 37×8 . The answer of 56 comes effortlessly, and you can focus on 30×8 , then add the product to the 56 in your head.

If you do not know that $7 \times 8 = 56$ straight away, you are more likely to become confused and frustrated. Being able to very quickly recall key facts is a way of hacking your working memory, making thinking about difficult stuff much easier.

This booklet contains knowledge organisers for all of your subjects for the summer term. Each knowledge organiser has the key information, which needs to be memorised to top up your long-term memory in order to help you master your subject and be successful in lessons. You will be expected to follow the homework schedule on page 4.

HOW TO USE YOUR KNOWLEDGE ORGANISER

Challenge yourself

Which will you choose?



Look Cover Write Check

Look at your knowledge organiser, Cover a section of it, Write out the content you have just covered from memory and Check you have recalled it correctly



Mindmaps

Place the key word/concept in the middle. Go wild with colourful, flowing shapes that link the key definitions and concepts.



Revision Clock

Draw a clock and add the topic in the middle. Then, break it down into 10 minute sections. Add notes in each segment. Cover the clock and recite all the information out loud.



Mnemonics

Creating mnemonics is a great way for remembering groups or lists of words. For example, to remember the order of planets in the solar system:

My **V**ery **E**xcited **M**other **J**ust **S**erved **U**S
Nachos



Flash Cards

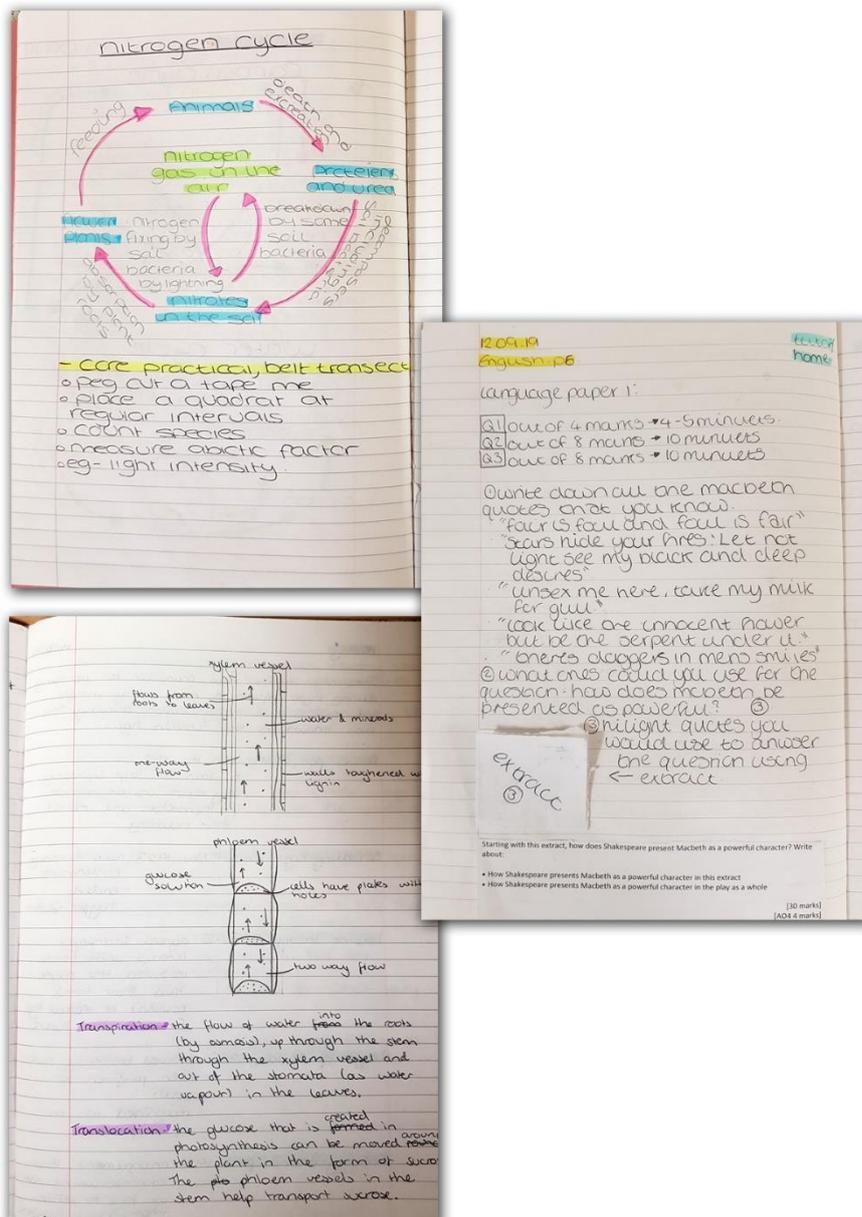
Write down the word/term on one side and a definition/explanation on the other side. Once you have notes written in your own words and summarised – move onto testing yourself quickly.

EXPECTATIONS OF YOU

1. Check the schedule on the next page to see which knowledge organisers you should use each day for your homework
2. Complete **one full page for each subject** on the schedule in your knowledge book **every day**
3. Use your knowledge organiser after you have finished to **mark and correct** your own work
4. **Sign your self-check sheet at the end of each week** after you have finished your full page each day
5. Get your self-check sheet **signed by your tutor** during your knowledge organiser tutor time session

T	on Time
A	Accurate
N	Neat
C	Complete

Homework should be **TANC**. Below is an example of homework that would meet the expected standard. If it does, your tutor will sign your log on the morning you are working in silence on your knowledge organiser.



YOUR SCHEDULE

Below is the homework schedule you will need to follow. You are required to produce a minimum of one page per subject in your pink books.

Week A	
Day	Subject
Monday	Maths
Tuesday	Science
Wednesday	History
Thursday	Art/DT/Music/Drama (rotation)
Friday	PE
Week B	
Day	Subject
Monday	English
Tuesday	MFL
Wednesday	Geography
Thursday	RE
Friday	Computing

You will need to sign to confirm you have completed the knowledge organiser homework. Your tutor will check this each week.

Week commencing	Self Check	Tutor Sign	Week commencing	Self Check	Tutor Sign
20/4/2020			1/6/2020		
27/4/2020			8/6/2020		
4/5/2020			15/6/2020		
11/5/2020			22/6/2020		
18/5/2020			29/6/2020		

You will notice on each knowledge organiser that there are green and blue edged boxes with text in. Text in a green edged box is key vocabulary you need to learn and writing in a blue edged box are the key concepts/knowledge you will need to learn.

Key Vocabulary will be written in a green edged box like this.

Key concepts/ideas will be written in a blue edged box like this

Animal Farm by George Orwell

Mr Jones of Manor Farm is so lazy and drunken that one day he forgets to feed his livestock. The ensuing rebellion under the leadership of the pigs Napoleon and Snowball leads to the animals taking over the farm. Vowing to eliminate the terrible inequities of the farmyard, the renamed Animal Farm is organised to benefit all who walk on four legs. But as time passes, the ideals of the rebellion are corrupted, then forgotten. And something new and unexpected emerges. . .

Key quotes

“Four legs good, two legs bad.”
 “All animals are equal, but some animals are more equal than others”
 “Man is the only real enemy.”
 “Perfect unity.”
 “The pigs had set aside the harness room as headquarters for themselves.”
 “It was noticed that they wagged their tails to [Napoleon] in the same way as the other dogs had been used to do to Mr Jones”

Key Characters

Mr Jones	Drunken owner of Animal Farm. Embodies the tyranny of man.
Old Major (pig)	Wise, old pig. Inspires the rebellion with his rhetoric.
Napoleon (pig)	Expels Snowball. Executes animals. Establishes himself as dictator. Controls with fear.
Snowball (pig)	Devoted to animalism and the education of lesser animals. Hero at the battle of the cowshed.
Squealer (pig)	Mouthpiece of Napoleon. Uses propaganda to control the animals
Boxer (horse)	Devoted citizen and immensely strong. Innocent and naïve.
Clover (horse)	Maternal, caring and loyal. Senses hypocrisy but cannot articulate it.
Mollie (horse)	Shallow and childish. Craves ribbons and sugar.
Benjamin (donkey)	Stubborn, cynical and apathetic.
Dogs + Sheep	Instruments of fear and control, educated by Napoleon.
Moses (raven)	Tamed raven of Jones. Spreads the idea of Sugarcandy Mountain.

Themes

- Leadership
- Corruption
- Power
- Education
- Oppression
- Rule and Order
- Tyranny

The Isca Way: use these sentences, in whichever order, as a *guide* to help organise your thinking in the exam:

- The writer establishes / uses / creates ____ to ...
- This suggests / conveys / portrays...
- The word / image / phrase “----” has connotations of...
- At a deeper level... Perhaps...Possibly...Metaphorically...
- ----becomes a symbol for...Symbolically...
- Priestley is challenging...Advocating... ..Is trying to change...
- The audience thinks...Feels...Is made to understand...Wonders whether...Is left questioning...



Key vocabulary

- Oppression
- Corruption



Naivety

- Deceit
- Power
- Tyrant / tyranny
- Enmity
- Allegory
- Rebellion
- Propaganda

Context

• An allegorical tale with direct links to the history of the Soviet Union in the early 20 th century. • The book charts the corruptions of Communist ideals of equality, where workers are promised equality and freedom and are eventually repressed and treated as bad, if not worse, as under the previous rule of the capitalist ‘Tsar’. • Old Major represents Karl Marx, putting forward the communist ideals which will free them from the tyranny of capitalism (represented by Jones). • Snowball represents Trotsky, a passionate component of Animalism (Communism) who is expelled by Napoleon (Stalin). • Napoleon follows a similar rise to power as Stalin, using fear and propaganda to control the masses, including show trials and executions.

Equivalent fractions		
Finding equivalent fractions	Multiply the numerator (top) and the denominator (bottom) by the same number. Here multiplying both by 5 $\frac{1}{2} = \frac{5}{10}$	
Multiply Fractions	Multiply the numerators and multiply the denominators.	$\frac{6}{7} \times \frac{4}{5} = \frac{6 \times 4}{7 \times 5} = \frac{24}{35}$
Divide Fractions	Flip the second fraction (find the reciprocal). Change the divide to a multiply. Multiply the fractions	$\frac{4}{7} \div \frac{5}{6} = \frac{4}{7} \times \frac{6}{5} = \frac{4 \times 6}{7 \times 5} = \frac{24}{35}$
Add or Subtract Fractions	Write as fractions with a common denominator. Add or subtract the numerators.	$\frac{2}{8} + \frac{1}{6} = \frac{6}{24} + \frac{4}{24} = \frac{10}{24} = \frac{5}{12}$
Convert between Improper and Mixed fractions	Divide the numerator by the denominator. The answer gives the whole number part. The remainder goes on top of the fraction, with the same denominator.	$\frac{43}{6} = 7\frac{1}{6}$
Convert between Mixed and Improper fractions	Multiply the denominator by the whole number part and add the numerator. Put the answer over the numerator.	$7\frac{1}{6} = \frac{6 \times 7 + 1}{6} = \frac{43}{6}$

Fractions	Decimals	Percents
1/2	0.50	50%
1/3	0.3	33 1/3%
2/3	0.6	66 2/3%
1/4	0.25	25%
3/4	0.75	75%
1/5	0.20	20%
2/5	0.40	40%
3/5	0.60	60%
4/5	0.80	80%

Fractions	Decimals	Percents
1/6	0.16	16 2/3%
1/8	0.125	12 1/2%
3/8	0.375	37 1/2%
5/8	0.625	62 1/2%
7/8	0.875	87 1/2%
1/10	0.10	10%
3/10	0.30	30%
7/10	0.70	70%
9/10	0.90	90%

Year 8 Maths

Linear Graphs

Fractions Decimals Percentages

Key terms

Fraction – written in the form $\frac{a}{b}$, means “a divided by b”.

Numerator - the top number of a fraction, represent the number of parts being studied

Denominator – the bottom number of a fraction, represents the number of parts to make one whole

Equivalent – worth the same amount as
Simplify – reducing a fraction to the equivalent with the lowest possible numerator and denominator

Decimal – a number that is not an integer
Integer – a whole number with denominator 1

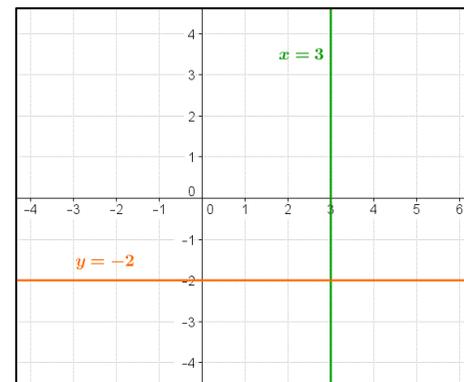
Percentage – written as a number out of 100
Inverse – the opposite mathematical operation such as add and subtract

Percentages of

To find 10%- divide by 10
To find 1%- divide by 100
Find the various different percentages and add them together.

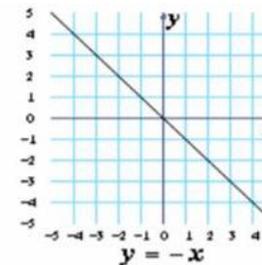
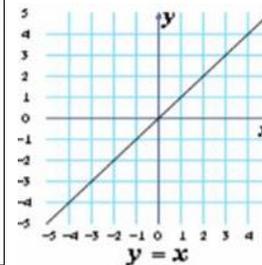
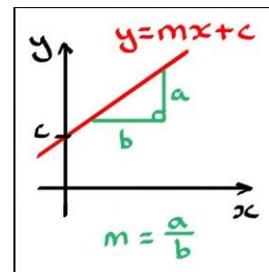
Linear Equation	A linear equation contains an x term but no higher power of x. eg $y = 3x - 1$ $2x + 3y = 8$
$y = mx + c$	The general equation of a straight line m is the gradient c is the y-intercept
Gradient	$Gradient = \frac{\text{change in } y}{\text{change in } x} = \frac{\text{rise}}{\text{run}}$ Positive gradients, line goes from bottom left to top right Negative gradients, line goes from top left to bottom right
Gradient between 2 points	If A = (x ₁ , y ₁) and B = (x ₂ , y ₂) The gradient of line AB = $\frac{y_2 - y_1}{x_2 - x_1}$
Parallel lines	Parallel lines have the same gradient
Perpendicular lines	When lines are perpendicular the product of the gradients is - 1 If one graph has gradient m, then a perpendicular graph has gradient $-\frac{1}{m}$
	Mid-point

Fractions to Decimals	Divide the numerator by the denominator using the bus stop method. $\frac{3}{8} = 3 \div 8 = 0.375$
Decimals to Fractions	Write as a fraction over 10, 100 or 1000 and simplify. $0.36 = \frac{36}{100} = \frac{9}{25}$
Percentages to Decimals	Divide by 100 $8\% = 8 \div 100 = 0.08$
Decimals to Percentages	Multiply by 100 $0.4 = 0.4 \times 100\% = 40\%$
Fractions to Percentages	Percentage is just a fraction out of 100. Make the denominator 100 using equivalent fractions. When the denominator doesn't go in to 100, use a calculator and multiply the fraction by 100. $\frac{3}{25} = \frac{12}{100} = 12\%$ $\frac{9}{17} \times 100 = 52.9\%$
Percentages to Fractions	Percentage is just a fraction out of 100. Write the percentage over 100 and simplify. $14\% = \frac{14}{100} = \frac{7}{50}$



Graphs of $y = a$ are horizontal, crossing the y-axis at a.

Graphs of $x = a$ are vertical, crossing the x-axis at a.



Congruent Triangles:

Triangles are congruent when one of the 4 conditions of congruence is true		
SSS	Two triangles are congruent if all 3 sides are equal	
SAS	Two triangles are congruent if two sides and the included angle are equal	
AAS	Two triangles are congruent if two angles and the corresponding side are equal	
RHS	Condition 4: Two triangles are congruent if right angle, hypotenuse and one other side are equal	

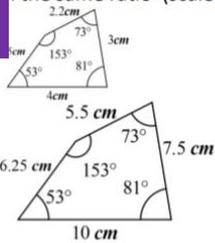
Similar Shapes:

Two shapes where one shape is an enlargement of the other. Corresponding angles are equal and corresponding sides are all in the same ratio (scale factor)

Small base = 4cm
Large base = 10cm

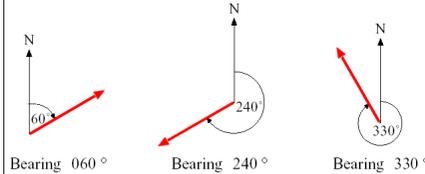
Ratio of these corresponding sides is $10 : 4 = 2.5 : 1$
Scale factor = 2.5

Or
 $\frac{\text{length from large shape}}{\text{length from small shape}} = \frac{10}{4} = 2.5$



Year 8 Maths

Bearings:

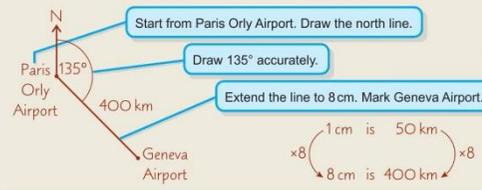


A 3-digit angle showing the direction of one object to another.

Measured in a clockwise direction from the north.

Worked example

Geneva Airport is 400km from Paris Orly Airport on a bearing of 135° . Draw this bearing accurately using a scale of 1cm to 50km.



Probability:

Probabilities add up to 1

Topic/Skill	Definition/Tips	Example
1. Probability	The likelihood/chance of something happening. Is expressed as a number between 0 (impossible) and 1 (certain) . Can be expressed as a fraction, decimal, percentage or in words (likely, unlikely, even chance etc.)	
2. Probability Notation	P(A) refers to the probability that event A will occur .	P(Red Queen) refers to the probability of picking a Red Queen from a pack of cards.
3. Theoretical Probability	$\frac{\text{Number of Favourable Outcomes}}{\text{Total Number of Possible Outcomes}}$	Probability of rolling a 4 on a fair 6-sided die = $\frac{1}{6}$

Mutually exclusive events:

Two events are **mutually exclusive** if they cannot happen at the same time. For example, when you roll an ordinary dice, you cannot get a 3 and an even number at the same time.

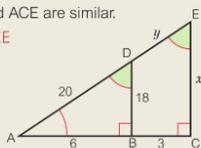
Theoretical probability	A number between 0 and 1 to represent the probability of something occurring.																										
Experimental probability	We can write probabilities using P(event) notation. An estimated probability based on the results of an experiment. The more trials are performed, the more reliable the results.	P(Picking a yellow) = $\frac{1}{5}$ (0.2 or 20%) P(Picking a blue) = $\frac{2}{5}$ (0.4 or 40%) I survey 100 cars and 24 of them are blue. The experimental probability of the next car being blue is $\frac{24}{100}$ (24%).																									
Independent event	When the probability of one even doesn't depend on the outcome of another event.	If I roll a 6 on a dice, the probability of rolling another 6 is still $\frac{1}{6}$. The probability doesn't change just because a 6 was previously rolled.																									
Dependent event	When the probability of one even depends on the outcome of another event.	If you miss the bus, the probability of being late for school increases.																									
Sample space	A way of recording all the outcomes of two events. The sample space opposite records all the possible outcomes when 2 four-sided spinners are spun and their totals multiplied together.	<table border="1"> <thead> <tr> <th>×</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <th>1</th> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <th>2</th> <td>2</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <th>3</th> <td>3</td> <td>6</td> <td>9</td> <td>12</td> </tr> <tr> <th>4</th> <td>4</td> <td>8</td> <td>12</td> <td>16</td> </tr> </tbody> </table>	×	1	2	3	4	1	1	2	3	4	2	2	4	6	8	3	3	6	9	12	4	4	8	12	16
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1	1	2	3	4																							
2	2	4	6	8																							
3	3	6	9	12																							
4	4	8	12	16																							
Venn Diagrams	Shows the relationship between two or more finite sets. A finite set could be 'Even numbers between 1 and 9' i.e. {2, 4, 6, 8}.																										
Tree diagrams	A way of recording the outcomes of multiple events and calculating their probability. Multiply down the branches to calculate the probabilities of each outcome.																										

Worked example

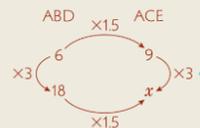
a Explain why triangles ABD and ACE are similar.

Triangle ABD Triangle ACE
 $\angle A = \angle A$
 $\angle B = 90^\circ = \angle C = 90^\circ$
 $\angle D = \angle E$ (corresponding angles)

The triangles have the same angles (AAA).



b Work out length x.



9×3 is easier to work out than 18×1.5 , but they give the same answer.

$x = 9 \times 3 = 27$

Week 5

1. **Current/Potential difference (I/V) graphs** show the characteristic relationship between current and pd values for different components:

Fixed resistor: I is directly proportional to V - straight line through the origin.

Filament lamp: resistance increases as the bulb gets hotter.

Diode: Very low resistance if current flows in one direction, very high resistance if current flows in opposite direction.

3. The higher the **power** of an appliance, the more quickly it can transfer energy.
4. Power, P, is calculated as:

$$\text{Power (W)} = \frac{\text{Energy transferred (J)}}{\text{time (s)}}$$

5. Electrical devices use **fuses, circuit breakers** and the **earth wire** as safety features.

Week 6

1. The **Electromagnetic (EM) Spectrum** consists of:
 - **Radiowaves, Microwaves, Infrared (IR), Visible light, Ultraviolet (UV), X-rays, Gamma rays.**
2. All EM waves travel at the **speed of light, 3×10^8 m/s** through a vacuum.
3. The longer the wavelength of an EM wave, the lower the frequency.
4. All EM waves have a variety of uses including communication, cooking and medical applications.
5. Some EM waves are harmful and can cause burns or damage your eyes. UV, X-rays and Gamma Rays are **ionizing radiations** and can cause cancer.

Week 7

1. **Energy** can be **stored** in different forms: Gravitational potential energy, Kinetic energy, Elastic potential energy, Chemical energy, Nuclear energy, Magnetic energy.
2. Energy can be **transferred** between these stores by: Heating (thermal), Light (radiant), Sound, Electrical Current.
3. The **Conservation of Energy** states that energy cannot be created or destroyed, only transferred between stores in a system.

Week 10

Insulation core practical

1. Wrap a 250ml beaker in a suitable **insulating material**.
2. Add a **known amount** of boiling water to the beaker and place a lid on your beaker.
3. Record the **initial temperature** of the water and start your timer.
4. After 10 minutes, record the final temperature of the water and calculate the **change in temperature**.
5. Repeat steps 1 -4 with different **insulating materials**.
6. Compare the changes in temperature – the more effective the insulator, the lower the temperature decrease.
7. Variables: **Independent:** Insulating material, **Dependent:** Change in temperature, Possible **controls:** Volume of water, time.

Week 8

1. **Useful energy** is energy in the form needed, in the place it is needed.
2. **Wasted energy** is energy in an unwanted form or in an unwanted place.
3. The **efficiency** of a system can be calculated as:

$$\text{Efficiency} = \frac{\text{Useful energy transferred}}{\text{Total energy transferred}}$$



4. Useful and wasted energy transfers can be shown using **Sankey Diagrams**
5. Wasted energy often **dissipates** to the surroundings as heat.

Week 9

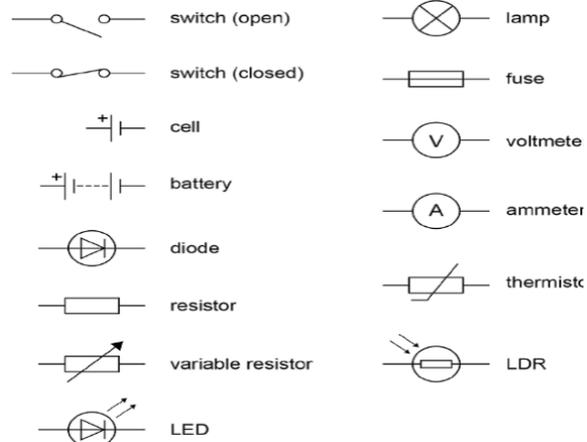
Energy transfer by heating:

1. **Solids:** by **Conduction** – vibrations passed between particles transfer energy.
2. **Fluids** (liquids and gases): by **Convection** – Hotter, less dense regions of the fluid rise, carrying the energy.
3. **No material** is needed for energy to be transferred by **Radiation** – energy is transferred as **Infrared radiation (IR)**.

1. **Dissipate:** spread out.
 2. **Efficiency:** The proportion of energy a system transfers usefully.
 3. **Elastic potential energy:** energy stored in object when it is squashed or stretched.
 4. **Electromagnetic (EM) Spectrum:** a group of Electromagnetic Waves divided up according to their frequency and wavelength.
 5. **Energy:** the ability of a system to do work
 6. **Equilibrium:** A situation which is not changing as all things affecting it are balanced
- Frequency, f:** number of waves passing a point each second, measured in Hertz, Hz.
- Insulation:** method or material used to reduce energy transfer by heating.
- Ionizing radiation:** radiation that causes charged particles to be formed.
10. **Potential difference (pd):** the amount of energy transferred per unit of charge, measured in Volts (V). Often called Voltage, shown by the letter V in equations.
 11. **Power:** the rate of energy transfer, measured in Watts (W). Shown by the letter P in equations.
 12. **Resistance:** The opposition to the flow of electric charge, measured in Ohms (Ω). Shown by the letter R in equations.
 13. **Kinetic energy:** energy stored in a moving object. Measured in Joules (J).
 14. **Weight:** the force of gravity acting on an object, measured in Newtons (N).

Week one

1. Rubbing two **insulating materials** together will cause the build up of a **static electric charge** as electrons are transferred.
2. **Components** in an electric circuit can be represented using **circuit symbols**



Week two

1. Electrons carry the electric charge in an **electric current**.
2. Current through a component can be measured in a circuit using an **Ammeter** connected in line with a component.
3. Current is always **conserved** in a circuit – the current leaving the positive terminal and arriving at the negative terminal is the same.
4. For a current to flow, the circuit must be complete.
5. **Potential difference** (pd) across a component in a circuit can be measured using a **Voltmeter** connected across a component.
6. The greater the pd across a component, the higher the current through it will be.

Yr 8

physics

Week three

1. **Series circuits:** components are arranged one after another – there is only one route for the current to take.
 - Current is the same through all components.
 - Pd across the individual components in the circuit adds up to the total pd across the power supply.
2. **Parallel circuits:** components are arranged on separate branches of the circuit – current flows along different branches when it reaches a junction.
 - Current through the main circuit is divided across the separate branches.
 - Pd across each branch is the same as the pd across the supply
3. **Resistance** occurs when charges collide with the particles which make up the wire.

Week four: Resistance core practical

1. Connect a series circuit of a power supply, an ammeter and a 1 m length of resistance wire closing a gap between two crocodile clips.
2. Connect a voltmeter in parallel across the resistance wire.
3. Switch on the circuit and record the readings of **current** and **potential difference**.
4. Repeat steps 1-3 for a range of **lengths of resistance** wire between 1m and 0.1 m.
5. Calculate the **resistance** of the wire at each length using:

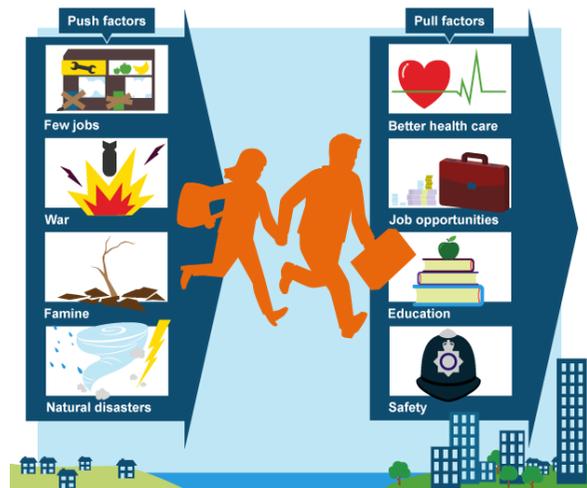
$$\text{Resistance } (\Omega) = \frac{\text{potential difference (V)}}{\text{current (A)}}$$

6. Use your calculated values of resistance to plot a graph of length of wire against resistance.

Population and Development

Population density: Population density is the number of people living in an area. It is worked out by dividing the number of people in an area by the size of the area.

Population density and distribution is affected by many factors. People prefer to live in places where they can grow food, build homes and work. Some areas are very difficult places to live and so only very few people live there.



Population change: The world population is still growing rapidly. Although the rate of growth is slowing slightly, there are so many young people that population will continue to grow for some time. Population change is caused by: births (eg availability of contraception and trends), deaths (eg war and disease) and migration (eg people moving into or out of a country).

One child policy in China: In 1979, the One Child Rule was introduced in China. It is an anti-natal policy. It was brought in because of concerns about the size of China's population. In the 1960s the fertility rate was as high as 5.7 and the country could not support this rate of population growth. The new policy meant that any couple having a second child would get a heavy fine, around £3,000, which only the very affluent could afford. There were financial incentives to follow the policy. The impact of the policy:

- The fertility rate has dropped from 5.7 in 1960 to 1.5 in 2011, -
- About 400 million births may have been prevented. -
- In urban areas the policy was very effective. -It
- has led to an ageing population with a high dependency ratio.

Development indicators: One of the key questions to ask about development is the standard of living of the people who live in a country. There are many different ways to measure the quality of life or level of development of a place. These are called development indicators. GDP is an example of an economic development indicator and life expectancy is an example of a social development indicator.

Gross Domestic Product (GDP) - the total value of all goods and services produced in a country.

Life expectancy- the average age a population is likely to live.

Measuring development is not straightforward. It can be misleading to look at one single wealth indicator like GNP per capita because the wealth of a country might not be shared out equally. Also, one country might be seen as very developed when using one indicator, but far less developed when using a different indicator. Therefore, geographers use more than one indicator when measuring development.

Key vocabulary:

Ageing population: When the average age of a population is rising.

Migration: When people move from one place to another.

Overpopulation: Where there are too many people living in one area. Resources would be in short supply and there may be overcrowding and damage to the environment.

Population density: The average number of people in a certain area.

Pull factors: A factor which attracts people to move to a new place.

Push factors: A factor that encourages people to leave the place in which they live and to move elsewhere.

Mexico and the USA: There is a 2000 km border between the USA and Mexico as illegal migration is a huge problem. U.S. Border Patrol guards the border and tries to prevent illegal immigrants from entering the country. Illegal migration costs the USA millions of dollars for border patrols and prisons.

Some Americans believe that Mexican immigrants are a drain on the economy. They believe that migrant workers keep wages low which affects Americans. However other people believe that Mexican migrants benefit the economy by working for low wages.



Holiday Destinations – Destinations de vacances	
Je vais...	I go...
à la campagne	in the countryside
à la mer/au bord de la mer	by the sea
à la montagne	in the mountains
chez mes grand-parents	at my grandparents'
en ville	in town
sur une île	on an island

Accommodation – Le logement	
Je reste...	I stay...
dans une auberge de jeunesse	in a youth hostel
dans un camping	on a campsite
dans un gîte	in a holiday home
dans un hôtel	in a hotel
dans une villa	in a villa
dans une caravane	in a caravan
sur un bateau de croisière	on a cruise ship

Near Future – Present of Aller (to go) + infinitive	
Je vais prendre	I am going to take
Tu vas choisir	You are going to choose
Il / elle va acheter	He / she is going to buy
Nous allons jouer	We are going to play
Vous allez manger	You are going to eat
Ils / elles vont boire	They are going to drink

Other Future phrases followed by an infinitive	
Je voudrais	I would like
J'aimerais	I would like

French Year 8 Summer

Essentials – Les essentiels	
Je vais prendre...	I am going to take...
un ballon	a ball
ma batte de cricket	my cricket bat
mes BD	my comics
un bon livre	a good book
mes lunettes de soleil	my sun glasses
une carte postale	a postcard
ma casquette	my cap
une carte	a map
de la crème solaire	sun cream
mon frisbee	my frisbee
mon maquillage	my make up
le lisseur	hair straighteners
mon portable	my mobile phone
mon jean préféré	my favourite jeans
mon maillot de bain	my swimming costume

Holiday activities – Les activités de vacances	
se baigner/nager	To swim
visiter des monuments	To visit monuments
dormir	To sleep
manger des plats régionaux	To eat local dishes
faire des randonnées	To go on walks
faire du vélo	To go cycling
jouer sur la plage	To play on the beach
louer un pédalo	To hire a pedalo

Key present tense verbs	
J'achète	I buy
Je bois	I drink
Je fais	I do
Je joue	I play
Je mange	I eat
Je trouve	I find
Je visite	I visit
Je voyage	I travel
Je vois	I see
Je vais	I go
Je rentre	I return
C'est	It is
Je le trouve	I find it

Seasons – Les saisons	
au printemps	in spring
en été	in summer
en automne	in autumn
en hiver	in winter

Past tense phrases	
J'ai acheté	I bought
J'ai bu	I drank
J'ai fait	I did/made
J'ai joué	I played
J'ai mangé	I ate
J'ai trouvé	I found
J'ai visité	I visited
J'ai voyagé	I travelled
J'ai vu	I saw
Je suis allé(e)	I went
Je suis rentré(e)	I went home
C'était	It was
Je l'ai trouvé	I found it

Sequencing words	
puis	then
ensuite	then, next
après	after
pour finir	finally
d'habitude	usually
hier	yesterday
(tout) d'abord	first of all

Year 8 Spanish- Cycle 3

	Spanish	English
1	Actualmente vivo en Perú, sin embargo, en el pasado vivía en España y en el futuro voy a vivir en allí otra vez porque la echo de menos.	I currently live in Peru, however, in the past I used to live in Spain and in the future I am going to live there again because I miss it.
2	Vivo en una casa grande en una ciudad que está cerca de la costa. Diría que tengo suerte porque me encanta donde vivo.	I live in a big house in a city that is near the coast. I would say that I am lucky because I love where I live.
3	En cuanto a mi casa, tiene un salón enorme, un comedor, una cocina moderna, dos cuartos de baño y cuatro dormitorios. Fuera hay un jardín bonito.	With regards to my house, it has an enormous lounge, a dining room, a modern kitchen, two bathrooms and four bedrooms. Outside there is a pretty garden.
4	En mi dormitorio hay una cama debajo de la ventana y a la izquierda hay una mesa con mi ordenador.	In my bedroom there is a bed under the window and on the left there is a table with my computer.
5	Por la tarde a las ocho siempre veo la televisión en el salón con mi familia. En mi opinión es bueno pasar tiempo juntos.	In the evening at 8 o'clock I always watch TV in the lounge with my family. In my opinion it is good to spend time together.
6	Los fines de semana me paso las horas muertas jugando a la consola.	At weekends I spend hour after hour playing on the games console.
7	Cada día, cuando tengo colegio, por la mañana me levanto a las siete. Me ducho y después desayuno en la cocina a las siete y media.	Every day, when I have school, in the morning I get up at 7. I shower and afterwards I have breakfast in the kitchen at 7.30.
8	Ayer por la noche cené con mi familia y escuché música con mi hermano Raúl. También hablé con mis amigos en Snapchat.	Last night I had dinner with my family and I listened to music with my brother Raul. I also spoke with my friends on Snapchat.
9	Esta noche voy a hacer mis deberes de matemáticas y luego voy a dar un paseo con el perro.	Tonight I am going to do my maths homework then I am going to go for a walk with the dog.
10	Odio hacer mis deberes cada noche ¡Qué rollo!	I hate doing my homework every night. What a pain!

Week 1 Countries	
¿Dónde vives?	Where do you live?
vivir	to live
vivo	I live
vives	You live(s)
vive	He/she lives
vivimos	We live
vivís	You live (pl)
viven	They live
vivía	I used to live
voy a vivir	I am going to live
en Alemania	in Germany
en Escocia	in Scotland
en España	in Spain
en Francia	in France
en Gales	in Wales
en Grecia	in Greece
en Irlanda	in Ireland
en Inglaterra	in England
en Italia	in Italy
en Portugal	in Portugal
Está	It is (location)
en el norte	in the north
en el este	in the east
en el sur	in the south
en el oeste	in the west
en el centro	in the centre

Week 2 Places to live	
Vivo en...	I live in...
un piso	a flat
una casa	a house
el campo	the countryside
una ciudad	a city / town
un pueblo	a village
la montaña	the mountains
la costa	the coast
antiguo	old (fashioned)
moderno	modern
bonito	pretty
feo	ugly
nuevo	new
viejo	old
pequeño	small
cómodo	comfortable
grande	big
Week 7 Daily routine	
Me despierto	I wake up
Me levanto	I get up
Me ducho	I shower
Me peino	I comb my hair
Me visto	I get dressed
Desayuno	I have breakfast
Voy al insti	I go to school
Hago mis deberes	I do my homework
Ceno	I have dinner
Me lavo los dientes	I brush my teeth
Me acuesto	I go to bed
Por la mañana	In the morning
Por la tarde	In the afternoon / evening
luego	then
después	afterwards

Week 3 Rooms	
Hay...	There is...
Tiene...	It has...
un comedor	a dining room
un cuarto de baño	a bathroom
un aseo	a toilet
un pasillo	a hallway
un salón	a lounge
una cocina	a kitchen
un dormitorio	a bedroom
un garaje	a garage
una habitación	a room
un jardín	a garden
una terraza	a terrace
arriba	upstairs
abajo	downstairs
fuera	outside

Week 8 Last Night	
Ayer	Yesterday
Por la noche	In the night
mandé	I sent
escuché	I listened
bebí	I drank
dormí	I slept
ví	I watched
jugué	I played
hablé	I spoke
comí	I ate

To talk about the past with regular verbs in the first person:
-ar verbs change to **é**
-er and **-ir** verbs change to **í**

Week 4 In the bedroom	
un armario	a wardrobe
un ordenador	a computer
una alfombra	a carpet / rug
una cama	a bed
una estantería	a shelf
una lámpara	a lamp
una mesa	a table
una puerta	a door
una silla	a chair
una televisión	a television
una ventana	a window
encima de	next to
a la derecha (de)	to the right (of)
a la izquierda (de)	to the left (of)
debajo de	under
delante de	in front of
al lado de	next to / beside
detrás de	behind
entre	between
en la pared	on the wall

Week 9 Tonight

ir	to go
voy a dar un paseo	I am going to go for a walk
vas a dormir	You're going to sleep (s)
va a vivir	he/she is going to live
vamos a desayunar	we're going to have breakfast
vais a hacer	You are going to do (pl)
van a tener	They are going to have

Week 5 Time	
¿ A qué hora...?	At what time..?
a medianoche	at midday
a mediodía	at midnight
a la una	at 1 o'clock
a las dos y cinco	at 2.05
a las tres y diez	at 3:10
a las cuatro y cuarto	at 4:15
a las seis y veinte	at 6:20
a las siete y veinticinco	at 7.25
a las ocho y media	at 8:30
a las nueve menos cuarto	at 8:45
a las once menos cinco	at 10:55
Week 6	
Mid Cycle Writing Assessment	

Immediate Future:
 Present tense of Ir (to go)
 + a
 + infinitive

How do we become good citizens?- Part 1

KEY WORDS:

Careers; democracy; politics; government; parliament (House of commons); House of Lords; socialist; liberal; communist; conservative.

KEY CHRISTIAN BELIEFS:

- Love your neighbour as you love yourself
- Follow the loving example of Jesus
- We are all made in the image of God
- Be good stewards (managers) of God's resources
- Life is a gift from God



Neighbourhood respect

What are the best 5 ways to help your local neighbourhood?

- Keep the noise down
- Set up a neighbour watch (against crime)
- Visit vulnerable neighbours (eg the elderly/sick)
- Pick up litter
- Know your neighbours and their children
- Have neighbourhood events
- Cut back overhanging trees/bushes
- Drive slowly
- Stay a neighbour, don't move house
- Walk around the neighbourhood.

- > What could you do to improve your neighbourhood?
- > What could Christians do to help the neighbourhood?



Respect for strangers

Put the following into 3 categories: Good way to respect strangers, OK way, poor way!

- Use earphones on public transport
- Don't push in queues
- Don't cycle on pavements
- Be honest- never steal
- Don't swear
- Don't ask personal questions
- Don't hug unless invited
- Listen, don't interrupt
- Be alert on zebra crossings
- Be first aid trained
- Don't be prejudiced eg racist eg ageist
- Start conversations
- Rescue victims of violence

- > Should you give money to beggars? Why?
- > Should you hand in expensive items lost by a stranger?



Helpful careers

Below are 10 helpful jobs to help society. Think of 5 more that are just as helpful.

- * Social worker
- * Plumber
- * Teacher
- * Brick layer
- * Doctor
- * Shop assistant
- * Police officer
- * Vet
- * Nursery Nurse
- * Car mechanic
- * _____
- * _____
- * _____
- * _____

- > What is the most helpful job?
- > What 3 jobs would you like to do?



Charity support

Choose 3 charities. Do detailed posters to promote them. Look them up on the internet for help.

- Cancer support
- Children in need
- Help the heroes
- Shelter
- Fair Trade
- The Samaritans
- Extinction Rebellion
- Christian Aid
- R.S.P.C.A. (Animals)
- British Heart Foundation
- Age UK
- Guide dogs for the blind

- > Explain in detail why one of the above is more important than some of the others



Voting

Put true or false by each statement below based on your opinion

- Voting is right to do
- Voting is important
- Voting helps you to be represented
- Voting stops bad people getting power
- Voting should begin at 16
- Voting upholds democracy (that the people decide)
- Voting should just be for intelligent people
- Voting makes a difference
- Voting is important for issues such as the EU and crime prevention
- Voting is a waste of time

- > What would you most like to vote on?
- > Give reasons



Political engagement

Memorize the below facts. Copy them out.

- o At general elections the party that gets the most votes becomes the government
- o The Government can make new laws (legislation)
- o Parliament (650 MPs) checks the Government's new laws and approves or challenges them
- o The House of Lords has a similar checking role

o What kind of government would you want?

Conservative- Tend to favour slow change. Want everyone to be free to prosper in their own way.

Socialist (Labour)- Tend to want fairness for all groups of people, especially the poor.

Liberal- Tend to want individual freedom/fairness.

Communist- Tend to want state ownership of land/resources for the benefit of everyone.

- > Which party would you vote for? Give reasons.
- > Who wouldn't you vote for? Why?

How do we become good citizens? Part 2

KEY WORDS:

Society; climate change; emissions; asylum; refugee; monarchy; citizen; constitutional.

KEY BUDDHIST BELIEFS:

- Produce good karma

- Show people metta (loving kindness)

- Show people karuna (compassion)

- Do not harm life, steal, lie, misuse drugs or sex (5 moral precepts)

Respect for the Law

Should we always respect the law?

YES

NO

- | | |
|---|---|
| <ul style="list-style-type: none"> • It would be chaos if everyone broke the law. • People would give in to their worst emotions. • Society would break down. • The law keeps everybody safe. • The law gives future hope. | <ul style="list-style-type: none"> • Sometimes the law is wrong eg racist laws. • The law is only as good as the law makers. • Sometimes we have to break the law eg if a traffic light is stuck on red. |
|---|---|

FOR each crime:

eg murder; rape; G.B.H; theft; armed robbery; drink driving; drug dealing; vandalism; animal abuse...

Choose a punishment:

Community service; suspended sentence; fine; short prison sentence; long prison time; execution.

Give reasons why...

Respect for the planet

Should we pay so much attention to the environment?

YES

NO

- | | |
|--|---|
| <ul style="list-style-type: none"> • How can we enjoy anything if our planet is destroyed? • Our children and their children will be in danger. • We are heading for mass deaths in the future. | <ul style="list-style-type: none"> • We should be more concerned about immediate issues like disease, war, starvation. • The future is no concern now. • It is the Government's responsibility to tackle the climate |
|--|---|

→ The planet's temperature has risen 1.620 Fahrenheit since the late 1800s.

→ This is due largely to an increase in Co2 emissions into the atmosphere.

→ Most of the warming has occurred in the past 35 years.

→ The Greenland and Antarctic ice sheets have decreased in mass.

→ Sea levels are rising.

Refugees

Should we allow many more refugees to come to our country in the UK?

YES

NO

- | | |
|---|--|
| <ul style="list-style-type: none"> • Refugees are in danger if they go home. • We are the 5th richest country. • We have a proud history of helping people. | <ul style="list-style-type: none"> • We should help our own poor and homeless first. • We have too few homes and overcrowded schools. • Our NHS might not cope. |
|---|--|

○ Refugees are people who have to leave their country due to war or famine or political opinions and so seek 'refuge'.

○ First, they seek political asylum before being granted refugee status to settle in a new country. However, many refugees end up in very poor refugee camps.

○ An example of a current refugee crisis are the millions of people who have fled Syria.

The Monarchy

Should we get rid of the Monarchy in our country?

YES

NO

- | | |
|---|---|
| <ul style="list-style-type: none"> • There is no place for Kings and Queen in a modern society. • They have no power anyway. • Why should one family have so much money from tax payers? | <ul style="list-style-type: none"> • The Queen gives the UK a sense of identity. • The Royal family bring in much revenue from tourism. • A permanent monarchy gives the UK long term stability. |
|---|---|

* In the UK the royal family is a 'constitutional' monarchy meaning that real powers belong to the government and parliament.

* The monarchy remain politically neutral but they do make comments on news related issues from time to time.

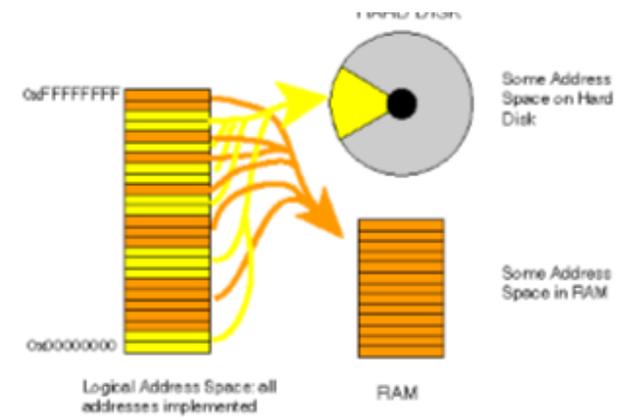
What would happen tomorrow if the police force had a day off? Explain in detail.

What would happen tomorrow if much of the UK was so flooded that only the top half of houses were above the water level. Explain in detail.

What problems would you have if you turned up in a foreign country desperate for help? Explain in detail.

What would be good about being the King or Queen of the UK. What would the challenges be? Explain in detail.

Key Vocabulary	
Volatile	Data is lost when there is no power to the storage
RAM	Random Access Memory—It stores currently running programs and a small piece of the operating system. Can store data
ROM	Read only memory— Holds the BIOS which allows the computer to boot up. It cannot be edited. Can store data.
BIOS	Basic input output system—Another name for the boot up sequence program.
Virtual Memory	Memory which is used when RAM is full. This is taken from secondary storage.
Disk Thrashing	Overusing the hard drive with virtual memory—which over time damages the disk.
Flash Memory (non-volatile)	Memory which retains data in the absence of power. USB drive.



Ram VS Rom	
RAM	ROM
Volatile memory	Non-volatile memory
Stores data	Stores data
Stores running programs & part of the operating system	Used to store the BIOS and bootstrap
Memory can be written to or read from	Memory can only be read from and not written to



The CPU will first search for data in the Cache memory and then move further away until it finds what it is looking for. The further away from the CPU, the longer data will take to transfer.



Flash Memory
 USB is not accepted—it has to be USB drive; USB pen drive; Flash drive.

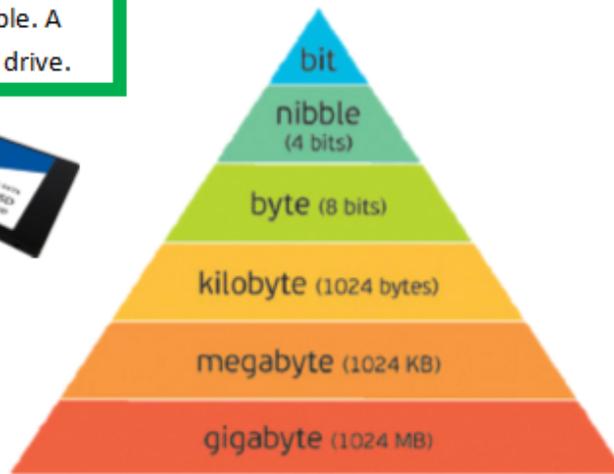
Have you applied?
 Definitions **must** be applied to the scenario otherwise you will receive 0 marks.
 Example: How can John increase the performance of his computer? (3)
 Answer: They could increase the number of cores, as this will increase parallel processing. He could also increase the RAM as this will allow more temporary storage for running programs and allow the processor more time to process data, and will reduce disk thrashing.

Key Vocabulary

Secondary Storage	Storage which is not directly connected to the motherboard. Non-volatile. Needed to store persistent data.
Primary Storage	Storage which is connected to the motherboard.
Magnetic Storage	Storage which is cheap per MB; not very durable as it has moving parts, not very portable. A hard drive.
Optical Storage	Storage which is cheap per MB, not very durable as it can be damaged by scratches, is portable. A CD
Solid State Storage	Storage which is expensive per MB, very durable as they are shock resistant and have no moving parts., very portable. A USB drive, or a solid state drive.



Device	Capacity	Speed	Portability	Durability	Reliability	Cost
Magnetic	High > 1TB	Medium data access	Not very; it is not easy to move a hard drive	Not very durable, it has moving parts and is easy to break	Mid reliability due to moving parts being easy to break.	Cheap per MB
Optical	Low <1GB	Slow data access	Very portable. It's a disk	Not very, it is easy to scratch and snap	Mid reliability as it is fairly robust but can be damaged and prevents reading data	Very cheap per MB
Solid State	Medium <1TB	Fast data access	Very, solid state drives have no moving parts and are fairly small	Very durable, as they are just microchips on a board.	High—although they do have a limited number of read and writes	Very expensive per MB
Cloud Storage	Within reason unlimited	Dependant on network access speed	Very portable, as long as you have internet access	Very durable, can be accessed on any device with internet access	It is not possible to break cloud storage	Mid range expensive. Depends on how much space you have.



Have you applied?

Definitions **must** be applied to the scenario otherwise you will receive 0 marks. **Here the photos have been mentioned.**

Example: John is transferring camera files from one computer to another. Discuss the advantages and disadvantages of using a flash drive.

Answer: A flash drive has high transfer speeds, and is very robust however has limited storage when compared to a hard drive, or cloud storage. So to move the photos I would recommend cloud storage.

Samba



Samba was invented in Brazil in 1930 by Ismael Silva and contains elements of musical traditional from South America and Africa. It is traditionally performed at carnivals and street parties especially just before the Christian period of Lent (January/February).

A samba band will have many different percussion instruments playing different rhythms at the same time.



Pop Key Words

Verse – Moves the story forward or expands on the central theme

Chorus – Repeated section usually highlighting the central theme.

Bridge – Contrasts with verse and chorus

Inversions – The notes of a chord arranged in a different order. Creates a smoother progression.

Music Technology:

With software like Garageband or Reaper you now have a recording studio in your home computer. This software will let you record sounds or use a midi keyboard to play virtual instruments on your computer.

Some DJs (e.g. DeadMaus) use music technology as an important part of their live performances.

Composers such as Hans Zimmer use DAW software for everything from experimenting with ideas to creating notated scores for orchestras to play from.

Music Technology Key Words

DAW – Digital Audio Workstation. Software which allows you to sample, sequence and use virtual instrument to create music.

Sampling – The recording of sounds (samples) for use in a piece of music. Examples include James Brown's drumbeats being sampled and reused in hip hop songs.

Sequencing – Using a DAW to arrange audio files into a piece of music.

Virtual Instruments – Computer program which make sounds like a real instrument e.g. violin.

MIDI – A way for electronic instruments to talk to each other (including computers).

Texture – Refers to how many tracks there are in the music. More tracks gives a thicker texture.



Year 8 MUSIC Knowledge Organiser

Samba Key Words:

Polyrhythms – Different rhythms being played at the same time.

Syncopation – Rhythms which accentuate the offbeat rather than the main beats.

Call and Response – Leader's rhythm is answered by a different rhythm from the rest of the band.

Tempo – The speed the rhythm is played at.

Ostinato – A repeated melodic or rhythmic pattern.

Surdo – A large bass drum which is struck with a beater on the drum head or on the side.



Tamborim – Similar to a tambourine but has no 'jingly bits'. Is played by being hit with a special beater.



Agogo – A percussion instrument with two metal bells or cones. It is played with a beater.



Ganza – A metal shaker.



Year 8

Improvisation

Improvisation is any work in Drama where you do not have a script.

Spontaneous Improvisation: You are making up your performance on the spot.

Polished improvisation: You do not have a script but you repeat and refine a scene before performing it.

Given Circumstances: These are the things you know about your character and the situation they are in. You use these to inform your improvisation.

Objective: The thing your character wants to achieve, this can also be called their motivation.

Staying in role: Stay focussed and present your character to the audience without letting your own feelings show.

Physical theatre

Physical theatre is any work in drama in which your body is the main tool for communicating with the audience.

Abstract: Not trying to show reality, Physical theatre can be quite strange, you are never trying to show how people behave in real life you might be exploring ideas and stories in an unusual and creative way.

Using actors as set: Usually by using actors bodies, you can create any object you need on stage. To do this effectively you will need balance, strength, coordination and cooperation.

Mechanical, repetitive, movement: turn every day movements into a synchronised robotic rhythm that is engaging for your audience.

Transitions: How you move from one moment to another is really important in physical theatre. It is part of the performance and should be interesting to look at

Script for Physical Theatre Assessment, Metamorphosis by Franz Kafka

1. As Gregor Samsa awoke one morning from uneasy dreams.
2. He found himself transformed in his bed into a gigantic insect.
3. His numerous limbs, which were pitifully thin compared to the rest of his bulk, waved helplessly before him.
4. What has happened to me?
5. He thought.
6. It was no dream
7. He looked at the alarm clock, ticking on the shelf
8. Half past six and the hands were quietly moving on.
9. Gregor! Gregor!
10. Said a voice
11. That gentle voice
12. It was his mother's.

Cooking Skills Key words: dice, slice, whisk, zest, juice, yeast (micro living organism helps bread to rise, gluten (protein helps bread to rise) knead (stretches out gluten in bread making process, prove (bread left at room temperature yeast lets off carbon dioxide and helps to rise), re-hydrate, starch, rubbing in method, roux method, all-in-one method, melt, layer, fry, boil, simmer

Equipment: electric whisk, food processor, measuring jug, juicer, frying pan, saucepan.

Knowledge: Food choice, food provenance, recipe modification, dietary needs.



Cooking and Nutrition

Food for Life



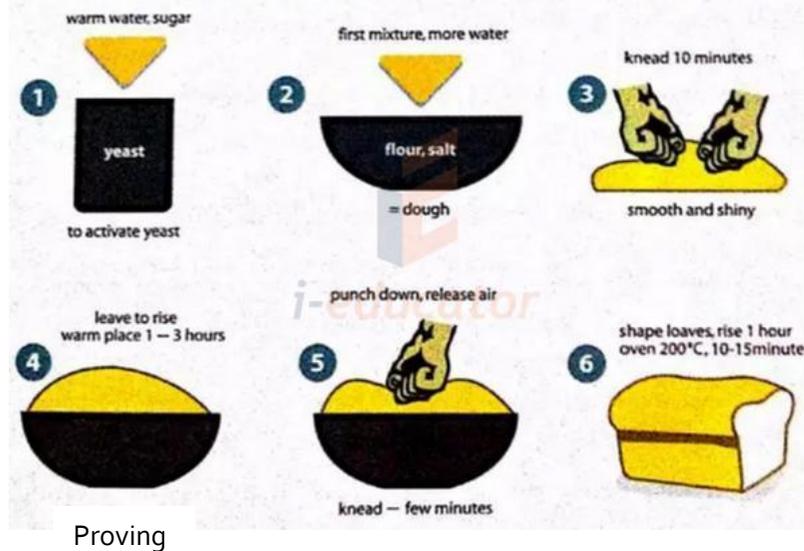
Essential Nutrients

1. Protein
2. Fat
3. Carbohydrate
4. Vitamins
5. Minerals

PLUS Water and Fibre (neither are nutrients but are required for a healthy diet).

Key Food Preparation and Cooking Processes

The Bread Making Process



Sources of Food

Ingredients can be grown, gathered, caught, reared or made / manufactured.



This aspect of food is known as **FOOD PROVENANCE**

Why do we need to know this?

How food is produced has an impact on its quality, its nutritional properties, the environment, as well as its cost.

The general rule is 'the closer to its original form, the better the food is for us'.



HOMEMADE V FAST FOODS

Homemade - positives

Know what's in it
Lower fat, sugar and salt

No artificial additives
Choose own ingredients – know their food provenance
Energy used in making

Fast food - negatives

High in sugar, fat and salt
Artificial additives
Not fresh
Throw away utensils etc

Cooking Methods



Baking – dry heat, no oil. Minimal vitamins are lost



Frying – in a frying pan with oil, gives texture, flavour and colour to food. Dissolve fat soluble vitamins. Use

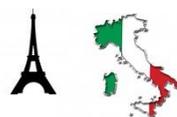


Simmering – after boiling in a saucepan of water to cook gently. Vegetables, pasta, sauces etc.



Multicultural Foods

Pizza and Lasagne- Italy
Curry - India
Scones - UK



Modify a Recipe – different diets



We could improve the by:

- Adding vegetables to the sauce – more fibre, vitamins, minerals
- Adding a protein (meat/fish etc)
- Making a homemade sauce
- Make vegetarian/vegan, less fat, ethical reasons
- lean meat (remove fat), less fat
- Semi skimmed milk – less fat
- wholemeal pasta (more fibre)
- Use healthier oils, margarine instead of butter
- Low fat cheese
- Lactose free ingredients

PLASTICS

Thermosetting
Thermoplastics
Acrylic
Nylon
Formaldehyde
Recycling
Polyester
Polymer
Injection
Rotational
Microplastics

(Look up the meanings of these words).

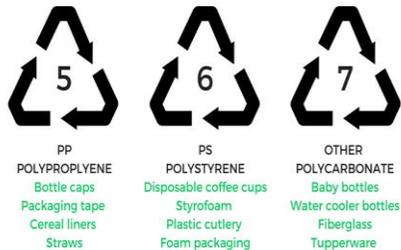
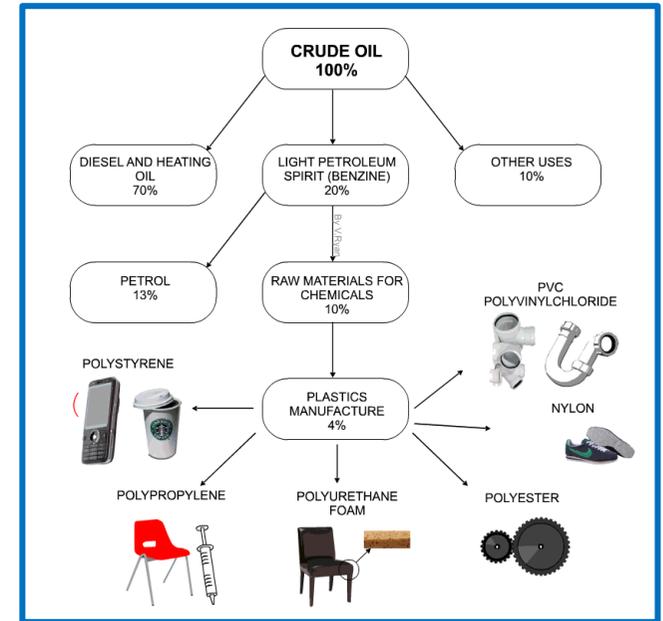
WHAT ARE THERMOPLASTICS ?

These plastics can be re-heated and re-shaped in various ways. They become mouldable after reheating as they do not undergo significant chemical change. Reheating and shaping can be repeated. The bond between the molecules is weak and becomes weaker when reheated, allowing reshaping. These types of plastics **can be recycled**.



WHAT ARE THERMOSETTING PLASTICS ?

Once heated and moulded, these plastics cannot be reheated and remoulded. The molecules of these plastics are cross linked in three dimensions and this is why they **cannot be reshaped or recycled**. The bond between the molecules is very strong.



PLASTIC MANUFACTURING PROCESSES.

- Injection moulding
- Vacuum forming
- Blow moulding
- Compression moulding
- Calendering

ADVANTAGES OF PLASTICS

- Any colour available
- Cheap to manufacture
- Strong
- Malleable
- Good insulator
- Versatile
- Water & Chemical resistant

40% of all plastic is manufactured for packaging – used just once, then thrown away.

1 million plastic drink bottles are bought around the world every minute.

Half of all plastic that has ever existed was made in the past 13 years.

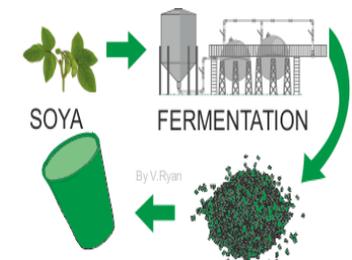
Microplastics exist in more than 90% of bottled water.

It is estimated that by 2050 there will be more plastic mass in the ocean than fish.

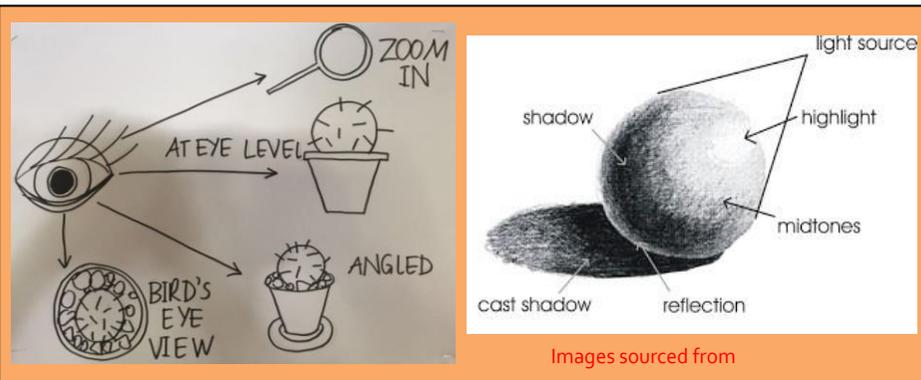
91% of plastic is never recycled.

BIOPOL BIODEGRADABLE PLASTIC

Biopol is the brand name for Polyhydroxybutyrate. It is an environmentally friendly polymer. It is processed through the fermentation of corn and soya.



MANUFACTURED INTO PRODUCT PROCESSED INTO BIOPOL



Images sourced from

Year 8 **Art and Design**.

Objects and Viewpoints

I am open minded and curious to learn about and understand new art styles and techniques. I am confident to play with ideas and processes whilst making style choices.

Stretch and Challenge: The more you do something, the better you get at it!

1. Arrange your own still-life and take photos of it using a range of different viewpoints (be experimental). Print out, present on paper and draw from them.
2. Complete the tasks written in green

Still-life: You may think that you won't be able to do it, but you will be amazed at how good you get at drawing a still-life during this project. You will be taught how to draw accurately and how to abstract. You will be taught to notice more than the obvious. **Set up your own still-life and practice drawing accurately what you see. Look closely at shape, size, angle, detail, light source**



Image sourced from Google

Experimental drawing: You will find it exhilarating to experiment with new ways of drawing and looking at something. Embrace the unknown and enjoy the wonderfully weird and imperfectly beautiful results that you create. **Arrange your own still life and find something interesting to look through. This could be anything from close up to looking through a sheet of bubble wrap**

Viewpoints: You will love experimenting with different ways of looking at a still-life. For example, you can change the angle, look through a magnifying glass or even bubble wrap! **Set up your own still-life and experiment with different ways of looking at it by taking photos and drawing what you see each**



Image sourced from Google

Discovering art styles! It is fascinating to see the work of other artists (yes, you too are an artist!) and learn about their inspirations, styles and techniques. You will be inspired by how your own style, skill and ideas transform whilst you explore the artist and the art style. **Find an artwork that includes a still-life and research about it and the artist. Then have a go at creating your own**

Key vocabulary

3D, view, space, place, point of view, perspective, viewpoint, distance, line. Shape. Tone. Texture, detail. Light/Shade. Intensity. Size, Proportion. Division, beauty. Game, experiment, realistic vs abstract, confusing, fragmented, alternative, layered, overlap, angles, geometric, interesting, imperfect, hint, suggestion, transformation, Context, information, sources, still-life, genre, Style, visual features, visual effects, Paris, France, Europe, avant-garde, cafes, WWI, society, fashion, city life, standards, corset, suffragette, photography, auction, collecting, financial value, art market, layout, presentation, interpretation, response, viewfinder, selection, enlargement, accuracy, proportion, division, placing, measuring, scale up, zoom in.

New techniques and processes: Experimental drawing, overlapping drawing, cubist style, watercolours, mixed media collage, hand stitch

Muscular System & Movement



Isotonic contractions – these occur when a muscle contracts and changes length and there are two types:

- **Isotonic concentric contraction** – this involves the muscle shortening. The origin and insertion of the muscle become closer together and the muscle becomes fatter.
- **Isotonic eccentric contraction** – this involves the muscle lengthening whilst it is under tension. The origin and the insertion move further away from each other. An eccentric contraction provides the control of a movement on the downward phase and it works to resist the force of gravity.



Isometric contraction – this involves a muscle producing tension but staying the same length. This occurs when the body is fixed in one position like the gymnast in the pictures



Muscle	Function	Example in Sport
Sternocleidomastoid	Help with the breathing process	All sporting activities but particularly endurance events
Deltoid	Abduction of the shoulder (moving the arm outwards and away from the body)	Outward arm action in a jumping jack
Rotator cuffs	A group of stabilising muscles of the shoulder which helps to prevent dislocation and allows the shoulder to rotate the humerus around its own axis	A throwing action such as a javelin throw
Pectorals	Adduction of the shoulder (moving the arm towards the body); Shoulder horizontal flexion (moving the arms forwards in front of the body)	Upwards phase of a press up
Intercostals	Assist with the breathing process	All sporting activities but particularly endurance events
Triceps	Extend the elbow (straightening the arm)	Shooting in netball
Biceps	Flex the elbow (bending the arm)	Drawing a bow in archery
Abdominals	Flex the trunk across the stomach (sitting upwards)	Performing a sit up
Latissimus dorsi	Shoulder adduction (moving the arm towards the body); Shoulder horizontal extension	Butterfly stroke in swimming
Quadriceps	Extend the knee (straightening the leg)	Kicking a ball
Hamstrings	Flex the knee (bending the leg)	Performing a hamstring curl on a weights machine
Gastrocnemius	Plantar flexion of the ankle (pointing the toes downwards)	Standing on tiptoe to mark a goal shoot in netball
Tibialis anterior	Dorsiflexion of the ankle (bringing the toes up towards the shin)	Foot making contact with a football

Type of joint	Body location	Types of movement
Ball and socket	Hip, shoulder	Flexion/extension, rotation, abduction, adduction, circumduction
Hinge	Knee, elbow	Flexion/extension

Type of Movement	What does this movement look like
Flexion	bending a joint. This occurs when the angle of a joint decreases. For example, the elbow flexes when performing a biceps curl.
Extension	straightening a joint. This occurs when the angle of a joint increases, for example, at the elbow when putting a shot.
Abduction	movement away from the midline of the body. This occurs at the hip and shoulder joints during a jumping jack movement.
Adduction	movement towards the midline of the body. This occurs at the hip and shoulder, returning the arms and legs back to their original position from a jumping jack movement.
Rotation	this is where the limb moves in a circular movement around a fixed joint towards or away from the midline of the body. This occurs in the hip in golf while performing a drive shot.
Plantar flexion	pointing the toes – this movement only occurs at the ankle, for example, pointing the toes in ballet.
Dorsiflexion	the foot moves towards the shin as if you are pulling your toes up. This movement only occurs at the ankle.

We would always encourage you to speak to the people you live with or someone in school if you have a worry or a problem. If you can't, or you want to read more about an issue affecting you or someone you know, here are some useful websites and phone numbers. They offer free, confidential advice and support.



General

Childline—www.childline.org

0800 1111

Offers information and advice, 1-2-1 confidential chat (text, email, phone) and support from message boards on a wide range of issues.

This website is one of the most useful you will find and can direct you to help or information about all the other topics mentioned here, and



Health

School nurse—07520 631722

Text only for confidential advice

National Health Service—www.nhs.uk

Research and useful information on health issues

Walk-In Centre, RD&E Hospital—01392 411611

Non-urgent and sexual health needs

Walk-In Centre, 31 Sidwell Street—01392 276892



Mental Health and well-being

Samaritans—www.samaritans.org

Call 116 123 for emergency help

Email jo@samaritans.org (response within 24 hours)

Papyrus—papyrus-uk.org 0800 068 41 41

Urgent help for you or someone you know

YoungMinds—youngminds.org.uk

Text YM to 85258 for urgent help

Happy Maps—www.happymaps.co.uk

Advice on everything from sleep problems to anxiety, bullying, self-harm, coping with divorce, autism, ADHD, gender dysphoria and more

Safety, bullying and abuse

Child Exploitation and Online Protection (CEOP) - www.ceop.police.uk

Report inappropriate online contact, any unlawful misuse of social media, or a child protection concern to a trained police officer. You can also click this button on your platform:



NSPCC—www.nspcc.org.uk 0800 1111

Information and help about on- and offline abuse

National Bullying Helpline—www.nationalbullyinghelpline.co.uk 0845 22 55 787

Advice and help about bullying on- and offline



Healthy relationships

Thinkuknow—www.thinkuknow.co.uk

Age-related help and advice about on- and offline relationships and consent.



Drugs and alcohol

YSmart—ysmart.org.uk 01271 388162

Information about substance misuse, advice, recovery and treatment



LGBT

X-PLORE—www.lgbtqyouthdevon.org.uk

Local support and groups for LGBTQ young people

Homeless, skills, advice, getting your voice heard

Young Devon—www.youngdevon.org 01392 331 666

If someone's life is at risk, you should always dial

999