Knowledge Organiser

Year 9

Term 1
2024/25

The Abbey School

Contents

Maths Year 9 Term 1 – Number Skills

TERM FOCUS – How do you calculate with ANY number?
How and why do we estimate?
How do you use primes and powers?

Prior Learning Links

Year 7 and Year 8 number skills required. Simple addition, subtraction, multiplication and division skills.

Students need to know what factors and multiples are and be comfortable in working with primes, squares, cubes and roots within calculations.

Students should also have a solid understanding of what negative numbers are and what rules of addition, subtraction, multiplication and division there are.

Future Learning Links

Links to harder topics in later years. Students need to be able to work in standard form (Year 11) and carry out calculations with larger numbers.

Index notation links to laws of indices and solving harder linear equations.

Powers of two and three link to quadratic and cubic graphs.

1. How do I calculate accurately?

Red | Amber | Green

How to subtract accurately

1. Line up the numbers you want to subtract in the correct place value
2. If the number you are subtracting is bigger than your current number, you must borrow from the next number.
3. The number you are borrowing from decreases by 1.

$$\begin{array}{r} 31.3 \\ -\,16.4 \\ \hline 14.9 \end{array}$$

How to add accurately

1. Line up the numbers you want to add in the correct place value columns
2. Add going downwards. If your number is over 10, remember to carry over.
3. Once you have carried over a number, do not forget to add it on to the next addition.

$$\begin{array}{r} 31.3 \\ +\,16.4 \\ \hline 47.7 \end{array}$$

How to divide accurately using bus stop

1. The number you are dividing goes underneath the bus stop. (3052)
2. The number you are dividing by goes next to the bus stop. (4)
3. Divide each number under the bus stop by the number next to it. (How many times does it go into that number?)
4. Write the answer in the line above.
5. If there is a remainder when dividing a digit, carry the remainder to the next digit.

$$\begin{array}{r} 0\,7\,6\,3 \\ 4\,\overline{)\,3^{3}0^{2}5^{1}2} \end{array}$$

3052 ÷ 4 = **763**

How to multiply accurately using column method

1. Write the numbers you want to multiply, one above the other, lining up the digits on the right
2. Multiply the bottom number's right digit by the top number. Write the result below
3. Multiply the bottom number's left digit by the top number. Write this result below the first, shifted one place left
4. Add the two numbers you wrote below
5. The final result is the answer to your multiplication

$$\begin{array}{r} 38 \\ \times\ 7 \\ \hline 56 \\ 210 \\ \hline 266 \end{array}$$

2. How do I calculate with decimals?	**Red**	**Amber**	**Green**

Multiplying Decimals

Multiplying decimals works the same way as multiplying whole numbers.

When multiplying decimals, add up the number of digits after the decimal points in the question. This number tells you the number of decimal places you should have in your answer.

1. Remove the decimal point from the question.
2. Work out the multiplication
3. Count how many decimal points there are in the question. This is how many there are in the answer.

3.4×2.86

x10 x100

$$\begin{array}{r} 286 \\ \times \quad 34 \\ \hline 1144 \\ 8580 \\ \hline 9724 \end{array}$$

$9724 \div 10 \div 100$

$= 9.724$

Dividing decimals by whole numbers

Dividing decimals by whole numbers works the same way as dividing whole numbers except, just like addition and subtraction of decimals, the decimal point must be kept in line.

$$6 \overline{)\, 0.744} = 0.124$$

$0.744 \div 6 = 0.124$

Dividing numbers by decimals

Equivalent fractions can be used to divide numbers by decimals

1. Convert the divisor into an integer by multiplying by 10, 100, 1000 etc.
2. Complete the division using bus stop.
3. Put back in the decimal point to match the number of places you multiplied by in step 1.

$8.75 \div 0.7$

$$\frac{8.75}{0.7} = \frac{87.5}{7}$$

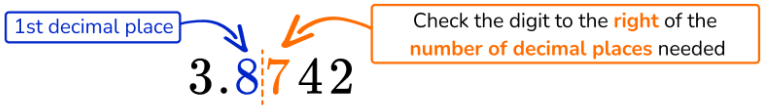
$$7 \overline{)\, 87.5} = 12.5$$

3. How do I round to decimal places?

Red Amber Green

Rounding decimals involves making a decimal simpler by shortening it to a given number of decimal places.

Example Round 3.8742 to one decimal place (1dp)



If this digit is a 5 or more, we round **up**.
If this digit is a 4 or less, we round **down**.
In this example, it is 7 so we round **up** to 3.9

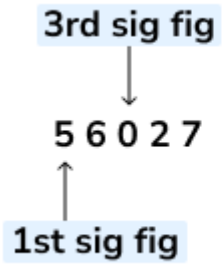
$$3.8742 = 3.9(1\text{dp})$$

These are the steps which can be followed to decide whether a number should be rounded up or rounded down to a set degree of accuracy.

1. Identify the position of the decimal place digit you are rounding to.
2. Leave it the same if the next digit (on the right) is less than 5 (This is rounding down/ keeping it the same)
3. But increase it by 1 if the next digit (on the right) is 5 or more (Thiis is rounding up)

4. How do I round to significant figures?

Red Amber Green



A significant figure is the first non-zero digit in a number. Once you start counting significant figure 0 is included.

1. Establish what place value column, the most significant figure is positioned.

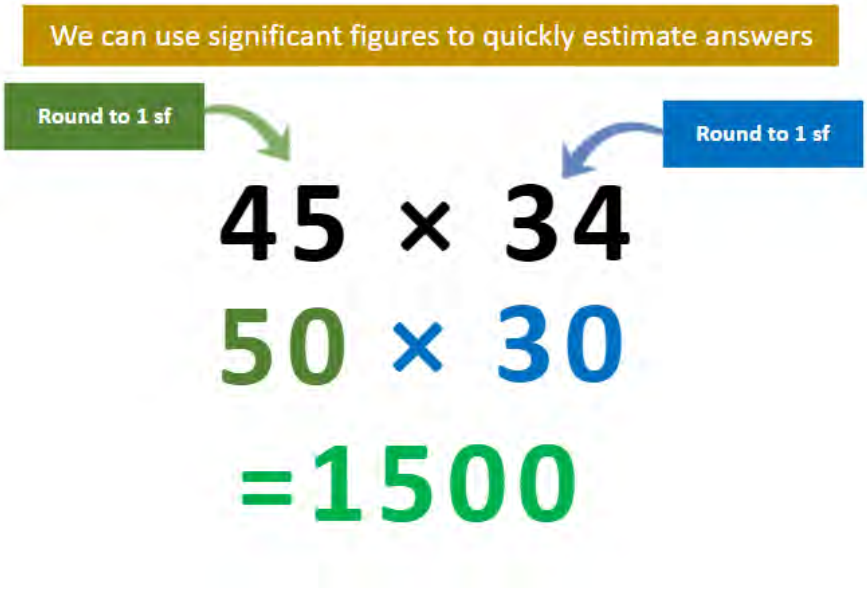
2. Refer back to the rules of rounding to decide whether this digit should be rounded up.

3. Leave the digit the same if the next digit is less than 5 (this is called rounding down) but increase it by 1 if the next digit is 5 or more (this is called rounding up).

4. The rounded value must be a similar size to the original number, so additional zero digits may be needed. For example, 320 to 1 significant figure is 300.

5. How do I estimate?

Red Amber Green

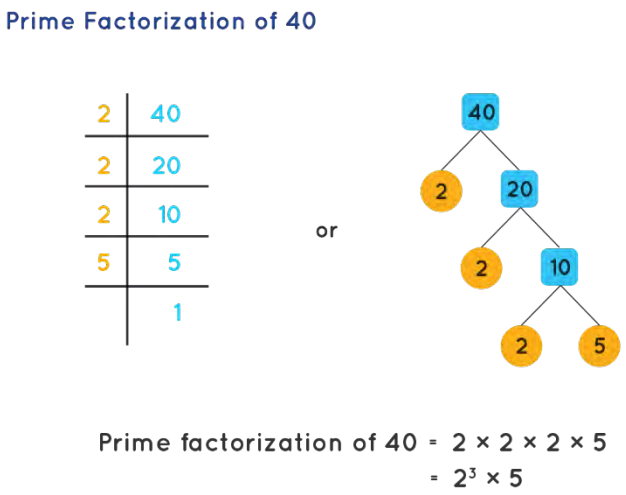


Estimations are when we use approximate values in a calculation to find approximate answers.

When we estimate we
1. Round all the numbers to 1 sf
2. Complete the calculation
3. You have your estimated answer.

6. How do I write a number as a product of its primes?

Red | Amber | Green



1. To factorise a number, divide it by the first possible prime number.

2. Take the resulting answer below the number.

3. If it is possible, continue dividing by the same prime number.

4. When you cannot do the division by this prime number, divide it by the next possible prime number.

5. And so forth until the final answer is 1.

6. Finally write this number as a product of powers of prime factors.

7. How do I find Highest Common Factor (HCF) and Lowest Common Multiple (LCM)?

Red | Amber | Green

The HCF is the largest integer (whole number) that two or more numbers can be divided by.

Finding the HCF and LCM using a Venn Diagram

1. State the product of prime factors for each number, not in index form.

The LCM is the smallest integer that is a multiple of two or more composite numbers (exists within the multiplication table of each number)

We can use the upside down bus stop to find the HCF and LCM of two numbers.
1. Write the two numbers on one line
2. Draw the L shape
3.Divide out common primes starting with the smallest
4. LCM- make an L shape. HCF- are the numbers going down the left hand side.

LCM using Repeated Division
Find the LCM of 24 and 36

2	24	36
2	12	18
3	6	9
	2	3

LCM: 2 x 2 x 3 x 2 x 3 = 72

HCF using Repeated Division
Find the HCF of 24 and 36

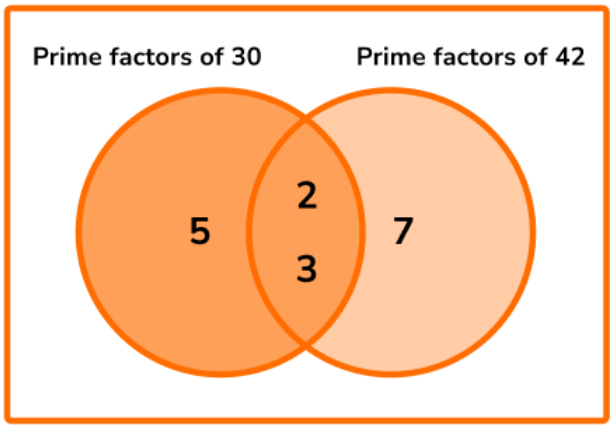
2	24	36
2	12	18
3	6	9
	2	3

HCF: 2 x 2 x 3 = 12

2. Write all the prime factors for each number into a Venn diagram.

3. Multiply the prime factors in the intersection to find the HCF.

4. Multiply each prime factor in the Venn diagram to find the LCM



8. What are the laws of indices?

Red | Amber | Green

Laws of indices provide us with rules for simplifying calculations or expressions involving powers of the same base. They are:

$$a^m \times a^n = a^{m+n}$$

$$a^m \div a^n = a^{m-n}$$

$$a^0 = 1$$

$$(a^m)^n = a^{m \times n} = a^{mn}$$

$$a^{-m} = \frac{1}{a^m}$$

$$a^{\frac{m}{n}} = \sqrt[n]{a^m}$$

GCSE Higher only

9. What is index notation?

Red | Amber | Green

Index notation is a way of representing numbers (constants) and variables (e.g. x and y) that have been multiplied by themselves a number of times.

Examples

3^4 is read as '3 to the power of 4' and means $3 \times 3 \times 3 \times 3$

$2y^3$ is read as ' 2 lots of y cubed' and means $2 \times y \times y \times y$

10. What is standard form and how do I convert to and from it? Red Amber Green

Standard form is a way of writing very large or very small numbers by using powers of ten. It is also known as *scientific notation*.

Numbers in standard form are written in this format:

$$a \times 10^n$$

Where **a** is a number **1 ≤ a < 10** and **n** is an **integer**.

Ordinary Form	Standard Form
200	2×10^2
"two hundred"	A number: $1 \leqslant x < 10$; Integer power of 10
3,500	3.5×10^3
"three thousand five hundred"	A number: $1 \leqslant x < 10$; Integer power of 10

In order to write numbers in standard form

1.Identify the non-zero digits and write these as a decimal number which is greater than or equal to 1 but less than 10
2.In order to maintain the place value of the number, this decimal number needs to be multiplied by a power of ten
3.Write the power of ten to the power of how many times you have moved the decimal place
4.Write your number in standard form

In order to convert from standard form to ordinary numbers

1. Convert the power of ten to an ordinary number
2.Multiply the decimal number by this power of ten
3. Write your number as an ordinary number

11. What are surds? Red Amber Green

A **surd** is a root that gives an irrational number. An irrational number can't be written as a fraction, and in decimal form is infinitely long with no recurring pattern.

e.g. $\sqrt{6} \approx 2.4494897$, which is an irrational number.

The square root of 6 is a surd.

12. How do I simplify surds? **Red** **Amber** **Green**

Simplifying surds is where we rewrite a surd in its simplest form by ensuring the number underneath the square root sign (the radicand) has no square numbers as factors. We make the number as small as possible by extracting square factors from underneath the root sign.

We can use the three important laws of surds:

- $\sqrt{m} \times \sqrt{n} = \sqrt{mn}$
- $\sqrt{m} \div \sqrt{n} = \sqrt{\frac{m}{n}}$
- $\sqrt{m} \times \sqrt{m} = m$

$$\sqrt{18} + \sqrt{50}$$

$$\sqrt{9}\sqrt{2} + \sqrt{25}\sqrt{2}$$

$$3\sqrt{2} + 5\sqrt{2} = 8\sqrt{2}$$

How to simplify a surds

1. Find a square number that is a factor of the number under the root.

2. Rewrite the surd as a product of this square number and another number, then evaluate the root of the square number.

3. Repeat if the number under the root still has square factors.

HOME LEARNING TASKS

Task Description	Done?
Multiplying Decimals – U293	
Rounding using significant figures – U965 and U731	
Estimating Calculation – U225	
HCF and LCM – U529, U751 and U250	
Index Laws – U235	
Standard Form- U161	
Surds – U338, U872, U633 and U499	

Physics, Year 9 Term 1 – Energy and Energy Resources

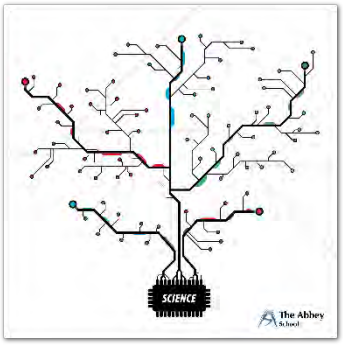
Term Focus
- BQ – How is energy transferred from one store to another?
- BQ – Can renewable energy resources replace non-renewable ones?

Prior Learning Links

- KS3 Science – What energy is
- KS3 Science– Use of formula and basic formula symbols.
- KS3 Science – Understanding of Particle theory
- KS3 Science - Renewable and non-renewable resources.

Future Learning Links

Energy and energy transfer are one of the fundamentals within Physics. Having a comprehensive knowledge of energy and its transfer is a necessity to understand the Physics course.



KEY VOCABULARY

KEY WORDS

Chemical
Elastic potential
Electrical
Gravitational potential
Kinetic
Light
Nuclear
Sound
Thermal
Efficiency
Conduction
Convection
Thermal conductivity
Dissipation
Radiation

Energy store
Energy transfer
Power
Non-renewable
Renewable
Geothermal
Hydroelectric
Solar
Tidal
Wave
Wind
Bio-fuels
Fossil fuels
Nuclear fuels

KEY SUBJECT TERMINOLOGY / FORMULA

1. Calculating **kinetic energy**	kinetic energy = 0.5 × mass × speed^2 **$E_k = 1/2\ mv^2$**
2. Calculating **elastic potential energy**	Elastic potential energy = 0.5 x spring constant x extension^2 **$E_e = 1/2ke^2$**
3. Calculating **gravitational potential energy**	Gravitational potential energy = mass × gravitational field strength × height **$E_p = mgh$**
4. Calculating **change in thermal energy**	Change in thermal energy = mass × specific heat capacity × temperature change **$\Delta E = mc\Delta\theta$**
5. Calculating **energy transfer**	Energy transferred = Power x time **E = Pt**
6. Calculating **work done**	work done = power x time **W = Pt**
7. Calculating **efficiency** using energy	Efficiency = useful output energy transfer ÷ total input energy transfer
8. calculating **efficiency** using power	Efficiency = useful output power ÷ total input power

1. What are the different energy stores? Red Amber Green

Units in P1 Energy

A physical quantity is something that can be measured. For any measurement, the unit being used must be stated to give an understanding of the scale of the measurement.

Unit of energy	J = Joules
Unit of mass	Kg = Kilograms
Unit of speed	m/s = Metres per second
Unit of spring constant	N/m= Newtons per meter
Unit of extension	m = Metres
Unit of gravitational field strength	N/kg = Newtons per kilogram
Unit of height	m = Metres
Unit of temperature	°C = degrees Celsius
Unit of specific heat capacity	J/kg°C
Unit of power	W = Watts
Unit of time	s = seconds

Energy Stores and Transfer

Energy store	Objects with energy in this store
Kinetic	Anything moving has energy in its kinetic energy store.
Thermal	Any object. The hotter it is, the more energy it has in this store. You may also see thermal energy stores called internal energy stores.
Chemical	Anything that can release energy by a chemical reaction, e.g. food, fuels.
Gravitational Potential	Anything that has mass and is inside a gravitational field.
Elastic Potential	Anything that is stretched (or compressed) e.g. springs.
Electrostatic	Anything with electric charge that is interacting with another electric charge — e.g. two charges that attract or repel each other.
Magnetic	Anything magnetic that is interacting with another magnet — e.g. two magnets that attract or repel each other.
Nuclear	Atomic nuclei have energy in this store that can be released in nuclear reactions.

Energy can be transferred between stores in four main ways:
- **Mechanically** – an object moving due to a force acting on it, e.g. pushing, pulling, stretching or squashing.
- **Electrically** – a charge (current) moving through a potential difference, e.g. charges moving around a circuit.
- **By heating** – energy transferred from a hotter object to a colder object, e.g. heating a pan of water on a hob.
- **By radiation** – energy transferred by e.g. light / sound waves (for example , energy from the Sun reaching Earth by light)

The Law of conservation of energy

Energy can be transferred usefully, stored, or dissipated, but can never be created or destroyed

Closed systems

Energy changes occur within a closed system.
- This is where no energy can enter or leave.
- The net change in the total energy of a closed system is always zero.

2. What does is it mean if an object is efficient?

Red Amber Green

What is efficiency?

Efficiency is the proportion of INPUT energy that is transferred into USEFUL energy

Calculating efficiency using energy

$$\text{Efficiency} = \frac{\text{useful energy output}}{\text{total energy input}} \times 100$$

Example - A TV uses 500 J of energy. 300 J of that energy is useful, the rest is wasted.
What is the efficiency?

$$\text{Efficiency} = \frac{\text{useful energy}}{\text{total energy}}$$

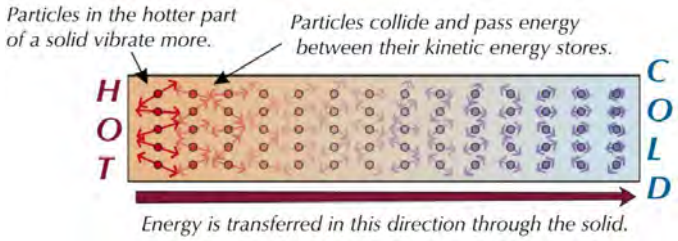
$$= 300/500 = 0.6 \text{ (or 60\%)}$$

3. What is the difference between conduction and convection?

Red Amber Green

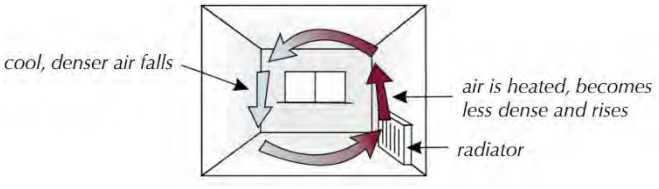
Conduction

Thermal energy moves in solids by CONDUCTION
- Heat energy excites atoms which vibrate faster
- Fast vibrating atoms knock into neighbouring atoms
- This passes on the heat energy



Convection

Convection is the flow of heat energy from a region of high temperature to a region of low temperature by movement of a fluid. Convection only occurs in fluids (liquids and gases).



4. How can unwanted thermal energy transfers be reduced? Red Amber Green

Reducing energy loss from buildings

1. Loft insulation – air trapped between fibres is a bad conductor
2. Cavity wall insulation – material with very poor conductivity pumped in the space between 2 layers of walls.
3. Aluminium foil behind radiators – reflect radiation back into room
4. Double glazed windows – thick glass with dry air between, poor conductors
5. Thick walls with low conductivity – act as poor conductors of heat
6. Draught excluders – reduce air flow under/around doorways

5. What is the specific heat capacity of a material? Red Amber Green

Specific Heat Capacity

Specific heat capacity is the amount of energy needed to raise the temperature of 1kg of a substance by 1℃

The amount of energy something stores is dependent on its MASS and TEMPERATURE and also the TYPE OF MATERIAL.

Example-What is the specific heat capacity (SHC) of a substance that requires 8800 J of heat energy to raise 1 kg of it by 10°C?

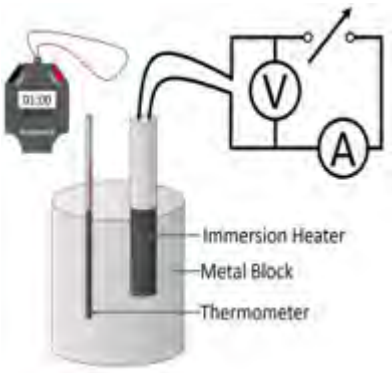
$$SHC = \frac{\text{energy}}{(\text{mass} \times \text{temperature})}$$

= 8800 / (1 x 10)

= 880 J/Kg°C

Method for measuring the specific heat capacity of a metal block

1. Using a balance measure the mass of the block, then wrap the block in insulation.
2. Use a pipette to put a small volume of water in the smaller hole.
3. Put the thermometer in this hole and measure the starting temperature of the block.
4. Place a heater in the larger hole in the block.
5. Connect the ammeter, power pack and heater in series.
6. Connect the voltmeter across the power pack in parallel.
7. Switch the power pack on and record the ammeter and voltmeter readings.
8. Calculate the power by using the equation P = I x V
9. Record the temperature every minute for 10 minutes.
10. Calculate the temperature change for each result.
11. Calculate the energy transferred to the block by using the equation E = P x t
12. Calculate the specific heat capacity by using the equation specific heat capacity = energy / (mass x temperature change)



6. What is the definition of power? Red Amber Green

Power is the rate of energy transferred or the rate of doing work. Power is measured in watts (W). One watt is equivalent to one joule transferred per second (J/s)

"Rate" means how fast something happens

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

$$\text{Power (W)} = \frac{\text{Work done (J)}}{\text{Time(s)}}$$

Example - A man pushing a wheelbarrow does 400 J of work in 5 seconds.
What is his power?

= 400/5
= 80W

Example - A shower transfers 540,000 J of energy to the water in 1 minute. What is its power in watts? In kilowatts?

= 540000/60
= 9000W (÷1000)
= 9kW

7. How can we calculate the energy of a moving object? Red Amber Green

Kinetic Energy Stores

Anything that is moving has energy in its kinetic energy store. Energy is transferred to this store when an object speeds up and is transferred away from this store when an object slows down.
The energy in the Kinetic energy store depends on the objects mass and speed.

Calculating kinetic energy

To calculate kinetic energy (*E*K) we use the equation

Kinetic energy = ½ x mass x (velocity)^2
(J) (kg) (m/s)^2

Example – An object of mass 2 kg is moving at a velocity of 3 m/s.
Calculate the kinetic energy of the object.
Ek = ½ x m x v^2
Ek = ½ x 2 x $(3)^2$
Ek = 0.5 x 2 x 9
Ek = 9 J

8. How can we calculate the energy of an elastic object? Red Amber Green

Elastic potential energy stores

Stretching or squashing an object can transfer energy into its elastic potential energy (Ee) store.

Elastic potential energy = 0.5 x spring constant x extension^2

$E_e = 1/2ke^2$

Example- A catapult is extended 0.5 m to fire a stone at a window. The spring constant of the catapult is 3 N/m.
What is the elastic potential energy stored in the catapult?

Ee = ½ x k x e^2
Ee = ½ x 3 x $(0.5)^2$
Ee = ½ x 3 x 0.25
Ee = 0.375 J

9. How is energy generated using different resources? Red Amber Green

Non –renewable energy sources

Coal, oil and gas are examples of *non-renewable* energy sources.
-We give them the collective name *fossil fuels*.

Fossil fuels are made underground over millions of years.

- They are made at a slower rate to the rate at which they are used.
- They will run out one day.

Non-renewable energy sources damage the environment in a number of ways:

- When burnt as fuels they release CO^2
- Mining
- Storage of the fuels
- Disposal

Renewable energy sources

Solar, wind and bio-fuels are examples of renewable energy sources.

- Renewable energy resources can be made at the same rate as they are being used.
- Therefore they will never run out.

10. How can renewable energy resources be used to generate electricity? Red Amber Green

Energy resource	***How it works***	Uses	Positive	Negative
Biofuel	***Plant matter burnt to release thermal energy***	Transport and generating electricity	Renewable. As plants grow, they remove carbon dioxide. They are 'carbon neutral'.	Large areas of land needed to grow fuel crops. Habitats destroyed and food not grown. Emits carbon dioxide when burnt and adds to greenhouse gases and global warming.

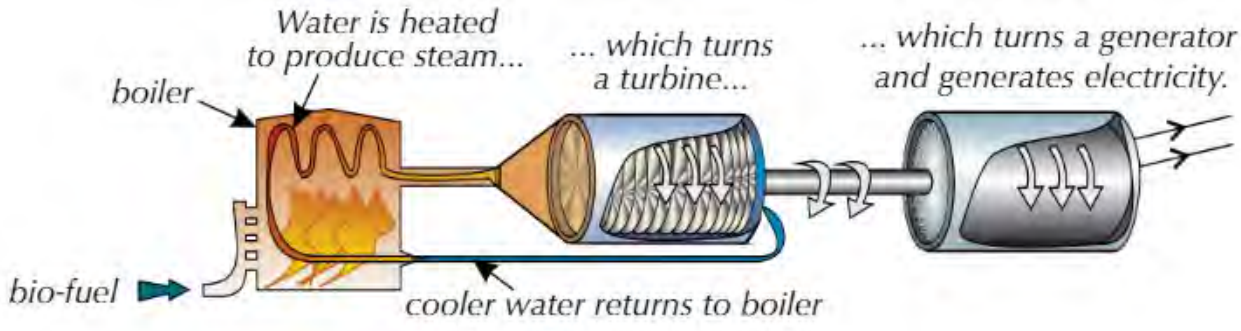
Tides	***Every day tides rise and fall, so generation of electricity can be predicted***	Generating electricity	Renewable. Predictable due to consistency of tides. No greenhouse gases produced.	Expensive to set up. A dam like structure is built across an estuary, altering habitats and causing problems for ships and boats.
Waves	***Up and down motion turns turbines***	Generating electricity	Renewable. No waste products.	Can be unreliable depends on wave output as large waves can stop the pistons working.
Hydroelectric	***Falling water spins a turbine***	Generating electricity	Renewable. No waste products.	Habitats destroyed when dam is built.
Wind	***Movement causes turbine to spin which turns a generator***	Generating electricity	Renewable. No waste products.	Unreliable – wind varies. Visual and noise pollution. Dangerous to migrating birds.
Solar	***Directly heats objects in solar panels or sunlight captured in photovoltaic cells***	Generating electricity and some heating	Renewable. No waste products.	Making and installing solar panels expensive. Unreliable due to light intensity.
Geothermal	***Hot rocks under the ground heats water to produce steam to turn turbine***	Generating electricity and heating	Renewable. Clean. No greenhouse gases produced.	Limited to a small number of countries. Geothermal power stations can cause earthquake tremors.

11. How are non-renewable energy resources and bio fuels used to generate electricity? **Red** **Amber** **Green**

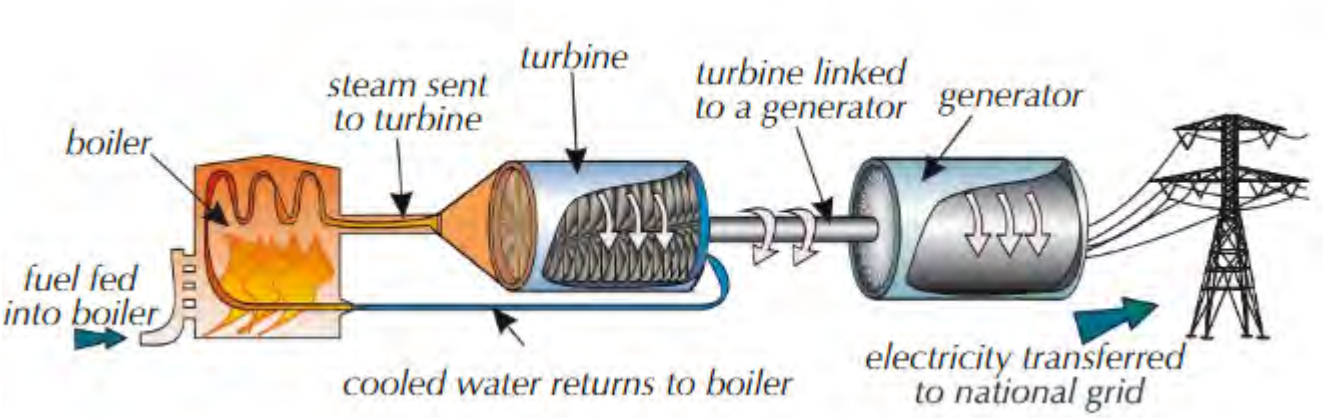
<u>Generating energy using Biofuels</u>

Biofuels are renewable energy sources created from either plant products or animal dung.

- They can be solid, liquid or gas.



Generating energy using Fossil Fuels



Energy resource	***How it works***	Uses	Positive	Negative
Fossil Fuels (coal, oil and gas)	***Burnt to release thermal energy used to turn water into steam to turn turbines***	Generating electricity, heating and transport	Provides most of the UK energy. Large reserves. Cheap to extract. Used in transport, heating and making electricity. Easy to transport.	Non-renewable. Burning coal and oil releases sulphur dioxide. When mixed with rain makes acid rain. Acid rain damages building and kills plants. Burning fossil fuels releases carbon dioxide which contributes to global warming. Serious environmental damage if oil spilt.
Nuclear	***Nuclear fission process***	Generating electricity	No greenhouse gases produced. Lots of energy produced from small amounts of fuel.	Non-renewable. Dangers of radioactive materials being released into air or water. Nuclear sites need high levels of security. Startup costs and decommission costs very expensive. Toxic waste needs careful storing.

12. How is energy use changing? **Red** **Amber** **Green**

Moving towards renewable energy

The UK has pledged to become net zero carbon emissions by 2050.This will mean moving towards renewable energy sources. However, renewable energy sources are not reliable enough to meet this demand for energy at present.

Carbon neutral

As plants grow, they absorb CO^2 from the atmosphere.
When they are burnt, this CO^2 is released back into the atmosphere.
So overall, there is no overall effect as the amount of CO^2 taken in by the growing plant is the same as the amount of CO^2 released when the plant is burnt.

HOME LEARNING TASKS	
Task Description	**Done?**
Task 1 – Read, Cover and Recall all 8 types of energy store from the list	
Task 2 – Read , Cover and Write and definition for Conduction and Convection	
Task 3 – Recall and write a method to determine the specific heat capacity of a 1kg mass of metal	
Task 4 – Rearrange for formula for Kinetic energy to calculate Velocity (V)	
Task 5 – Explain the difference between a renewable and non-renewable source of energy	
Task 6 – Explain the process of using fossil fuels to generate electricity	

Subject Year 9 Term 1 – B1: Cell Biology

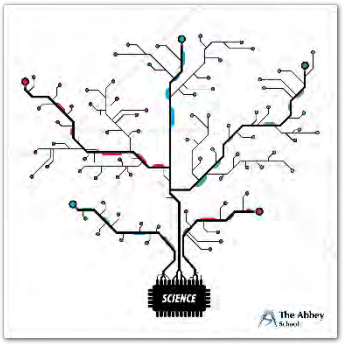
Term Focus –
Big question: How are different cells adapted to their functions?

Prior learning links from KS3 Science:

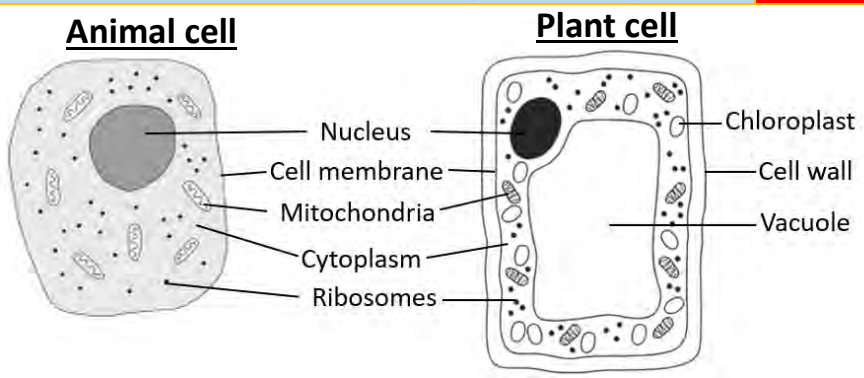
1. Cells are the basic functional unit of an organism.
2. Organisms can either be unicellular or multicellular. Bacteria are unicellular, whereas animal and plants are multicellular.
3. Labelling and defining the functions for the organelles of animal, plant and bacteria cells to include: Cell wall, cell membrane, nucleus, cytoplasm, mitochondria, chloroplasts and vacuole.
4. Being familiar with using an optical microscope to view cells.
5. The functions of animal specialised cells to include, muscle cells, red blood cells and sperm cells.

Future Learning Links:

1. Microscopy required practical
2. KS5 Biology
3. KS5 Microbiology
4. KS5 Sports Science
5. KS5 Applied Science



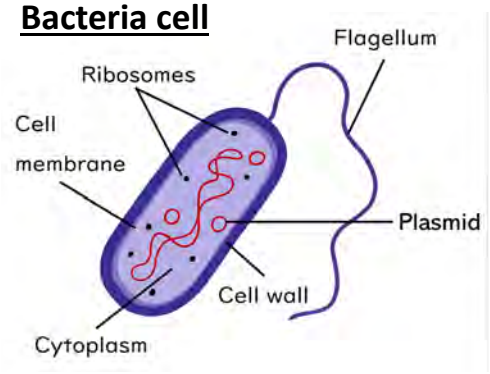
1. What is the difference between animal and plant cells? (Grades 4 to 9) **Red** **Amber** **Green**



Key term/question	Definition/answer
1. What are Eukaryotic cells?	Cells with DNA contained inside a nucleus
2. Examples of eukaryotes (2)	**1**. Plant cells **2**. Animal cells
3. Nucleus function	Contains DNA that controls cellular activity
4. Cytoplasm function	Site of chemical reactions
5. Cell membrane function	Semi-permeable so controls what enters and exits the cell
6. Mitochondria function	Site of respiration to release energy
7. Ribosomes function	Site of protein synthesis
8. Cell wall function	Supports and strengthens the cell
9. Vacuole function	Contains cell sap to keep the cell turgid
10. Chloroplast function	Site of photosynthesis
11. Cell structures unique to plants (3)	**1.** Cell wall **2.** Vacuole **3.** Chloroplasts

2. What are the differences between eukaryotic and prokaryotic cells? (Grades 4 to 9)	Red	Amber	Green

Bacteria cell



Key term/question	Definition/answer
12. What are prokaryotic cells?	Cells with a single strand of DNA floating free in cytoplasm
13. Give an example of a prokaryote	Bacteria
14. What is a plasmid?	Small loop of DNA containing genes for antibiotic resistance
15. What is the function of the flagellum?	Rotates to make the cell move
16. Name 2 cell structures unique to bacteria	Plasmids and flagellum

3. How has the development of microscopes helped us understand cellular structure? (Grades 3 to 6)	Red	Amber	Green

S. No	Characteristics	Light Microscope	Electron Microscope
1.	Magnification	2,000x	Up to 10,000,000x
2.	Resolution	200 nm	0.5 nm
3.	Image produced by	Visible light rays	Electron beam
4.	Image focused by	Glass objective lens	Electromagnetic objective lenses
5.	Image viewed through	Glass ocular lens	Fluorescent screen
6.	Specimen placed on	Glass slide	Copper mesh
7.	Organisms may be	Live	Always dead
8.	Specimen requires special stain or treatment	Not always	yes
9.	Colored Image produced	Yes	No i.e. Black and white

Microscopes are used for different applications depending on the size of the organism or sample that needs to be observed.

In addition to the differences in what can be observed there are cost implications.

Light microscopes are much cheaper then electron microscopes.

A common exam question here will ask for an evaluation of the two types of microscope. Using the data provided make a judgement about the best type and give reasons for this choice.

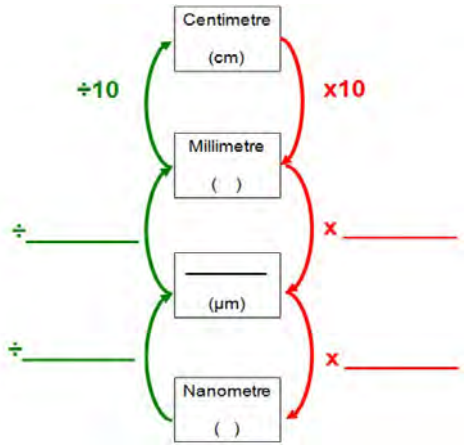
4. How do we convert between units?	Red	Amber	Green

Unit conversions:

Units are used to show the size of the measurement we are making. Comparing different objects e.g. the size of the Earth compared to the Size of a tennis ball however requires a change in units so that the number is appropriate.

Most units come with a prefix – a word in front of the unit that tells us the size of the measurement:

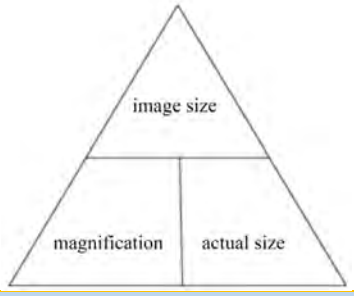
Name of prefix	Symbol for prefix	In standard form	In full numbers
tera	T	10^{12}	1000000000000
giga	G	10^{9}	1000000000
mega	M	10^{6}	1000000
kilo	k	10^{3}	1000
hecto	h	10^{2}	100
deca	da	10^{1}	10
—	—	10^{0}	1
deci	d	10^{-1}	0.1
centi	c	10^{-2}	0.01
milli	m	10^{-3}	0.001
micro	µ	10^{-6}	0.000001
nano	n	10^{-9}	0.000000001
pico	p	10^{-12}	0.000000000001



5. How do we use image size = actual size x magnification? (Grades 4 – 7)	Red	Amber	Green

$$\text{magnification} = \frac{\text{image size}}{\text{real size}}$$

When using a microscope, the image is designed to look larger than it is in real life – this is magnification. The real size of the sample being observed is still needed. Rearranging the equation to make any of the variables the subject gives you the correct calculation. A formula triangle can also be used:



Worked example:
An image is 3mm big as measured through a microscope. The microscope is set to a magnification of 200x. What is the real size of the sample?

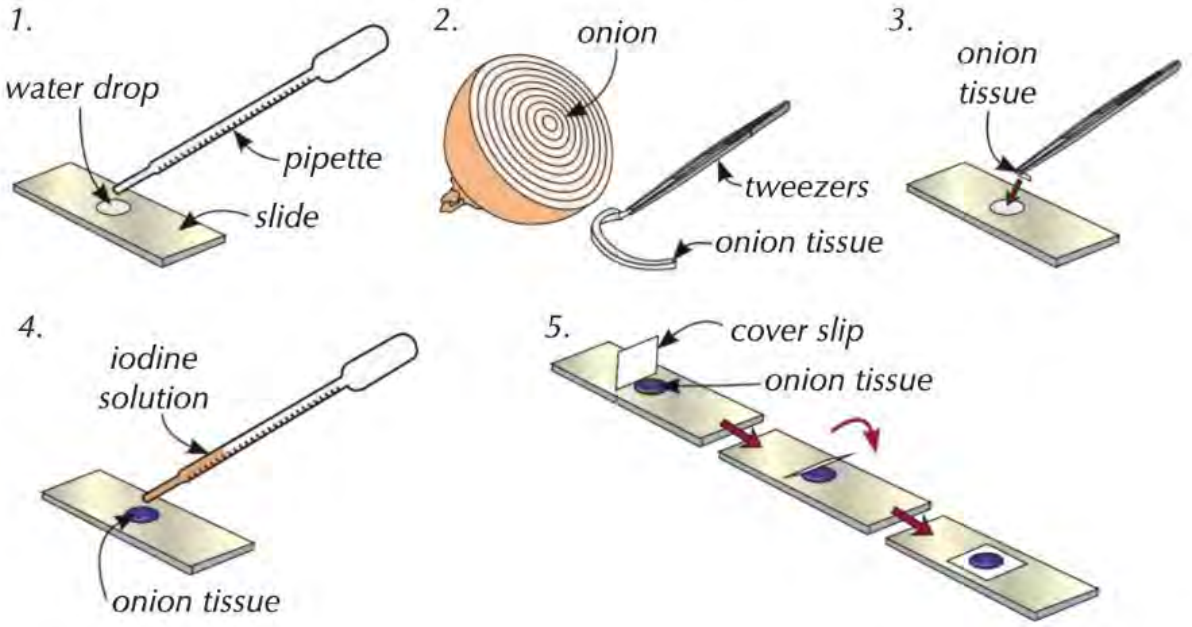
1. Rearrange the equation:
$$\text{Real size} = \frac{\text{image size}}{\text{magnification}}$$
2. Substitute the numbers in:
$$\text{Real size} = \frac{3}{200}$$
3. Calculate the answer:
Real size = 0.015mm

This answer is a small number in mm, try converting to micrometres:
0.015 x 1000 = 15µm

6. How are organelles viewed within a cell? (Grades 1 – 9)	Red	Amber	Green

1. Add a drop of water to the middle of a clean slide.
2. Cut up an onion and separate it out into layers. Use tweezers to peel off some epidermal tissue from the bottom of one of the layers.
3. Using the tweezers, place the epidermal tissue into the water on the slide.
4. Add a drop of iodine solution. Iodine solution is a **stain**. Stains are used to highlight objects in a cell by adding colour to them.

5. Place a cover slip (a square of thin, transparent plastic or glass) on top. To do this, stand the cover slip upright on the slide, next to the water droplet. Then carefully tilt and lower it so it covers the specimen. Try not to get any air bubbles under there — they'll obstruct your view of the specimen. Steps 1-5 are shown in Figure 2.



7. How are organelles viewed within a cell? (Grades 1 – 9)	Red	Amber	Green

Watch the following video to observe how the required practical should be completed:

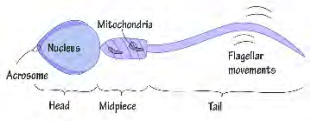
Alternatively go to YouTube and search for Malmesbury Science Microscopy to find the same video.

8. How are animal cells adapted to their function? (Grades 1 – 5)	Red	Amber	Green

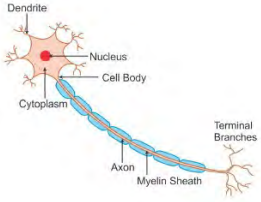
- Cells can become differentiated to perform functions more efficiently.
- Certain functions need the cell to make chemicals.
- Certain functions require the cell to have physical features to perform their function.

Common adapted (specialised) animal cells:

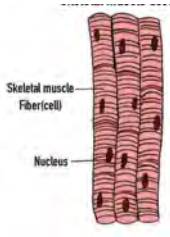
Sperm Cell:



Nerve cell:



Muscle cell:



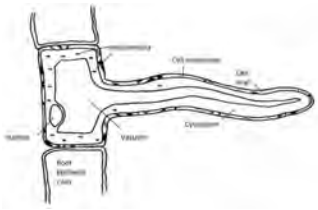
9. How are plant cells adapted to their function? (Grades 1 – 5)

Red | Amber | Green

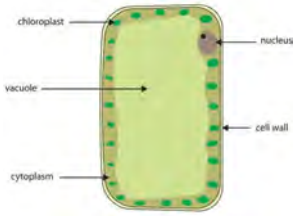
- Cells can become differentiated to perform functions more efficiently.
- Certain functions need the cell to make chemicals.
- Certain functions require the cell to have physical features to perform their function.

Common adapted (specialised) plant cells:

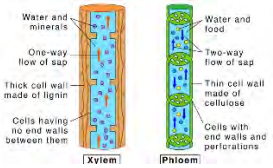
Root hair cell:



Palisade cell:

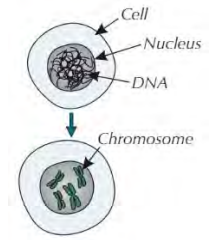


Xylem and Phloem cells:



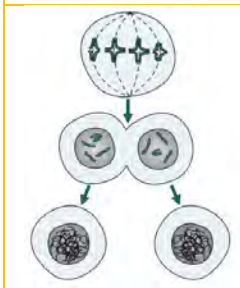
10. How do our body cells replicate? (Grades 5 – 8)

Red | Amber | Green



Stage 1:

- Cells grow and develop to full size – during this stage the number of ribosomes (for making proteins) and mitochondria (for energy release) increase.
- At this stage the DNA is in long thin strands, arranged randomly in the nucleus.
- When ready for reproduction, the DNA replicates (makes a copy of itself) and arranges itself into chromosomes. Each arm of the chromosome is identical.



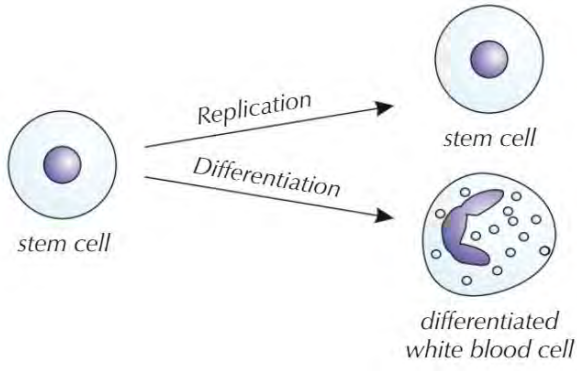
Stage 2:

- The chromosomes are pulled apart along the centre line of the cell.
- The cell begins to split and new nuclei form around the chromosome halves.
- The split finishes, leaving two new "daughter" cells both with an exact copy of the DNA.
- The DNA forms long thin strands ready for growth and the process can begin over again.

11. Why are stem cells important? (Grades 4 – 9)

Red | Amber | Green

Key word	Definition
Stem Cell	A cell that is unspecialised and can turn into any other type of cell.
Embryonic Stem Cell	These cells can differentiate into any other kind of cell – this is how an embryo develops and grows.
Adult Stem Cell	These are stem cells taken from adult bone marrow, they are NOT able to differentiate as widely as embryonic stem cells.
Meristem Cells	These are the plant equivalent of stem cells and explain why we can take e.g. cuttings from a plant to grow into a new plant.



12. What are the uses of stem cells in medicine? | Red | Amber | Green

	Advantages	Disadvantages
Embryonic stem cells	• Can create many embryos in a laboratory • Painless technique • Can treat many diseases • Can become any type of cell	• Harm / death to embryo • Embryo rights / embryo cannot consent • Unreliable technique / may not work
Adult stem cells	• No ethical issues / patient can give permission • Can treat some diseases • Procedure is (relatively) safe / doesn't kill donor • Tried and tested / reliable technique	• Risk of infection from procedure • Can only treat a few diseases • Procedure can be painful

HOME LEARNING TASKS

Task Description	**Done?**
• Look, cover, write, check the key terms for plant and animal cells.	
• Complete the diagram showing the different unit conversions	
• Calculate the missing values in the table below:	

Image Size	Real Size	Magnification
10mm	1mm	
200nm		X3000
	40nm	X12,000
30µm	6µm	
4cm		X200
	2000nm	X30

• Describe in detail how sperm cells, nerve cells and muscle cells are adapted to their functions.	
• Evaluate the use of a light microscope and an electron microscope to observe a sample of onion skin cells	
• Explain the differences in the use of adult and embryonic stem cells. Write a balanced argument for which type of stem cell should be used in medical applications.	

Science Year 9 Term 1 – Atomic Structure and Periodic Table

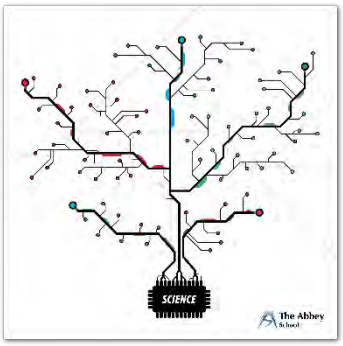
TERM FOCUS –
Big Ideas – What makes up matter and how can we separate it?

Prior Learning Links

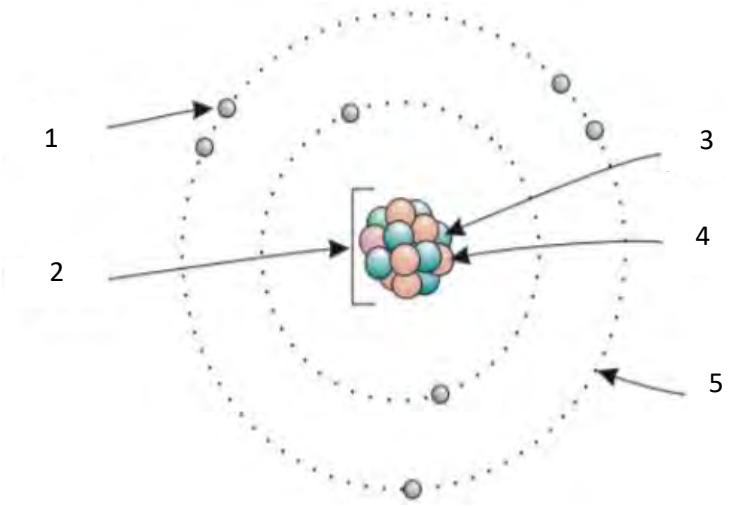
1. KS3 Science – Knowing the differences between atoms, elements and compounds.
2. KS3 Science – Chemical symbols and formulae for key elements and compounds
3. KS3 Science – What a mixture is and different techniques on how to separate them.
4. KS3 Science – Knowing how the atom developed through time and what electronic structure is.

Future Learning Links

1. KS3 Science Investigations
2. GCSE Required Practical Activities
3. GCSE Science Investigations



1. What makes up an atom?



Red **Amber** **Green**

1. Electron
2. Nucleus
3. Proton
4. Neutron
5. Electron shell

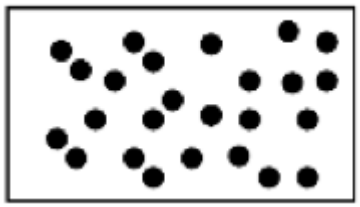
Name	Mass	Charge	Where is it?
Proton			
Neutron			
Electron			

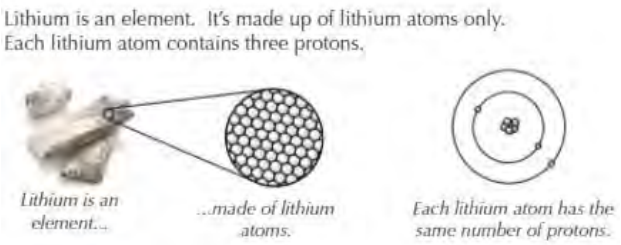
Proton mass, charge and location.	**1.** Mass = 1 **2.** Charge = +1 (positive) **3.** Location = nucleus
Neutron mass, charge and location	**1.** Mass = 1 **2.** Charge = 0 (neutral) **3.** Location = nucleus
Electron mass, charge and location	**1.** Mass = 0 **2.** Charge = -1 (negative) **3.** Location = shells that orbit the nucleus

2. What are the simplest chemical substances?

Red	Amber	Green

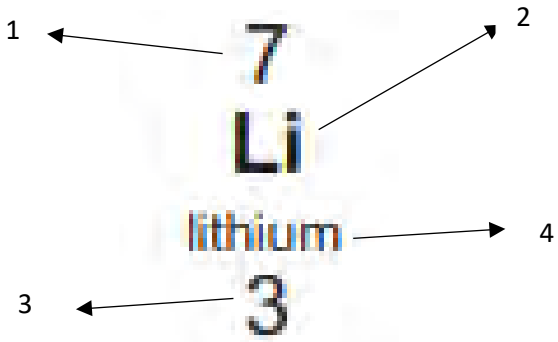
Element





1. A substance that contains only 1 type of atom is called an element.

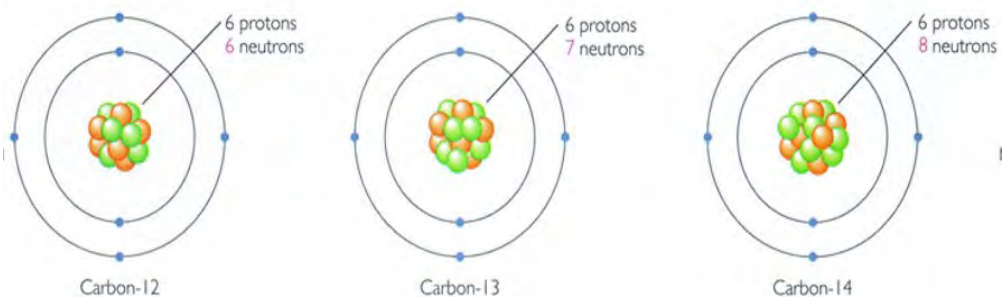
CHEMICAL SYMBOLS



1. Atomic Mass Number
2. Chemical Symbol
3. Name of Element
4. Atomic (Proton) Number

3. What is an isotope?

Red	Amber	Green



1. An isotopes are atoms of the same element with <u>the same number of protons</u> but <u>different number of neutrons</u> in its nuclei.

How to calculate the relative atomic mass of an isotope?

$$\text{relative atomic mass } (A_r) = \frac{\text{sum of (isotope abundance} \times \text{isotope mass number)}}{\text{sum of abundances of all the isotopes}}$$

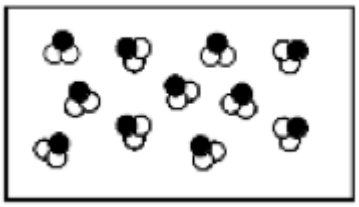
Calculate the relative atomic mass for Chlorine.

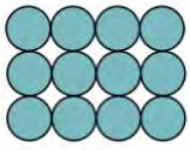
Chlorine has two isotopes ^{35}Cl and ^{37}Cl
A sample in nature would have: 75% of ^{35}Cl and 25% of ^{37}Cl

4. What happens when several elements combine together?

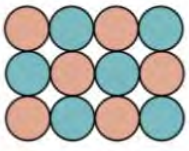
Red | **Amber** | **Green**

Compound





An element.



A compound.

A Water Molecule

A Carbon Dioxide Molecule

1. When elements react, atoms combine with other atoms to form compounds.
2. Compounds are formed by 2 or more elements.
3. The atoms are held together by chemical bonds.
4. Compounds are represented by a formula. The formula shows what elements are present and in what ratio.
5. Water is made up of 2 Hydrogen atoms and 1 Oxygen atom. The formula is H_2O.
6. Carbon Dioxide is made up of 2 Oxygen atoms and 1 Carbon atom. The formula is $C0_2$

5. How can a chemical reaction be represented?

Red | **Amber** | **Green**

Word Equations:

Magnesium + Oxygen → Magnesium oxide

Sodium + Chlorine → Sodium Chloride

Methane + Oxygen → Carbon dioxide + Water

Symbol Equations:

$2Mg + O_2 \rightarrow 2MgO$

$2Na + Cl_2 \rightarrow 2NaCl$

$CH_4 + O_2 \rightarrow CO_2 + H_2O$

Diatomic Molecules: A molecule containing 2 atoms bonded together.

You will need to learn them and make sure your symbol equations are correct.

What do you notice about these molecules?

Name	Formula
Hydrogen	H_2
Nitrogen	N_2
Oxygen	O_2
Fluorine	F_2
Chlorine	Cl_2
Bromine	Br_2
Iodine	I_2

When writing a chemical reaction we set them up like this:

Reactants → Products

Reactant: A reactant is a substance that reacts in a chemical reaction.

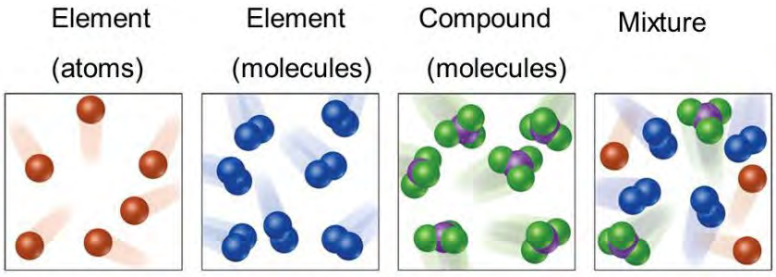
Reactants always go on the left side of the reaction.

Product: A product is a substance that is formed from the chemical reaction.

Products always go on the right side of the reaction.

6. What is the difference between a mixture and a compound?

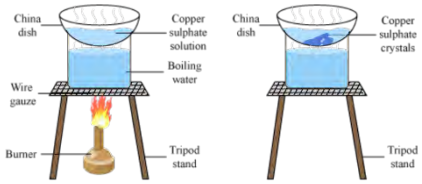
Red | Amber | Green



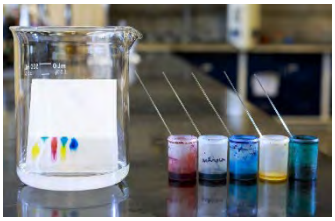
How to separate a mixture:

Filtration: A method used to separate an insoluble solid from a liquid.

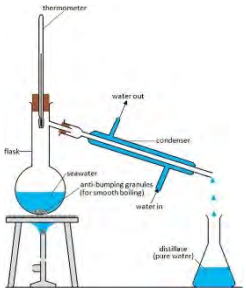
Crystallisation: The formation of solid crystals as water evaporates from solution.



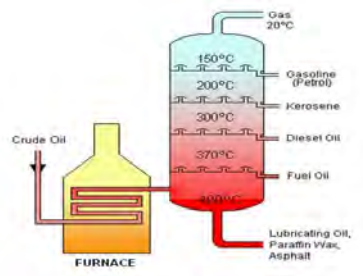
Chromatography: A method used to separate a mixture based on how the components interact with a stationary and a mobile phase.



Simple Distillation: A method used to separate a liquid from a mixture by heating and condensing.



Fractional Distillation: Separating multiple liquids from a mixture using their boiling points.



Key Words:

Atom: A neutral particle contain protons and neutrons in the nucleus, and electrons around the outside of the nucleus.

Element: A substance made up of only one type of atom.

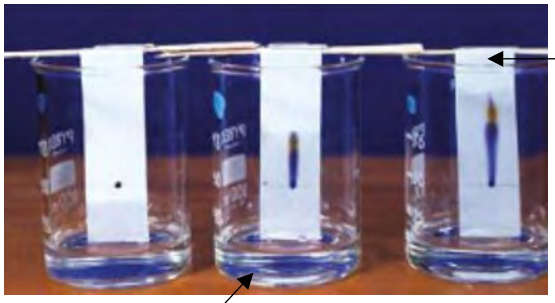
Compound: A substance made up of at least two different atoms chemically joined together.

Isotope: Atoms of the same element with the same number of protons, but a different number of neutrons.

Mixture: A mixture is made up of separate substances which are **NOT** chemically bonded together.

7. How can we separate different dyes in an ink?

Red | Amber | Green



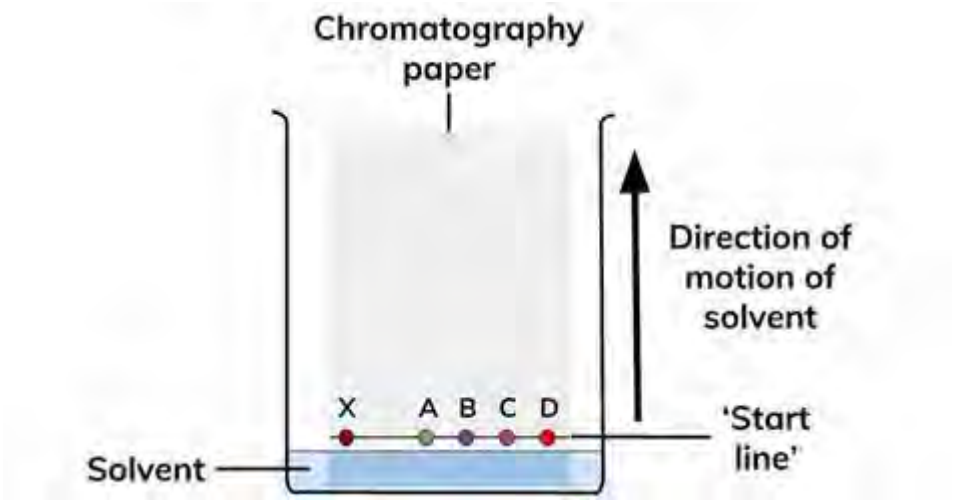
Key Words:

Mobile Phase: The phase in chromatography that is able to move, either a gas or a liquid.

Stationary Phase: The phase in chromatography that does not move, is a solid.

8. How can we produce a paper chromatography?

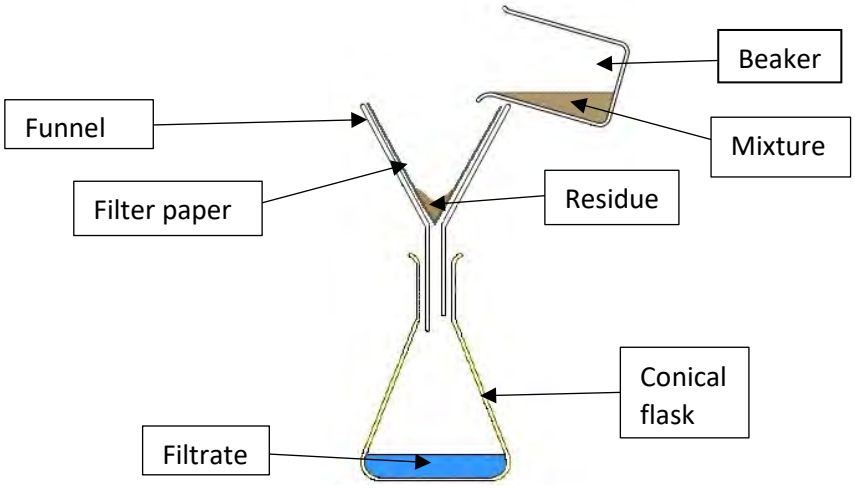
Red | Amber | Green

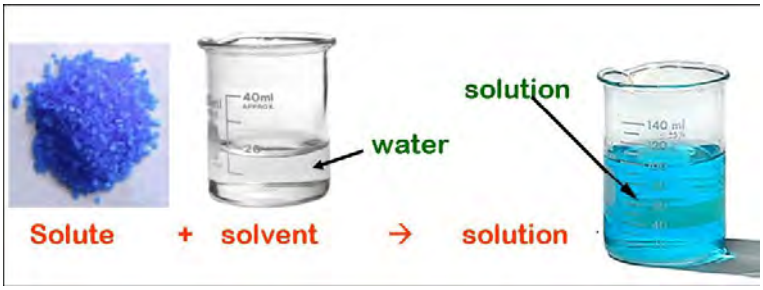


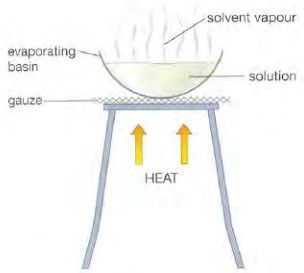
Method:

1. Use a pencil to draw a horizontal base line/start line, 2cm from the bottom of the paper.
2. Add a spot of sample onto the cross and allow to dry.
3. Place chromatography paper into a boiling tube or beaker.
4. Add solvent, making sure it does not go above the sample spot.
5. Leave until the solvent is near the top of the paper.
6. Remove the chromatogram. Using a pencil, mark the solvent front and the coloured spots.
7. Allow the chromatogram to dry.

9. What are the steps involved in filtration and crystallisation?







Red	Amber	Green

Key Words:

Filtrate: The particles small enough to go through the filter

Residue: The large particles that are trapped by the filter.

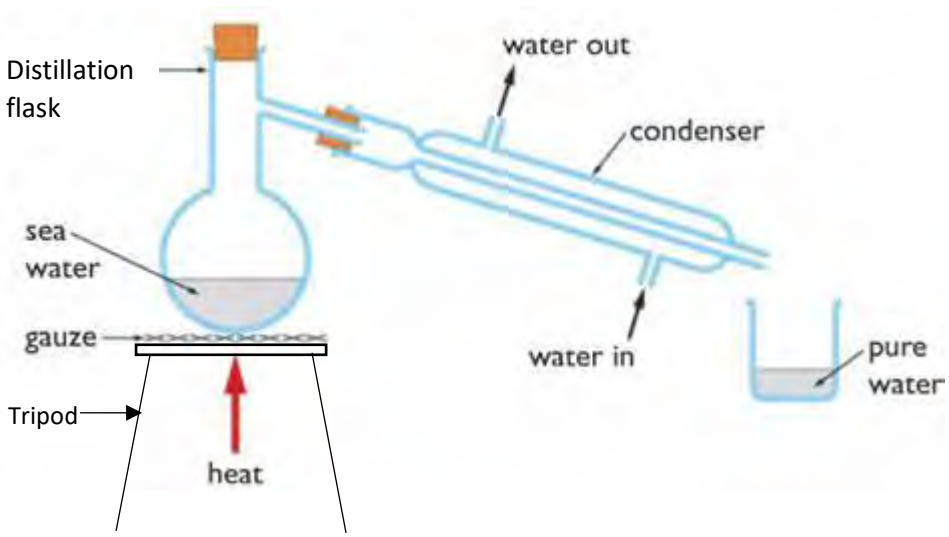
Solute: The substance (usually a solid) that is being dissolved into the liquid.

Solvent: The liquid that is having the substance dissolve into it.

Solution: The mixture that is going to be filtered. Usually a solid dissolved into a liquid.

10. What can be separated using distillation?

Red | Amber | Green



Distillation:

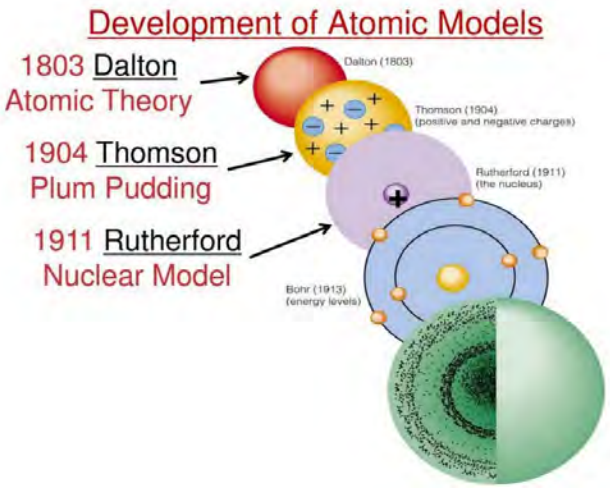
Used to separate out components of a liquid, for example, producing pure water from hard water (has dissolved solids in it).

Method:

1. Place the solution in a flask and heat it until it boils.
2. The liquid with the lower boiling point (usually the solvent) turns into vapour and leaves the flask.
3. The vapour passes through a condenser, which is a tube surrounded by cold water. The cold water cools the vapour and turns it back into liquid.
4. The liquid (distillate) is collected in another container, leaving the solid behind in the flask.

11. What are the historical models of the atom?

Red | Amber | Green



Key figures and dates:

John Dalton 1803:

Atoms are solid spheres, different spheres make up different elements.

JJ Thomson 1904:

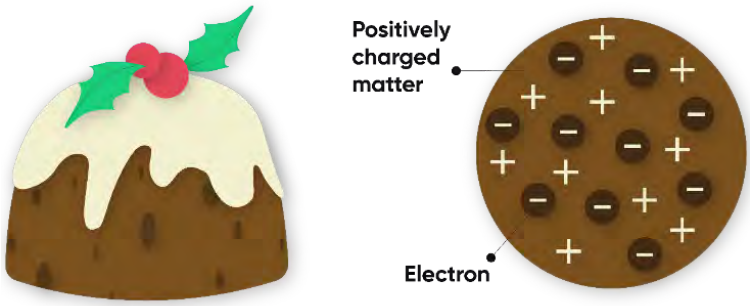
Discovered the electron. Atoms are positive spheres with negative electrons embedded in.

Ernst Rutherford (and Ernest Marsden) 1911:

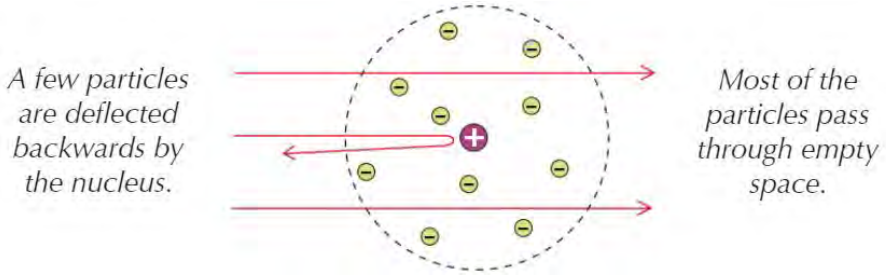
Conducted the alpha particle scattering experiment. Found that some of the positive alpha particles travelled straight through the gold foil, some deflected slightly and some deflected back.

They concluded that atoms must be largely empty space,

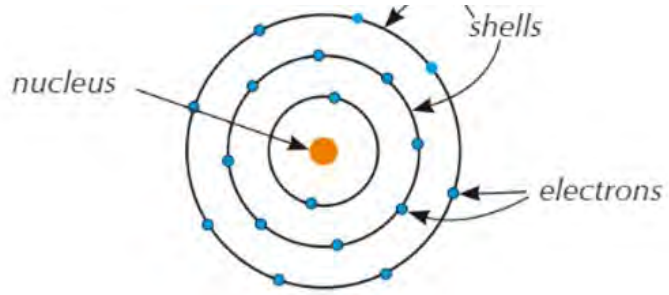
Plum pudding model



Alpha particle scattering experiment



Electron shells



they must have a small positive charge at the centre and electrons floating around in the empty space.

Niels Bohr 1913:

Determined that electrons orbit the nucleus in shells and each shell is a fixed distance from the nucleus.

Various other scientists 1920s:

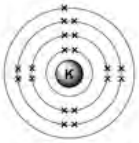
Other scientists realised the nucleus could be divided into smaller particles and referred to them as protons.

James Chadwick 1932:

Chadwick discovered the neutron by working with isotopes. This led to the nuclear model as we know it today.

12. How are the electrons arranged in an atom?	**Red**	**Amber**	**Green**

The first twenty elements

	1	2	13	14	15	16	17	18
1	 hydrogen 1							 helium 2
2	 lithium 2.1	 beryllium 2.2	 boron 2.3	 carbon 2.4	 nitrogen 2.5	 oxygen 2.6	 fluorine 2.7	 neon 2.8
3	 sodium 2.8.1	 magnesium 2.8.2	 aluminium 2.8.3	 silicon 2.8.4	 phosphorus 2.8.5	 sulfur 2.8.6	 chlorine 2.8.7	 argon 2.8.8
4	 potassium 2.8.8.1	 calcium 2.8.8.2						

<u>The first electron shell can only contain 2 electrons, each shell after that can only contain a maximum of 8 electrons.</u>

HOME LEARNING TASKS	
Task Description	**Done?**
Complete the labels for the structure of the atom, and the relative mass and charge of each sub-atomic particle.	
Look, cover, write, check for the structure of the atom, and the relative mass and charge of each sub-atomic particle.	
Keyword spellings for any key terms that are bold and underlined.	
Calculate the relative atomic mass for the isotopes of chlorine. Look, cover, write, check for the word and symbol equations. Write out some of your own word and symbol equations that you have learnt.	
Write a simple method for each separation technique.	
Outline the alpha particle scattering experiment that led to the disproving of the plum pudding model. Explain what they expected to find and what they actually found out from the experiment.	

Christian Key ideas/terms to learn – K/O

The Nature of God • **Omnipotent** - God created the world • **Omnibenevolent** – God helps & sent his son to save the world • **Just** – he judges humans and rejects prejudice and discrimination • God inspires people e.g. prophets • People communicate with God by **prayer** • God is **Spirit** and **Holy** & **Jesus** is his son	**The Trinity** • Beliefs are in the **Nicene** Creed • **3 people in one God**: Father, Son and Holy Spirit –all God but have different roles & exist in a relationship of love • God is **Father** & **omnipotent, omnibenevolent, omniscient, omnipresent** • God is **Son** who became incarnate through Jesus: ***"The Word became flesh & dwelt among us"*** • God is **Holy Spirit**–working in the world to help	**The Problem of evil and suffering** • If God is omnibenevolent, why do people suffer? • If God is omnipotent, why does he not stop suffering? • If God is just, why does he allow evil to take place towards good people?	**Creation** • God created out of nothing • Jesus, **the Word** (John's gospel), was part of creation • The Spirit was part of creation as it moves on the waters • Many Christians do not see the creation as scientifically accurate • Some Christians believe it literally happened as in Genesis • God created everything ***"good"***
The Afterlife • Christians believe they will be resurrected & receive **eternal life** • Christians need to have **faith in Jesus** and follow his teachings to enter heaven: ***"No one comes to the Father except through me"*** • Soul continues after death & there is a new spiritual body: ***"The body sown is perishable, it is raised imperishable***	**Judgment** • Christians believe when they die God will judge them on **past actions** • The parable of the Sheep & Goats is about judgment: ***"Whatever you did not do for one of them, you did not do for me"* –** by serving others, they are serving Jesus • God's judgment will result in **eternal reward** or **eternal punishment**	**Heaven and Hell** • **Heaven** is **eternal happiness** with **God**; a reward for **faith and actions** • Heaven is either a **physical** place or **spiritual** state with loved ones • Jesus is on a throne judging people • **Hell** is **eternal suffering, no God,** either **physical** place/**spiritual** state • Roman Catholics believe in an intermediate state called **purgatory**	**The Incarnation** • Christians believe Jesus was God in **human form** • Jesus was conceived by Mary, after an angel appeared to her • This is celebrated by Christians at **Christmas**
Jesus as the Son of God • Jesus was **fully human & fully God:** ***"The Word became flesh and dwelt among us"*** • Jesus speaks the word of God • Christians believe Jesus is a **spiritual Messiah** (no a physical one) • The Gospels refer to Jesus as the **Christ**	**The Crucifixion** • This took place on **Good/Black** Friday • Jesus was handed over to **Pontius Pilate** after he was betrayed by Judas • Jesus' last words were: ***"Father, into you hands I commit my spirit".*** • Jesus prayed for those crucifying him: ***"Father, forgive them, they know not what they do"***	**The Resurrection** • This took place on Easter Sunday • Jesus's body was not in the tomb and he appeared to many, including Mary Magdalene, ***"In Adam all die, in Christ, all will be made alive"*** • Shows power of **God over death** and gives **hope** all resurrected	**The Resurrection for Believers** • Christians will live on **after death** • Some Christians believe the **soul is resurrected** after death • Catholics believe there will be a **spiritual & physical resurrection** • Others believe resurrection will take place when **Jesus returns**
The Ascension • Took place **40 days** after Resurrection • Jesus returned to the right hand of **God** • Allowed the **Holy Spirit** to be sent to earth to work in the churches	**Sin and Original sin** • Sin is **thought or action** against God: *"We have all sinned & fall short of the glory of God"* • Original sin stated at the **Fall**, - Roman Catholics believe all people are born with it	**Atonement** • Jesus' death gave atonement from sin & a **new relationship** with God: • All who follow Jesus will have eternal life	**Salvation** • Salvation means **being saved** from **sin** & its consequences by: **Law** e.g. 10 Commandments; **Action** e.g. food banks; **Grace** e.g. sacraments **Spirit** e.g. Holy Spirit in services

Knowledge Organiser

Additional Subjects

History

Year 9

Term 1

2024/25

The Abbey School

History Year 9 Term 1 – GCSE Paper 1: Medicine Through Time – Medieval Medicine

This unit examines the medical advancements and practices from ancient to medieval times(c500BC-1500AD). You will cover the classical theories by Hippocrates and Galen, particularly the Four Humours and their influence on treatments – such as purging and bloodletting. The unit also explores the significant role of the Church, monasteries and scholarly texts in medical care, the concept of miasma as a disease cause, and the limited effectiveness of apothecaries and barber surgeons as sources of care and treatment in the Medieval period.

Prior Learning Links

- Year 7 Term 1 – The Roman Empire & Roman Britain
- Year 7 Term 2 – Medieval Britain & Europe – Political
- Year 7 Term 3 – Medieval Britain & Europe – Social

Future Learning Links

- Year 9 Term 2 – GCSE Paper 1: Medicine Through Time – Renaissance Medicine & 18th –19th Century Medicine

Scan me!

GCSE Pod

KEY VOCABULARY

Historical Skills Vocabulary

Cause – the reason for something happening
Change – when things are different to how they were before
Consequence – the result of something happening
Continuity – the opposite of change; when something stays the same or continues
Difference – the ways in which things are different to one another
Factor – something that can affect, or determine an event or outcome
Inference - a conclusion drawn about something using the information you already have about it
Rate of change – the pace at which change occurs; e.g. very quickly or slowly
Reliability – the degree to which something can be trusted or relied upon as accurate
Significance – the importance of something
Similarity – the quality of being similar, or the same
Trend – when there are a number of similar and related changes continuing in the same direction over a period of time
Turning point – a significant change happens – something that is different from what has happened before and which will affect the future

Paper 1 GCSE: Medicine Through Time Core Vocabulary

Care – to provide help and support for someone who is unwell
Diagnosis – the act of identifying what is wrong with someone who is ill
Disease – an illness which affects people, spread by bacteria or infection
Prevention - to prevent something, is to ensure that it does not happen
Public Health – the health of the general population, and the activities and services that are designed to improve or protect this
Surgery – a medical treatment in which someone's body is cut open so that a doctor can repair, remove, or replace a diseased or damaged part
Treatment – medical attention given to a sick or injured person or animal

Medieval Medicine Vocabulary

1. **Apothecary** – someone who prepared medicine or herbal remedies in the Medieval period
2. **Astrology** - the study of the movements of the planets, sun, moon, and stars in the belief that these movements can have an influence on people's lives or health
3. **Barber Surgeon** – a barber who also practiced in surgery and dentistry
4. **Cupping** – applying a heated glass cup to the skin to create suction and draw blood to the surface
5. **Dissection** – the act of dissecting; methodically cutting up a body or plant in order to study its internal parts
6. **Dysentery** – very severe diarrhoea
7. **Epidemic** – a widespread outbreak of a disease that spreads very quickly and affects many individuals at the same time
8. **Humour** - one of the four fluids of the body that were thought to determine a person's temperament (mood), features of their personality, or health
9. **Leeching** – to remove blood by the use of leeches; worm-like creatures that feed on blood

10. **Malnutrition** – an illness caused by lack of food; from Latin *mal* meaning 'bad' + nutrition
11. **Mass** - a Christian church ceremony, especially in the Roman Catholic Church, during which people eat bread and drink wine in order to remember the last meal of Jesus Christ
12. **Miasma** – a 'bad air' or noxious (toxic) cloud believed to have spread disease
13. **Monastery** – a building where monks live, eat, study the bible, and pray
14. **Paralysis** – being unable to move either all or part of your body as a result of illness, poison or injury
15. **Penance** – a punishment inflicted on yourself to show that you are sorry for your sins
16. **Phlebotomy** - the surgical procedure of opening, or puncturing a vein in order to withdraw blood
17. **Physician** – someone who practices medicine – a medieval physician had very little training
18. **Pilgrimage** – a journey to a holy place to show your devotion to God
19. **Purging** – the act of removing fluids or substances from your body
20. **Quarantine** – Separating the sick from the healthy to stop the spread of a disease – from the Italian *quaranta* meaning the number forty which was a reference to the number of days a sick person should be separated from the public
21. ***Regimen Sanitatis*** – A poem promoting daily hygienic procedures and diet to promote a clean, and healthy life
22. **Superstition** – the belief in things that are not real or possible – for example magic
23. **Trepanning** – a surgical intervention in which a hole is drilled or scraped into the skull
24. **Urine Chart** – a chart comparing the smell, taste, viscosity (thickness), and colour of urine used in order to diagnose someone's illness or ailment
25. **Vivisection** – the practice of performing operations on live animals for the purpose of experimentation or scientific research, this was used as a punishment for criminals in the Medieval period

1. What were the supernatural and religious explanations of the causes of disease in the Medieval period?	**Red**	**Amber**	**Green**
Are you able to identify key supernatural explanations for disease during the Medieval period? **Can you describe how religious beliefs influenced perceptions of disease in the Medieval era?** **Are you able to compare supernatural and religious explanations for the causes of disease in Medieval times?**			
2. How influential was the theory of the Four Humours on medical thought from the classical period throughout the Medieval age?	**Red**	**Amber**	**Green**
Can you explain the basic principles of the Four Humours theory? **Are you able to assess the impact of the Four Humours theory on Medieval medical practices?** **Can you trace the continuity of Galen's and Hippocrates' ideas from the classical period to the Medieval age?**			
3. How did the church influence medical thought in the Medieval era?	**Red**	**Amber**	**Green**
Are you able to explain the role of the Church in promoting certain medical ideas? **Can you discuss how religious institutions affected medical education and practices in the Medieval period?** **Are you able to evaluate the extent to which the Church controlled medical knowledge and treatment?**			
4. What external influences affected beliefs surrounding the cause of disease in Medieval Europe?	**Red**	**Amber**	**Green**
Can you identify external factors that shaped Medieval European beliefs about disease causation? **Are you able to analyse how trade and travel influenced Medieval medical theories?** **Can you discuss the impact of cultural and scientific exchanges on Medieval European medical thought?**			
5. What were the consequences of religious and humoural theories of disease on the treatment of patients in the Medieval period?	**Red**	**Amber**	**Green**
Can you describe treatments derived from religious beliefs and humoural theory? **Are you able to assess the effectiveness of treatments based on these theories?** **Can you analyse the impact of these theories on patient care in the Medieval period?**			
6. How effective were preventative measures to stop the spread of disease and illness in the Medieval era?	**Red**	**Amber**	**Green**
Are you able to identify common preventative measures used in the Medieval period? **Can you evaluate the success of these measures in controlling disease spread?** **Are you able to compare Medieval preventative strategies with modern approaches?**			
7. What type of care was available to the sick and diseased in Medieval society?	**Red**	**Amber**	**Green**
Can you describe the roles of different caregivers, such as apothecaries and barber surgeons? **Are you able to explain the types of treatments and care provided in Medieval hospitals?** **Can you assess the overall quality of care available to the sick in Medieval times?**			
8. How significant were Medieval 'medics' in providing care, treatment and prevention?	**Red**	**Amber**	**Green**
Are you able to identify key figures in Medieval medicine and their contributions? **Can you evaluate the importance of various medical practitioners in Medieval society?**			

Are you able to discuss the limitations and achievements of Medieval medics?			
9. What were the symptoms and causes of the Black Death?	**Red**	**Amber**	**Green**
Can you describe the primary symptoms of the Black Death? **Are you able to explain the suspected causes of the Black Death according to contemporary understanding?** **Can you compare Medieval explanations of the Black Death with modern scientific knowledge?**			
10. Why was the Black Death able to ravage Medieval Europe so rapidly?	**Red**	**Amber**	**Green**
Can you identify factors that contributed to the rapid spread of the Black Death? **Are you able to analyse the social and economic conditions that facilitated the pandemic?** **Can you discuss how transportation and trade routes affected the spread of the Black Death?**			
11. What measures did Medieval Europe take to prevent the spread of the Black Death?	**Red**	**Amber**	**Green**
Are you able to describe quarantine practices and other measures taken to control the Black Death? **Can you evaluate the effectiveness of these preventative measures?**			
12. How successful were treatments available in halting the scourge of the Black Death?	**Red**	**Amber**	**Green**
Can you identify treatments used during the Black Death and their basis in contemporary medical theory? **Are you able to assess the effectiveness of these treatments in alleviating symptoms or curing the disease?** **Can you discuss the impact of these treatments on the overall mortality and morbidity during the Black Death?**			

HOME LEARNING TASKS

Task Description	**Done?**
Use 'Look, Cover, Write, Check' to learn the Medieval Medicine Vocabulary	
Complete GCSE Pod Tasks 1-4 using the QR code at the top of the page	
Explain the difference between **natural** and **supernatural theories of disease**.	
Explain three ways in which people **prevented** disease in the Medieval period	
Exam Style Question: Explain why the power of the Church limited medical progress in the years c.1250-1500. (12 marks)	
Exam Style Question: 'The main reason for a lack of medical progress in the years c.1250-1500 was a lack of education.' How far do you agree with this statement? (16 marks)	

Knowledge Organiser

Additional Subjects

Geography

Year 9

Term 1

2024/25

The Abbey School

Geography Year 9 Term 1
– Global Resource Management
/ Resource Management in the UK / Food (Option)

Term Focus – On the significance of food, water and energy to economic and social well-being. That there are global inequalities in the supply and consumption of resources. Especially with the rising demand for food resources, where supply is insecure. Without strategies to increase food supply globally, there are concerns surrounding conflict.

Prior Learning Links

- Geographical description foundation Term 1 Year 7.
- Stepping into Asia in Year 7 Term 3 set foundations for population distribution, interactions between humanity and the physical world around us, and economic activity.
- Year 8 Term 2 Economic Activity, plus Term 5 international development.
- Finally, sustainability and natural resource use in Terms 6 of both Yar 7 and 8.

Future Learning Links

- PEA mapping technique used throughout KS4, and baseline into KS5.
- Resource Management leads in to trade with London in Term 3 and The Development Gap in Term 5. Plus, in Year 10 for Economic Development of the UK in Term 2.

KEY VOCABULARY

KEY WORDS	KEY SUBJECT TERMINOLOGY
Agribusiness – farming conducted on commercial principles, for profit. **Carbon footprint** – a measure of the amount of carbon dioxide in the atmosphere as a result of human activity. **Energy mix** – the combination of fossil fuels, nuclear power and renewable sources of energy that is used to meet domestic and industrial energy needs. **Fossil fuel** – the natural fuel derived from coal, oil and gas (remains of organisms formed in the geological past). **Local food sourcing** – food that is produced within a short distance to where it is consumed. **Organic produce** – the product produced without man-made fertilisers or chemicals. **Renewable energy** – an energy from a source that will not be depleted.	**Food miles** – how far a food item has travelled from producer to consumer. **Security** – sufficient access to a resource. **Insecurity** – the condition of not having sufficient access to a resource. **Water deficit** – Inadequate or insufficient access to water. **Water scarcity** – an areas demand outpaces supply, leading to lack of resource. **Water stress** – demand for water exceeds the available amount in an area. **Water surplus** – water supply exceeds demand.

1. What does PEA do to describe global distribution? | **Red** | **Amber** | **Green**

To describe trends from a map, we need to follow PEA.

P = Pattern – To detail the general pattern seen. Of where most or little is. Use of compass points, hemispheres and lines of latitude.
E = Expand and example – To expand detail with continent, country, ocean names and data examples using the key.
A = Anomaly – To identify any anomalies which do not fit the pattern.

Daily calorie intake

This map shows how many **calories per person** that are consumed on average for each country worldwide. This indicates the global distribution of **food security and food insecurity.**

2. Who is eating all the food, drinking all the water and using all the energy?

Red | Amber | Green

A **resource** is a stock or supply of something that has value or purpose.
Most HICs have plenty resources, or have resources imported (brought in from other countries). LICs (poorer countries) lack resources, and struggle to improve quality of life.

Food	Water	Energy
- A poorly balanced diet can cause illness and disease. - Obesity is an increasing problem. - Over 1 billion people do not get enough calories. - Undernutrition affects a further 2 billion people. - Countries in sub-Saharan Africa suffer most from undernutrition.	- Essential for drinking, crops and to produce energy. - Many poor countries have water shortages. LICs / NEEs use most water for agriculture. HICs use most water for industry. - Variations in climate and rainfall affect supply.	- Required for light, heat and power. Power for factories. Also fuel for transport. - Richer countries consume more energy than poorer countries. - The Middle East is a major oil supplier. - NEEs become more industrialised, the demand for energy increases.

3. What is the mystery plant that is destroying our rainforests? (Not for 9B fast track)

Red | Amber | Green

Global demand for products that contain Palm Oil is driving deforestation in tropical rainforests.

4. What are food miles and how are they impacting the environment? (Not for 9B fast track)

Red | Amber | Green

Food can travel long distances (food miles).
Importing food adds to our carbon footprint. Due to producing the energy for commercial cultivation, and from transport.

5. How is demand for food in the UK changing?

Red | Amber | Green

The UK imports 40% of total food it consumes and is increasing.
Why? > UK climate cannot produce some foods.
> Cheaper food available from abroad.
> Demand for products – demand for more exotic food – demand for seasonal produce all year round.

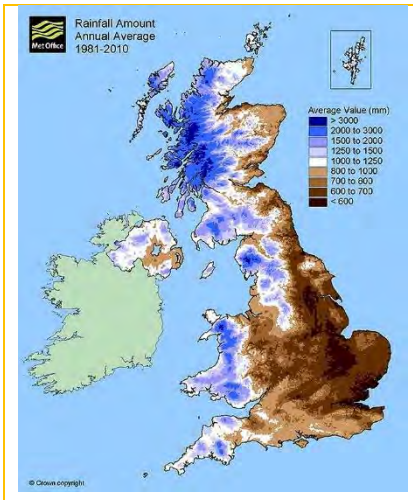
Food can travel long distances (food miles) – see 4.

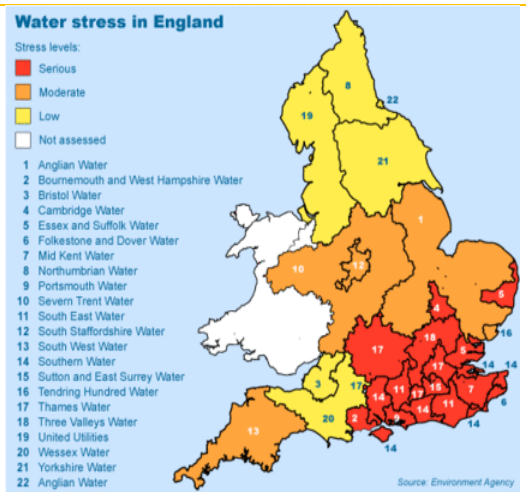
Lynford House Farm (East Anglia) Agribusiness	Riverford Organic Farm (Devon)
- The land is intensively farmed on a large scale. - Produces high yields (a large amount of food) - Pesticides and fertilisers used. - High costs of machines but increase efficiency. - Few people employed.	- Organic farm, so no pesticides used (more likely permaculture). - Delivery boxes of organic vegetables locally, and surrounding counties. - Reduces food miles and provides local employment.

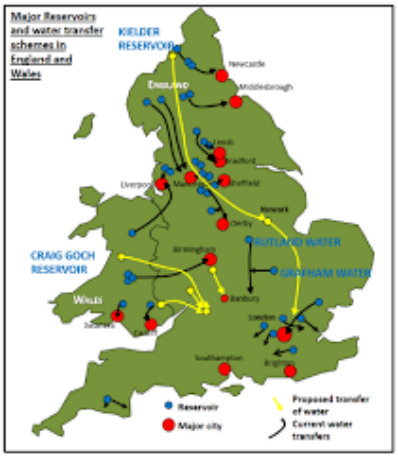
6. How can we get water from areas of surplus to areas of deficit in the UK?

Red | Amber | Green

- When a country has a water surplus in one area and a water deficit in another, supplies can be transferred. This is called a water transfer scheme. Reservoirs collect and store water in areas of high rainfall. Canals and pipes transport the water to rivers or reservoirs in other parts of the country.







7. How has energy use changed over time and what might it look like in the future?

Red | Amber | Green

- Energy consumption has fallen in recent years, mainly due to the decline of heavy industry and energy conservation.

UK's changing energy mix

- 75% of the UK's known oil and natural gas reserves have been used up.
- Coal consumption has declined because of concerns surrounding greenhouse gases and climate change.
- In the UK fossil fuels remain important, but renewables are now much more significant.

Impacts of energy exploitation

	Economic	Environmental
Nuclear	- Nuclear power plants are expensive to build. - Decommissioning old plants is expensive. - New plants provide job opportunities.	- Problem of safe processing and storage of radioactive waste. - Warm waste water can harm local ecosystems.
Wind Farms	- High construction costs. - Local homeowners can have lower energy bills.	- Visual impact on the landscape. - Help reduce carbon footprints. - Noise from wind turbines.

8. What does it mean to have food security?

Red | Amber | Green

Food security – having access to enough affordable, nutritious food to maintain a healthy life.
Countries who produce more food than is needed by their population have a **food surplus**.
Countries which do not produce enough food to feed their population and have to rely on imported food have a **food deficit**.
Many of these countries also experience **food insecurity**.

9. The more developed a country becomes, the more food its inhabitants consume. Why and how is this?

Red | Amber | Green

Factors that affect food supply.
Climate
Technology
Pests and diseases
Water stress
Conflict
Poverty

10. What are the human and physical geographical reasons for food insecurity?

Red | Amber | Green

Food insecurity occurs when a country can't supply enough food to feed it's population.
Famine
Rising prices
Soil erosion
Undernutrition
Social unrest

11. Why do some people have plenty of food, and some not enough?

Red | Amber | Green

Countries can have the ability to **increase their food supply**.
Irrigation
Aeroponics
Hydroponics
Biotechnology
Appropriate Technology

The "New" Green Revolution

12. What are the positives and negatives of growing food using a large-scale agricultural scheme? | **Red** | **Amber** | **Green**

To evaluate the advantages and disadvantages of producing food on a large-scale development.

Indus Basin Irrigation System (IBIS), Indus River Pakistan

- It is the largest continuous irrigation system in the world. With 3 large dams and 100+ smaller dams to regulate water flow. Canals distribute water across the countryside, providing 1.6 million km of ditches and streams for irrigation to Pakistan's agricultural land.

Advantages	**Disadvantages**
- Improves food security in Pakistan, 40% of land available to cultivate. - Irrigation has increased crop yields. - Diets have improved with a greater range of food. - Hydroelectric power is generated by large dams.	- Some farmers take an unfair share of water. - Poor irrigation techniques mean water is wasted. - Salinisation (increased saltiness) can damage the soil. - Population growth will increase demand for water. - High costs to maintain reservoir capacity.

UK example: Thanet Earth	**Located in Kent, the site includes four huge greenhouses using hydroponics to grow food such as tomatoes**	**Advantages** • **Supports more than 500 jobs.** • **Produces food all year round.** • **Provides UK with food security.**	**Disadvantages** • **Money generated mostly goes to large companies not community.** • **Requires a lot of energy.** • **Causes visual & light pollution.**

13. How can our food supply be made more sustainable? | **Red** | **Amber** | **Green**

A **sustainable food supply** ensures that fertile soil, water and environmental resources are available for future generations.

Organic Farming
Permaculture
Urban Farming
Fish from sustainable sources
Meat from sustainable sources
Seasonal food consumption
Reduction of food waste

Sustainable food supply

This ensures that fertile soil, water and environmental resources are available for future generations.

Organic Farming - The banned use of chemicals and ensuring animals are raised naturally.	**Permaculture** - People growing their own food and changing eating habits. Fewer resources are required.	**Urban Farming** - Planting crops in urban areas. i.e. roundabouts and allotments	**Managed Fishing** – Includes setting catch limits, banning trawling and promoting pole and line methods.

Makueni Country, Kenya

- The programme provides direct help to 2 small villages and a primary school in rural Kenya.
- The construction of Sand Dams, with support from charity "Just a Drop" have helped improve food security.

The programme includes: -

- Improving water supply by building sand dams for each village.
- Providing a reliable source of water for crops and livestock.
- A training programme to support local farmers.

- Growing trees to reduce soil erosion.

The project has been very successful: -

- Crop yields and food security have increased.
- Water-borne diseases have been reduced.
- Less time is wasted fetching water.

HOME LEARNING TASKS	
Task Description	**Done?**
Learn Key Word Vocabulary.	
Revise and take test from: Resources - food, energy and water - Distribution of resources - AQA - GCSE Geography Revision - AQA - BBC Bitesize	
Examine the advantages and disadvantages of renewable and non-renewable energies used in the UK.	
Food Miles investigation: Where have items in your supermarket shop come from?	
Information leaflet: Thanet Earth, Kent Thanet Earth Home - Thanet Earth	
Challenge Revision (Grade 7-9) Food Production - THE GEOGRAPHER ONLINE	

Knowledge Organiser

Additional Subjects

RE

Year 9

Term 1

2024/25

The Abbey School

Christian Key ideas/terms to learn – K/O

The Nature of God • **Omnipotent** - God created the world • **Omnibenevolent** – God helps & sent his son to save the world • **Just** – he judges humans and rejects prejudice and discrimination • God inspires people e.g. prophets • People communicate with God by **prayer** • God is **Spirit** and **Holy** & **Jesus** is his son	**The Trinity** • Beliefs are in the **Nicene** Creed • **3 people in one God**: Father, Son and Holy Spirit –all God but have different roles & exist in a relationship of love • God is **Father** & **omnipotent, omnibenevolent, omniscient, omnipresent** • God is **Son** who became incarnate through Jesus: ***"The Word became flesh & dwelt among us"*** • God is **Holy Spirit**–working in the world to help	**The Problem of evil and suffering** • If God is omnibenevolent, why do people suffer? • If God is omnipotent, why does he not stop suffering? • If God is just, why does he allow evil to take place towards good people?	**Creation** • God created out of nothing • Jesus, **the Word** (John's gospel), was part of creation • The Spirit was part of creation as it moves on the waters • Many Christians do not see the creation as scientifically accurate • Some Christians believe it literally happened as in Genesis • God created everything ***"good"***
The Afterlife • Christians believe they will be resurrected & receive **eternal life** • Christians need to have **faith in Jesus** and follow his teachings to enter heaven: ***"No one comes to the Father except through me"*** • Soul continues after death & there is a new spiritual body: ***"The body sown is perishable, it is raised imperishable***	**Judgment** • Christians believe when they die God will judge them on **past actions** • The parable of the Sheep & Goats is about judgment: ***"Whatever you did not do for one of them, you did not do for me"* –** by serving others, they are serving Jesus • God's judgment will result in **eternal reward** or **eternal punishment**	**Heaven and Hell** • **Heaven** is **eternal happiness** with **God**; a reward for **faith and actions** • Heaven is either a **physical** place or **spiritual** state with loved ones • Jesus is on a throne judging people • **Hell** is **eternal suffering, no God,** either **physical** place/**spiritual** state • Roman Catholics believe in an intermediate state called **purgatory**	**The Incarnation** • Christians believe Jesus was God in **human form** • Jesus was conceived by Mary, after an angel appeared to her • This is celebrated by Christians at **Christmas**
Jesus as the Son of God • Jesus was **fully human & fully God:** ***"The Word became flesh and dwelt among us"*** • Jesus speaks the word of God • Christians believe Jesus is a **spiritual Messiah** (no a physical one) • The Gospels refer to Jesus as the **Christ**	**The Crucifixion** • This took place on **Good/Black** Friday • Jesus was handed over to **Pontius Pilate** after he was betrayed by Judas • Jesus' last words were: ***"Father, into you hands I commit my spirit".*** • Jesus prayed for those crucifying him: ***"Father, forgive them, they know not what they do"***	**The Resurrection** • This took place on Easter Sunday • Jesus's body was not in the tomb and he appeared to many, including Mary Magdalene, ***"In Adam all die, in Christ, all will be made alive"*** • Shows power of **God over death** and gives **hope** all resurrected	**The Resurrection for Believers** • Christians will live on **after death** • Some Christians believe the **soul is resurrected** after death • Catholics believe there will be a **spiritual & physical resurrection** • Others believe resurrection will take place when **Jesus returns**
The Ascension • Took place **40 days** after Resurrection • Jesus returned to the right hand of **God** • Allowed the **Holy Spirit** to be sent to earth to work in the churches	**Sin and Original sin** • Sin is **thought or action** against God: *"We have all sinned & fall short of the glory of God"* • Original sin stated at the **Fall**, - Roman Catholics believe all people are born with it	**Atonement** • Jesus' death gave atonement from sin & a **new relationship** with God: • All who follow Jesus will have eternal life	**Salvation** • Salvation means **being saved** from **sin** & its consequences by: **Law** e.g. 10 Commandments; **Action** e.g. food banks; **Grace** e.g. sacraments **Spirit** e.g. Holy Spirit in services

Knowledge Organiser

Additional Subjects

Sport Science

Year 9

Term 1

2024/25

The Abbey School

Sport Science // Year 9 & 10 // Terms 1-6

Cambridge National Level 1 / 2 Sport Science
R181: Applying the principles of training: fitness and how it affects skill performance

Prior Learning Links

- Knowledge of basic components of fitness from Core PE.
- Some knowledge of basic fitness tests such as MSFT.
- Completed unit of work on "Fitness" in Years 7&8 in Core PE.

Future Learning Links

- Some links to questions in exam paper for R180.
- BTEC Level 3 Unit 2 – Fitness Training and Programming.

KEY VOCABULARY

KEY WORDS & TERMINOLOGY

Topic Area 1: Components of fitness applied in sport

Key Terms:

- ✓ **Strength** – the extent to which a muscle or muscle group can exert force to overcome a resistance, e.g in weightlifting
- ✓ **Power** – exerting muscular force (strength) with speed, e.g. 100m sprint
- ✓ **Agility** – the ability to change direction at speed while remaining in control of movement, e.g. sidestepping an opponent
- ✓ **Balance** – the ability to maintain the centre of mass over the base of support, e.g. standing on one leg
- ✓ **Flexibility** – the range of movement around a joint, e.g. performing the splits
- ✓ **Muscular endurance** – the ability of the muscles to repeatedly contract without fatiguing/tiring
- ✓ **Cardiovascular endurance** – the ability of the heart and lungs to meet the oxygen demands of the muscle over a prolonged period of time
- ✓ **Speed** – how fast an athlete covers a premeditated distance
- ✓ **Fatigue** – extreme tiredness from mental or physical exertion
- ✓ **Stamina** – the term used to describe the body's ability to sustain physical activity for a long time
- ✓ **Coordination** – the ability to use two or more body parts at the same time with efficiency
- ✓ **Reaction time** – how long it takes to respond to a stimulus
- ✓ **Pressurised drill** – an activity within a training session which has an added element of competition such as being timed or up against an opponent

Topic Area 2: Principles of training in sport

Key Terms:

- ✓ **Progression** – gradual increases or movements towards a goal
- ✓ **Overload** – doing more than what was done in a previous session to ensure continued results
- ✓ **Frequency** – how regularly an individual trains, i.e. times a person trains per day, week or month
- ✓ **Intensity** – how hard an individual works during a session
- ✓ **Time** – how long an individual exercises for
- ✓ **Type** – the method of training adopted by the participant, e.g. circuit training
- ✓ **Specificity** – training which improves a component of physical or skill-related fitness related to an individual's goal, sport or activity of choice
- ✓ **Reversibility** – the regression in physical fitness or ability after a prolonged period of inactivity
- ✓ **Specific** – how relevant goal is to the performer or their role in that sport
- ✓ **Measurable** – a goal in which can be in some way quantified and monitored to assess
- ✓ **Achievable** – a goal which is not impossible to meet
- ✓ **Realistic** – a goal which is within the capabilities of the performer
- ✓ **Time-bound** – a goal which is set a duration in which it is to be achieved

Topic Area 3: Organising and planning a fitness training programme

Key Terms:

- ✓ **Injury history** – whether an individual has had any physical niggles in the past which may affect the planning of a training programme.
- ✓ **Aims** – the ultimate goals that the training programme hopes to achieve
- ✓ **Objectives** – the measurable, intermediate steps that help and athlete check progress leading to the ultimate goal
- ✓ **Suitability** – whether or not a training programme is appropriate enough for an individual's needs
- ✓ **Adaptability** – the extent to which a programme can be manipulated in response to an unforeseen event or new demands
- ✓ **FITT** – an acronym for the principles of progressive overload which should be incorporated into any successful training programme (Frequency, Intensity, Time, Type)
- ✓ **Reflection** – coaches and athletes taking time out to check on strengths, weaknesses and progress – to help formulate future plans
- ✓ **Facilities** – the location or amenities needed to take part in sport or physical activity
- ✓ **Equipment** – the items or resources which are needed to perform a certain sport or physical activity
- ✓ **Risk assessment** – a pre-exercise safety measure carried out to identify hazards and arrange appropriate controls
- ✓ **Testing** – a way of evaluating a training programme by comparing a fitness component before and after the training block.
- ✓ **SMART goals** – the targets that an individual sets themselves for a fitness training programme which applies different principles ensuring its effectiveness

Topic Area 4: Evaluate own performance in planning and delivery of a fitness training programme

Key Terms:

- ✓ **Protocol** – the set of instructions involved in carrying out a fitness test
- ✓ **Sequence** – the order in which a series of tests are carried out
- ✓ **Validity** – whether a test actually measures the component of fitness that it intends to
- ✓ **Reliability** – the ability of a test to produce the same outcome if performed exactly the same
- ✓ **Practicality** – the feasibility of a test protocol or its ease of implementation with respect to time, equipment, space and individuals
- ✓ **Normative data** – the typical age and gender matched fitness test results of a larger population, used for comparative purposes
- ✓ **Average** – the mean value of a set of fitness results
- ✓ **Rating** – the descriptor given to a test result that helps categorise or group together sets of results
- ✓ **Gender** – whether an individual considers themselves as male, female or another identity will affect how they are scored in a fitness test
- ✓ **Age** – how old or young an individual is, which impacts their expected fitness test result
- ✓ **Standardisation** – an established set of procedures which are reproduced every time to ensure consistency in both inter and intra individual testing
- ✓ **Comparison** – analysing the results from two different individuals or groups and measuring them against each other
- ✓ **Accuracy** – the extent to which a test result is recorded with precision
- ✓ **Procedure** – the sequence of steps for carrying out a task
- ✓ **Units** – the quantity given for a particular measurement

1. How are components of fitness relevant to different sports? 2. Can you justify why different components of fitness are relevant for different sports?	Red Red	Amber Amber	Green Green

Components of Fitness

Think about which components of fitness are needed to complete the challenges set for the sports stars below

Owen Farrell (rugby union)

Challenge: To steal the ball and sidestep an opponent to score a try.

Component of fitness	Definition

Simone Biles (gymnastics)

Challenge: To execute the double layout floor exercise to a high standard.

Components of fitness	Definition

3. What fitness tests are used for each component of fitness? 4. Can you apply the components of fitness to a skilled performance?	Red Red	Amber Amber	Green Green

Fitness Tests

Fill in the missing appropriate fitness tests:

Component of Fitness	Appropriate fitness test
Agility	
Cardiovascular endurance	Multistage fitness test
Muscular endurance	Press up test
Speed	30m speed test
Strength	
Power	Standing long jump
Flexibility	
Balance	Stork stand test
Coordination	

5. What are the principles of training? Red Amber Green

Principles of Training

Fill in the blanks for the following definitions of the FITT principles:

- Fr_qu_e_cy – the number of times you train per week (how often)
- In_e_s_ty – how hard you train during each training session (how hard)
- _im_ – the length of each training session (how long)
- T_p_ – the method of training used during each training session (which training method)

6. What are SMART goals? Red Amber Green

SMART Goals

Match up the SMART principles below with their definitions

Specific	It should be possible to reach your goal.
Measurable	Goals should not be vague but should describe what you want to achieve in detail.
Achievable	Goals should be tracked in order to see your progress as you complete them.
Realistic	It should be clear when your goals should be achieved by.
Time-bound	A goal should be something that is possible given your individual circumstances, e.g. the amount of time you can dedicate to training, or the facilities and equipment available to you.

7. What are methods of training and their advantages/disadvantages? Red Amber Green

Methods of Training

Complete the table below to describe the characteristics of the exercises/training methods and the advantages and disadvantages of each.

Exercise/ training method	Aerobic, Anaerobic or both?	Advantages	Disadvantages
Walking around the room/hall/track for 1 minute			
jogging on the spot for 30 seconds			
Sprinting on the spot for 10 seconds			
Weaving in and out of 10ms of cones			
Sprinting to a cone 10m away and walking back			
Sprinting to a cone 10m and sprinting back			
Enacting a first and second tennis serve			
Performing four different static stretches for 10-12 seconds each			

8. What factors should you consider when designing a fitness training programme? | **Red** | **Amber** | **Green**

Designing a Fitness Programme

Circle the 5 most important factors to consider when designing a fitness training programme:

Method used	Current fitness levels	Safety/risk assessments
Duration	Previous injuries	Suitable activities
Name	Session aims	Application of SPOR
Age	Athlete goals	Progression
Aims	Equipment/ facilities needed	Objectives

9. How do you apply the principles of training to a fitness programme? | **Red** | **Amber** | **Green**

Principles of Training

Read what each athlete says below about their training and give them advice on how they could apply the most relevant principle of training to their situation

I have managed to stay fit and active over the years and continue to run recreationally, but I am frustrated by the fact that I can no longer run at the same pace I did when I was racing.

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I always lift the same weights at the gym as I'm comfortable with this but I don't seem to feel any fitter or stronger.

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10. How do you plan a fitness programme? 11. How do you record your results from a fitness training programme?	Red	Amber	Green

Planning a Fitness Programme

Think about the information that goes into a training programme. Fill out the worksheet below to begin the planning process.

Suitable warm-up and cool-down
(Think about the different components of warm-ups and cool-downs and how exercises may vary for different activities.)

Suitable main activities
(Can you think of different activity examples suitable to a range of different subjects?)

Coaching points (What instructions might coaches provide to improve the performance of different skills and techniques?)

Duration of plan (What factors would influence the optimum duration of the programme?)

Duration of sessions (What factors might influence the duration of a training session?)

Monitoring progression and adaptability
(How is progress monitored and how might a training session or mid-term testing result in adaptation of the programme?)

Equipment and facilities
(What different equipment and facilities are needed for different sports and activities?)

12. What are the strengths and areas for improvement for your fitness training programme?	Red	Amber	Green

Strengths and Areas for Improvement

It is important to evaluate the effectiveness of a fitness programme. Think about the strengths and weaknesses of your fitness programme. Things to consider are:

- ✓ The level of success based on whether or not the goals were met
- ✓ Whether the training methods were appropriate for the participant
- ✓ If the programme was tailored to the individual needs of the subject
- ✓ Whether the programme was fully adhered to (if not, why not?)

Strengths	Areas for improvement

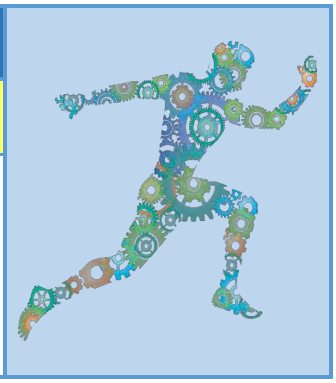
HOME LEARNING TASKS

Task Description		Done?
1) Complete Checkpoint 1 & 2 on the EverLearner at a minimum grade of 70% *"Components of fitness applied to sport"*		
2) Complete Checkpoint 3 & 4 on the EverLearner at a minimum grade of 70% *"Applying the principles of training: fitness and how it affects skill performance"*		
3) Complete Checkpoint 5 on the EverLearner at a minimum grade of 70% *"Organising and planning a fitness training programme"*		
4) Complete Checkpoint 6 on the EverLearner at a minimum grade of 70% *"Evaluate own performance in planning and delivery of a fitness training programme"*		

Sport Science // Year 9 & 10 // Terms 1-6

Cambridge National Level 1 / 2 Sport Science

Unit R182: The body's response to physical activity and how technology informs this.



Prior Learning Links

- Knowledge of basic anatomy and physiology from Core PE.
- Knowledge of sporting examples R181 and Core PE.

Future Learning Links

- Some links to questions in exam paper for R180.
- BTEC Level 3 Unit 1 – Anatomy and Physiology

KEY VOCABULARY

KEY WORDS & TERMINOLOGY

Topic Area 1: The cardio-respiratory system and how the use of technology supports different types of sports and their intensities

Key Terms:

- ✓ **Atria** - upper chambers of the heart that collect blood from veins.
- ✓ **Ventricles** – lower chambers of the heart that pump blood out through arteries.
- ✓ **Valves** - prevent the backflow of blood.
- ✓ **Deoxygenated** – venous blood (in veins) that does not carry oxygen.
- ✓ **Oxygenated** - arterial blood (in arteries) that carries oxygen.
- ✓ **Arteries** - blood vessels that mainly carry oxygenated blood away from the heart.
- ✓ **Capillaries** - tiny, thin walled blood vessels that join arteries (which carry blood away from the heart) and veins (which carry blood back to the heart).
- ✓ **Alveoli** - tiny air sacs in the lungs.
- ✓ **Veins** - blood vessels that mainly carry deoxygenated blood back to the heart.
- ✓ **Trachea** - tube connecting the mouth and nose to the lungs.
- ✓ **Lungs** - large spongy organs in chest; used for gas exchange.
- ✓ **Bronchi** - airways that lead from the trachea into the lungs.
- ✓ **Bronchioles** - air passages inside the lungs that connect the bronchi to the alveoli.
- ✓ **Diaphragm** - dome-shaped muscle causing inhalation and exhalation.
- ✓ **Radial pulse** - heart rate that can be felt at the wrist.
- ✓ **Carotid pulse** - heart rate that can be felt at the neck.
- ✓ **Vasoconstriction** – reduction in the diameter of a blood vessel to reduce blood flow through that vessel.

Topic Area 1 (Continued…):

- ✓ **Vasodilation** - widening in the diameter of a blood vessel to increase blood flow through that vessel.
- ✓ **Cardiac output** – the volume of blood that the heart is able to pump out in one minute.
- ✓ **Stroke volume** – the volume of blood that leaves the heart during each contraction.
- ✓ **Systolic blood pressure** - blood pressure when the heart is contracting.
- ✓ **Diastolic blood pressure** - blood pressure when the heart is relaxed.
- ✓ **Inhalation** - breathing in.
- ✓ **Exhalation** - breathing out.
- ✓ **Intercostal muscles** - muscles located between the ribs.
- ✓ **Diffusion** - the movement of a gas from an area of high concentration to an area of low concentration.
- ✓ **Wearable technology** - technology worn on the body during exercise to provide data.
- ✓ **Laboratory-based technology** - the use of technology inside a laboratory to provide data.
- ✓ **Field-based technology** - technology that can be used to provide data outside of a laboratory in the setting where sports take place, for example a football pitch.
- ✓ **Spirometer** - machine that produces a spirometry trace of breathing volumes.
- ✓ **Vital capacity** – amount of air expelled from your lungs when you take a deep breath and then exhale fully.
- ✓ **Pulse oximeter** – device used to measure how efficiently oxygen is being carried to the extremities by the heart (blood oxygen level).

Topic Area 2: The musculo-skeletal system and how the use of technology supports different types of sports and their movements

Key Terms:

- ✓ **Clavicle** - the collarbone.
- ✓ **Scapula** - the shoulder blade.
- ✓ **Humerus** - bone in the upper arm.
- ✓ **Radius** - bone of the forearm; attaches to the thumb side of the wrist.
- ✓ **Ulna** - bone of the forearm; forms the point of the elbow.
- ✓ **Cranium** - skull bone, which surrounds the brain.
- ✓ **Ribs** - bones surrounding the heart and lungs, forming the chest cavity.
- ✓ **Sternum** - flat bone at the front of the chest, sometimes called the breastbone.
- ✓ **Vertebrae** - many single bones joined together to form the backbone.
- ✓ **Femur** - long bone of the thigh or upper leg, which extends from the hip to the knee.
- ✓ **Tibia** - the shin bone; forms knee joint with the femur.
- ✓ **Fibula** - bone in the lower leg that forms the ankle.
- ✓ **Patella** - the kneecap; covers the knee joint.
- ✓ **Deltoids** - muscles on shoulder joint that move the upper arm.
- ✓ **Trapezius** - muscle at the top of the back that moves the scapula and head.
- ✓ **Latissimus dorsi** – muscle at the side of back that moves the upper arm.

Topic Area 2 (Continued…):

- ✓ **Pectorals** - muscles in the chest that move the upper arm.
- ✓ **Biceps** - muscles at the front of the upper arm.
- ✓ **Triceps** - muscles at the back of the upper arm.
- ✓ **Abdominals** – stomach muscles that protect internal organs.
- ✓ **Gluteals** - buttock muscles, which are used when running.
- ✓ **Hamstrings** - muscles at the back of the upper leg.
- ✓ **Quadriceps** - muscles at the front of the upper leg.
- ✓ **Gastrocnemius** - one of the calf muscles; used in walking.
- ✓ **Soleus** - one of the calf muscles; used in walking.

- ✓ **Synovial joint** - a freely moveable joint.
- ✓ **Ball and socket joint** - ball shaped end of bone fits into the socket of another, for example the hip.
- ✓ **Hinge joint** - end of bone fits against another bone allowing movement in only one direction, for example the knee.
- ✓ **Gliding joint** - one bone can slide over another, for example the carpals in the wrist.
- ✓ **Pivot joint** - rounded end of one bone fits into a ring formed by the other bone, for example the vertebrae of the neck, which allow head rotation.

Topic Area 3: Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

Key Terms:

- ✓ **Anticipatory rise** – slight increase in heart rate before exercise.
- ✓ **Heart rate –** Number of times the Heart beats per minute
- ✓ **Stroke volume –** Volume of blood that leaves the Heart during each contraction
- ✓ **Cardiac output –** Volume of blood that the Heart pumps out in one minute
- ✓ **Breathing rate –** Number of breaths taken per minute
- ✓ **Gaseous exchange –** The exchange of gases in the lungs (Oxygen in – Carbon dioxide out)
- ✓ **ROM –** Range of movement at joints

Topic Area 4: Long-term effects of exercise on the cardio-respiratory and musculoskeletal systems

Key Terms:

- ✓ **Fast twitch fibres** – muscle fibres that contract quickly and/or with high force; used during high-intensity work.
- ✓ **Slow twitch fibres** – muscle fibres that contract with a low force but do not fatigue quickly.
- ✓ **Bradycardia** – decrease in the resting heart rate because of training.
- ✓ **Goniometer** - device used to measure flexibility (range of movement at a joint).
- ✓ **Lung capacity** - the amount of air the lungs can hold.
- ✓ **Tidal volume** - the amount of air breathed in and out at rest.
- ✓ **Bone density** - the amount of bone mineral in bone tissue.
- ✓ **Capillarisation** – an increase in the number of capillaries as a result of endurance training.

	✓ **Heart disease** - when the heart's blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries that supply the heart with blood. ✓ **Heart attack** – medical emergency in which the supply of blood to the heart is suddenly blocked.

1: What is the function and role of the cardio-respiratory system?	Red	Amber	Green

- **What is Heart Rate and how is it measured?**

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- **What is Stroke Volume?**

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- **What is Cardiac Output?**

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- **What is Breathing Rate and how is it measured?**

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- **What is Tidal Volume?**

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- **What is Gaseous Exchange?**

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2: How is technology used to inform us about the cardio-respiratory system?	Red	Amber	Green

Key terms

Technology Putting scientific knowledge into practical use to solve problems or invent useful tools.

Wearable technology Technology worn on the body during exercise to provide data.

Laboratory-based technology The use of technology inside a laboratory to provide data.

Field-based technology Technology that can be used to provide data outside of a laboratory in the setting where sports take place, for example a football pitch.

- **How could a coach use data from a Central Midfielder's Heat Map to assess the performance of his/her Football player?**

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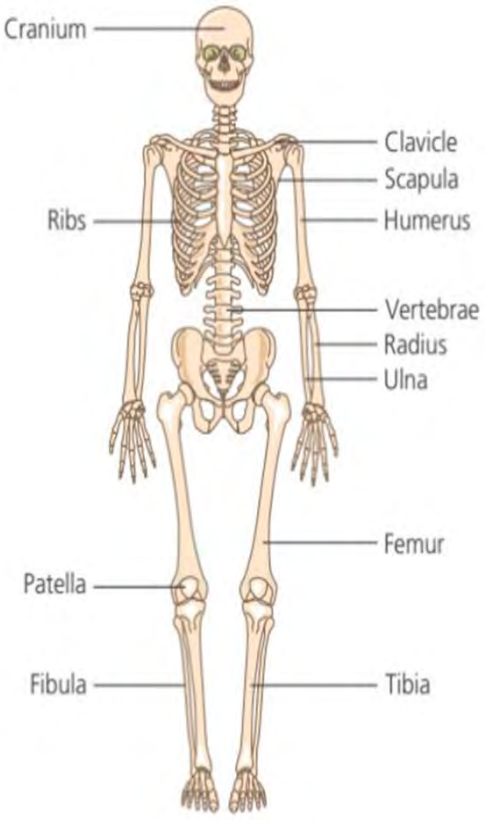
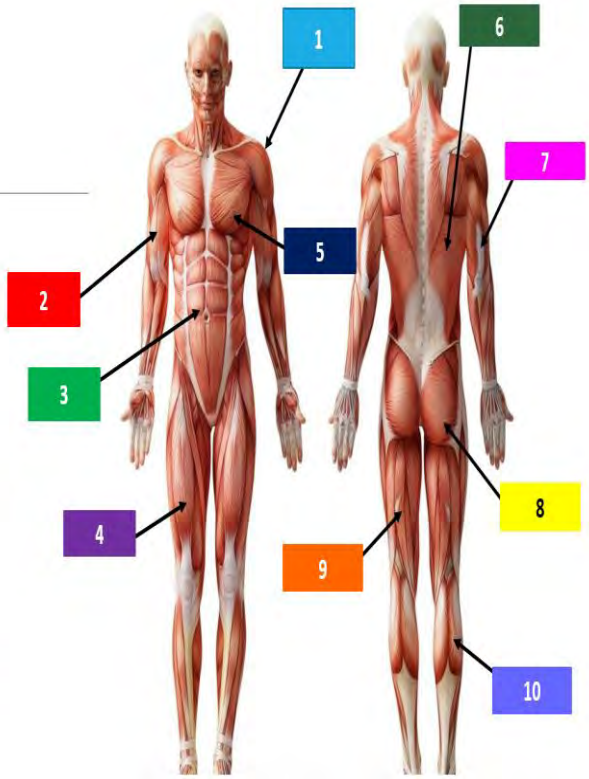
3: What are the components and role of the musculo-skeletal system?	Red	Amber	Green



1 = Deltoid
2 = Bicep
3 = Abdominals
4 = Quadriceps
5 = Pectorals
6 = Latissimus Dorsi
7 = Triceps
8 = Gluteal
9 = Hamstring
10 = Gastrocnemius



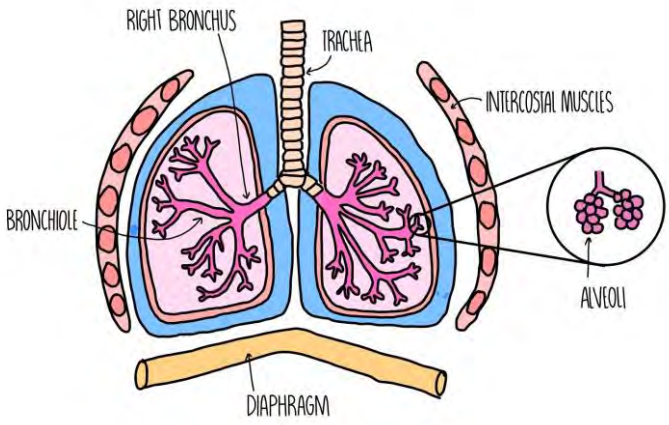
4: How is technology used to inform us about the musculo-skeletal system?	Red	Amber	Green

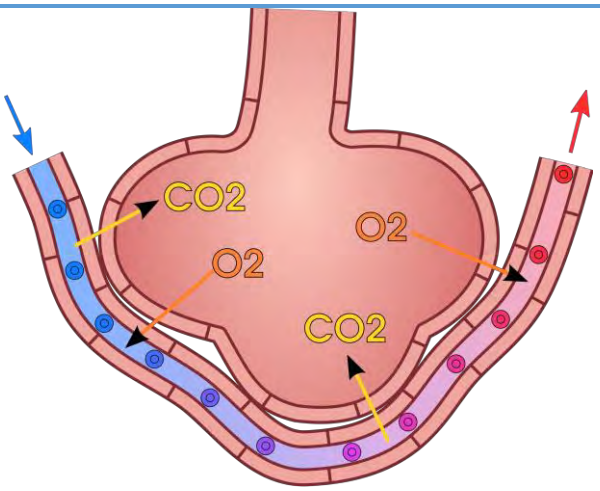
- **How could a High Jump coach use the data gathered from Slow Motion Capture to assess the performance of his/her athlete?**

5: What are the short-term effects of exercise on the cardio-respiratory system?	Red	Amber	Green

- **What would you notice occurring to your Heart Rate and Cardiac Output during exercise?**

- **What would you notice occurring to your Breathing Rate during exercise?**





6: What are the short-term effects of exercise on the musculo-skeletal system?	Red	Amber	Green

- **During exercise, what happens to blood flow to muscles and why does this occur?**
- **What effect would this have on muscle temperature and pliability?**

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Think:

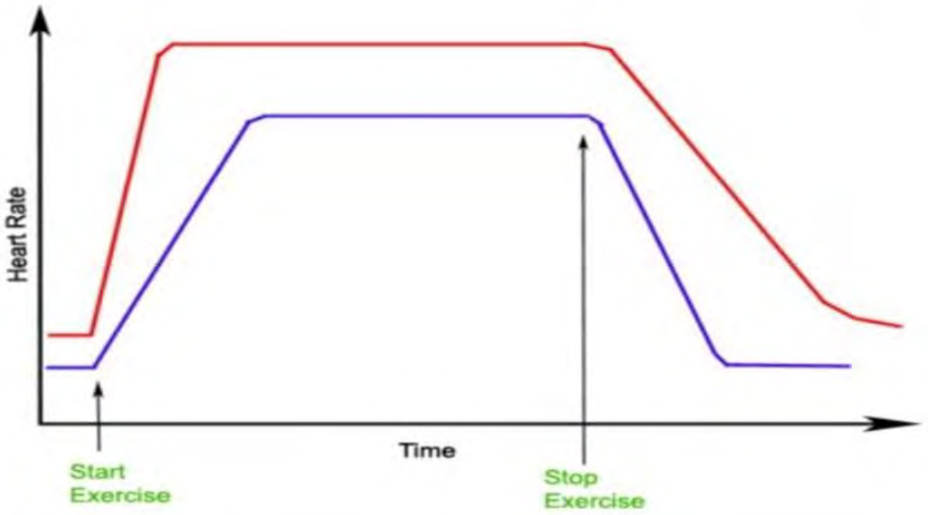
- ✓ **Heart rate** – Number of times the Heart beats per minute
- ✓ **Stroke volume** – Volume of blood that leaves the Heart during each contraction
- ✓ **Cardiac output** – Volume of blood that the Heart pumps out in one minute
- ✓ **Breathing rate** – Number of breaths taken per minute
- ✓ **Gaseous exchange** – The exchange of gases in the lungs (Oxygen in – Carbon dioxide out)

7: What are the long-term effects of exercise on the cardio-respiratory system?	Red	Amber	Green

Long-term effects of exercise on the cardio-respiratory system occurs to:

- **Heart Rate**
- **Stroke Volume**
- **Cardiac Output**
- **Heart Rate recovery**
- **Lung capacity**

- This graph shows the **Heart Rates** of two performers running 100m. One of them is fit, while the other is unfit. Which is which? Back up your answer with **two reasons** as to why you have come to your conclusions. **(4 marks)**



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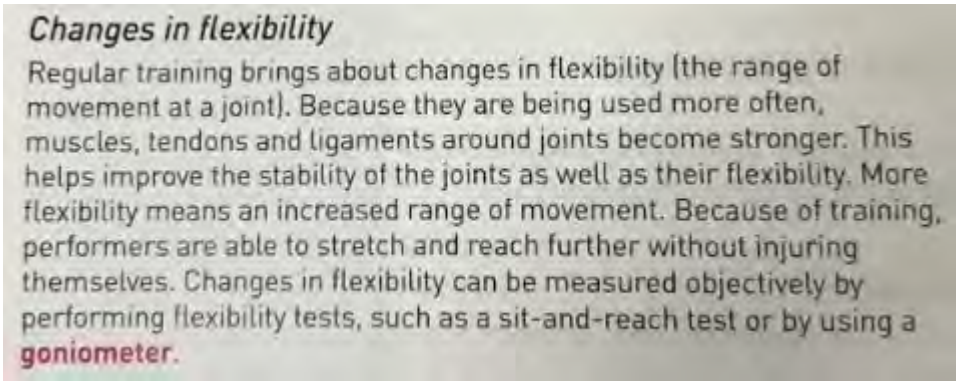
8: What are the long-term effects of exercise on the musculo-skeletal system?	Red	Amber	Green

Long-term effects of exercise on the musculo-skeletal system occurs to:

- Changes in muscle size
- Changes in strength
- Changes in flexibility
- Quicker muscle recovery



Changes in flexibility

Regular training brings about changes in flexibility (the range of movement at a joint). Because they are being used more often, muscles, tendons and ligaments around joints become stronger. This helps improve the stability of the joints as well as their flexibility. More flexibility means an increased range of movement. Because of training, performers are able to stretch and reach further without injuring themselves. Changes in flexibility can be measured objectively by performing flexibility tests, such as a sit-and-reach test or by using a **goniometer**.

- **The long-term changes to an athlete's flexibility due to training will enable them to perform at a much higher level than someone who has not been training over time. How would their performances in Badminton differ? Give two explicit examples of how flexibility benefits Badminton performance.**
  (4 marks)

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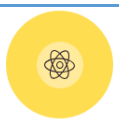
HOME LEARNING TASKS		
Task Description		**Done?**
1) Complete Checkpoint 1 on The EverLearner at a minimum grade of 70%: *"The cardio-respiratory system and how the use of technology supports different types of sports and their intensities"*	 	
2) Complete Checkpoint 2 on The EverLearner at a minimum grade of 70%: *"The musculo-skeletal system and how the use of technology supports different types of sports and their movements"*	 	
3) Complete Checkpoint 3 on The EverLearner at a minimum grade of 70%: *"Effects of Exercise"*	 	

Knowledge Organiser

Additional Subjects

Art

Year 9

Term 1

2024/25

The Abbey School

Subject Art Year 9 Term 1 & 2 – ‘Drawing an and Printmaking’

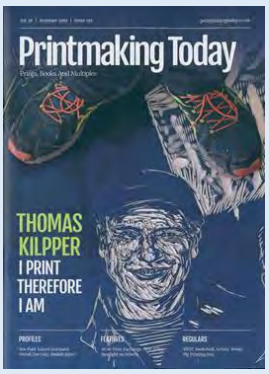
Term Focus – *Broaden printmaking skills learned in Year 8, through experimenting with a range of printmaking techniques. Investigate how artists make use of printmaking techniques and processes in their work. Select and develop ideas appropriate for printmaking.*

Prior Learning Links

Throughout KS3 students learned about the Formal Elements and developed basic skills in Observational Drawing, Tone, Colour 3D, Printmaking, creating 3D work inspired by other cultures, composition planning and painting. All projects were underpinned the processes of recording, developing, refining, evaluating and realising intentions and they will continue to repeat and further embed these in their GCSE projects beginning with ‘Drawing and Printmaking’.

Future Learning Links

Drawing and Painting Techniques and Processes- Build on knowledge of colour theory learned in Year 7. Develop skills in more advanced painting techniques and media such as working with acrylics. Investigate how artists use colour and painting techniques to communicate mood and atmosphere in art. They will transfer this knowledge into their own paintings.



The Ultimate Guide on Different Art Mediums – ARTDEX

KEY VOCABULARY	
KEY WORDS	**KEY SUBJECT TERMINOLOGY**
I will learn the meaning of… *Relief/Repeat/Texture/Sequence/Reduction/Pattern/Intaglio/ Mono/Stencil/Collagraph/Line/Positive and Negative space within the context of* ***Printmaking.***	Record Develop Refine Realise Evaluate

1. How do artists use printmaking?

Red | **Amber** | **Green**

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently record…

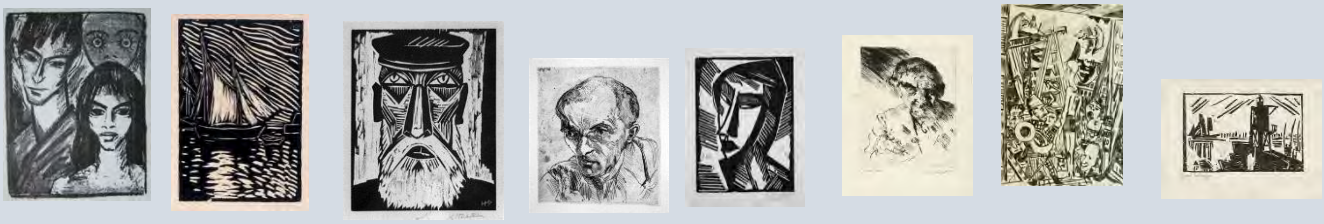
- images and information appropriate for printmaking

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):

I will learn how to confidently evaluate…

- artists using analytical writing skills and forming opinions

Introducing the German Expressionists



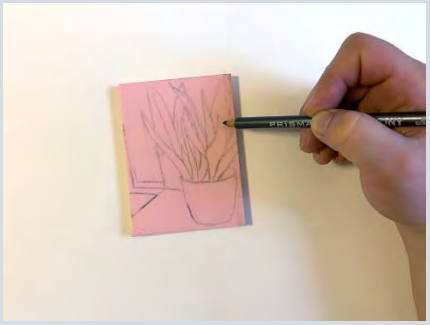
Top left to right:
Otto Mueller, Emil Nolde, Herman Max Pechstein, Ludwig Meidner, Karl Schmidt-Rottluff, Lovis Corinth, Max Beckmann and Lyonel Feininger.

Bottom left to right:
Erich Heckel, Ernst Ludwig Kirchner and Walter Gramatte

2. Why is drawing important for printmaking?

Red	Amber	Green

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):



I will learn how to confidently record…

- images and information appropriate for printmaking
- using drawing and printmaking techniques
- building on my knowledge and understanding of how artists use printmaking techniques to create meaningful work
- ideas for a print

3. How does positive and negative space work in printmaking?

Red	Amber	Green

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently develop…

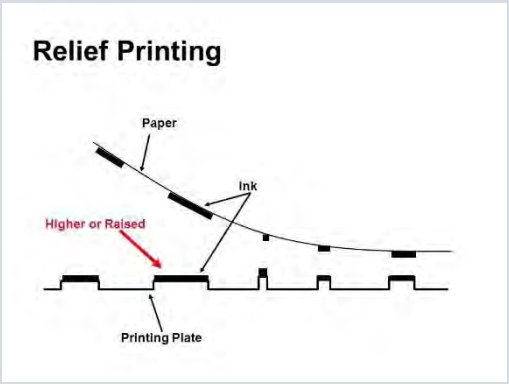
- and broaden my knowledge and understanding of printmaking

4. What does the term relief mean in printmaking and how can we demonstrate it?	Red	Amber	Green

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently develop…

- and broaden my knowledge and understanding of printmaking
- a range of compositions suitable for printmaking
- alternative ideas in response to a given theme, linking to artists work.
- my higher order thinking skills



This picture shows different leaf compositions in print

5. Can you demonstrate the reduction printing process?	Red	Amber	Green

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently develop…

- and broaden my knowledge and understanding of printmaking

6. Can you list the materials and equipment needed to make a lino print?	Red	Amber	Green

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently develop…

- and broaden my knowledge and understanding of printmaking

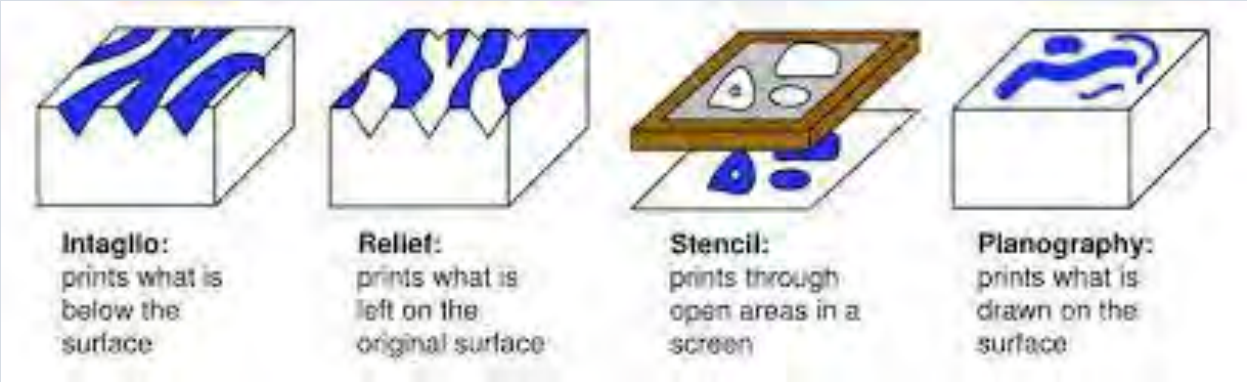
Lino
Ink Roller
Lino cutting tools
Bench Hook
Paper
Block Printing Ink
Print Press

7. Can you describe 3 types of printmaking techniques? | Red | Amber | Green

Develop ideas through investigations, demonstrating critical understanding of sources (AO1):

I will learn how to confidently develop…

- and broaden my knowledge and understanding of printmaking



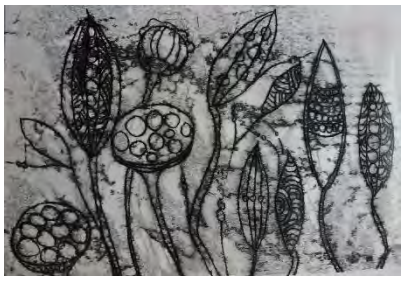
8. What does it mean to realise intentions in Printmaking? | Red | Amber | Green

Refine work by exploring ideas, selecting and experimenting with media, materials, techniques and processes (AO2):

I will learn how to confidently refine…

- using images and information to create ideas for printmaking
- through experimenting with a range of printmaking techniques e.g. Relief, Mono and Collagraph.
- by selecting ideas to adapt and improve into a final idea

Collagraph/Reflief



Mono

Intaglio

Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language (AO4):

I will learn how to confidently realise intentions…

- using print techniques and processes.

9. Why do we need to evaluate our print work? | Red | Amber | Green

Record ideas, observations and insights relevant to intentions as their work progresses (AO3):

I will learn how to confidently evaluate…

- *analysing and reflecting on the development of my own work*
- *making connections between my own artists' work*
- *suggesting ways I could I improve*

EVALUATING ARTISTS' WORK

1. Describe the piece of art you are looking at
2. What is the name of the artist or type of art?
3. What art movement or culture does the art link to?
4. Research and list 5 or more things about the artist or culture?
5. What important things have happened in the country that the art comes from?
6. What has influenced the art E.g. other artists, people, personal experiences, society, culture, politics, gender, colour, pattern, movement, religion, travel, places, objects etc.
7. Describe the materials used to make the art
8. How has the art been produced?
9. What is being communicated through the art?
10. Which of these words best describes the mood of the picture? EMOTIONAL/POWERFUL/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/ INTENSE/SCARY can you think of any other words?
11. What do you like or dislike about the picture? Explain your reasons…

Think!

See?

Know?

Think?

ANNOTATING YOUR OWN WORK

- In this artwork I was trying to…
- The artist/culture that has influenced my work is…
- The source I have used is…
- I found the source I used at…
- In this artwork I used the technique of...
- The media I have used is...
- I like/dislike this piece because...
- My idea links to the theme because…
- I can improve this piece by…
- I could develop this work further by...

Think!

What?

How?

Why?

END OF PROJECT EVALUATION

1. Describe each stage of the project from start to finish
2. What media did you use to produce your work? E.g. Paint/Pencil/Clay etc.
3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
4. Which artist's culture have you looked at?
5. Write down 2 or more similarities between your work and the artist's work.
6. Which piece of your work best shows the Artist's style or the influence of another culture and why?
7. Describe some of your own ideas…
8. Have you used a primary or a secondary source?

9. Have you included the secondary source in your work? Where did you find it?
10. Imagine your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
11. Explain any other influences on your work e.g. personalities *(including your own)*, places, memories, objects, politics, events, activities, religion, fact, fiction etc.
12. Describe how your work links to the project theme?
13. Explain what you have done well…
14. Explain how you could improve…
15. What would you do differently, if you were to repeat any part of this project?

Task Description	**Done ?**
Homework- tasks linked to 'Drawing and Printmaking' (2 hours per cycle)	
<u>How do artists use printmaking?</u> Below are two very different prints by two different artists, it is easy to spot the differences but if you study the images carefully you will also notice some similarities as well. Complete the following tasks: • Describe 3 or more differences • Describe as many similarities as you can • Do a drawing of the one you like best • As an extension research the artists and create a presentation about them  Kathee Kollwitz  Paul Catherall	
<u>Why is drawing important for printmaking?</u> Drawing allows us to show our thinking and planning, before committing to a final decision; in much the same way as you have to show your working outs for a maths solution: Draw a set of four drawings that could express happiness without using a smiling face: then refine the drawing that best expresses happiness.	
<u>Can you describe a situation where positive and negative space could be used?</u>	

Signs and symbols often rely on the brain to understand negative space to fully understand the whole image. Design your own set of symbols that use negative space imaginatively…

Things you could use to inspire this:

- Your initials
- Parts of the body
- Your surrounding
- Indoor and outdoor signs
- Objects

<u>What does the term relief mean in printmaking?</u>

Comprehension exercise:

Read the following text then fill in the blanks below:

READ ME…

A relief print is a printmaking technique that allows a design to be repeated multiple times. Here's how it works:

- A design is created on a surface called a **printing plate.**
- The printing plate can be made from materials like wood, linoleum, or rubber.
- Ink is applied to the raised parts of the design on the plate.
- The plate is then rolled or painted with ink and pressed onto paper or fabric.
- The ink transfers to the paper, creating a mirror image of what's on the plate.

Common relief printing techniques include **Woodcut, Lino cut, Letterpress** and **Rubber and Metal Stamping.** It's a versatile method that has been used for centuries!

Did you know? Relief printing dates back over 2000 years, with woodblock printing being used in ancient Egypt and China!

COMPLETE ME…

A ……. ……. is a printmaking technique that allows a design to be repeated …….. times. Here's how it works:

- A …….. is created on a surface called a **printing plate.**
- The printing plate can be made from materials like wood, …….., or rubber.
- …….. is applied to the …….. parts of the design on the plate.
- The plate is then ……. or painted with ink and …… onto ……..or fabric.
- The ink transfers to the paper, creating a …… ……... of what's on the plate.

Common relief printing techniques include **Woodcut, ……., letterpress** and **rubber and metal stamping.** It's a versatile method that has been used for centuries!

Did you know? Relief printing dates back over …… years, with …….. printing being used in ancient Egypt and China!

WORD BANK: Print, Multiple, Printing, Linoleum, Relief, Raised, Rolled, Pressed, Paper, Transfers, Image, Lino cut, Woodblock, Mirror Image, Relief, Design, 2000, Ink.

<u>Can you demonstrate understanding of the reduction printing process?</u>

Printmakers Breaking the Mold: Dave Lefner - YouTube

- Watch the video and then list 3 things you have learned about the Reduction Printing Process:

…….

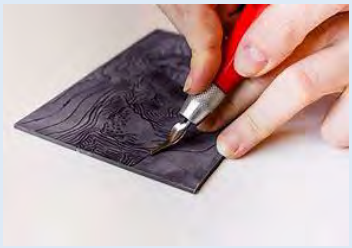
…….

…….

- Now do a drawing of one of these images by Dave Lefner
- Then evaluate the picture using the 'See Know Think' Evaluation

<u>Can you list the materials and equipment needed to make a lino print?</u>

Label the images of the tools below: giving a brief explanations on how to use them correctly.



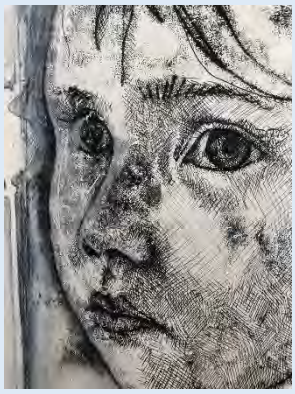
Lino
Ink Roller
Lino cutting tools
Bench Hook
Paper
Block Printing Ink
Print Press

<u>Can you describe 3 types of printmaking techniques?</u>

Pick your favourite print, explain how it was made and then draw it…

(See definition of printmaking techniques at the end of the KO)

Lino Print



Mono Print

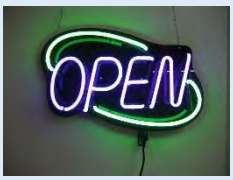
Collagraph Print

My Favourite Print is the…… and it was made by……
……

<u>What does it mean to realise intentions in printmaking?</u>

- Go back to the examples of Dave Lefner's lino prints and design 3 rough ideas for a print inspired buy his work.
- Complete one best design

Inspirational pictures only (you could also use your own initials and personal items):



<u>Why do we need to evaluate our print work?</u>

It is important to reflect on the creative processes we explore considering what, how and why we have completed the work. Evaluating your work will help you see what has gone well, what could be better and where you could take the idea next.

- Evaluate your work using What, How and Why…

Watch the videos below and complete the following Quiz:

<u>German Expressionist Art Quiz</u>

1. When did the term German Expressionism become commonly used?

   ……..

2. Which very famous artists (who lost his ear) was said to have influenced the German Expressionists?

   ……..

3. What was emphasised above all else in their artwork?

   ……..

4. Where did these artists emerge from?

   ……..

5. What does Die Brucke mean?

   ……..

6. What does Die Blaue Reiter mean?

   ……..

7. When did New Objectivity begin, before or after WWI?

   ……..

8. What did the Nazi's label Modern Art as?

   ……..

9. What happened to Ernst Ludwig Kirchner after the German Expressionists were exiled?

   ……..

10. What did German Expressionism evolve into later in the 1970s?

https://www.youtube.com/watch?v=v3sec7eG0wk

https://www.youtube.com/watch?v=MLhDLL3MjSs

Printmaking Techniques Explained

Reduction

Reduction printmaking is the process of **creating a multilayered or coloured print using only one block or piece of lino**. a reduction print is made up by gradually carving away more lino after each layer is printed. the process of carving away and printing is repeated on the same block until the final print is built up.

Mono
Monoprinting is a **one-off fine art printing technique** that uses a sheet of glass or Perspex to transfer a unique design onto a sheet of paper. No two monoprints are alike, and the design created can only be used once (‘mono’ = single).

Collagraph
A collagraphis a **unique printmaking technique that uses textured materials to create a printing plate**. This plate is then inked and used to produce beautiful prints with a rich variety of textures and depths.

Intaglio
Intaglio printing is a form of printing that involves **carving an image on a metal plate**, which is then covered in ink and transferred to paper. The marked line holds the ink and creates the image. The name intaglio derives from the Italian intagliare, meaning "to carve" or "to engrave", a reference to cutting the image into the metal plate.

Knowledge Organiser

Additional Subjects

Drama

Year 9

Term 1

2024/25

The Abbey School

Drama Year 9 Term 1
Understanding Drama and Theatre Roles

Term Focus

You will learn how to:

- Build upon your understanding of performance skills both through theoretical and practical explorations.
- Develop your understanding of theatre roles both practically and theoretically and how this links to Unit 3 of your examination.
- Create and perform your own performances whilst collaborating with others developing your teamwork, communication and problem-solving skills.
- Evaluate your own work in addition to the work of your peers.

Prior Learning Links

- Key Stage 3 lessons will have encouraged pupils to develop a basic understanding of performance skills and drama techniques creating a foundation of practical knowledge which can be built upon at Key Stage 4.
- Understanding of the following:
  - History of Theatre – Greek / Melodrama
  - Theatre Roles
  - How to approach a script – performing scripted and devised
  - Interpreting a script – analysis of a performance including all constituent features

Future Learning Links

- Key skills will continue to be developed in preparation for Unit 1 and Unit 2.
- Pupils' command of vocabulary is the key to their learning and progress across the whole curriculum.
- Promotes confidence and resilience across the wider school.

KEY VOCABULARY: PERFORMANCE SKILLS

Performance Skills are used by an Actor to convey a character.

Planned Movement	Physical actions that are organised prior to the performance and then rehearsed.
Positioning	Arranging an actor in a place/way. Where the actor is facing.
Posture	How the body is held.
Body Language	Movements with the body, that communicate feeling.
Eye Contact	Where the actor is looking.
Discipline	The ability to maintain commitment in conveying a character on stage.
Space	How the environment is used.
Levels	How high or low an actor is positioned on stage.
Vocal Skills	How the voice is used to communicate emotion and character.
Gestures	Using your hands to further express meaning or emotion.
Facial Expressions	Showing mood through the movement of your face.

KEY VOCABULARY: DRAMA TECHNIQUES

Drama Techniques are used in an abstract performance, to present an idea in an alternative way.

Thought Tracking	A character telling the audience their thoughts and feelings about the situation on stage. All other actors remain in a still image. The Actor breaks down the fourth wall of Actors and audience.
Still Image	. A frozen moment in a scene.
Monologue	A speech spoken by one character.
Choral Speaking	A group of actors speaking at the same time.
Slow Motion	Changing the pace of movement/speech in order to emphasis that specific moment. The speed to complete the action takes longer.
Flashback	A scene from the past
Cross Cutting	Mixing up the order of scenes, so the order is no longer chronological.
Narration	A spoken commentary for the audience about what is happening on stage.
Organic Sound	Sounds created by the Actors (not recorded).
Synchronisation	Actors moving at the same time.
Canon	Performing the same action one after another.
Multi-role	One actor taking on more than one role in a performance.
Hot Seating	Questioning an Actor and the Actor responds as the character they are playing. This is a key rehearsal technique.
Physical Theatre	Using your body to communicate an idea.
Mime	Performing actions without talking and without the aid of props.
Mirroring	2 Actors facing one another and moving at the same time as if they were a reflection of each other.
Split – Role	Multiple Actors playing the same role.
Flash Forward	A scene from the future.
Tableau	The bigger picture. A larger scale still image which captures the whole scene or story.
Repetition	Performing an action/word/sound again
Marking the Moment	When a moment in a scene is emphasised. A moment in a scene can be emphasised by one of the drama techniques listed such as slow motion.

1. What is the role of the Performer?	Red	Amber	Green

A performer might be an actor, singer or dancer whose job it is to perform within a production. They will usually audition in front of the director and a casting director to get their part. They begin their work in the rehearsal room with the director before performing on stage in front of an audience. They must ensure that they maintain a high-quality performance each night during the run of the show.

A performer must have good characterisation. Characterisation refers to the act of changing voice, body language, movement, gesture etc when in role is called characterisation. All people are different. The actor must use their skills to portray a character consistently throughout their performance.

A character is a person, animal, or figure in creative writing, like a story or a play.
Every play, theatre performance and production will include a character. It is important when performing a character that you make the audience believe you are that person. You need to walk, talk and act like the character you are playing so that your performance is believable.

When performing a character there are a variety of skills you will need to use to allow the audience to understand you are playing the role of someone else and not you.

These skills are known as performance skills.

These are the most important skills you are going to learn and you will be required to use these skills every lesson!
Physical performance skills are the things we do to use our **body** however **vocal skills** are the performance skills we use to specifically change our **voice.**

2. What is the role of the Director?

Red | Amber | Green

A **Director** is responsible for the overall creative vision of the show. They have to bring the different elements of the production together to produce a cohesive final production, having meetings with the design team at various stages during a production. They will also direct the performers and help them to develop their characters in **rehearsals** ahead of the final performance.

Usually, a director wishes to fulfil the playwright's original aims for the script, following their intentions for genre, form and style. However, some scripts can have more abstract or flexible forms, enabling the director to make choices about the style for their own interpretation.

A Director MUST:

- **Have good communication skills**
- **Show excellent leadership**
- **Be able to problem solve efficiently**
- **Have a clear vision**
- **Be able to demonstrate superb teamwork**

3. What is the role of a Costume Designer?

Red | Amber | Green

Costume refers to what the performers are wearing. It is an important aspect of a production, as it helps to establish a character and convey the context of the play. The role of the costume designer is to decide what the characters are wearing on stage, this also includes whether the characters are required to change during a performance.

As well as helping the audience to understand information about the character and the performance as a whole, performers can find it easier to 'become' their character once they try their costume on.

Costumes can:

- provide the audience with basic information about a character, such as their age, gender, occupation and economic and social background
- reveal lots of information about a character's personality, eg a vain character might wear a flamboyant outfit to draw attention to themselves, while a shy character might wear plain clothes in dull colours
- reveal information about a character's circumstances within the play eg a character might begin the play wearing smart clothes but by the end of the play their costume might look creased and untidy to help communicate their journey and what they have experienced.

When designing a costume, it is essential a range of elements are considered.

This includes:

- **Colour**
- **Material**
- **Accessorises**
- **Length**
- **Style**
- **Footwear**
- **Garment**

- **Hair and make up**

Contribution:
- Highlights role
- Shows profession
- Shows age
- Highlights gender
- Suggests personality
- Implies hobbies/interests
- Portrays social status

4. What is the role of the Set Designer?

Red | Amber | Green

The **Set Designer's** role is to design and plan how the set/objects are arranged on stage. They are also often involved in the creation of the set itself and can be involved in the process of seeking items for the performance. The set designers are responsible for the environment in which the performers act. The set designers are NOT in the performance.

The set helps show where and when the story of a play takes place, while also conveying meaning to the audience. The most essential aspect of set design is to show the audience where the **action takes place**, which might be as general as a country or as specific as a room within a house.

Set designers must consider the following elements:

Props:
- items in which this Actors use on stage to communicate the narrative further.

Stage Type:
- End On Stage
- Thrust Stage
- Traverse Stage
- Proscenium Arch Stage
- In the Round Stage

Set Design:
- Backdrops
- Scenery
- Items on stage which are set

Special Effects:
- Illusions created on stage

Lighting:
- Whilst lighting can be discussed when describing the set, lighting can also be it's own question

Contribution:
- Allows the Actor to be seen clearly
- Creates atmosphere
- Supports the narrative
- Aids Actor's role
- Highlights intention

5. What is the role of the Sound Designer?

Red | Amber | Green

A **Sound Designer** is in charge of operating any sounds/music which are required in a performance.

Sound can be used to do the following:

- **Support the style of a production**

Like all of the design elements, sound and music will help to support the overall style of a production. For example, a play in a naturalistic style would use realistic sound effects to create the impression of real life eg: the sound of the wind

- **Create mood and atmosphere**

Sound and music can be an effective way to create mood on stage. Music can be used to heighten the mood of a scene, eg: the use of sad strings to underscore an emotional monologue. Music can also be contrasted to the action on stage for dramatic effect.

There a variety of ways in which sound can be incorporated into a performance.

- **Organic Sounds** – this refers to sound which is made by the Actors themselves eg: the ticking of a clock
- **Sound Effects** – sound effects are sounds that are artificially made eg: played from a computer
- **Music** – Music can also be used in the form of songs with lyrics and instrumental arrangements

A soundscape refers to when a variety of organic sounds are layered to create an atmosphere therefore painting a sound picture of the environment.

The following must also be considered when creating an atmosphere.

- **Speed of the sound**
- **Volume of the sound**

Examples include; the jungle, the seaside, a busy city, a haunted house

6. What is the role of the Lighting Designer?	Red	Amber	Green

When discussing set design, the **lighting** also needs to be considered in addition to the environment of the performance. Lighting may also come up as a separate question to physical setting.

Lighting can be used to create atmosphere on stage. The following aspects must be considered when designing the lighting state:

- **Colour**
- **Type of lighting**
- **Position/Direction of lighting**
- **Intensity**

Contribution:

- Highlight the Actors on stage
- Restrict the space
- Create location
- Create mood/atmosphere
- Suggest time of day

HOME LEARNING TASKS	
Task Description	Done?
Use 'Look, Cover, Write, Check' to learn the Key Vocabulary	
What are the different theatre roles in Drama and what does each role entail?	
Your theme is a haunted house. Describe the lighting – refer to each category – type, position, intensity and colour Explain why you have made the choices you have. What does it show about a haunted house?	

Your theme is a hospital. Describe a suitable costume for a character – refer to each category – garment, colour, style, length, material, footwear, hair/make up and accessorises Explain why you have made the choices you have. What does it show about their role?	
Your theme is a nightmare. Describe the sound – refer to each category – include an example of an organic sound, a sound effect, music and a soundscape. Comment on the speed and volume of the sounds. Explain why you have made the choices you have. What does it show about what is happening in the nightmare?	
Your theme is inside a person's home. Describe the set design – refer to each category – props, stage type, set design, special effects. Remember you will not be able to show every part of the house, be specific. Explain why you have made the choices you have. What does it show about a specific place inside the home?	

Knowledge Organiser

Additional Subjects

Dance

Year 9

Term 1

2024/25

The Abbey School

Dance Year 9 Term 1
Dance – Skills for Performance and Safe Practice

Term Focus

You will learn how to:

- Develop basic dance skills which link to the 5 basic body actions.
- Perform to peers using knowledge developed of physical and expressive skills
- Evaluate your own work and the work of others using correct terminology.
- Develop the link between the knowledge developed through practical exploration and how this applied to exam style questions from a theoretical standpoint.

Prior Learning Links

- Students knowledge and practical understanding of dance will be varying. This will be the first term of students being able to take Dance as a subject.

Future Learning Links

- Key vocabulary underpins all performance elements of the course. This will lead into Term 2. Students will be expected to build upon these skills theoretically and practically.
- Safe practice is an integral part of all practical lessons. This will feed into all lessons of KS4.

KEY VOCABULARY: PHYSICAL SKILLS

Physical Skills enable a dancer to physically complete the action therefore giving an effective performance.

TOP TIP: We use BASIC SPEC FM to help us remember these skills.

Balance	A steady or held position achieved by an even distribution of weight.
Alignment	The correct placement of body parts in relation to each other.
Stamina	The ability to maintain energy over a period of time.
Isolation	An independent movement of part of the body.
Control	The ability to stop and start movement, change direction and hold shape efficiently.
Strength	Muscular Power.
Posture	The way the body is held.
Extension	The lengthening of muscles or limbs.
Coordination	The ability to move 2 or more body parts at the same time efficiently.
Flexibility	The range of movement at a joint.
Mobility	The ability to move fluently from movement to movement.

KEY VOCABULARY: EXPRESSIVE SKILLS

Expressive Skills are aspects that contribute to performance artistry and that engage the audience.

TOP TIP: We use FAT FROGS POUNCE MASSIVELY SIDEWAYS SOUTH to help us remember these skills.
FFPMSS

Facial Expressions	The use of the face to show mood, character or feeling.
Focus	The use of the eyes to enhance performance or interpretative qualities.
Projection	The energy the dancer uses to connect with and draw the audience in.
Musicality	The ability to make the unique qualities of the accompaniment evident in performance.
Sensitivity to Other Dancers	Awareness of and connection to other dancers. EG: Timing.
Spatial Awareness	Consciousness of the surrounding space and its effective use .

1. **What is Dance?**	Red	Amber	Green

What is Dance?

Dance, the movement of the body in a rhythmic way, usually to music and within a given space, for the purpose of expressing an idea or emotion, releasing energy, or simply taking delight in the movement itself.

Whether you decide to go into a career which links to Dance, that is up to you however Dance as subject is an opportunity for you to develop key skills you can transfer to any career you wish to have.

Transferrable Skills

- Teamwork
- Creativity
- Problem Solving
- Leadership
- Confidence
- Resilience
- Communication
- Creativity
- Independence

Potential Careers in Dance

- Choreographer
- Community Dance Practitioner
- Costume/Set Designer
- Dance Performer
- Dance/Arts/Culture Officer
- Dance Company
- Education Specialist
- Dance Film Maker
- Dance Movement Therapist
- Dance Journalist
- Dance Lecturer or Academic Researcher
- Dance Photographer
- Dance Project Coordinator
- Administrator Dance
- Producer Dance Science
- Dance Teacher in schools
- Dance Teacher in the community
- Lighting Designer/Technical Production

- Management Specialist
- Notation/Choreology Pilates Instructor
- Press and Public Relations Specialist
- Yoga Instructor
- Youth Worker
- Therapist – Dance
- Primary School Teacher in charge of Dance on the curriculum

These are some of the careers which are dance related however that doesn't mean you have to dance as a career. Taking Dance as a GCSE option is valued by all career choices.

1. What are the expectations for the course? Red Amber Green

Expectations for Dance Theory:

- Entry and exit procedures just like any other lesson. Planners, pencil cases and knowledge organisers out at the start of the lesson. Ensure you have turned to the dance page.
- You will be expected to take your booklets home, please ensure you bring them to every lesson.
- Homework is expected to be completed and handed in on time.

Expectations for Dance Practical:

- You will all be expected to purchase a GCSE Dance t – shirt. T – Shirts are customised. No other top is accepted.
- Black sports leggings or plain leggings – NO LOGOS
- Abbey Dance sweatshirt is optional but no other hoodies are accepted.
- Bare feet
- Hair tied back
- No jewellery
- Everyone will be required to perform to the class.
- You will work with different people in the group.
- You will have practical homework at times to complete.
- You will be expected to come to rehearsals in your own time.
- You will line up outside for entry procedure – 4 minutes to change.

Attitude:

- Give everything a go
- Be kind to yourselves – you will not understand everything straight away! Be patient and keep practicing, some things will be difficult and take time to learn.
- Practice and time is key! Try and try again, you will get there!

2. What are the five basic body actions? Red Amber Green

Movement is identified through 5 different categories. Any action a dancer can perform will fall into at least one category. Some movements can fall into more than one.

Jump
A movement in the air
EG: full twist jump, tuck jump, pencil jump, leap, hop

Turn
A movement that changes direction
EG: full twist jump, pirouette, half turn, elevated turn

Travel
Moving from one place/position to another
EG: fan roll, slide, shift, backward roll, gallop, elevated turn, run.

Stillness
An action that requires no weight.
EG: head roll, elbow jolt, arm reach, leg kick

Gesture
A fixed position which does not move
EG: standing, crouching, arabesque, holding a lunge position, kneeling.

The basic body actions can be used to create a motif. A motif is a sequence of movements in a dance.

In your practical lessons you will focus on developing your knowledge of the 5 basic body actions. You will be taught phrases to perform which will require a level of performance. Physical skills and expressive skills will be used to contribute to your ability to perform (See Vocabulary List). You will also learn about safe practice which is also a key part of a dancer's journey.

3. What is safe practice?	Red	Amber	Green

Safe working practice refers to personal care, respect for others, safe execution and preparation and recovery from dancing. When dancing, it is essential safe practice is the first priority before any performance.

When referring to safe practice, you must discuss the following:

- **Attire**
- **Environment**
- **Warm Up**
- **Cool Down**
- **Hydration**
- **Nutrition**
- **Technical Accuracy**

When all items which have been listed have been considered, then a dancer can focus on their performance.

4. What is the correct attire for a dancer?	Red	Amber	Green

Dance Attire:

- Tightly fitted clothing
- Bare feet or appropriate footwear depending on the style EG: ballet shoes
- Hair up
- Absence of jewellery

Why do we wear dance attire?

- Correct dance attire enables the teacher to see the dancers' positions and movement in order to give necessary corrections for the benefit of the dancer's education
- It establishes professionalism in the studio
- It is safer for your dancer as sometimes improper attire can become a slipping hazard EG: jeans dragging on the floor
- It ensures that their clothing will not be a distraction to themselves or others in class
- Appropriate wear means dancers don't need to worry about their midriff showing when dancing or lifting their arms
- Dancers are able to move more freely

5. What is an appropriate environment for a dancer?	Red	Amber	Green

Environment:

- No spillages

- Sprung flooring
- No obstacles
- Clear, big area
- Correct temperature / Good ventilation
- Mirrors

Why is an appropriate environment needed?

- To prevent injury as obstacles in the way could cause harm when dancing.
- To ensure the dancers have enough space to move

6. What does a warm up consist of?

Red | Amber | Green

Key elements of a warm up:

- Joint mobilizing movements – warm up the joints
- Cardiovascular actions – raise heart rate
- Stretches – to prepare muscles

An effective warm up will:

- Prepare dancers both mentally and physically
- Improve performance and reduce prevalence of injuries
- Increase coordination and proprioception
- Increase heart rate and blood circulation gradually
- Increase body temperature
- Permits freer movement of the joints
- Improves the effective muscles actions
- Reduce the risk of injury
- Improves the transmission of nerve impulses
- Should mobilise all the joints that are to be used during the dance class/performance.

7. What does a cool down consist of?

Red | Amber | Green

The cool down is just as important as the warm up. A cool down must include activity that lowers the heart rate and temperature of the dancer.

- If the activity stops suddenly dizziness can occur.
- Dancing increases adrenaline and endorphins (hormones) in circulations which can lead to restlessness and sleep.
- Increase in waste products such as Lactic Acid can cause stiffness and soreness as well as cramps and muscle spasms.
- By gradually slowing your movements the breathing rate will decrease and reverse the warm up process.
- Extra soreness may occur due to the intensity of the exercise or unfamiliar movements performed.
- Stretching should also be part of the cool down process. If you are still sore the following day, doing some light/ gentle exercise and stretching may help.

An effective cool down will:

- prevent build-up of lactic acid
- prevent muscle soreness
- mental preparation for the next class
- helps heart rate return to normal
- helps breathing return to normal
- helps avoid dizziness
- blood pooling in veins
- reduce core temperature

8. What does a dancer's diet look like?

Red | Amber | Green

Nowadays dancers need to be athletic, quick, strong and fit, with traditional gender roles being blurred as men and women are often expected to do the same movements and have the same range of fitness, strength and agility. As dancers demand more from their bodies, they need to be especially careful about how they nourish themselves.

- Key physical requirements dancers need to maintain are:
- high energy levels
- strong bones/muscles
- flexible joints
- efficient heart and lungs.

Key Food Groups:

- Carbohydrates
- Protein
- Fats
- Fibre
- Vitamins and Minerals

Carbohydrates are the best source of fuel for exercise and supplies most of our body's energy. A dancer's diet should be derived mostly from slow energy releasing 'complex carbohydrates'. These include wholemeal and wholegrain breads, brown rice, wholemeal pasta, wholegrain breakfast cereals, starchy vegetables (for example potatoes), beans, or pulses.

Protein builds strong muscles and organs, and our bodies use protein to grow and repair tissues, transport nutrients, and to produce enzymes and hormones. Strong muscles are of course vitally important to dancers, and they need to incorporate proteins into their daily diet.

Fats provide more than twice the amount of energy as carbohydrate, but are stored in the body as fatty tissue and are not a readily available energy source. Dancers should be wary of eating too many high fat foods, as these will not give them the energy they need. However a little fat, especially essential fatty acids, are needed to carry vitamins around the body, protect essential organs, and lubricate joints. Fats are also essential for the brain and nervous tissue.

Fibre will help to keep things moving through the digestive system. Soluble fibre is found in oats and pulses, as well as all the fruits and vegetables we've been talking about. Insoluble fibre, which helps alleviate constipation and bowel upsets, is also very important and is found in bran and other wholegrain cereals.

Vitamins are required to maintain health and help prevent disease. We can get all the vitamins and minerals we need from the food we eat, and it is far more beneficial to absorb them in this way. Foods which are generally particularly good for providing a range of vitamins and minerals are fresh fruit and vegetables (especially when eaten raw or lightly cooked), wholegrains, nuts, seeds, dairy products, seafood and organ meats (for example, liver or kidneys).

- Vitamin A comes from milk and dairy foods, and is needed for growth, development and eyesight.
- 'B' vitamins come from starchy carbohydrates, meat and dairy products and help the body release and use energy
- Vitamin C comes from fresh fruit and vegetables, and is needed for healthy skin and body tissue. It also helps the body absorb iron.
- Vitamin D comes from oily fish, butter and margarine and is needed for healthy bones.
- Minerals provide the frame of the human body and are needed in small amounts. Amongst their many roles minerals are needed to maintain strong bones and transport oxygen.

Three **minerals** which are commonly deficient in the diet and important to dancers are:

- Calcium - Essential for strong bones. Female dancers in particular need to include sufficient levels to maintain healthy bones and teeth. Calcium from dairy products is easily absorbed by the intestine, making these excellent sources of calcium.

- Iron - Helps to prevent fatigue. Good sources of iron include liver, lean red meat, tuna and dark green vegetables.
- Zinc - Important in the immune system and for its role with enzyme activity (during the digestive process). Sources include meat, seafood, pulses and wholegrains.

9. What is hydration?	Red	Amber	Green

The body requires **water** in order to keep **hydrated**.

Water is necessary for the metabolic process (converting food into energy) and it transports glucose to the muscles through the bloodstream. It also gets rid of the body's waste and toxins and is an essential means of transporting nutrients around the body.

If fluid is not replaced, the dancer will become dehydrated. Muscle cramps, electrolyte deficits and muscle fatigue may be associated with dehydration. Even a 2% fluid loss of total body weight reduces the dancer's ability to regulate heat loss and cope with the physical demands of dance. Greater levels of dehydration affect strength, ability to concentrate, and risk of injury. Severe dehydration is life threatening.

Dehydration reduces blood volume (leading to impaired performance) and decreases blood flow to the skin, as the exercising muscles take priority. This in turn causes a decreased rate of heat loss, a rising body temperature, and can result in sensations of physical and mental impairment such as overheating or dizziness.

Exam Question Example: Give two reasons why it is important for a dancer to stay hydrated during a rehearsal.

- helps prevent build-up of lactic acid
- helps to avoid cramp
- keeps muscles working at optimum
- helps to prevent potential dizziness

Do not provide answers such as 'to avoid dehydration' or similar mention of hydration without demonstration of understanding of the word.

10. What is technical accuracy?	Red	Amber	Green

Technical accuracy refers to the dancer's knowledge and understanding of how they can support themselves when dancing.

Dancers must:

- Have awareness of correct alignment - EG: knees over toes not knees bending inwards
- Have awareness of how to move in and out of the floor - EG: bending knees and using hands to safely lower to the floor instead of just falling to the floor and seeing what happens.
- Have an awareness of their own body – EG: turnout

HOME LEARNING TASKS

Task Description	Done?
Select a variety of examples of dance careers from the list and research what that particular job role entails.	
Use 'Look, Cover, Write, Check' to learn the Key Vocabulary	
Identify and define each physical skill. Provide an example of an action which requires that skill.	
Identify and define each physical skill. Provide an example of an action which requires that skill.	
Why should a dancer warm up and cool down?	
How has safe working practices contributed to your class work this term? Remember to include specific examples and explain how these examples have contributed to your work.	

Knowledge Organiser

Additional Subjects

Music

Year 9

Term 1

2024/25

The Abbey School

Music Year 9 Term 1
Popular Music

Term Focus

You will learn how to:

- develop your knowledge and understanding of music through performing
- perform a piece of popular music
- develop an understanding of popular music
- listen to and identify feature of popular music

Prior Learning Links

- Year 7 Term 3&4 Keyboard Skills – students will have explored some four chord popular songs
- Year 8 Term 1&2 Ukulele Skills – students have learnt basic chords on the ukulele and performed popular songs
- Year 8 Term 5&6 – students have explored popular music structures and features and explored writing popular songs

Future Learning Links

- Component 1 – all students will perform two pieces of music, at least one must be as part of an ensemble
- Component 3 – students will be assessed through a written/listening examination that will assess their knowledge of AoS4: Popular Music

KEY VOCABULARY

KEY WORDS	KEY SUBJECT TERMINOLOGY
Solo: a song or piece of music performed by a single performer. This can be accompanied or unaccompanied	**Musical elements:** the building blocks of music that include dynamics, tempo, texture, timbre and pitch
Dynamics: the volume that notes should be played/sung	**Popular music:** music that is popular at a given time and appeals to a wide audience
Tempo: the speed or pace of the music	**Music technology:** the incorporation of technology, such as computers and software, to perform and create music. It could include DJ-ing and sequencing
Texture: how melody, harmony and rhythm are combined in music to create layers of sound	**Musical arrangement:** altering or adapting an existing piece of music through changing musical elements, structure or the instruments used
Timbre: the type of sound produced by an instrument or a voice	**Musical ensemble:** a group of people who perform instrumental or vocal music together
Pitch: how high or low a note sounds	**Musical accompaniment:** the music that plays in the background to support a melody
Structure: the order the different sections of a song or piece of music are played in (e.g. verse/chorus/intro)	**Technical control:** the ability to perform with secure instrumental/vocal technique, control of tuning and tone and projection
Harmony: more than one note/pitch is played or sung at the same time	**Musical expression:** a performance that shows good communication of the feeling of the piece of music and effective balance between performers
Unison: one sound. Two or more people play/sing the same pitch	**Stylistic awareness:** successfully include stylistic features relevant to the genre of music in a performance
Riff: a catchy, repetitive melody in pop music	**Pace and fluency:** a musical performance that is accurate and at an appropriate tempo

1. What are some common pop music structures?	Red	Amber	Green

Verse-Chorus Structure

Pop songs often start with an intro that uses the best bit from the song to grab the listeners' attention. Many pop songs contain the following sections:

- **Intro**: The opening section that sets the stage for the rest of the piece.
- **Verse**: A section where the melody may remain the same but the lyrics change with each repetition.
- **Chorus**: A recurring section that usually contains the main theme and is often more memorable.
- **Bridge**: A contrasting section that connects different parts of the song, providing variety and a break from the repetitive sections.
- **Outro**: The concluding section that wraps up the piece.

A lot of pop songs follow this structure: intro - verse – chorus – verse – chorus – bridge – chorus - outro

Find more information here:

Strophic Form

In strophic form there is no chorus and the music for each verse remains the same (although the lyrics change). Examples include *The Times They Are A-Changin'* by Bob Dylan and *Blue Suede Shoes* by Carl Perkins.

32-Bar Song Form

These pop songs contain four 8-bar sections, Sections 1,2 and 4 have the same melody but section 3 has a contrasting melody. This creates an AABA structure. A famous example of a pop song with this structure is *Yesterday* by The Beatles.

2. What are some features of vocals in pop music?	Red	Amber	Green

Voices in pop songs are very important and you will need to know about the lead vocals (the lead singing usually sings the melody) and the backing vocals (backing singers usually sing the harmonies).

Some vocal features in pop music are:

a capella - singing with no instrumental accompaniment
vibrato – when singers voices wobble up and down slightly in pitch to make a warm sound
falsetto – when (usually) men make their voices go really high
portamento – sliding from one note to another
scat – improvising using made up words (e.g. 'doo' or 'dat')
riffing – when singers add decoration to the main tune
belting – singing notes at a louder volume than normal
rapping – lyrics are spoken or chanted to a rhythm
beatboxing – using the voice to make percussive sounds to sound like a drum kit

3. What instruments are commonly used in pop music?

Red | Amber | Green

Piano or keyboard is often used to play melodies or chords to fill out the harmony

Lead guitar – plays parts of the melody and solos

Rhythm guitar – fills in the harmony in songs, often by strumming chords

Bass guitar – plays low individual notes (not chords)

Drums – add the rhythm to the song. The drums set the tempo for the song and sometimes add fills, like solos, between sections of the music

4. What are synthesizers?

Red | Amber | Green

Synthesizers can look just like the keyboards we use in school, or a little more complex with additional functions. They are electronic instruments that can create the sound of virtually any instrument you want (e.g. flute or violin).

5. How can I develop my instrumental/vocal skills?

Red | Amber | Green

You may wish to begin by evaluating your skills from 1 (poor) to 5 (excellent) in the audit below:

Area	Skill	1	2	3	4	5
Techniques	• accuracy of pitch/intonation					
	• accuracy of rhythm and timing					
	• accuracy of expression and dynamics					
	• accuracy of phrasing					
	• range of notes (vocalists)					
	• breath control (vocalists)					
	• diction (vocalists)					
	• following an accompaniment					
	• learning new pieces					
	• projection					
	• musical interaction					
Interpretation	• accurate interpretation and reproduction of style					
	• awareness and communication with accompaniment in performance					
	• physical expression – body language, facial expressions					
	• communication with the audience in performance					
	• use of timing and rhythm for expression					
	• use of phrasing for expression					
	• use of dynamics for expression					
	• confidence					
	• stage presence					

Following your skills review, create some SMART targets to explain what you want to achieve with your performance skills:

S - Be **specific**. Describe and explain exactly what you want to achieve with your performance skills. Think about your technical vocabulary.
M - Make sure you can **measure** and track this target. How will you know that you are making progress?
A - Is this target **attainable** and realistic to achieve. Work towards something that is challenging but possible.
R - Is this a **relevant** target?
T - Check the **time frame** and set deadlines. Are you going to achieve this in the short or long term?

6. What does a successful practise session look like?	Red	Amber	Green

Create a rehearsal schedule, including SMART targets. See the example below:

Instrument Rehearsal Plan

Musician's Name:
Instrument:
Date Range of Plan:

1. Goals and Objectives

Overall Goal:
What is the primary aim of this rehearsal period? (e.g., preparing for a performance, improving technical skills, mastering a particular piece)

2. Rehearsal Schedule

Date	Time	Focus Area	SMART Target	Notes
MM/DD	HH:MM	*E.g., Warm-up, scales*	*E.g., S: Practice C major scale. M: Play without mistakes for 3 minutes. A: Already know basics. R: Important for piece. T: Within this session.*	*Any additional notes*
MM/DD	HH:MM	*E.g., Piece practice*	*E.g., S: Master measures 20-40. M: Play at 80 bpm accurately. A: Challenging but manageable. R: Crucial for performance. T: By the end of the week.*	*Any additional notes*
MM/DD	HH:MM	*E.g., Technical exercises*	*E.g., S: Improve finger dexterity. M: Perform exercise without errors 5 times consecutively. A: Exercises are familiar. R: Enhances overall playing.*	*Any additional notes*
MM/DD	HH:MM	*E.g., Technical exercises*	*E.g., S: Improve finger dexterity. M: Perform exercise without errors 5 times consecutively. A: Exercises are familiar. R: Enhances overall playing.*	*Any additional notes*
MM/DD	HH:MM	*E.g., Repertoire review*	*E.g., S: Polish entire piece. M: Play through without stopping 3 times. A: Already learned notes. R: Ready for concert. T: By next rehearsal.*	*Any additional notes*

3. Warm-up Routine

Duration:
Exercises:

1. **Breathing exercises:** *E.g., Deep breathing for 2 minutes*
2. **Scales and arpeggios:** *E.g., Major and minor scales for 5 minutes*
3. **Technical drills:** *E.g., Finger exercises for 5 minutes*

7. How can I work successfully with other musicians?	Red	Amber	Green

For your GCSE assessment, you will have to perform at least one piece of music as an ensemble. There must be between two and eight of you playing or singing, but your part cannot be doubled. You have to perform a significant part and your group cannot be conducted. You must think carefully about which musicians in the class will work well with you to create a balanced performance.

Here are some key strategies to help you and your ensemble succeed:

1. Clear Communication

- **Establish Roles:** Ensure everyone knows their role in the group, whether it's a lead player or accompanist
- **Regular Meetings:** Hold regular meetings to discuss goals, schedules, and any issues that arise.
- **Open Dialogue:** Foster an environment where members feel comfortable expressing ideas and concerns.

2. Set Clear Goals

- **Short-term Goals:** Set specific, achievable goals for each rehearsal, such as mastering a particular section of music.
- **Long-term Goals:** Have overarching objectives, such as preparing for a performance or recording a piece.

3. Effective Rehearsals

- **Structured Plan:** Have a clear rehearsal plan with allocated times for warm-ups, individual sections, and full run-throughs.
- **Punctuality:** Start and end rehearsals on time to show respect for everyone's schedule.
- **Focus on Problem Areas:** Identify and spend more time on challenging sections rather than just playing through the entire piece.

4. Develop Strong Musicianship

- **Individual Practice:** Ensure all members are practicing their parts individually outside of group rehearsals.
- **Technical Skills:** Work on improving individual technical skills and ensemble playing techniques, such as dynamics, timing, and articulation.

5. Regular Feedback

- **Constructive Criticism:** Give and receive feedback in a constructive and positive manner.
- **Self-Evaluation:** Encourage self-evaluation and group reflection after rehearsals and performances to identify areas for improvement.

6. Performance Preparation

- **Mock Performances:** Hold mock performances to simulate the conditions of the actual event and reduce performance anxiety.
- **Stage Presence:** Work on stage presence and audience interaction as part of your rehearsals.

8. How can I select appropriate repertoire for performance?	Red	Amber	Green

The standard of pieces selected for performance should be broadly equivalent to grade 3 of the graded music examinations.

One of the pieces performed must be linked to specific aspects of musical content within **one** of the four areas of study. All students are required to perform one ensemble piece and when this is linked to area of study 2, Music for Ensemble, the piece must be related to one of the specific genres or styles covered in this area of study.

Area of study 1: Musical Forms and Devices Area of study 2: Music for Ensemble
Area of study 3: Film Music
Area of study 4: Popular Music

In **all** performances, learners will be expected to display:

- technical control
- expression and appropriate interpretation
- accuracy of rhythm and pitch
- appropriate pace and fluency
- effective use of dynamics
- stylistic awareness
- empathy (in ensemble playing).

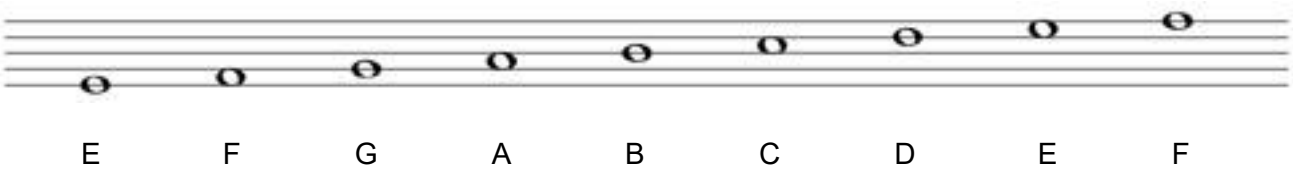
9. What is the musical staff and how do we write notes?	Red	Amber	Green

The musical staff (or stave) is a set of five horizontal lines and four spaces that represent different musical pitches. It is the foundation for writing and reading music, providing a framework where musical notes, rests, and other symbols are placed to indicate specific pitches, rhythms, and dynamics.

Example 1

As shown in Example 2, if we place pitches in the form of note heads on the staff, information about the relationship of the pitches with each other is produced.

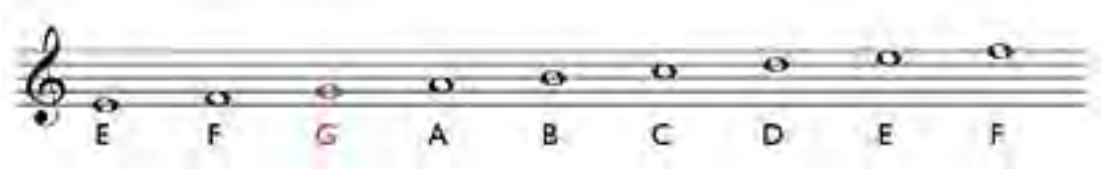
Example 2



10. What are clefs?

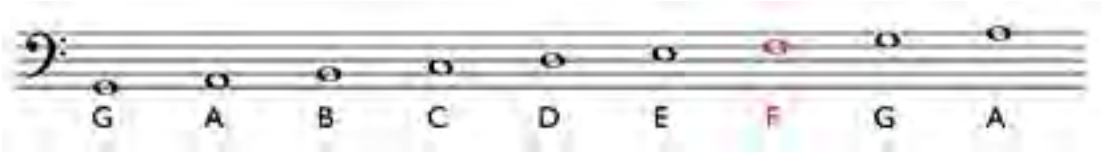
Red | Amber | Green

 Treble Clef (G Clef): Indicates that the second line from the bottom is the note G above middle C.



The notes on the lines (from bottom to top) in the treble clef are E, G, B, D, and F. A common mnemonic to remember this is "Every Good Boy Does Fine." The notes in the spaces are F, A, C, and E, remembered as "FACE."

 Bass Clef (F Clef): Indicates that the fourth line from the bottom is the note F below middle C.



The notes on the lines (from bottom to top) in the bass clef are G, B, D, F, and A. A mnemonic for this is "Good Boys Do Fine Always." The notes in the spaces are A, C, E, and G, remembered as "All Cows Eat Grass."

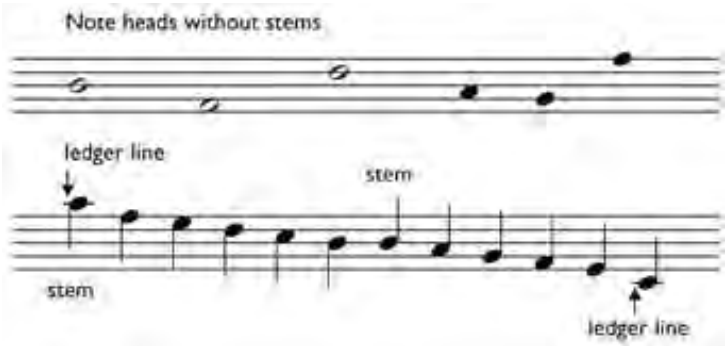
11. How do we write musical notes?

Red | Amber | Green

You should bear in mind the following guidelines when writing notes on paper.

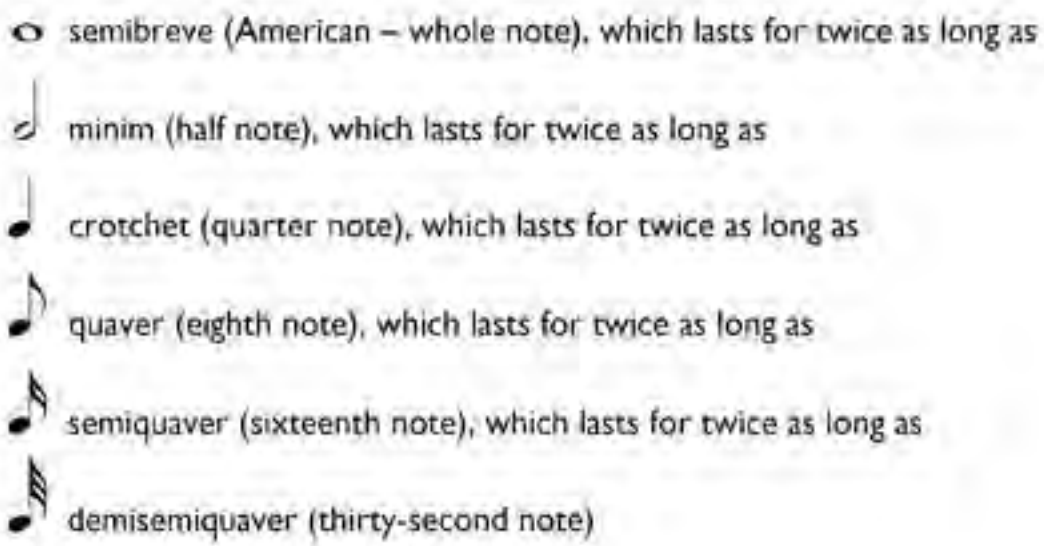
- **Note heads** are oval in shape (some open, some filled in) and should sit centrally on a line or in a space so that no confusion can arise as to the pitch notated.
- Most notes also need **stems**, and these should be vertical and should be roughly the same height as the height of the staff.
- In addition, note stems should go down on the left-hand side for note heads on the top two lines of the staff and in the top two spaces, and up on the right-hand side for note heads on the bottom two lines and in the bottom two spaces. Stems for note heads on the middle line can go up or down.
- Ledger lines should run parallel to the lines of the staff.

Example



12. How can we tell how long notes last for?	Red	Amber	Green

Some common note lengths:



HOME LEARNING TASKS

Task Description	Done ?
Complete music skills audit	
Create a rehearsal schedule with SMART targets	
Music theory – the musical staff	
Music theory – writing notes	
Music theory – identifying notes	
Music theory – note lengths	

Knowledge Organiser

Additional Subjects

Media

Year 9

Term 1

2024/25

The Abbey School

Media Year 9 Term 1 – Introduction to Media

Term Focus –

Prior Learning Links	Future Learning Links
• None Required	• Year 9 Term 3- Practical Skills

KEY VOCABULARY

KEY WORDS/ SUBJECT TERMINOLOGY

Convention – Something we would expect to see, for example a convention of an action film would be explosions. A product convention would be something we expect to see in a certain product, e.g. a film poster would usually have the title of the film
Typography- Another way of describing fonts
Publishing- Media products that are physical and can be printed, e.g. posters, magazines, leaflets etc
Demographic- A way to categorise audience based of factors like age, gender etc
Audience- The people who are the intended 'consumers' of media
Producer- The person/s responsible for creating and distributing media products
Purpose- The reason a media product has been created, usually to **persuade**, **inform** or **entertain** (PIE)
Genre- The category a media product belongs to, based on the conventions it has
Masthead- The title of a magazine on the front cover
Cover line- A snappy sentence on the front cover that teases a story inside the magazine
Image- The technical name for a picture
Graphic- The name you would use for a shape that is not a picture or text on a media product

1. What is a Media product convention?

Red Amber Green

Different media products have certain elements that we would expect to see in them

For example on the left you can see a magazine front cover.
At the top you can see the masthead.
There are a number of cover lines that tease stories inside the magazine
There is a large image that takes up the whole page

These are just three examples of product conventions of a magazine front cover

See what you can find when you next see a magazine cover

2. What is a graphic?

Red Amber Green

A graphic is a shape that is often used to enhance a picture or text

For example on the left you can see a number of graphics being used, such as the white hexagon in the centre, the gold colour used in the background and the blue one at the top.

When you create your own publishing products you should make your own graphics to go along with any text or images you use.

3. How can I use typography to appeal to an audience?

Red Amber Green

In Media we often use 1001fonts.com to find interesting fonts that you cannot get in other programmes.

You need to think carefully about who you are trying to appeal to and make choices about your fonts based on this. This includes colour as well.

Would this be suitable?

Would this be suitable?

Would this be suitable?

You need to consider the tone you want to bring to your product, the age of the people who it is aimed at, the primary gender and also how easy the font is to read as well.

4. What would we expect to see on a film poster? I.e. what are film poster conventions? Red Amber Green

When we look at film posters there are 7 (seven) conventions that are often used.

- **1- the title of the film**
- **2- A large main image, often of the main character though not always**
- **3- A tagline- a catchy slogan linked to the film to intrigue the audience**
- **4- The release date of the film**
- **5- The production credits (the tiny writing at the bottom)**
- **6- The names of the biggest stars (actors)**
- **7- Quotes/ratings from positive reviews**

It is worth noting that all of these are not always present.
How many can you see on the poster to the left?

You can use the list above as tick list of what to include when you make a film poster yourself

5. What conventions would you expect to see on DVD cover? Red Amber Green

DVD covers (and computer covers) share a lot of conventions with film posters. However there are some differences. Some of these include:

- **A blurb on the back that teases the story but does not give away anything crucial**
- **Thumbnail images from the film**
- **Technical specifications**
- **The age rating of the film**

When designing a DVD cover, it is essential that the front cover goes on the right, there is a small spine in the middle and the back cover is on the left. Can you work out why it is this way round?

6. What is a Media Sector? Red Amber Green

So far we have only really spoken about publishing media (posters and magazines) but media products actually fit into one of three media sectors, some examples are below:

Publishing	Broadcast	Interactive
Magazines- Vogue	Films	Computer games
Posters	TV shows –Britain's Got Talent	Websites -Youtube
Newspapers – The Sun	Music videos	Apps -Instagram
Brochures	Radio –Radio 1 Breakfast show	
leaflets	Podcasts	

Can you think of any specific examples like the ones in red above?

The people who make these products are the MEDIA PRODUCERS.

The people who read, use, watch, listen or play them are the MEDIA CONSUMERS

7. What is a media franchise? Red Amber Green

Sometimes media producers don't make up completely new ideas for their media products. Often they will used products that already exist but will create different versions of them, either on the same platform or a new platform.

If we take Marvel Comics as an easy example.

The comics have been around since 1939. However, it is not just to comic books where we see the marvel characters. There are many different media products that use these characters. For example:

- **Films like Spiderman or The Avengers**
- **TV shows like Loki and She Hulk**
- **Computer Games such as Marvel vs Capcom or The Punisher**

There are also non- media products such as costumes, stationary, action figures etc

8. Why Franchise? Red Amber Green

There a few reasons why media companies go into a franchise but main reason is MONEY!

Companies know that there is a readymade audience for their product so creating a new Marvel film is a lot less financially risky than coming up with something completely new and untested. However it there are positives and negatives of franchised media products, from both the producer and the audience's perspective:

	Producer	Audience
Positive	Less risk and readymade audience	Get to see more of their favourite characters and worlds
Negative	Original ideas maybe more difficult to get funding for and get produced	Might get a lack of choice in the products that are on offer

9. What is iconography? Red Amber Green

Certain images become very symbolic over time and take on meaning without having to be explained. In religions for example this can easily be seen with a cross.

This can also be seen in media products.

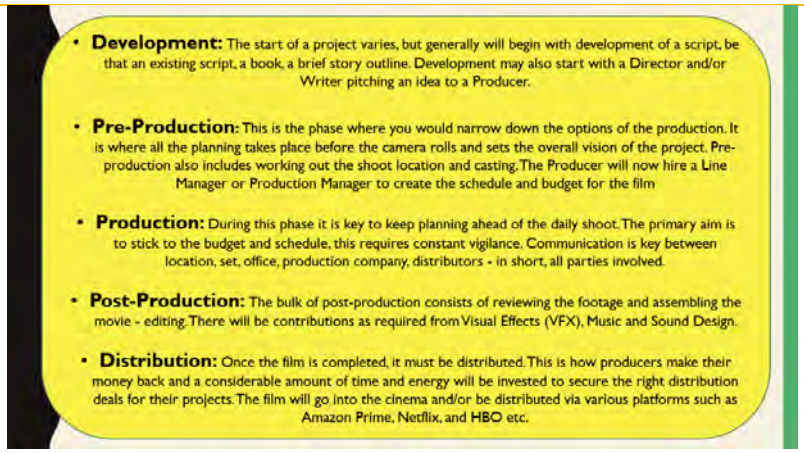
So symbols become so well know that they can be used to give meaning for the audience without the need for words.

Captain America's shield for example is so well know that it can be used with any explanation and an audience will recognise it and also some of the meaning it conveys, such as bravery, justice, America etc

Think of other film franchise like Harry Potter or James Bond, what iconography can you think of related to these?

10. What are the phases a media product goes through from start to finish? Red Amber Green

As I am sure you can work out, a media product does not just appear out of nowhere. There are a number of different stages it needs to go through. Let us have a look at the process a film would go through:



What do you think are some of the issues that a producer might encounter at each of these different stages?

The link below will help develop this further.

https://www.youtube.com/watch?v=GOQ7rZ4PNOo

11. How can you help make a film successful?	**Red**	**Amber**	**Green**

The final stage of the film making process is Distribution. This involves getting the message out there to an audience that this film exists and they should come and watch it.

There are a number of ways that you can do this, for example;

- **You can make a trailer**
- **You can make posters**
- **You can do online advertising**
- **You can create social media accounts**
- **You can have the stars of the film do press junkets and interviews**
- **You can have a film premier**

Are there any other ways you can think of that would help to promote a film?

Red **Amber** **Green**

HOME LEARNING TASKS	
Task Description	**Done?**
Read a magazine, have a look at the front cover to see what conventions you can see	
Keep a look out for a film poster, how many of the 7 conventions can you spot on it?	
Research a media franchise and see how many different products you can find related to it	
Design a film poster that contains all 7 conventions	

Knowledge Organiser

Additional Subjects

Business

Year 9

Term 1

2024/25

The Abbey School

Business Year 9 Term 1 – Enterprise

Term Focus – Setting up a Mini-Enterprise

Prior Learning Links

- Introductory topic

Future Learning Links

- Finance and Marketing

KEY VOCABULARY	
KEY WORDS	**KEY SUBJECT TERMINOLOGY**
Innovation, Products, Services, Entrepreneurs, Communication, Customers, Costings, Constraints, Leadership, Pitch, Coherence, Persuasive	Social aims, Financial aims, Non-financial aims, USP Competitors, Segmentation, Target market, Product, Service

1. Can you explain what makes a good entrepreneur? Red Amber Green

Enterprise involves an element of risk. Things may go wrong or not according to the plans of the entrepreneurs or company.

Initiative is about making the first move to get things done. It is also about developing creative solutions to problems and 'thinking outside of the box'

2. Can you identify resources needed to start up an enterprise? Red Amber Green

Human resources:

What job roles will be needed?

How many staff will be needed and at what hours?

Will additional staff be needed or can the work be managed by you?

Financial resources

Where will start-up finance come from?

How will day-to-day activities be paid for in the early days?

Physical resources

What equipment will be needed?

3. Can you identify the skills needed by a successful entrepreneur? Red Amber Green

Take risks, think ahead, have initiative, see the bigger picture, have market understanding, have a "yes" personality, drive and determination, decisiveness, networking skills, leadership and powers of persuasion, planning and learning from mistakes, have new ideas, have a unique take on old ideas

4. Can you explain why being innovative is important in business? Red Amber Green

Innovation can lead to - Better quality and improved product range

By definition, better quality products and services are more likely to meet customer needs. Assuming that they are effectively marketed, that should result in higher sales and profits A business with a single product or limited product range would almost certainly benefit from innovation.

5. Can you define 'social enterprise'? Red Amber Green

Street Soccer Scotland is a non-profit social enterprise that delivers a range of football-related services to socially disadvantaged adults and young people across Scotland.

Social Bite is a chain of retail stores and catering concessions in Scotland which employs a quarter of its workforce from a homeless background.

6. Can you explain why having a USP is so important? Red Amber Green

Unique features = unique selling point
Unique selling point = things that only your business offer

HOME LEARNING TASKS

Task Description	**Done?**
Find definitions of the following words; Entrepreneur, Enterprises, Enterprise, Risk, Goods and Services	
Using the Cadbury example, or another advert which you are familiar with, explain why it was successful. 1. Briefly explain the campaign/advert and then.. 2. Remember the purposes of promotion in you answer: inform consumers of a new product or service persuade consumers to buy a product or service remind consumers about the benefits of a product or service to build and maintain your brand	
Research the USP of three chosen businesses. Explain what product/service features are the most important?	

Knowledge Organiser

Additional Subjects

French

Year 9

Term 1

2024/25

The Abbey School

French Year 9 Term 1 – School

Term Focus – This term introduces you to talking about your school. You will be able to:

- Describe your uniform and buildings in your school
- Give opinions about your subjects
- Talk about school rules

Prior Learning Links

- School subjects (Year 7)
- Clothes (Year 7)
- Adjectival agreement (Year 7&8)
- Opinion phrases (Year 7&8)

Future Learning Links

- Using the future tense
- Adjectival agreement
- Giving opinions
- Talking about future ambitions

1. What is your school day like?

Red Amber Green

C'est comment, ta journée scolaire? (What is your school day like?)			
Ici en Angleterre (here in England)	**les cours commencent** (lessons start)	**à sept heures** (at 7 o'clock)	**la journée scolaire est plus courte** (the school day is shorter)
Ici en France (here in France)	**le collège commence** (school starts)	**à sept heures et quart** (at 7 :30)	
Ici au Canada (here in Canada)	**le collège finit** (school finishes)	**à huit heures moins le quart** (at 7 :45)	**la pause-déjeuner est plus longue** (the lunch break is longer)
Ici à la Martinique (here in martinique)		**à huit heures** (at 8 o'clock)	

2. What do you wear at school?

Red Amber Green

Qu'est-ce que tu portes au collège? (What do you wear at school?)			
Je porte (I wear)	**un uniforme scolaire.** (a uniform.)	**des chaussures.** (shoes.)	**un t-shirt.** (a t-shirt.)
On porte (We wear)	**un pantalon.** (trousers.)	**un short.** (shorts.)	**une veste.** (a jacket.)
	des baskets. (trousers.)	**une chemise.** (a shirt.)	**une cravate.** (a tie.)

3. What's your school like?

Red Amber Green

C'est comment, ton collège? (What's your school like?)			
Dans mon collège, (In my school,)	**Il y a** (there is / there are)	**beaucoup de bâtiments.** (lots of buildings.)	**un terrain de foot.** (a football pitch.)
	Il n'y a pas de* (there isn't / there aren't)	**une cantine.** (a cantine.)	**une bibliothèque.** (a library.)
		une salle de classe. (a classroom.)	**des labos de sciences.** (some science labs.)

***When using 'il n'y a pas de' you must get rid of the article (un / une / des) in front of the noun.**

4. What is your favourite subject?

Red Amber Green

Quelle est ta matière préférée? (What is your favourite subject?)

Ma matière préférée est (My favourite subject is) **J'aime** (I like) **J'adore** (I love) **Je suis fort en** (I am good at) **Je n'aime pas** (I don't like) **Je déteste** (I hate) **Je suis faible en** (I m bad at)	**le dessin** (art) **le théâtre** (drama) **l'espagnol** (spanish) **l'anglais** (english) **la géographie** (geography) **l'histoire** (history) **la musique** (music) **l'eps** (pe)	**la technologie** (technology) **les sciences** (science) **les maths** (maths) **les langues** (languages)	**car** (because)	**on a trop de devoirs.** (we have too much homework.) **le / la prof est sympa.** (the teacher is nice.) **je suis sportif.** (i am sport.) **je suis créatif.** (i am creative.)
			car c'est (because it is)	**amusant** (fun) **intéressant** (interesting) **passionnant** (exciting) **ennuyeux** (boring)
Je pense que (I think that) **Je trouve** (I find)			**est** (is)	**facile** (easy) **utile** (useful)

5. What are the rules in your schools?

Red Amber Green

Quelles sont les règles dans ton collège? (What are the rules in your school?)

Il faut (You must) **Il est essentiel de** (It's essential to)	**Il est important de** (It's important to)	**porter l'uniforme scolaire.** (wear school uniform.) **faire ses devoirs.** (do your homework.)	**s'asseoir a sa place.** (sit down in your seat.) **respecter les profs.** (do your homework.)
Il ne faut pas (You must not) **Il ne faut jamais** (You must never)	**Il est interdit de** (It's forbidden to)	**arrive en retard.** (arrive late.) **manger en classe.** (eat in class.)	**harceler d'autres éleves.** (bully other students.) **utiliser son portable en classe.** (ues your mobile in class.)

6. What do you think of school rules? Red Amber Green

Qu'est-ce que tu penses du règlement scolaire? (What do you think about the school rules?)					
À mon avis, (In my opinion,) **Je dirais que,** (I would say that,)	**c'est** (it is)	**juste** (fair) **injuste** (unfair) **important** (important)	**stupide** (stupid) **nul** (rubbish) **sévère** (strict)	**parce que c'est** (because it is) **car c'est** (because it is)	**important pour les examens.** (important for exams.) **essentiel pour le travail scolaire.** (essential for school work.)

7. How can we tell whether a noun is masculine or feminine? Red Amber Green

	Masculine singular	Feminine singular	Masculine plural	Feminine plural
A / some	**Un**	**Une**	**des**	**des**
The	**Le**	**La**	**Les**	**Les**

Every noun in French is either masculine of feminine and we need to know this so that we can agree adjectives.

8. What are the rules for adjectival agreement? Red Amber Green

Masculine singular	Feminine singular	Masculine plural	Feminine plural
Amusant	**Amusante**	**Amusants**	**Amusantes**
Ennuyeux	**Ennuyeuse**	**Ennuyeux**	**Ennuyeuses**
Actif	**Active**	**Actifs**	**Actives**

9. What is an intensifier? Red Amber Green

Definition: An intensifier is used before an adjective to add detail.

Key intensifiers: très (very), vraiment (really), assez (quite), un peu (a little), trop (too)

10. How do I use comparatives? Red Amber Green

Definition: A comparative is a structure that compares two things.

E.g. Maths is more difficult than science.

In French, comparatives come in pairs around the adjective.

plus (more)	**adjective**	**que** (than)
moins (less)	**adjective**	**que** (than)

11. What is an infinitive verb? Red Amber Green

Definition: A verb in its most basic form. It tells us what the action is but not who is doing it or when it is happening.

In French, an infinitive verb always ends in either -ER, -RE or –IR. In English, we translate them with the word 'to' at the start.

12. What is a negative? Red Amber Green

Definition: In French, a negative is saying what something is not or using the word never.

Negative structures in French will always have the word 'ne' in them.

HOME LEARNING TASKS

Task Description	Done?
Can you write a short paragraph describing your school uniform?	
Can you write a short paragraph describing your school facilities?	
Can you write a short paragraph talking about your school subjects?	
Can you use the sentence builders above to write sentences answering the questions? Can you improve these by adding conjunctions and intensifiers?	
Practise the vocabulary in your knowledge organiser by using the look, cover, write, check method.	
Go to www.sentencebuilders.com and practise this terms vocabulary.	

Knowledge Organiser

Additional Subjects

Spanish

Year 9

Term 1

2024/25

The Abbey School

Spanish Year 9 Term 1 – School

Term Focus – This term introduces you to talking about your school. You will be able to:

- Describe your teachers, uniform and buildings
- Give opinions about your subjects
- What you will do to prepare for your exams

Prior Learning Links

- School subjects (Year 7)
- Clothes (Year 7)
- Adjectival agreement (year 7&8)

Future Learning Links

- Using the future tense
- Adjectival agreement
- Describing people

1. What are your teachers like?

Red Amber Green

¿Cómo son tus profes? (What are your teachers like?)

En mi opinión (In my opinion) **Diría que** (I would say that)	**el director** (the headmaster) **la directora** (the headmistress) **mi profesor** (my teacher) m. **mi profesora** (my teacher) f.	**es** (is)	**alegre** (cheerful) **simpático** (kind) **antipático** (unkind) **severo** (strict)	**y tiene un buen sentido de humor.** (and has a good sense of humour.) **y tiene un mal sentido de humor.** (and has a bad sense of humour.)

2. What clothes do you wear at school?

Red Amber Green

¿Qué ropa llevas en el insti? (What clothes do you wear at school?)

Llevo (I wear) **Llevamos** (We wear)	**ropa deportiva.** (sports clothes.) **uniforme.** (a uniform.) **un panatalón.** (trousers.)	**un jersey.** (a jumper.) **un vestido.** (a dress.) **una camisa.** (a shirt.)	**una camiseta.** (a t-shirt.) **una chaqueta.** (a jacket.) **una corbata.** (a tie.)	**una falda.** (a skirt.) **unos zapatos.** (some shoes.) **unas zapatillas de deporte.** (some trainers.)

3. What are the facilities like?

Red Amber Green

¿Cómo son las instalaciones? (What are the facilities like?)

En mi insti, (In my school,)	**hay** (there is / there are)	**muchos edificios.** (lots of buildings.) **muchos campos deportivos.** (lots of sports grounds.) **muchos laboratorios.** (lots of laboratories.) **muchas aulas.** (lots of classrooms.) **una biblioteca.** (a library.) **un gimnasio.** (a gym.)	**Las instalaciones son** (The facilities are)	**caras.** (expensive.) **baratas.** (cheap.) **cómodas.** (comfortable.) **incómodas.** (uncomfortable.) **bonitas.** (beautiful / nice.)	**feas.** (ugly.) **divertidas.** (fun.) **excelentes.** (excellent.) **viejas.** (old.) **decepcionantes.** (disappointing.)

4. What is your favourite subject?

Red Amber Green

¿Cuál es tu asignatura favorita? (What is your favourite subject?)

Mi asignatura favorita es (My favourite subject is)	**el dibujo** (art)	**la música** (music)		**aburrido** (boring)	**imposible** (impossible)
Lo que más me gusta es (What I like the most is)	**el teatro** (drama)	**la educación física** (pe)	**porque es** (because it is)	**difícil** (difficult)	**interesante** (interesting)
Lo que menos me gusta es (What I like the least is)	**el español** (spanish)	**la tecnología** (technology)		**divertido** (fun / funny)	**útil** (useful)
Se me da bien (I am good at)	**el inglés** (english)	**las ciencias** (science)	**ya que son** (because it is)	**duro** (hard)	**práctico** (practical)
Se me da mal (I am bad at)	**la geografía** (geography)	**las matemáticas** (maths)		**fácil** (easy)	**complejo** (complex)
	la historia (history)	**los idiomas** (languages)		**importante** (important)	**pesado** (annoying)

5. What are you going to do to be successful?

Red Amber Green

¿Qué vas a hacer para tener éxito? (What are you going to do to be succesful?)

Para aprobar mis exámenes, (To pass my exams,)	**aprenderé des mis errores.** (I will learn from my mistakes.)	**pasaré más tiempo repansando.** (I will spend more time revising.)
Para mejorar mi nivel, (To improve my level,)	**participaré más en clase.** (I will participate more in class.)	**asistiré a clases de repaso.** (I will attend revision classes.)
Para sacar buenas notas, (To get good grades,)	**preguntaré al professor si no entiendo.** (I will ask the teacher if I don't understand)	
Para sacar mejores notas, (To get better grades,)		
Para tener éxito en la prueba, (To be successful in the test,)		

6. How can I tell if a noun is masculine or feminine?

Red Amber Green

	Masculine singular	Feminine singular	Masculine plural	Feminine plural
A / some	**Un**	**Una**	**Unos**	**Unas**
The	**El**	**La**	**Los**	**Las**

Every noun in Spanish is either masculine of feminine and we need to know this so that we can agree adjectives.

7. What is adjectival agreement?

Red Amber Green

Definition: The process of changing the spelling of an adjective to match the noun that it is describing.

An adjective will either be written in its masculine singular, masculine plural, feminine singular or feminine plural form.

8. What are the rules for adjectival agreement? Red Amber Green

Masculine singular	Feminine singular	Masculine plural	Feminine plural
Divertido	Divertida	Divertidos	Divertidas
Hablador	Habladora	Habladores	Habladoras
Feliz	Feliz	Felices	Felices

9. How do I use verbs of opinion? Red Amber Green

Verbs of opinion are opinion phrases that include "me" in them. E.g. Me gusta, me encanta, me chifla

When they are used to talk about something plural, we must add an 'n' to the end.

Me gusta la biblioteca → I like the library

Me gustan los laboratorios → I like the science laboratories

10. How do I use comparatives? Red Amber Green

Definition: A comparative is a structure that compares two things.

E.g. Maths is more difficult than science.

In Spanish, comparatives come in pairs around the adjective.

más (more)	**adjective**	**que** (than)
menos (less)	**adjective**	**que** (than)

11. What is an infinitive verb? Red Amber Green

Definition: A verb in its most basic form. It tells us what the action is but not who is doing it or when it is happening.

In Spanish, an infinitive verb always ends in either –AR, -ER or –IR. In English, we translate them with the word 'to' at the start.

12. How do I form the future tense? Red Amber Green

To form the future tense in Spanish, you will need to take the following steps:

Step 1: Decide which pronoun you need

Step 2: Take your infinitive

Step 3: Add the ending that matches the pronoun

E.g Jugar + é = jugaré → I will play

Pronoun	Ending
I	é
You (singular)	ás
He / she / it	á
We	emos
You (plural)	éis
They	án

HOME LEARNING TASKS

Task Description	Done?
Can you write a short paragraph describing your school uniform?	
Can you write a short paragraph describing your school facilities?	
Can you write a short paragraph talking about your school subjects?	
Can you use the sentence builders above to write sentences answering the questions? Can you improve these by adding conjunctions and intensifiers?	
Practise the vocabulary in your knowledge organiser by using the look, cover, write, check method.	
Go to www.sentencebuilders.com and practise this terms vocabulary.	

Knowledge Organiser

Additional Subjects
Health and Social Care
Year 9

Term 1
2024/25

The Abbey School

Health and Social Care Year 9 Term 1

Term Focus – Introduction to Health & Social Care- The difference between health and social care

Prior Learning Links	Future Learning Links
Knowledge of how to express themselves clearly, share feelings openly and listen to others. From the KS3 PSHE Curriculum topic Communication skills	Basic observations and how to interpret, monitor and record them

IMAGE
(please check copyright)

KEY VOCABULARY

KEY WORDS	KEY SUBJECT TERMINOLOGY
Clarification - To clarify something means to make it easier to understand, usually by explaining it in more detail **Paraphrasing** – means to state something written or spoken in different words, especially in a shorter and simpler form to make the meaning clearer. **Independence** – not influenced or controlled by others in matters of opinion, conduct or choice etc: thinking or acting for oneself	**Interpersonal skills**- the ability to communicate or interact well with other people. **Domiciliary care** – is care and support given at home by a care worker to help a person with their daily life **Housing trust** - housing associations are private, non-profit making organisations that provide low-cost "social housing" for people in need of a home.

1. What is health and social care? **Red** **Amber** **Green**

This lesson introduces you to what health and social care is. We will look at some of the different jobs available in health and social care and which services are available in our local area.

2. What is adult social care? **Red** **Amber** **Green**

Social care is about providing physical, emotional and social support to help people live their lives. For various reasons and at different stages in their lives, some people need support to develop and maintain their independence, dignity and control.

3. Why are interpersonal skills important for health and social care professionals? **Red** **Amber** **Green**

Interpersonal skills are the ability to communicate or interact well with other people.
Examples of interpersonal skills in health and social care are:

- Listening
- Communication
- Patience
- Sense of humour
- Stress management
- Problem-solving
- Assertiveness

Why do you think these skills are important for people working in health and social care?

4. Why are interpersonal skills important for health and social care professionals? **Red** **Amber** **Green**

Effective interpersonal skills are essential in health and social care. They help to prevent mistakes happening and also to build and maintain relationships with service users, their relatives and other members of staff. Consider how good interpersonal skills will help if you have a job interview.

5. Why do we need to work as part of a team? **Red** **Amber** **Green**

A key part of being successful in work and study is the ability to work with other people. This includes being able to communicate, working together to solve problems and working in teams to achieve common goals. Consider the importance of being a good team working skills when working in health and social care.

6. How does effective communication enable good teamwork and use of the 6C's? **Red** **Amber** **Green**

Ways you will need to communicate with others when working as part of a team include:

- Taking part in discussions to decide ways to complete activity/task.
- Consideration of own verbal communication when working with others.
- Listening and responding appropriately to others.
- Contributing ideas and points of view.
- Accepting and giving positive and negative feedback

How do you think effective communication enables good team work?

7. How can I show my understanding of what I have learnt?	**Red**	**Amber**	**Green**
Assessment lesson			
8. How can I improve?	**Red**	**Amber**	**Green**
PIT lesson			
9. Why is it important to follow the care values when you work in health or social care?	**Red**	**Amber**	**Green**

The care values that underpin good practice in health and social care are:

- Duty of care
- Maintaining confidentiality
- Respect for the individual
- Maintaining dignity
- Safeguarding
- Person-centred approach

Why are these care values important when working with vulnerable people?

10. Why is it important to follow the care values when you work in health or social care?	**Red**	**Amber**	**Green**

Consider the following, do you think they show respect:

- Calling people 'love' or 'dear' because you can't be bothered to learn their name
- Not knocking on the door before entering a person's room in a care home
- If someone receiving personal care prefers to have their shower in the morning but the carer always says it is best in the evening because it's more convenient for them.

11.	**Red**	**Amber**	**Green**
12.	**Red**	**Amber**	**Green**

HOME LEARNING TASKS	
Task Description	**Done?**
Research one health or social care job – find out what the role involves and qualifications needed	
Watch an episode of I'm a celebrity/The Apprentice and look for evidence of good and bad team work. Examples of good and effective teams. Identify traits that make the team work well together.	
Design a poster to show the 6C's and why they are important	

Knowledge Organiser

Additional Subjects

Child Development

Year 9

Term 1

2024/25

The Abbey School

Child Development Year 9 Term 1

Term Focus – – Family and parenting to include family structures and changes in children's care. Pre-conceptual health and care and methods of contraception

Prior Learning Links

- Knowledge of Relationships Education will build positive foundations for healthy and safe relationships of all kinds. This will start with family and friends, how to be kind, and exploring online friendships from KS3 PSHE Statutory relationships education and RSE

Future Learning Links

Term 2: Preparation for Pregnancy and Birth

Reproduction, Pregnancy and antenatal care

Preparation for the birth of the new baby and Postnatal care.

IMAGE

(please check copyright)

KEY VOCABULARY

KEY WORDS	KEY SUBJECT TERMINOLOGY
Adoption - the legal process of placing a child with non-birth parents **Fostering** – the provision of temporary care for a child unable to live with their own parent(s) **Local authority** - an administrative body in local government. **Respite care** – care that provides short-term, temporary relief to those caring for children or other relatives	**Nuclear family** – Two heterosexual parents and dependent children **Extended family** – a family that includes parents, children and other relatives e.g. grandparents **Blended family** – A form of step-family in which one or both partners have children from previous relationships **One-parent family** – a family consisting of a lone parent and at least one dependent child

1. What are the different forms of family structure in the UK? **Red** **Amber** **Green**

A family is a group of people who live together or who are related by blood ties, marriage or adoption. The classic image of the family is of a married couple and two children. However, family structures in the United Kingdom are much more diverse than this. We will be looking at the different family structures in the UK.

2. Why is socialisation an important part of the family's role? **Red** **Amber** **Green**

Teaching children how to behave in society is a key part of the family's role. Children need to learn appropriate attitudes and values and how to behave in different situations. What kinds of things do you need to teach a child before they go to school? Consider these things:

- Behaviour
- Relationships
- Communication
- Manners

3. What are the factors that influenced changes in the family structure? **Red** **Amber** **Green**

Family structures have changed over time in the UK. The family is now much more diverse than it was 100, 50 or even 25 years ago. Family diversity is the result of a number of social changes that have affected wider UK society. Compare the structure of your family and compare to your friends. Are they the same/different? How are they the same/different?

4. What are the different types of care for children? **Red** **Amber** **Green**

Children who are unable to live with their birth or adoptive families, or other relatives, are usually looked after by local authorities. Local authorities throughout the UK provide residential care homes or a temporary or permanent foster family.

5. What does the term-Pre-conceptual health and care mean? **Red** **Amber** **Green**

Pre-conceptual care refers to the care that should be taken both physically, socially and emotionally before deciding to become pregnant. This includes lifestyle factors like eating healthily and not being overweight, taking regular exercise and not smoking or drinking alcohol.

6. Why is it important to plan for pregnancy?	Red	Amber	Green
By planning to become pregnant, women can start taking folic acid, which is one of the B vitamins. Research has found that folic acid can help to prevent conditions like spina bifida (an abnormality in the development of the brain and spinal cord). Some women may also need more specific tests before deciding to become pregnant, especially if there is a family history of certain medical conditions.			
7. What are the different types of contraception?	**Red**	**Amber**	**Green**
Part of the decision making process in choosing to have a baby is about the use of contraception. Planning to have a family is very important because couples need to make sure they are ready to take on the responsibility of a baby, practically, emotionally and financially. There are many methods of contraception for both men and women and some are more effective and reliable than others.			
8. Revision Lesson	**Red**	**Amber**	**Green**
Look back at everything we have learned this term. Have you missed any lessons that you need to catch up on? Do you know the names and definitions of the different family structures in the UK? Why have family structures changed over the last 100 years? Do you understand the difference between fostering and adoption? Consider how both a child with complex disabilities and her parents benefit from her receiving regular respite foster care. Can you describe the lifestyle choices and medical factors that can influence pre-conceptual health? Can you identify the different types of contraception and explain the advantages and disadvantages of each type? Do you understand the meaning of barrier methods of contraception?			
9. What have we learnt so far this term?	**Red**	**Amber**	**Green**
Assessment lesson.			
10. How can I progress?	**Red**	**Amber**	**Green**
Look at your EBI and complete the task. Peer Assessment			
	Red	**Amber**	**Green**
	Red	**Amber**	**Green**

HOME LEARNING TASKS	
Task Description	**Done?**
Find the meaning of fertility/infertility	
Contraception worksheet	
Revision	

Knowledge Organiser

Additional Subjects
Hospitality and Catering
Year 9

Term 1
2024/25

The Abbey School

Subject Hospitality and Catering - Year 9 Term 1 Theme - General practical skills

Term Focus – Skills review and development in the planning, preparation and presenting of food. Skills being learnt and developed further. What skills must I learn to be successful in my journey towards my qualification?

Prior Learning Links

KS3 – Basic cooking skills
KS3 – Basic hygiene and safety
KS3 – Safe use of equipment

Future Learning Links

Hospitality and catering WJEC.
Required medium and complex skill development.
Producing effective time plans in line with WJEC requirements
Working towards presentation skills to achieve higher grades by meeting WJEC presentation requirements.

KEY VOCABULARY

KEY WORDS

Mis en place	Boiling
Al dente	Simmering
Seasoning	Poaching
Garnish	Steaming
Decoration	Shred
Mash	Grate
Peel	Pipe
Blend	Juice

KEY SUBJECT TERMINOLOGY

HATTIE
Al dente
Mis en place
Hygiene and safety
Equipment / utensils
Cooks knife
Paring knife
Bread knife
Claw grip / bridge hold

1. What practical skills must I develop (HATTIE) (Mis en place) ?

Red | Amber | Green

Skill 1 – General Practical Skills

Weigh and Measure Accurately

Dry ingredients e.g flour and solid ingredients e.g butter are weighed using electronic scales

Measuring spoons are for small amounts

Liquids are measured in jugs or cups

Prepare your Workspace

Organise all your ingredients and equipment before you start cooking

Grease, oil, line or flour equipment like tins

Test Food to see if it's Cooked

Meat – temperature probe

Cake mixtures – skewers and knives – clean =cooked

Cakes – touch test for springiness

Bread – tap on bottom and

Change How Food Affects the Senses

Improve and change the flavour of food by adding:

Salt, Sugar, Herbs, Spices

Browning changes the flavour and colour of the food:

Caramelisation & Dextrinisation

For most recipes you need to be able to weigh/measure ingredients accurately.

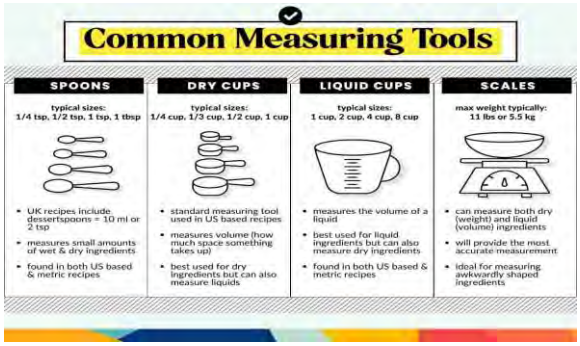
Your area must be prepared before you cook. HATTIE

It is important to learn how to check when food is cooked. A temperature probe will tell you when meat is safe to eat. Cakes can be pressed with your finger, if they are spongey they are cooked.

Vegetables can be checked with a sharp knife. If the knife goes in easily the food is cooked.

Pastry should be a deep golden brown.

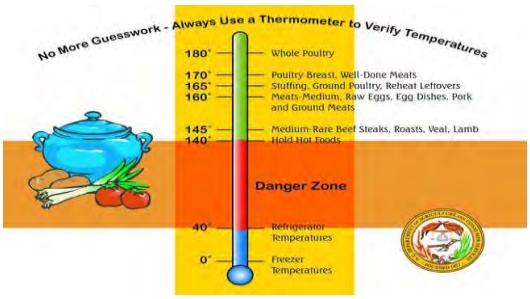
What are ways of weighing and measuring solids and liquids? Red Amber Green



It is essential that ingredients are weighed measured accurately to ensure the successful; outcome of your dish.

The results are likely to be poor if the ratio of ingredients is not correct.

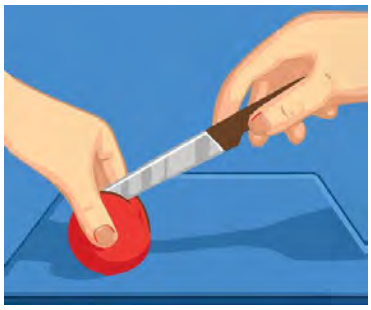
2. Why is it important to understand when food is properly cooked? Red Amber Green

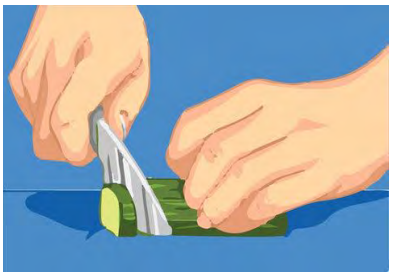


3. How can we ensure food is ready for serving (testing seasoning, presentation and food styling)? Garnish and decoration Red Amber Green

Always check the flavour of your dishes as you work. This means you are able to improve any dishes lacking in flavour to avoid disappointment.

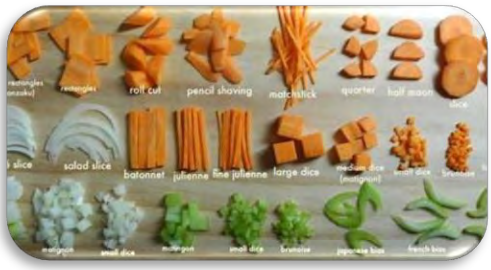
4. What are the safety rules for knife use? What are the different vegetable food cuts? Red Amber Green





5. What simple food styling could we use for fruit and vegetables? | Red | Amber | Green

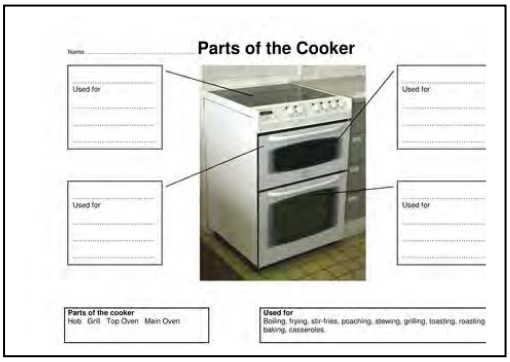
6. How are fruit and vegetables prepared for use in various meals? What are the different vegetable food cuts? | Red | Amber | Green



7. What safety precautions must we take when using the cooker? | Red | Amber | Green

- Do not overfill saucepans.
- Use an oven glove.
- Tie long hair back
- Do not leave the cooker unattended.
- Do not reach over the gas flame.
- Keep clothes away from the heat source.
- Keep paper to a minimum in the oven.
- Use a splash guard.
- Pan handles placed inwards on the hob
- The grill should be left open when in use.

8. Using the cooker, what do the different areas do? Hob, grill and oven. Red Amber Green



10. What are the basic pieces of cooking equipment and how are they used? Red Amber Green

11. What electrical equipment can be used to prepare food? Red Amber Green

Using equipment safely

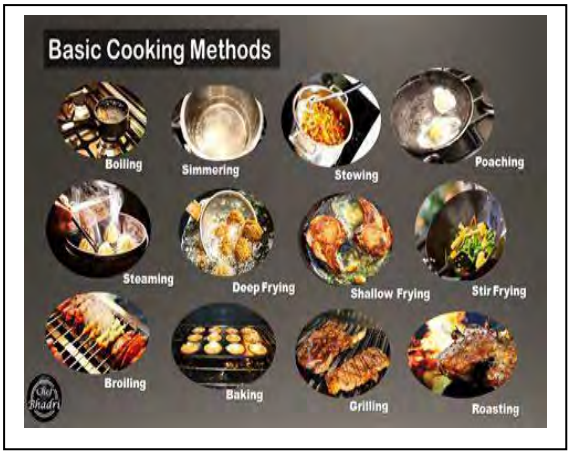
Do not use when your hands are wet.

Do not wash up in water.

Switch off at the socket when not in use.

Do not put hands or spoons into a bowl while a mixer or processor is being used

12. How does using different cooking methods affect our food?	Red	Amber	Green



There are many ways in which we can cook food. The method we choose will depend upon the food being cooked and often the time available for cooking. The effect on food is varied: softer, harder, crusty, spongy, golden, crunchy, gooey…

HOME LEARNING TASKS

Task Description	Done?
Using a recipe of your choice, write a list of the equipment needed. State how it is used, include any safety and hygiene points which may occur	
Design a fruit platter for a party. The platter should be colourful and appealing. Draw and describe how you would present the food. Use colour and detailed annotations to describe the outcome	
Choose 4 of the subject terminology items. List them and describe their meaning in detail.	
Use the diagram from question 9 to complete the areas of the cooker. List 3 dishes made in each section and the meaning of any other points.	
Choose 3 basic cooking methods, describe them, list 4 meals made by these methods	

Knowledge Organiser

Photography
Year 9
Term 1
2024/25

The Abbey School

Subject Photography Year 9 Term 1 – ‘Introduction to Photography’

Term Focus – To enable students to work from a set of objectives relating to a theme.
To develop students’ knowledge of the formal elements and principles of visual language in photography including;

Line, shape, form, tone, colour, texture, pattern and composition.

To develop students’ knowledge and understanding of photographic techniques including lighting, viewpoints, aperture, depth of field, shutter speed and movement.

To develop students’ knowledge of genres of photography. This might lead to consideration of career paths e.g. sports or fashion photography.

These basic camera skills, the elements and principles of visual language will proceed to be built upon and interleaved through a series of projects. Scaffolding the design process for proceeding coursework projects.

Throughout KS3 Art students learned about the Formal Elements and developed basic skills. In Year 7 they learned knowledge and skills linked to ‘Observational and Tone’, ‘Abstract and Colour’ and ‘Imagination and 3D’. Moving into specialist techniques in Y8 including ‘Printmaking’, creating 3D work inspired by ‘Other Cultures’ and composition planning and painting in ‘Viewpoints’. All projects were underpinned by the processes of recording, developing, refining, evaluating and realising. In DT- Product Design students experienced RM, Textile and Graphic Design including 2D Design and CAD. All projects were underpinned by the design process ACCESS FM and the process of ‘Design, Make and Evaluate’.

Future Learning Links

Introduction to Photography focusing on basic skills and formal elements including depth of field, shutter speeds and filling the frame.

Implement prior camera knowledge and experimenting in response to their research. E.g. Fill the frame, shutter speeds, depth of field from Term 1.

To enable students to work from a set of objectives relating to the theme.

Encourage students to think and observe creatively and realise the intentions of the photograph.

To introduce students to basic tools in Photoshop, the industry standard for graphics editing, students are working towards a possible career in the creative industries.

To introduce planning, creating and reviewing work considering the theme. To encourage independence later on in the course.

	Scaffolding the design process for proceeding coursework projects.	

KEY VOCABULARY	
KEY WORDS	**KEY SUBJECT TERMINOLOGY**
Genres- *Portrait, Still Life, Abstract, Conceptual, Commercial, Documentary, Fashion, Fine Art, Wedding Photography.* **DSLR-** *DSLR, Lens, Battery, Aperture, Electronic Sensor* *Shutter Release, Data Display, Camera Dial, Viewfinder, Shutter release, Modes- P, Tv, Av and M* **Vocabulary-** *Digital SLR, Card Reader, Contact sheet, JPEG, PSD/B files, Genre, Focal lengths, Exposure, Depth of field, Underexposed, Overexposed, Shooting Modes-* ***auto,*** *scene, and P, Tv, A and M Modes, Shutter speed, Aperture.* **Composition-** *Rule of thirds, Filling the frame, Symmetry, Repetition, Balance, Import, Edit*	**Genres** **Visual Language-** *Line, shape, form, tone, colour, texture, pattern and composition***.** 

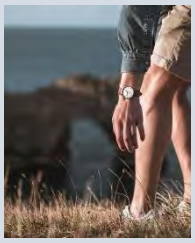
1. What are the different Photography genres and how can we learn from the photographers who are successful with them?	**Red**	**Amber**	**Green**

I will discover and be able to recognise different photography genres

Portrait, **Still Life**, **Abstract**, **Conceptual**, **Commercial**, **Documentary, Fashion**, **Fine Art** and **Wedding**.



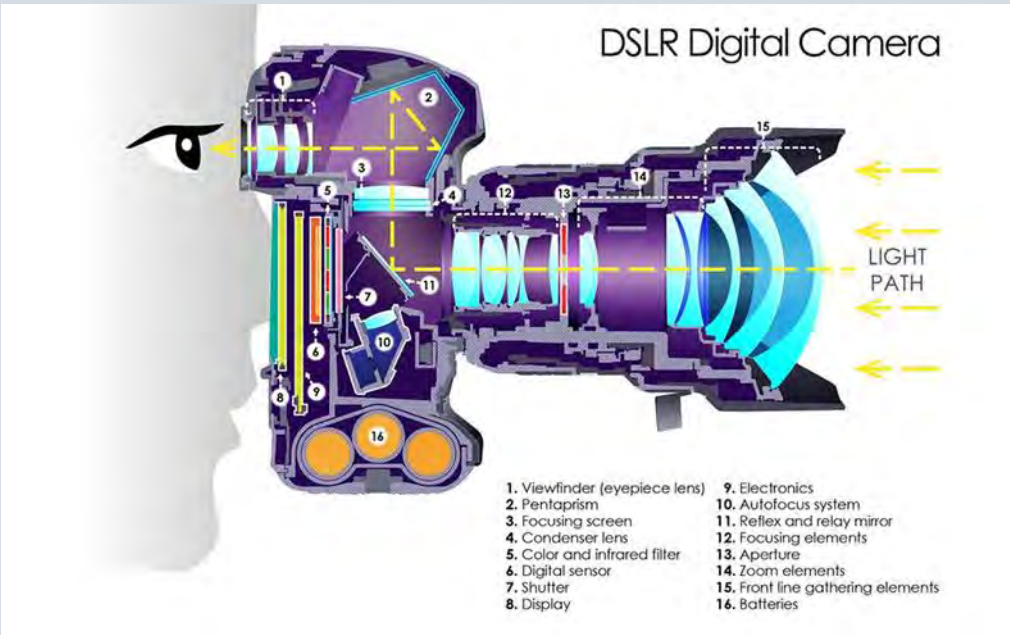







2. Can you identify the different parts and functions of the DSLR?

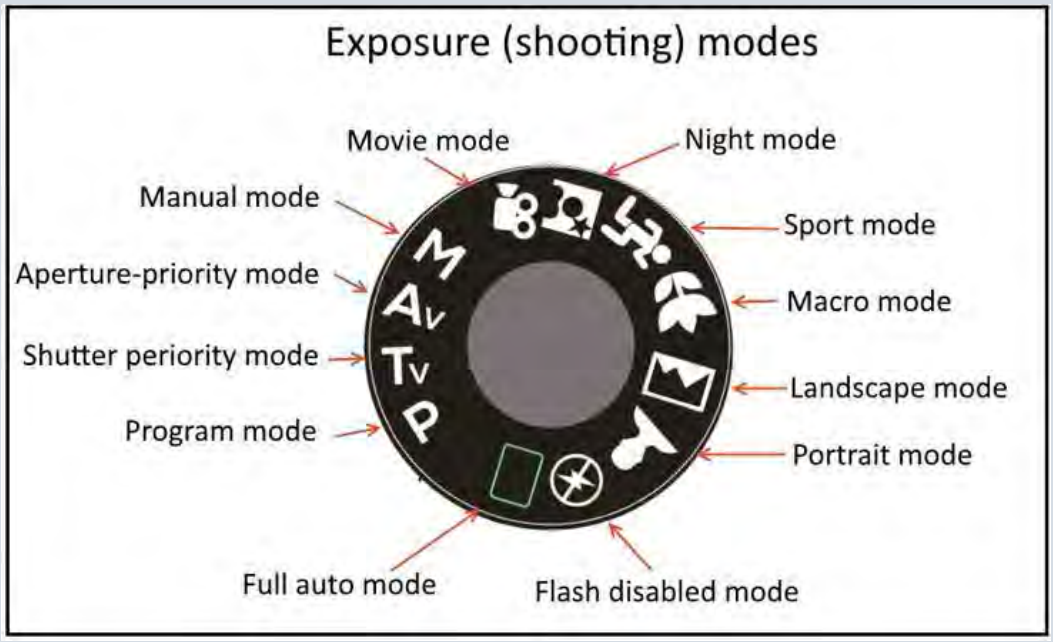
I will learn how to identify the different parts and functions of the DSLR



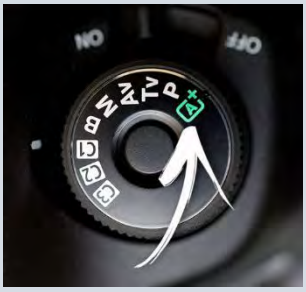
I will learn how to handle and hold thee camera properly

3. What are shooting modes and how can we use them?

I will learn how to recognise the different modes on the camera mode dial and understand their functions.



Auto mode



In auto mode the camera will do all the work. It will choose the settings it thinks is right for that scene that is currently in the frame of the camera. If that scene gets darker, it will brighten up the frame by automatically changing any one, or all of your three principle settings, aperture, shutter speed and ISO. You only have to point the camera in the right direction and work on what is going to be in your photograph.

Shutter Priority (S or Tv)

Shutter priority is where you have control over shutter speed with the main dial on your camera and then the camera chooses the appropriate aperture for the given scene your camera is pointing at.

Shutter speed is the time that the shutter is open for. The longer the shutter speed, the more light will get into your camera.

Shutter speed also controls how much **motion blur** you have in your photographs. If you are shooting a moving object like a sports person, a bird or moving water, a longer shutter speed will blur this movement.

Shutter priority is great for sports and wildlife photography, where having the right shutter speed is imperative.

Big Aperture (small Hole) more depth of field and slow shutter speed for motion bur of the moving water.

Fast shutter speed

Aperture Priority (A, Av)

Aperture priority is where you have control over the aperture with the main dial on your camera. The camera then chooses the appropriate shutter speed for that scene you are pointing the camera at. If the brightness in your frame changes, the shutter speed will change to suit. The aperture will only ever change when you turn that dial.

The aperture refers to the size of the (iris) hole within the lens. Aperture is measured in **F-stops.** A low number like F1.8 or F2.1 means a wider aperture. F16 would be a smaller aperture. A wider aperture (a low F-stop) means less of the image is in focus. It also means a faster shutter speed can be used.

ISO

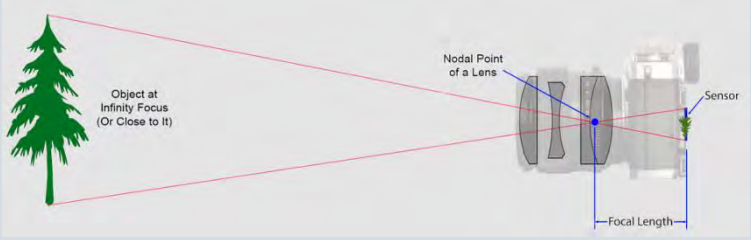
Is the light sensitivity of the digital chip or film. The higher the ISO the more sensitive the chip becomes, meaning that you can take a photograph when there is less light. An ISO of 200 is the average daylight setting.

4. What is focal length and why is it important?

Red | Amber | Green

I will learn how different lenses can be used to adjust focal length.

Focal length measures the distance, in millimeters, between the “nodal point” of the lens and the camera’s sensor. “Nodal point” may sound complicated, but it is simply the point where light converges in a lens. Here’s a simple diagram showing the focal length of a lens, based upon this definition:



As you can see from the diagram above, focal length is determined when the lens is focused on something very far away – in other words, focused to infinity. Lenses are named by their focal length. You can find this information on the barrel of the lens, and almost every camera lens ever made will prominently display the focal length. For example, a 50mm lens has a focal length of 50 millimeters.

Focal length is a property of the lens itself, not the camera

Focal length is important because it relates to the field of view of a lens – that is, how much of the scene you'll capture. It also explains how large or small a subject in your photo will appear.

If you're trying to understand different focal lengths, you can think of higher values (like 500mm) as more "zoomed in," whereas lower values (like 20mm) are more zoomed out."

While the technical definition of focal length may be relevant to some people, as photographers, it is more important to understand is what focal length looks like!

Take a look at the following demonstration. The four photos shown below were taken at increasing focal lengths. The photos start at 25mm and end at 140mm:

Focal length: 25mm. Can you spot the climbers yet?

Focal length: 50mm. Now the climbers are

Focal length: 140mm. Now you can even see the expression on the climber's face!

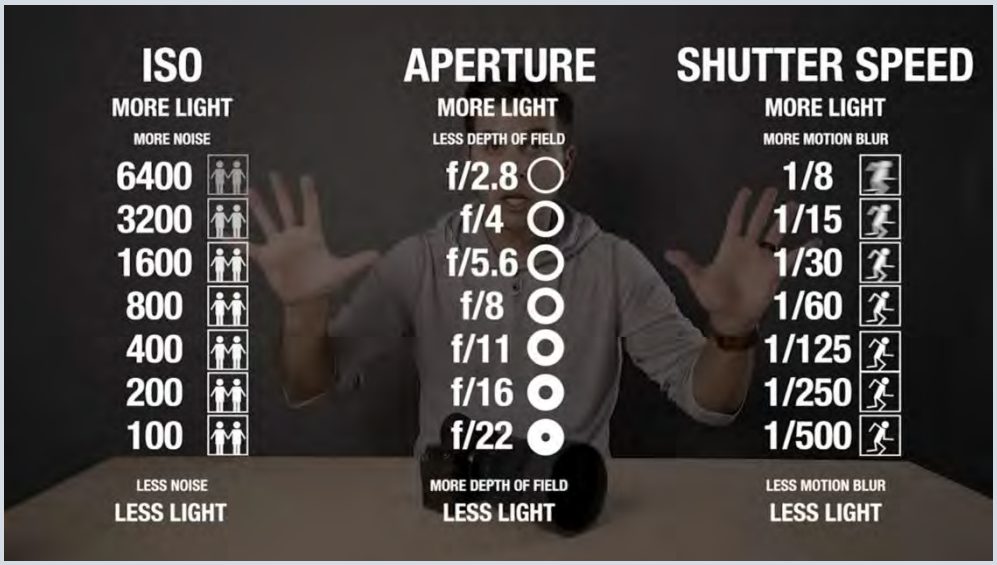
If you want to know more about lenses go to this website-
[6 Different Types of Camera Lenses (and when to use each one) (livesnaplove.com)]

5. How are aperture and depth of field connected?

Red | Amber | Green

I will learn how to adjust aperture and depth of field

Depth of field is one of the bet-known photography techniques. It relates to which elements in the image are in or out of focus. It is set by tweaking your camera's aperture settings. Shallow depth of filed puts your subject in sharp focus and blurs the background or foreground. While large depth of field puts all of your subject in sharp focus.



Shallow Depth of Field larger F-Stop foreground / background in focus



Large Depth of Field Small F-Stop everything in focus


[3 Steps for Adjusting the Depth of Field on Your Camera - Photonify Photographers Marketplace]

6. How can shutter speed be used creativley?

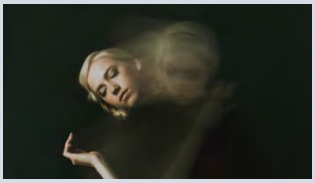
Red Amber Green

I will learn how to select the appropriate shutter speed to capture movement and experiment with motion blur.

Motion blur is a long exposure photography that lets you convey the feeling of movement or action in a still image. **“It gives use the ability to see things in a way that we can’t on our own,” says photogpher Chris Sidla.**

Camera settings to capture motion blur.

Motion blur is all about shutter speed and how it interacts with light. You create the blur with a slow shutter speed. The slower your shutter speed (sometimes called a long shutter speed), the more light gets to your camera sensor. Because your shutter is open longer, more visual information is captured, which can include the blur of motion. This can also be helpful in low-light scenarios, but most of the time you’ll need to adjust your other settings to limit the amount of light in your frame to compensate for the potential of overexposing a long exposure image. For the most control, shoot in manual mode. You can work with almost any DSLR or filmcamera, as long as you can adjust your exposure triangle of shutter speed, aperture, and ISO. If you don’t want to go full manual, shutter priority mode lets you choose your shutter speed, and the camera will balance the other settings around your choice.




[How to make motion blur photography | Adobe]

7. Why are the Formal Elements important in photography?

Red Amber Green

I will learn the importance of the Formal Elements.

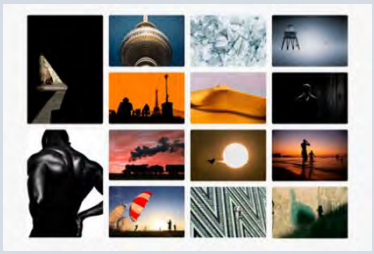
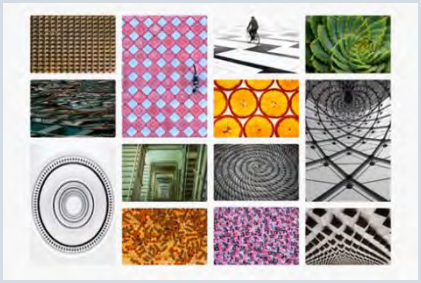
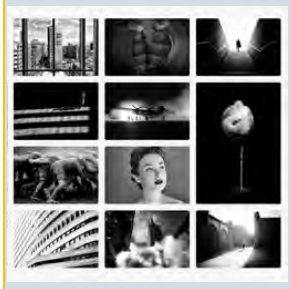
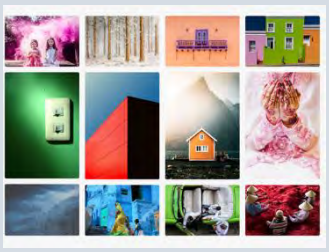
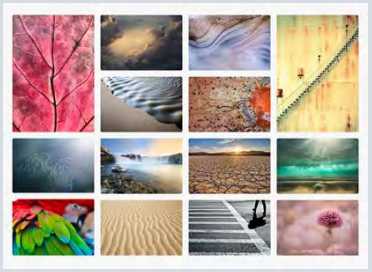
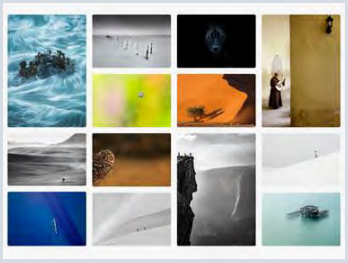
There are several design elements, known as formal elements, that all photographers should be aware of when thinking about their image compositions.

Formal elements are visual feature that, when applied, have the potential to transform simple subjects into great shots.

The seven formal elements are commonly known as: LINE, SHAPE AND FORM, PATTERN, TONE, COLOUR, TEXTURE AND SPACE

Paying attention to the formal elements will bring order to your compositions and help you emphasise the most critical aspects of the shot.

Many of the world's most successful photographers base their images around formal elements, and understanding tem is essential to developing your photography skills.

Focus: Understanding the 7 formal elements of photography (picfair.com)

8. What is the Rule of Thirds and how can we apply it in Photography?

Red | Amber | Green

I will learn how to apply the Rule of thirds and about the Rule of Odds.

The rule of thirds in photography is a guideline that places the subject in the left or right third of an image, leaving the other two thirds more open. It divides a photo into nine equal parts, split by two equally spaced horizontal and vertical lines. Generally, the rule of thirds leads to compelling and well-composed shots.
Imagine dividing a photo, or even your camera's viewfinder, into nine equal zones using these horizontal and vertical lines. That forms your rule of thirds grid – a setting you can select on most cameras, and even your phone.

Guide to the Rule of Thirds in Photography | Adobe

What is the rule of odds in photography?
The rule of odds states that, whenever possible, a composition should have an *odd* number of objects, *not* an even number of objects. So an image should have three flowers rather than two, and five people rather than four.
Why? The rule of odds taps into the brain's propensity to create order. You see, when viewing a group of objects, we unconsciously want to group them in pairs
But when we're faced with three, five, or seven objects in a photograph, we have a group that can't be easily organized. With an odd number of objects, one may become dominant. At the very least, the viewer will look longer at the image, moving between the individual elements. That is the power of the rule of odds in photography: It creates a composition that makes the viewer's brain work a little harder and look a little longer.

The Rule of Odds in Photography (An Easy Trick for Better Compositions) (digital-photography-school.com)

9. What is fill the frame photography?

Red | Amber | Green

I will learn what it means to fill the frame

What is fill the frame photography?
In photographic composition, the "frame" refers to the rectangular scene you see through your camera. When you use this technique, you simply fill your photo's frame with more of your subject, reducing the amount of background or negative space shown.
You can achieve this by getting closer to the subject to bring forward the details. A zoom lens is another option if you can't get as close as you'd like.

Why use this technique?
When you fill the frame, you remove distractions and put more emphasis on your subject. This creates a stronger overall image and keeps viewers from having to guess what your subject is or what you hope to convey.
The fill the frame technique is especially useful in street photography. Too much background action can create confusion in a photo on busy streets, but using this technique will make your subject matter clear amidst the hustle and bustle.

When should you use it?

As with all photographic techniques, deciding whether to use it or not is simply a matter of creative choice.

When composing your shot, stop for a minute and consider the background. If the background helps to tell a story, consider leaving at least a portion of it within the frame. If the background doesn't add anything to the photo, consider a tighter crop to showcase more of your subject.

What is fill the frame photography? - Adobe

Fill the Frame Photography & Composition Techniques (studiobinder.com)

10. How can we consider balance and symmetry in Photography?	Red	Amber	Green

I will learn about symmetry in photography.

In photography symmetry appears when parts of your composition mirror other parts. It is created when two halves of your scene look the same and balance each other out. Symmetry defines something being clean, proportional and balanced and will make pictures appear neat, tidy and clinical.

Symmetry in Photography – Killer Tips to Improve Composition — The School of Photography - Courses, Tutorials & Books

11. What is repetition and how can it be explored through photography?	Red	Amber	Green

I will learn how to recognise repetition in photographs

Repetition in photography refers to the technique of integrating recurring elements, patterns, or themes in a compositions to produce a sense of rhythm and balance in an image. This can involve the repeated use of lines, shapes, colours, textures, or other visual elements that can create a sense of consistency and uniformity.

E.g. A row of trees, a series of arches, a field of sunflowers, or even a group of people dressed similarly. By echoing these elements throughout the image, the photographer guides the viewer's eye across the photograph, establishing a visual rhythm.

Writing Help

ANALYSING OTHERS' WORK

Structure your response using the following headings:

FORM
What is going on in the art work/photography? Explain objectively and honestly (this is what you see)
Imagine you are trying to explain the art work to someone over the telephone and transcribe that message (write it down)

PROCESS
What has the artist used to make the art work? Consider materials and media. If a photograph, what are the lighting considerations? Has it been presented in a special way i.e. as an installation?
What formal elements appear?
Are there any recognisable types of composition e.g. Rule of Thirds, Rule of Odds, Symmetry, Repetition?

CONTENT
Having researched further and understood the wider context, discuss the ideas behind the art work and the intentions of the photographer to the best of your ability. Consider the mood of the work and how it has been achieved.
Do you recognise the associated genres?

CONTEXT- Understanding the wider context and underlying themes gleaned from research and used to inform your opinion

This could include- *Biographical information about the artist, Political events of the time e.g. Wars, Suffragettes*

Social & Cultural Norms e.g. fashion movements

Ideologies, Technology, comparing other artists from the time

Consider past work and common trends in career

Art movements such as Bauhaus or Futurism

How does the work fir in to the history of Art and Photography?

Quotes and key points by specialists and academics

RESEARCH- Research using a variety of secondary sources and collecting comments, quotes and discussion points

Books, Magazines, Periodicals, Newspapers, Galleries, Museums, Internet, Radio, TV/DVD

QUESTIONING- Start with writing down key words and simple questions to get initial primary response and raise further areas for research

What? The Artwork

Who? Subject Matter

Where? Location

When? Process

Why? Meaning

ANNOTATING YOUR OWN WORK

Think?

What is it that you have done?

e.g. ***This is a photograph of****…….(subject/object)* ***considering****…….(techniques such as frame, viewpoint, direct light, natural light, diffused, composition, cropping, macro, movement).*

Was there anything you felt that didn't work well?

Write a sentence describing what didn't work well and why.
I feel that*……* ***did not work well because****…….. (is the photography in focus? Could the composition be improved? Cropped, should you have used a different viewpoints, lighting dull or not effective? More direct light)*

Evaluate what was successful? What is it that you liked about it and why?

*Use of colour-complementary, texture, line, detail, viewpoint lighting etc****. I felt that worked because I used……***

When annotating your work make sure you used photography keywords

CONNECTIVES- Connective help our writing to flow- Try using these connectives to improve your written work.

ADDITION
And
Also
In addition
Further
Furthermore
As well as
And then

COMPARISON
Similarly
In comparison
Otherwise
In contrast
Alternatively
Despite this

ILLUSTRATION
For example
For instance
In other words
To show that
Such as
As revealed by
Analysis shows

SUMMARY
In brief
On the whole
Summarising
Overall
To sum up
Evidently
In conclusion

OPINION
It would seem
It appears
Obviously
Possibly
It seems likely
Presumably
In conclusion

BALANCE & CONTRAST
However
Nevertheless
Alternatively
Yet
whereas

Task Description	Done?
Homework will be set every two weeks linking to the project theme Below are some additional tasks you can complete with or without a camera:	
Without a camera task- Look at the different genres for Big Question no 1 choose your favourite and describe it using the analysing others work in the writing help section. **With a camera task-** take some photographs of your own inspired by one or more genres	
Without a camera task- Study the pictures in Big Q no 2 and then **l**abel the different parts of the DSLR pictures below: 	

READ ME

Shutter Priority (S or Tv)

Shutter priority is where you have control over shutter speed with the main dial on your camera and then the camera chooses the appropriate aperture for the given scene your camera is pointing at.

Shutter speed is the time that the shutter is open for. The longer the shutter speed, the more light will get into your camera.

Shutter speed also controls how much **motion blur** you have in your photographs. If you are shooting a moving object like a sports person, a bird or moving water, a longer shutter speed will blur this movement.

Shutter priority is great for sports and wildlife photography, where having the right shutter speed is imperative.

COMPLETE ME

Shutter Priority (S or Tv)

Shutter priority is where you have control over …… with the main dial on your camera and then the camera chooses the appropriate …… for the given scene your camera is pointing at.

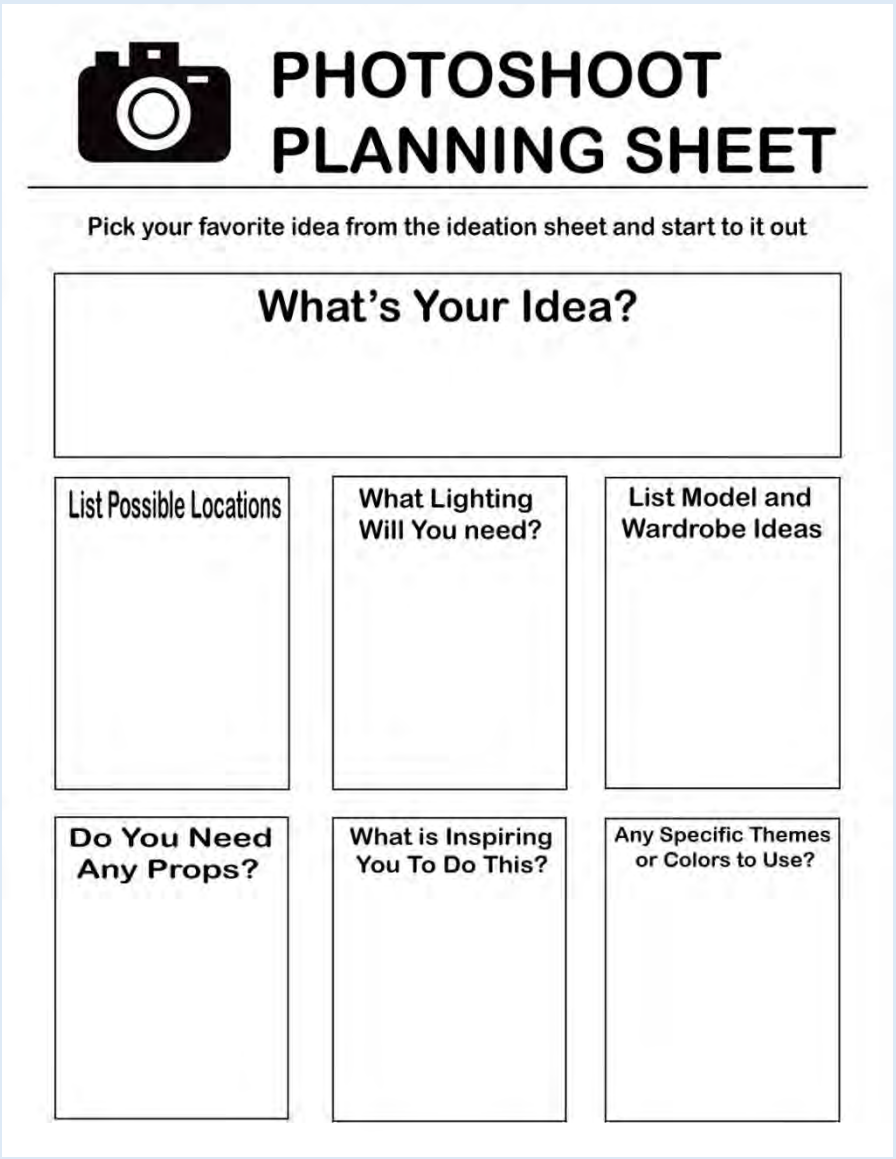
Shutter ……. is the time that the shutter is open for. The longer the shutter speed, the more ……. will get into your camera.

Shutter speed also controls how much **motion ……** you have in your photographs. If you are shooting a moving object like a sports person, a bird or moving water, a ……. shutter speed will blur this movement.

Shutter priority is great for sports and wildlife photography, where having the right shutter …… is imperative.

Without a camera task- Which of the formal elements is being shown in the pictures below? Go on the internet and find 10 pictures linked to the formal elements and make a collage like the one below using copy and paste.
With a camera task- take pictures looking for examples of the formal elements make a collage if you can

Without a camera task- Use the worksheet below to help you plan a photo shoot linked to one of the genres...



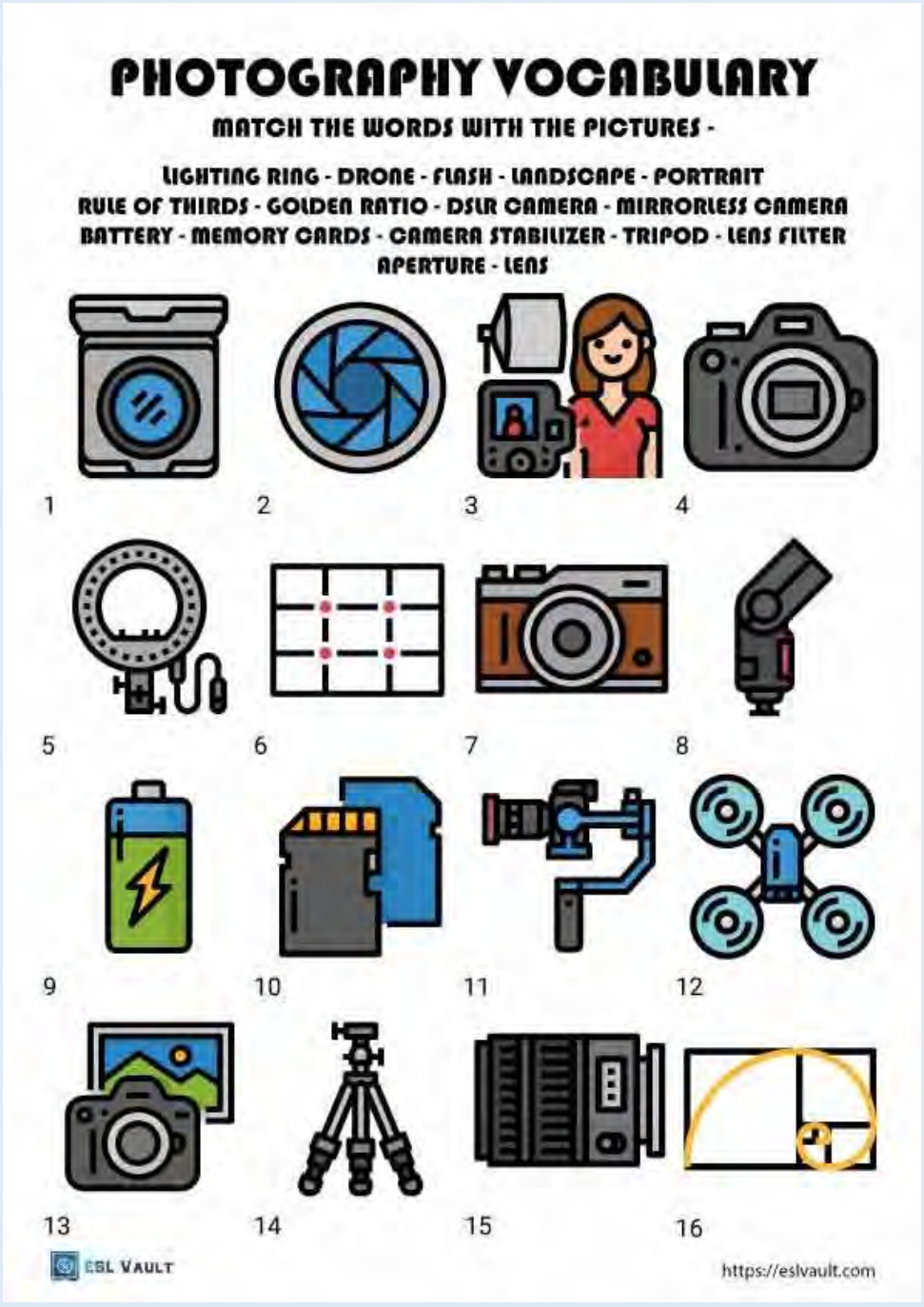
PHOTOSHOOT PLANNING SHEET

Pick your favorite idea from the ideation sheet and start to it out

What's Your Idea?

List Possible Locations	What Lighting Will You need?	List Model and Wardrobe Ideas
Do You Need Any Props?	What is Inspiring You To Do This?	Any Specific Themes or Colors to Use?

Without a camera task- complete the worksheet below…



Without a camera task- complete the worksheet below

photography

E	P	H	L	I	M	O	O	R	K	R	A	D	P
M	O	L	M	T	L	E	T	W	M	L	I	F	O
T	H	L	O	E	O	I	H	I	H	G	I	L	T
M	S	S	N	E	L	E	G	L	A	G	E	A	S
A	O	O	G	P	E	K	I	P	R	A	M	T	I
A	T	O	M	O	D	E	L	G	D	O	T	I	M
P	O	A	R	I	S	T	T	C	L	L	L	G	H
E	H	K	U	K	S	E	F	A	I	O	O	I	I
R	P	N	R	R	G	T	O	M	G	W	I	D	G
T	F	R	H	M	O	R	S	E	H	K	D	O	H
U	L	A	U	N	A	M	I	R	T	E	U	E	K
R	O	D	T	E	H	H	H	A	I	Y	T	O	E
E	S	O	L	A	T	K	D	I	N	T	S	H	Y
D	I	P	T	R	I	P	O	D	G	A	A	D	S

DIGITAL
HIGHKEY
LENS
STUDIO
ISO
MODEL
CAMERA
HARDLIGHT
LOWKEY
SOFTLIGHT
PHOTOSHOP
APERTURE
TRIPOD
MANUAL
FILM
DARKROOM
LIGHTING

Play this puzzle online at : https://thewordsearch.com/puzzle/232185/

Without a camera task- complete the worksheet below…

PHOTOGRAPHY - WORD SCRAMBLE GAME

Put the letters into the correct order.

PHOTO, IMAGE, CAMERA, LENS, FOCUS, MACRO, ZOOM, SHUTTER, TRIPOD, VIEW, FLASH, BACKGROUND, CONTRAST, CROP, CAPTURE, FILM, TONE, BRIGHTNESS

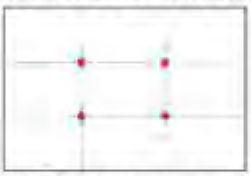
1. FMLI	.....
2. MAIGE	.....
3. TOPHO	.....
4. ATNRCTOS	.....
5. ESRHUTT	.....
6. MROCA	.....
7. SOCFU	.....
8. TNEO	.....
9. ETCRAPU	.....
10. RPCO	.....
11. SIEBSRHTGN	.....
12. DIRTPO	.....
13. IVEW	.....
14. BRNKCDUOAG	.....
15. SENL	.....
16. ZOOM	.....
17. HALFS	.....
18. RACEAM	.....

Without a camera task- identify which picture is using the Rule of thirds then sketch it in the grid

With a camera task- take photos using the Rule of Thirds

The Rule of Thirds

Imagine that your image is divided into 9 equal segments by 2 vertical and 2 horizontal lines.



Photographs with the focal point exactly in the centre can lack depth and interest, so it's better to position your focal point off-centre. To do this, apply the rule of thirds. Draw two horizontal and two vertical lines through the picture you want to capture. The eyes are naturally drawn to the four focal points illustrated in

Compare the two images above. A focal point placed in the centre often just looks boring, so avoid placing your focal point in the centre. You will see this rule being applied in any magazine you look at.

Centre focal point

Rule of Thirds

With a camera task- complete the worksheet below

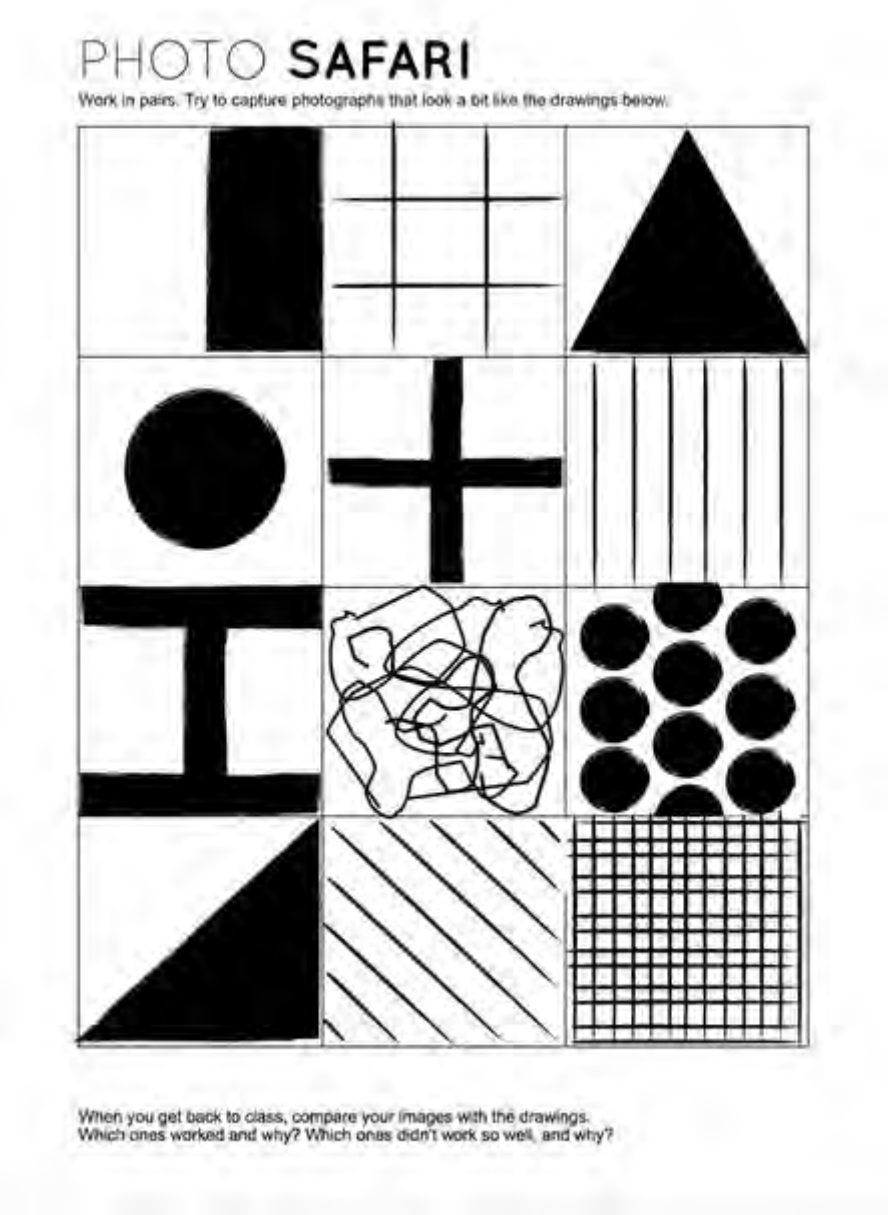


PHOTO **SAFARI**

Work in pairs. Try to capture photographs that look a bit like the drawings below.

When you get back to class, compare your images with the drawings.
Which ones worked and why? Which ones didn't work so well, and why?

Without a camera task- choose a photo from the KO and analyse it using the writing help
With a camera task- annotate one of your own photographs