Knowledge Organiser

Year 7 Autumn 1 2026

"Try to learn everything about something and something about everything"

Thomas Huxley

Thomas Henry **Huxley** (4 May 1825 – 29 June 1895) was an English biologist and anthropologist who specialized in comparative anatomy.

YEAR 7 KNOWLEDGE ORGANISER: THE HOUSE WITH CHICKEN LEGS

CHARACTERS

Marinka – A young girl who lives with her grandmother Baba. Baba is the guardian of the gate and tells Marinka it is her destiny to follow in her footsteps.	**Baba - Marinka's grandmother. She is a guardian which means she guides the dead through the gate to the stars.**
Jack - A tame bird who is Marinka's pet and her closest friend.	**Benjamin - A living boy who enjoys speaking to Marinka when she is staying near his village.**
Benji – A lamb who Marinka looks after for Benjamin.	**Nina – A girl who should pass through the gate but does not.**
Serina – Nina's sister who passes through the gate.	**The House – A walking house with chicken legs which interacts with the people who live there: Baba and Marinka.**

THEMES AND CONTEXT

Russian Folklore: **Russian folklore often features talking animals, enchanted forests and moral lessons.** **Stories usually involve a hero's journey, often with a test of their bravery, honour or wisdom.**	**Baba Yaga:** **Baba Yaga is a mysterious figure in Russian folklore.** **She is often shown as an old, powerful witch.** **She lives in a walking house that has chicken legs and is often shown as flying about on a giant pestle and mortar.**	**Themes:** **Grief and Death:** The "afterlife" is treated as a beautiful, natural transition rather than something scary. **Identity:** Marinka struggles to accept the heritage she was born into. **Belonging:** The story explores the tension between wanting to fit in with normal people and embracing your unique family.

VOCABULARY:

Ethereal – Delicate and otherworldly, often used to describe spirits or magical settings.	**Melancholy** – A deep sadness or sorrow.	**Genre** – A type of film, novel or music, for example rock or science-fiction.
Destiny – The idea of fate or an unavoidable path.	**Defiance** – Open resistance.	**Hesitant** – Unsure or reluctant.
Personification – When a writer gives human qualities to non-human things.	**Vibrant** – Full of life and energy, describing settings or emotions.	**Analyse** – to break a text down into smaller pieces—like characters, words, or settings—to learn *how* and *why* the author put it together.
Simile – When a writer makes a comparison between two things using “like a” or “as a”	**Transient** – Temporary or not lasting long.	**Characterisation** – the way an author or a playwright describes or shows what a character is like.
Metaphor – When a writer makes a direct comparison between two things.	**Apprehensive** – Feeling anxious or uneasy about something.	**Impetuous** - Acting quickly without thinking, often recklessly.

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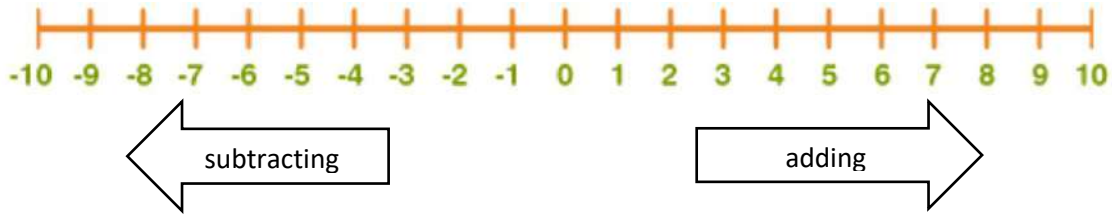
MATHS KNOWLEDGE ORGANISER – YEAR 7 HT 1

	Topic	Information	Examples
1	Place value	<table><tr><td>Thousands</td><td>Hundreds</td><td>Tens</td><td>Unit</td><td>•</td><td>tenths</td><td>hundredths</td><td>thousandths</td></tr><tr><td>1000</td><td>100</td><td>10</td><td>1</td><td>•</td><td>$\frac{1}{10}$</td><td>$\frac{1}{100}$</td><td>$\frac{1}{1000}$</td></tr></table>	45.26 means 4 tens, 5 units, 2 tenths and 6 hundredths
2	Integer	A **whole number** that can be positive, negative or zero	Numbers like 2, 5, 0, 287, -34. But not 6.7, $\frac{1}{2}$ or $\sqrt{2}$
3	Decimal places	The number of digits after the decimal point.	3.296 has 3 decimal places
4	Negative numbers	 • Adding a negative is the same as subtracting • Subtracting a negative is the same as adding	Move to the right to add and to the left to subtract
5	Inequalities	$x > 2$ means **x is greater than 2** $x < 3$ means **x is less than 3** $x \geq 1$ means **x is greater than or equal to 1** $x \leq 6$ means **x is less than or equal to 6**	State the integers that satisfy $-2 < x \leq 4$ -1, 0, 1, 2, 3, 4
6	Division	Splitting into equal parts or groups. The process of calculating the **number of times one number is contained within another one**. 'divide', 'share'	$20 \div 4 = 5$ $\frac{20}{4} = 5$
7	Multiplication	Can be thought of as **repeated addition**. 'multiply', 'times', 'product'	$3 \times 6 = 6 + 6 + 6$ $= 18$

Science Y7 Cells and Organisation Term 1

'Multi' means many; 'uni' means one.
Multicellular organisms contain many cells; **unicellular** organisms are made of only one or a single cell.

Organelles are parts of cells that have specific functions (jobs).

↓

Cells are the building blocks of living things.

↓

Groups of similar cells form a **tissue**.

↓

Different tissues work together to make up an **organ**.

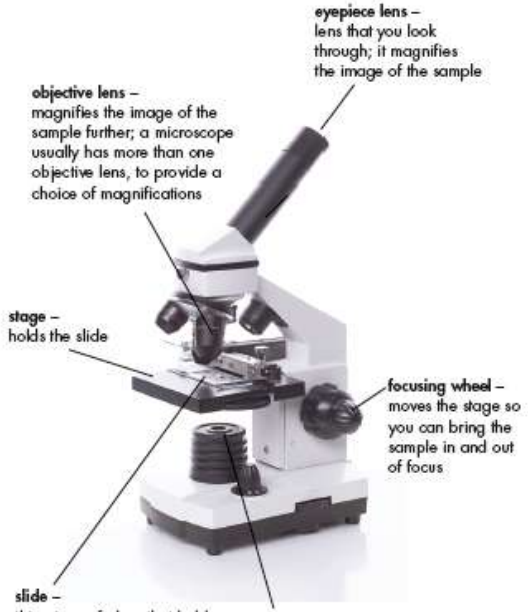
↓

Organs work together to make an **organ system**.

↓

Organ systems work together to form **organisms**.

A **light microscope** is used to **magnify** objects that are too small to see with the unaided eye. With a light microscope, we can observe microscopic organisms, such as bacteria, and inside cells to see the cell parts and organelles.



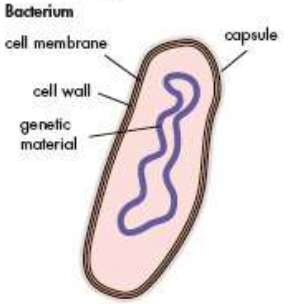
Electron microscopes allow much greater magnification than light microscopes. They are bigger and more expensive than light microscopes. They use a beam of electrons to form a very detailed image of a sample.

Organisms can be classed into two groups based on how their genetic material is stored.

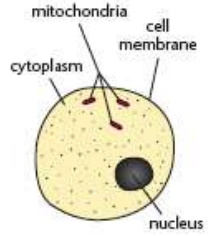
Prokaryotes:
- thought to be the first organisms on Earth
- all are unicellular
- don't have a nucleus
- have very few organelles
- example: bacteria.

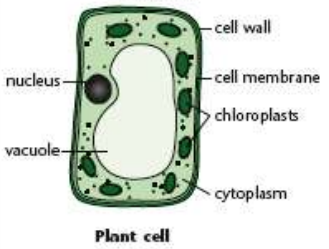
Eukaryotes:
- usually bigger and more complex than prokaryotes
- some are unicellular, most are multicellular
- genetic material is stored in a nucleus
- have other organelles, such as mitochondria
- examples: animals, plants, fungi, amoeba.

Unicellular organisms are simply a cell with organelles working together. Unicellular organisms are adapted in different ways. Examples are:
- **bacteria** – there are many types of bacteria but all have no nucleus
- **algae** – these are plant-like and contain chloroplasts to make their own food
- **yeasts** – these are fungus-like and absorb nutrients from their surroundings.



Animal cells and plant cells have some cell parts or organelles in common but some differences too. This is because the cells have different functions.





Key vocabulary	
algae	a unicellular organism that has a nucleus and contains chloroplasts for photosynthesis
bacterium	a simple unicellular organism; some bacteria can cause illness
capsule	structure that covers the outer layer of the cell wall of a bacterium
cell	the 'building block' that all living things are made from
cell membrane	the layer around a cell that controls substances entering and leaving the cell
cell wall	the tough outer layer of a plant cell
chloroplast	a structure in plant cells where photosynthesis takes place
cytoplasm	the main component of a cell; the place where reactions take place
electron microscope	an instrument that produces a magnified, detailed image of a sample using a beam of electrons
eukaryote	an organism whose cells store genetic material in a nucleus
genetic material	material that transmits information from one generation to the next during reproduction
light microscope	an optical device used to see magnified images of tiny objects and structures
magnify	to make something look bigger
mitochondria	the structures in a cell that produce energy (by respiration)
multicellular	made of many cells
nucleus	the part of a cell that contains the genetic material
organ	a collection of tissues that work together to perform a function
organelle	a structure in a cell with a specific function (job)
organism	a living thing
organ system	organs that coordinate with one another in body processes
prokaryote	a unicellular organism that has no nucleus
tissue	a collection of body cells that work together to carry out a task
unicellular	made of one cell
vacuole	a bubble of water and nutrients in a plant cell
yeast	a unicellular fungus

Science Y7 Cells and Organisation Term 1

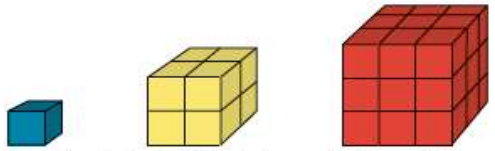
Cells in any organism start out exactly the same: these are called **stem cells**. These cells then grow and change their structure to adapt to a certain function. We say the cells become **adapted** and **specialised**.

Movement of substances in and out of cells:

- controlled by the cell membrane
- substances such as glucose and oxygen pass into cells
- waste products such as carbon dioxide and urea pass out of cells
- only some substances allowed through the cell membrane, so it is a **semi-permeable membrane**.

How quickly diffusion happens depends on several factors or **variables**:

- temperature – the higher the temperature, the faster the rate of diffusion
- concentration of particles – the greater the difference in concentration between the two sides of the cell membrane, the faster the rate of diffusion
- **surface area**-to-**volume** ratio – the higher the ratio for a cell, the faster the rate of diffusion.



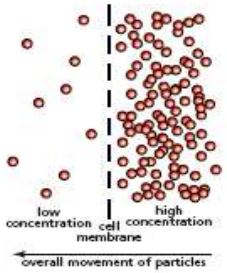
The smaller cube has the highest surface area-to-volume ratio; this means that diffusion can happen at a faster rate across smaller cells than larger cells.

surface area of a cube = area of one side × number of faces

volume of a cube = length × breadth × height

surface area-to-volume ratio = surface area ÷ volume

Diffusion is the movement of substances (in the form of liquid or gas particles) from an area of high **concentration** to an area of lower concentration, until the concentration is equal throughout. For cells, diffusion occurs across the cell membrane when the concentration of a substance inside the cell is different to the concentration of that substance outside the cell.



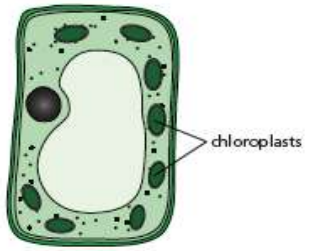
Specialised animal cells include **sperm cells**, **muscle cells**, **nerve cells**, **red blood cells** and **egg cells**. All these cells have a nucleus, cell membrane and cytoplasm, but they look very different.

Sperm cells have a tail to move them and a large head containing a nucleus (this contains the genetic material).

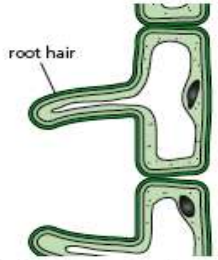
Nerve cells have long extensions of cytoplasm that allow them to transmit impulses around the whole body.

Muscle cells are made of protein fibres that can expand and contract and have lots of mitochondria to provide energy for movement.

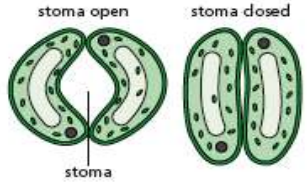
Specialised plant cells include upper **leaf cells**, **root hair cells** and **guard cells**. Each is adapted to its function (job).



Leaf cells contain chloroplasts to absorb energy transferred from sunlight for photosynthesis.



Root hair cells have long extensions, called root hairs, that absorb water into the roots. They do not have chloroplasts, because chloroplasts are needed to absorb energy transferred from sunlight and these cells are not exposed to sunlight.



Guard cells can change shape to open a space to allow gas to pass into and out of the leaf.

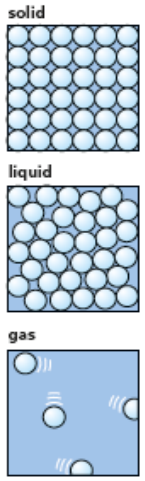
Key vocabulary	
adapted	having special features that help with a specific function (job)
concentration	the amount of something per unit volume, for example, sugar dissolved in water
diffusion	particle movement that causes particles in a liquid or gas to spread out
egg cell	the female sex cell in animals
guard cell	a specialised leaf cell, found on either side of a stoma (pore), that controls the opening and closing of the stoma
leaf cell	a specialised cell within a leaf; some are specialised for photosynthesis, for example
muscle cell	a specialised body cell that makes up muscle tissue
nerve cell	a specialised body cell that transmits information around the body in the nervous system
red blood cell	a specialised cell in the blood that carries oxygen
root hair cell	a specialised plant cell found on plant roots
semi-permeable membrane	a membrane that allows some, but not all, particles to pass through
specialised cell	a cell that has features that help with a specific function (job)
sperm cell	the male reproductive cell of an animal
stem cell	an unspecialised body cell that can develop into another, specialised cell
stoma	the pores on the underside of a leaf, surrounded by guard cells
surface area	area of the outer surface of an object
variable	something that increases or decreases over time or has a different value in different situations
volume	amount of space an object takes up

Science Y7 The particulate nature of matter Term 1

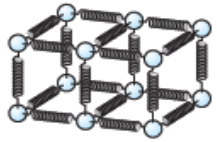
All **matter** is made from **particles**, which are arranged in the different **states of matter**.

- In solids, the particles vibrate in their fixed positions.
- In liquids, the particles move randomly from their positions, but are always in contact with other particles.
- In gases, the particles move about randomly and very quickly, widely separated but colliding with other particles.

Temperature affects how quickly the particles move. At higher temperatures, particles in a solid vibrate faster, while in liquids and gases particles move around faster.



The particles in a solid have very strong, attractive forces between them, which hold the particles in their positions.

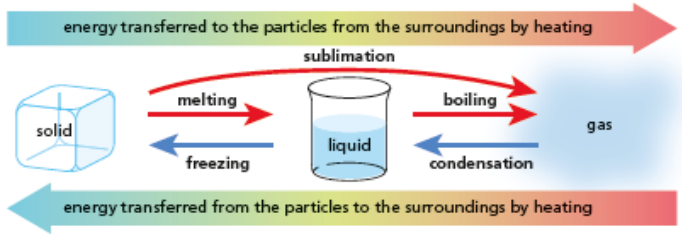


The forces between the particles in liquids are still strong, but not as strong as in solids. Gases have the weakest forces between particles.

When gas particles or liquid particles move, they collide with other particles and also with the sides of the container they are in. **Pressure** is a measure of the average force of these collisions over the area of the container's sides. The standard units of pressure are **kilopascals (kPa)**.

State of matter	solids	liquids	gases
Shape	fixed shape and cannot flow because the particles cannot move from their fixed positions	flow and take the shape of their container because the particles can move past each other	flow and fill their container because the particles can move around quickly in any direction
Compression	cannot be **compressed** as the particles are close together in a fixed position	cannot be compressed because their particles are close together and there are no spaces for them to move into	can be compressed because the particles are far apart with space between them for particles to move into

The change from a solid to a liquid or a gas, and from a liquid to a gas, are reversible changes. They are called **physical changes**. When materials are heated or cooled, they may change from one state to another. Water freezes to become ice at 0 °C and boils to become a gas at 100 °C.



Boiling only happens at the **boiling point**, and the whole liquid turns into a gas. The particles gain enough energy to leave the liquid.

Evaporation occurs at any temperature between the melting point of a liquid and its boiling point. It only happens at the surface of the liquid. Some of the particles gain enough energy to leave the surrounding particles and become a vapour.

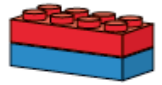
Atoms are the smallest parts of all substances. We can represent an atom by writing its element name, writing a symbol, or drawing a simple circular particle. John Dalton was the first person to propose using particles to represent atoms.

Some atoms can chemically bond together to form **molecules**. Here is a molecule of hydrogen and a molecule of oxygen.

Elements contain only one type of atom. Most elements are metals. Each element is identified by a unique symbol, which always begins with a capital letter.

Compounds are made from the atoms of more than one element, chemically bonded together. Compounds have different properties from the original elements.

We use the chemical symbols of the elements to write the **chemical formula** of the compound, which represents the **ratio** of atoms in each unit of the compound.



1 red brick and 1 blue brick, the ratio is 1:1
This model could represent one unit of the compound copper oxide, CuO

2 red bricks and 1 green brick, the ratio is 2:1
This model could represent one molecule of the compound carbon dioxide, CO_2

Key vocabulary

atom	the basic 'building block' of an element; it cannot be chemically broken down
boiling	the process that happens when a liquid changes state and turns into a gas, by reaching its boiling point
boiling point	the temperature at which a liquid changes state to a gas (or at which a gaseous substance condenses)
chemical formula	chemical symbols and numbers that show which elements, and how many atoms of each, a compound is made up of
collision	when objects hit each other with force
compound	atoms of more than one element chemically bonded together
compress	to make smaller by squashing or pushing together
condensation	the process that happens when a gas changes into a liquid when the temperature drops to the boiling point; for example, when water vapour condenses to form liquid water
element	a substance made of only one type of atom
evaporation	the process that happens when a liquid changes to a gas at the surface of the liquid; for example, when water evaporates to form water vapour
freezing	the process in which a liquid turns into a solid by being cooled to its melting point; for example, when water freezes to form ice
kilopascal (kPa)	unit of pressure
matter	anything that takes up space and has mass
melting	the process in which a solid turns into a liquid by being heated to its melting point; for example, when ice melts to form water
molecule	two or more atoms held together by strong chemical bonds
particle	a very small part of a material, such as an atom or a molecule
particle model	a scientific model in which all matter is made of a large number of very small particles; used to explain the properties of solids, liquids and gases
physical change	physical changes are reversible and include dissolving and changes from one state (solid, liquid or gas) to another
pressure	the average force on a certain area
ratio	a link between two values; for example, if the first value is twice the second value, the ratio is 2:1
state of matter	solid, liquid or gas
sublimation	the process that happens when a solid turns into a gas when heated, without becoming a liquid first
temperature	a measure of how hot an object is; the unit is normally degrees Celsius (°C)
viscosity	the resistance to flow

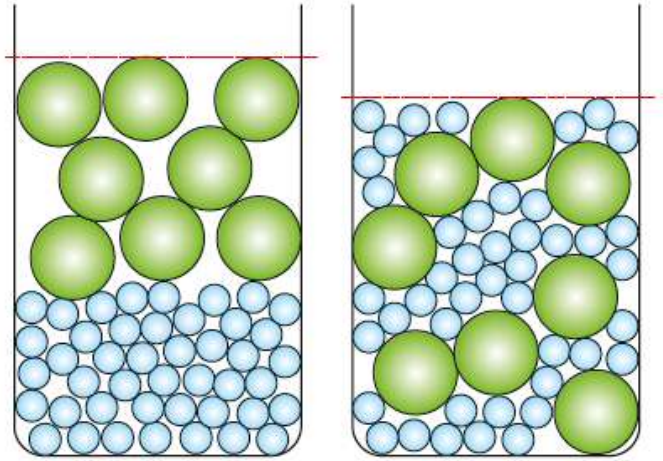
Science Y7 The particulate nature of matter Term 1

The law of **conservation of mass** means that matter cannot be destroyed or created, only transformed. This means that when a reaction takes place, the mass of the reactants always equals the mass of the products. This is also true when substances change state, when solutions are mixed together, or if a solute is dissolved in a solvent to form a solution.

Sometimes there appears to be a change in mass during a physical or **chemical change**. This change in mass can usually be explained because one of the reactants or products is a gas.

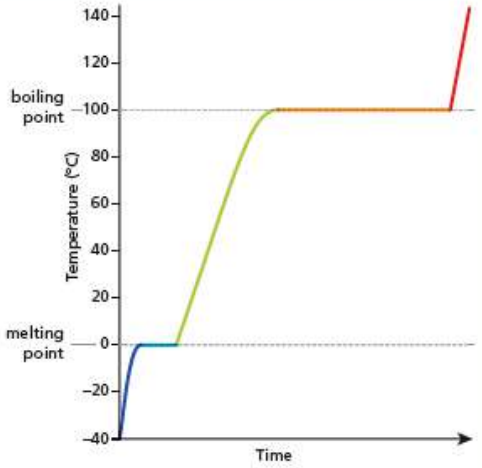
In a chemical reaction, the mass of the products may be less than expected because one of the products is a gas that has escaped into the surrounding air. If the mass of the products is more than expected, then one of the reactants is a gas. The gas atoms have chemically bonded to one of the other reactants.

When alcohol and water are mixed the volume is less, but the mass stays the same. This is because there are the same number of particles, but the mixture takes up less room



When a solid is heated, its temperature increases until it reaches its **melting point**. At the melting point, all the **energy transferred** by heating is used to overcome the forces between the particles, until the solid changes state. The temperature remains constant until all the solid has changed state. This 'extra heat' needed for the change of state is called **latent heat**.

This graph shows what happens to the temperature as an ice cube is heated. At the melting point, 0 °C, the temperature remains constant until all the substance has changed state from a solid to a liquid. The temperature also remains constant at the boiling point of 100 °C, until all the water has changed state from a liquid to a gas.



Heating causes solids, liquids and gases to **expand**. This is called **thermal expansion**. It means they take up more space when they are hot compared to when they are cold. Gases expand more than solids and liquids.

Diffusion is the movement of particles from an area of high **concentration** to an area of low concentration, until the concentration is equal throughout.

Diffusion happens because of the movement of particles in a gas or a liquid. There is hardly any diffusion in solids because the particles cannot move freely. Gas particles move faster and further than liquid particles, so diffusion in gases occurs faster than in liquids.

Key vocabulary	
accurate	an accurate measurement is one that is close to the true value
chemical change	an irreversible change caused when one substance combines with another to form a new substance, or one substance breaks down to form two or more others
concentration	a measure of the number of particles in a certain volume or space
concentration gradient	the difference in concentration between two areas
conservation of mass	matter cannot be destroyed or created, only transformed; this means the total mass does not change during physical changes or chemical reactions
diffusion	the movement of particles from a higher concentration to a lower concentration
energy transfer	the passing on of energy from one energy store to another
expand	get bigger
latent heat	the heat needed to change the state of a substance
melting point	the temperature at which a solid changes state to a liquid (or a liquid substance freezes)
precise	measurements are precise if they are clustered together around the mean
repeatable	measurements are repeatable when the same person carries out the same experiment under the same conditions and gets similar results
thermal expansion	when particles in a solid or liquid gain enough energy to occupy more space
true value	the actual value that a measurement should be

Science Y7 Forces Term 1

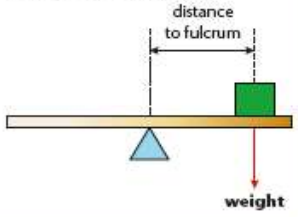
A force applied to an object can stretch, **compress**, twist or try to snap it, or cause it to speed up, slow down or change its direction of motion.

Forces can be **contact** forces, such as water or **air resistance**, or **non-contact forces**, such as gravity.

Forces can be shown by arrows. The direction of the arrow shows the direction of the force and the length of the arrow indicates the size of the force.

Hooke's Law says that if an object is loaded then the **extension** will be proportional to the **load** as long as the **elastic limit** is not exceeded.

The **moment** of a force is its turning effect. Its size is the force multiplied by the distance from the turning point.

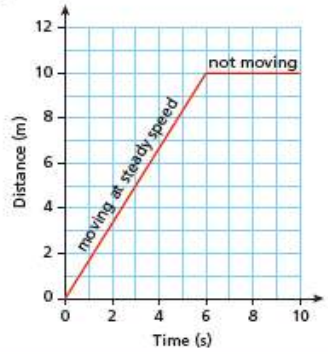


Speed is calculated using the equation:

speed = distance ÷ time

The average (mean) speed for a journey is the total distance divided by the total time.

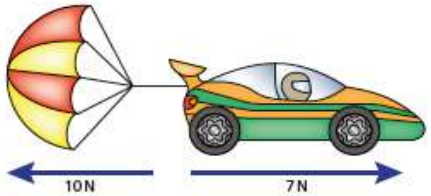
A journey can be displayed on a **distance–time graph**, with distance on the vertical axis and time on the horizontal axis. The gradient of the line shows the speed.



Key vocabulary

air resistance	frictional resistance when something moves through the air
elastic behaviour	when a material returns to its original shape and size after a stretching or compressing force is removed
effort	the force applied when using a machine
elastic limit	the maximum force that can be applied for a material to remain elastic; if this limit is exceeded the extension will no longer be proportional to the force
extension	the amount by which an elastic material has got longer
friction	a force that opposes movement
fulcrum	the point about which something turns; also called a pivot
lever	a machine that either increases the size of a force or the distance over which the force acts; this is done by using the turning effect of a force around a fulcrum (pivot)
moment	size of turning effect of a force around a fulcrum (pivot) – the direction of the moment can be clockwise or anticlockwise
newtonmeter	a device that uses the stretching of a spring to measure force
normal contact force	the force that acts when an object touches a surface; it is at right angles (90°) to the surface
relative speed	movement of one moving object in relation to another object
speed	how fast something travels; measured in metres per second (m/s)
weight	the force of gravity acting on an object

An **unbalanced force** is needed to get an object to move, to stop it from moving, to change its speed or alter its direction. This change will depend on the size and direction of the different forces.



If all the forces are **balanced**, a moving object will continue at the same speed and in the same direction.

Objects float because of balanced forces. The weight of the object is balanced by the **upthrust** provided by the water.

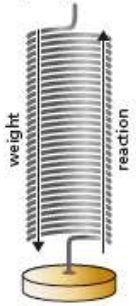
Pressure is calculated using the equation

pressure = force ÷ area

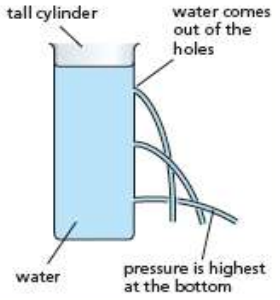
If the force is measured in **newtons** and the area in square metres the pressure will be in newtons per square metre (N/m²).

The higher in the atmosphere, the lower the **atmospheric pressure** on a surface. This is because the pressure is caused by the weight of the air above that surface.

If opposing forces act on an object they may hold it in **equilibrium**. An example of this is a weight suspended on a spring.



The deeper down in a liquid, the greater the pressure becomes, because there is more liquid above that point.



Key vocabulary

atmospheric pressure	the pressure on a surface exerted by the weight of air above that point
balanced forces	forces on an object that act in opposite directions and where the total force in one direction is equal in size to the total force in the opposite direction
equilibrium	a state of rest or balance due to opposite forces being equal
gravitational force	the force that pulls masses towards one another
newton (N)	the standard unit of force
pressure	the force acting divided by the area over which the force acts; measured in N/m²
unbalanced forces	forces acting on an object where the total force acting in one direction is not equal in size to the total force acting in the opposite direction
upthrust	the upward force that a fluid exerts on an object in it
work done	energy transferred by a force moving a load, measured in joules (J)

Science Y7 Energy Term 2

Stored **energy** is called **potential energy**. Energy can be stored in several different ways:

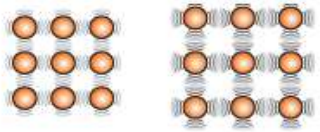
- **chemical potential energy** (for example, in **fuels** and food)
- **elastic potential energy** (for example, in a stretched or compressed spring)
- **gravitational potential energy** (for example, an apple on a tree)
- **kinetic energy** (for example, a moving car)
- **thermal energy** (for example, a hot cup of tea) – it is responsible for the temperature of an object.

Energy transfer is the passing on of energy from one store to another. Energy can be transferred between stores in various ways including heating, doing mechanical work, by an electrical current or by waves.

We measure energy in **joules (J)** or **kilojoules (kJ)**.

Power is the rate at which energy is transferred. It is measured in **watts (W)** and **kilowatts (kW)**.

Different **foods** contain different amounts of energy per gram.



Thermal (heat) energy is transferred through a material by **conduction**. The vibrating particles within the material transfer energy by colliding with their neighbours. A material that conducts heat is called a **thermal conductor**, a material that does not is called a **thermal insulator**.

Electricity can be generated using **renewable energy** sources, such as the wind, or **non-renewable energy** sources, such as gas.

Gas and electricity companies calculate the cost of home energy use using the unit **kilowatt-hours (kW h)**.

The cost of using an electrical appliance can be calculated using the equation:

cost = power (kW) × time (hours) × price (per kWh)

Key vocabulary

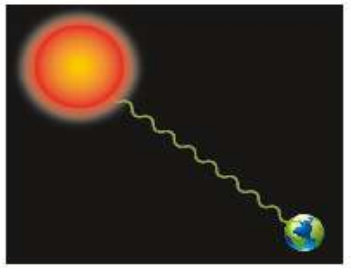
conduction	the transfer of energy by passing on energy to nearby particles
energy	the potential to do work or produce heat
energy transfer	the passing on of energy from one energy store to another
food	a substance that provides living things with nutrients and energy
fuel	a material that is burned to release its stored energy
joule (J), kilojoule (kJ)	unit of energy; 1000 J = 1 kJ
kilowatt-hour (kW h)	the energy transferred in 1 h by an electrical appliance with a power rating of 1 kW
non-renewable energy	energy from a source, such as a fossil fuel, that will run out because it cannot be replaced quickly enough
power	amount of energy that something transfers each second; measured in watts (W)
radiation	energy given out in the form of a wave; it can pass through a vacuum
renewable energy	energy from a source that will not run out, such as the sun or wind
temperature	the measure of how hot or cold an object is; unit is degrees Celsius (°C)
thermal conductor	a material that allows energy to pass through it quickly by the process of thermal conduction
thermal insulator	a material that does not allow energy to pass through it quickly by the process of thermal conduction
watt (W), kilowatt (kW)	unit of power; 1000 W = 1 kW; 1 W is equal to a joule per second (1 J/s)

When energy is transferred, not all of the energy is useful for the intended purpose. We say that any energy transferred to a store where we cannot use it is **wasted energy**. This can happen, for example, when friction heats up two surfaces that rub together, or when a hot object heats up the air around it.

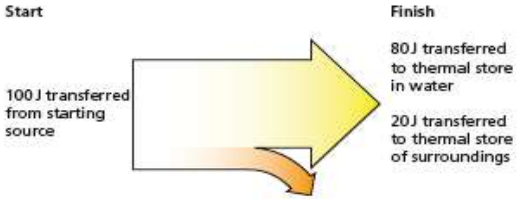
When energy is being transferred, we can keep track of the increase or decrease in the amounts of energy in each store by drawing an **energy transfer diagram**.

Whenever energy is transferred no energy is ever 'lost' or 'used up'. The quantity of energy stored before the change is the same as the quantity stored after the change. This is called the **law of conservation of energy**.

Thermal (heat) energy can be transferred from a hotter object to a cooler one by thermal **radiation**. The energy is transferred as a wave, and does not require the presence of particles to travel through.



The energy supplied to and the energy outputs from a system can be represented on a **Sankey diagram**. This shows which of the outputs are useful. The width of each arrow represents how much energy is transferred, so the diagram also shows the proportion of the input energy that is useful and that the total amount of energy is conserved.



Key vocabulary

chemical potential energy	the energy store that is emptied during chemical reactions
elastic potential energy	the energy store of an elastic object when it is stretched or compressed
energy transfer diagram	a diagram with arrows showing how energy is transferred between energy stores
gravitational potential energy	the energy store of an object because of its height above the ground
kinetic energy	the energy stored in a moving object
law of conservation of energy	energy cannot be created or destroyed, only stored or transferred; this means that the total energy is the same before and after a change
Sankey diagram	an energy transfer diagram that shows what proportion of the input energy is transferred as useful or as wasted output
thermal energy	the energy store filled when an object is warmed up

Geography Year 7 – Topic 1 - Our Place in the World Knowledge Organiser

Homework 1

Create a table with two columns titled – **Physical Geography** and **Human Geography**

1. Define each type of Geography in your table. Here are the definitions to help -

- The branch of geography dealing with natural features
- The branch of geography that describes the interactions between humans and the natural world..

2. Put the following features in the correct column of your table.

- Coasts
- Energy
- Rivers
- Mountains
- Houses
- Cities
- Deserts
- Cliffs
- Healthcare
- Earthquakes
- Transport
- Volcanoes
- Jobs
- Rainforests
- Education

Homework 2

1, Complete the two revision quizzes on the links below. If you get any incorrect, please do the quiz until you get 100% on both.

- Continents and Oceans - World: Continents and Oceans - Map Quiz Game - Seterra
- Latitude and Longitude - What is longitude and latitude? - BBC Bitesize

2. Answer the questions below in your homework book. Use a world map on internet for help if needed.

1) Which continent is northeast of Asia?	6) Which line of latitude is at 23.5° North?
2) Which ocean is to the east of North America?	7) Which continent is Brazil located in?
3) Which line of latitude is at 0°?	8) Which ocean is the largest one in the world?
4) Which continent has the largest land mass?	9) Which line of latitude is 23.5° South?
5) Which ocean is around Antarctica?	10) Which continent is south of Europe?

Homework 3

Fieldwork in Geography is where you collect information outside the classroom.

Your task is to do a questionnaire to find out information on the places where people have lived, did live or have visited.

Task 1: Ask five adults you know the following questions as part of your questionnaire, Note down their answers in your homework book.

1) Where do you currently live?
2) If you have lived in a different place before, where?
3) Name three places you have visited abroad or in the UK.

Task 2: Summarise your findings in a paragraph. Are there any similarities between answers? What are the differences? What does this tell you about the world we live in?

Homework 4

Research **one** of the following mountainous areas in the UK. Use the internet to help.

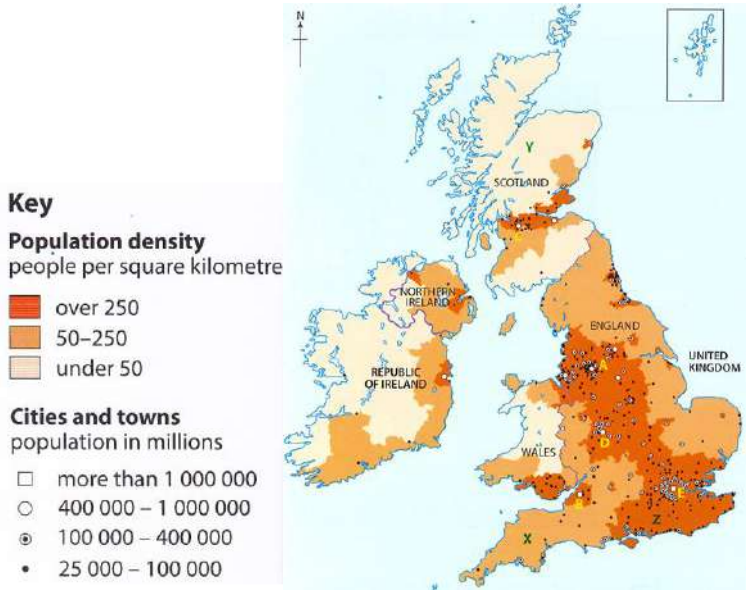
1. Scottish Highlands
2. Lake District
3. Peak District
4. Snowdonia

Include the following:

- **Location** – Where is it and which UK country (nation) is it in?
- **Physical Features** – Mountains, lakes, valleys, rivers, and famous landmarks.
- **Wildlife** – Animals and plants found in the area.
- **Climate** – Typical weather and how it affects the landscape.
- **Tourism** – Why people visit and what activities they can do.
- **Conservation** – Why the area is protected and any environmental challenges it faces.

Homework 5

1. What does the term population density mean?
2. Identify three areas of high population density in the UK.
3. Identify three areas of low population density in the UK.
4. Explain two reasons why some areas have a high population density.
5. Explain two reasons why some areas have a low population density.



Homework 6

Answer the following questions using the OS map:

1) What is the 4-figure grid reference for the milestone (MS)?

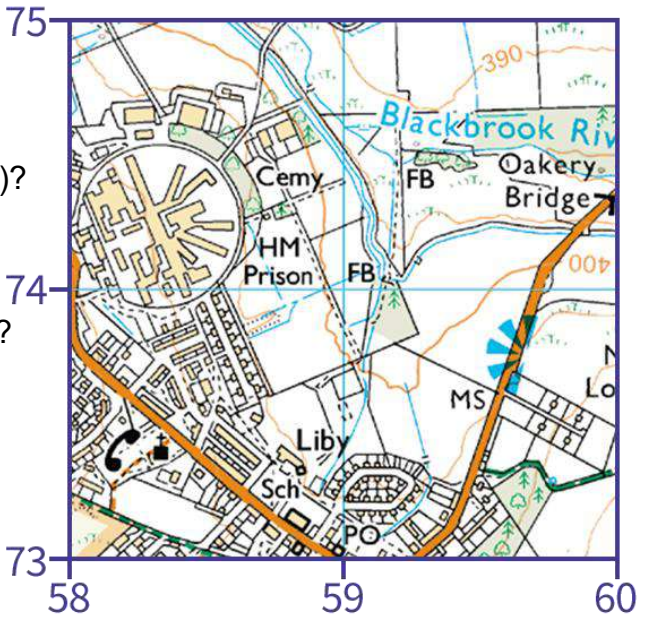
2) In which grid square would you find Oakery Bridge?

3) What is the 6-figure grid reference for the telephone box?

4) What is at 588 732 on the map?

5) Which is the highest point shown in grid square 5974?

6) What direction is Oakery Bridge to the library (Liby)?



Homework 7

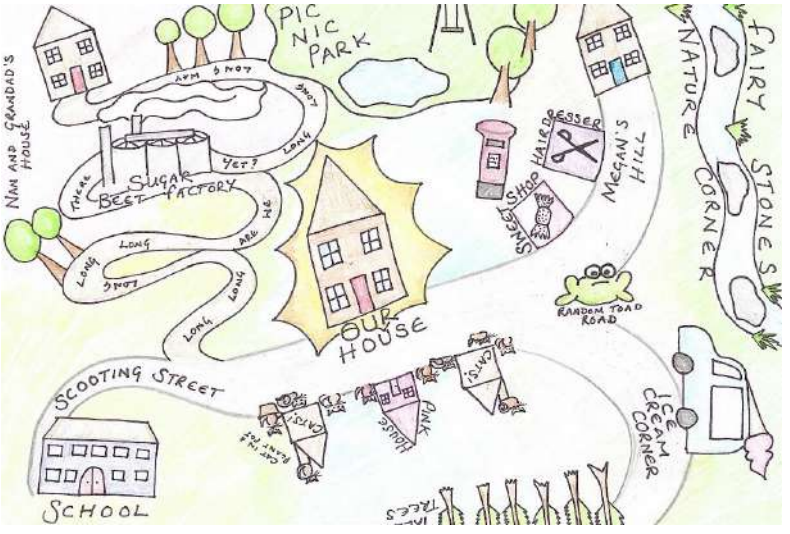
In Geography sketch maps can we used to identify key features in a paritcular area. Your task is to create a sketch map on A4 paper of your local area where you live. (See example below).

You could include the following depending on where you live:

- Human features: roads, houses, shops, school, parks, churches, railways, car parks, etc.
- Physical features: Rivers, woodland, fields, farmland, lakes, hills, etc.

Include any other features you have near your home onto your sketch map.

You may include a key if you wish.

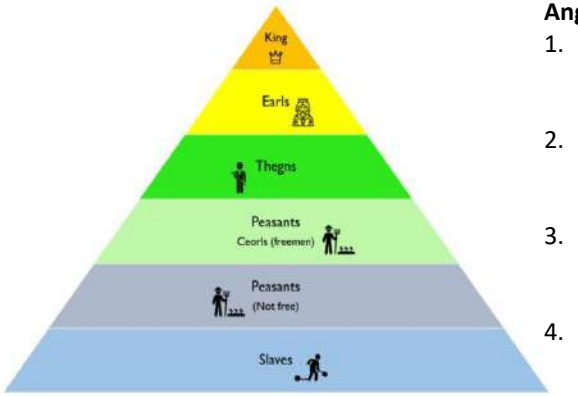


Year 7- How strong was Anglo-Saxon England on the eve of 1066? Knowledge Organiser

1. Key terms

Hierarchy	A system in which people or things are put at levels or ranks according to their importance.
Monarch	The ruler of the country or nation.
Earldoms	The territory governed by an earl.
Witan	The King's council of advisors. Made up of nobles who advised the king and chose the next in line to the throne when there was no heir
Shire	An area of land within England- similar to a county today.
Shire reeve	The King's representative in each shire of England
Succession	To inherit a title (e.g. the title of King)
Succession Crisis	A situation where it is not clear who will inherit the title of King.
Legitimacy	The rightfulness of a monarch's rule, and the public's acceptance of that rule.
Heir	The next in line to the throne
Claimant	Someone who believes they have the right (claim) to be the next king.

2. The structure of Anglo-Saxon society



3. The structure of Anglo-Saxon government

Anglo-Saxon Government:

1. The king- His role was to protect his people from attacks and give laws to maintain security.
2. The Witan- They advised the king on important matters and also approved the new king.
3. Earls- collected taxes, oversaw justice and could raise armies. They helped the king govern England.
4. Shire reeves- collected taxes, fines, enforced the law and provided men for the part time army in their shire.

4. Crime and punishment in Anglo-Saxon England

Policing:	Courts:	Trials:	Punishments:
Citizens were responsible for controlling crime in their communities. Some strategies involved: • Hue and Cry: a loud cry calling for the pursuit and capture of a criminal. If someone did not cry, they could be responsible for damage to the victim. • Tithing: a group of ten householders who lived close together and were collectively responsible for each other's behaviour.	There were three main courts in the Anglo-Saxon period: • Shire Courts - dealt with large crimes that impacted a large area. • Hundred Courts - dealt with small crimes that impacted the local community. • Ecclesiastical (Church) Courts - dealt with any crime that was committed in a church or on church land.	**Trial by Ordeal**: Painful tests carried out on the criminal to test innocence. If God intervenes then they are not guilty. Used with a lack of evidence. **Witan Trial**: The Witan was the king's court. This dealt with serious crimes and nobles who broke the law. **Trial by jury**: A criminal could be tried in a court by a jury. Failure to appear meant the accused was classed as an outlaw who could be punished by death.	Common Punishments include the following: • Execution • Sold into slavery • Exiled: Forced to live in a far away place. • Stocks and Pillory • Blood Feud: Revenge for a crime – retaliatory. Can go on for a long period between families. • Weregild: You have to pay a fine to the victim or family of the victim of the crime.

5. How threatening were the Vikings?

- 793AD= First Viking invasion at Lindisfarne. The Vikings raid villages and monasteries and steal gold, silver, cattle and slaves.
- 871AD= The Vikings have conquered Northumbria, East Anglia and Mercia. They manage to conquer Wessex by defeating King Athelred of Wessex.
- 878AD= Athelred's brother Alfred defeats the Vikings. The Vikings agree to leave Wessex and stay in the Danelaw (North and East England).
- The Vikings settle in the north and east bringing their own language, laws, customs.
- 1016- Danish Prince Cnut invaded England- the battle was the conclusion to the Danish reconquest of England.
- 1066- after the Anglo-Saxons had regained power under Edward the Confessor, the final Viking invasion came after his death, when Harald Hardrada fought Harold Godwinson at the Battle of Stamford Bridge.

6. Key events of 1066

- 4th January 1066 Edward the Confessor dies with no heir
- 6th January 1066 Harold Godwinson crowned King
- July 1066 Harold prepares his army on the south coast for a Norman invasion
- September 1066 Harald Hardraada and Vikings invade England in the North
- 20th September Battle of Fulford Gate – Vikings defeat Morcar and an English army
- 21st September Harold marches North
- 25th September Battle of Stamford Bridge – Harold defeats Harald Hardaada– English victory.
- 27th September William sets sail for England
- 28th September William lands at pevensey Bay, England
- 29th September William occupies Hastings
- 6th October Harold arrives back in London
- 14th October Battle of Hastings – Norman victory. Harold Godwinson is killed.
- 25th December 1066 William the Conqueror is crowned King of England

French Knowledge Organiser – Year 7 - Half Term 1

Homework 1	
The French have lots of different ways of greeting each other and saying goodbye.	
Bonjour	Hello
Bonsoir	Good evening
Salut	Hi
French people who know each other well greet others with 'la bise'.	
La bise: an exchange of kisses on the cheek	
Au revoir	Goodbye
À toute à l'heure	See you later

Homework 2
A cognate: a word that looks or sounds similar in French and English e.g. mai = May.
A noun: a word for a person, place, object or thing e.g. boy, France, table, love If you can put MY / THE / A in front of it, it's a noun.
An article: little words that come before a noun – 'the', 'a' and 'an' are articles in English
A pronoun: a word that takes the place of a noun e.g. I, he, she, it, we.
A verb: a word used to describe an action or state.

Homework 3	
Speaking French in class helps us to practice and feel more confident in the language. Here are some useful phrases:	
Je voudrais un stylo	I would like a pen
Je voudrais aller aux toilettes	I would like to go to the toilets
Oui	Yes
Non	No
S'il vous plaît	Please
Merci	Thank you
De rien	You're welcome
Répétez	Repeat
Je ne comprends pas	I don't understand
Je ne sais pas	I don't know

Homework 4	
Un	One
Deux	Two
Trois	Three
Quatre	Four
Cinq	Five
Six	Six
Sept	Seven
Huit	Eight
Neuf	Nine
Dix	Ten
Onze	Eleven
Douze	Twelve
Treize	Thirteen
Quatorze	Fourteen
Quinze	Fifteen
Seize	Sixteen
Dix-sept	Seventeen
Dix-huit	Eighteen
Dix-neuf	Nineteen
Vingt	Twenty
To talk about your age in French, you say you 'have' years rather than 'being' an age.	
J'ai	I have
J'ai onze ans	I'm 11 years old
J'ai douze ans	I'm 12 years old

Homework 5	
To write the date in French, you write the day of the week, followed by the number, followed by the month.	
In French, you just need the number and the month, the number doesn't have "th" or "st" like it does in English.	
The only time you don't just use the number is on the first of the month, for which you use "le premier" or "1er".	
In French, days of the week and months do not have capital letters.	
janvier	January
février	February
mars	March
avril	April
mai	May
juin	June
Juillet	July
aout	August
octobre	Octobre
novembre	Novembre
décembre	Decembre

Homework 6	
Les jours = The days	
Lundi	Monday
Mardi	Tuesday
Mercredi	Wednesday
Jeudi	Thursday
Vendredi	Friday
Samedi	Saturday
Dimanche	Sunday
Mon anniversaire est le…	My birthday is the…

GERMAN YEAR 7
HT1 into HT2

Homework 1:

1. A **cognate** = a word which is similar in German and in English
   e.g. **Januar** – **January**
2. A **noun** = a word used to identify something e.g. **table**
3. Nouns in German always begin with a capital letter !
4. Can you put MY / THE / A in front of it ? It's a noun = needs a capital letter !
5. A **pronoun** = a word that takes the place of a noun e.g. I, he, she
6. A **verb** = a word used to describe an action e.g. to live ➔ German infinitive verbs usually end in 'en', e.g. wohnen

Homework 2:

1. DEFINITE article = THE
2. der = THE (masculine nominative)
3. die = THE (feminine nominative)
4. das = THE (neuter nominative)
5. INDEFINITE article = A / AN
6. ein = A (masculine nominative)
7. eine = A (feminine nominative)
8. ein = A (neuter nominative)
9. The nominative is used to translate the subject of the sentence.

Homework 3:

1. eins
2. zwei
3. drei
4. vier
5. fünf
6. sechs
7. sieben
8. acht
9. neun
10. zehn
11. elf
12. zwölf
13. dreizehn
14. vierzehn
15. fünfzehn
16. sec**hz**ehn
17. sie**bz**ehn
18. achtzehn
19. neunzehn

Homework 4:

1. To give a date in German (e.g. 7th) you need to apply the following rule:
2. numbers 1 – 19 = add 'ten' onto the end of the number - e.g. vierten
3. EXCEPTIONS: ersten (1st), dritten (3rd), siebten (7th), achten (8th)
4. numbers 20 – 31 = add 'sten' onto the end of the number - e.g. zwanzigsten

Homework 5:

1. Montag = Monday
2. Dienstag = Tuesday
3. Mittwoch = Wednesday
4. Donnerstag = Thursday
5. Freitag = Friday
6. Samstag = Saturday
7. Sonntag = Sunday

Homework 6:

1. ich finde das … (I find that …)
2. es ist … (It is …)
3. das ist … (That is …)
4. ich mag … (I like …)
5. ich lerne Deutsch (I am learning German)
6. und = and ➔ no change to word order
7. aber = but ➔ no change to word order
8. denn = because ➔ no change to word order

Homework 7:

Fragewörter	Question words
Wie?	How?
Was?	What?
Wo?	Where?
Woher?	Where … from?
Wer?	Who?

Oft benutzte Wörter	**High-frequency words**
und	and
(und) auch	(and) also
aber	but
sehr	very
ziemlich	quite
nicht	not

Knowledge Organiser – Term 1

Spanish

HOMEWORK 1	
Los saludos	**Greetings**
¿Cómo te llamas?	What are you called?
Me llamo …	I am called…
¿Y tú?	And you?
¡Hola!	Hello!
¡Adiós!	Goodbye!
¡Hasta luego!	See you later!
Buenos días	Good morning
Buenas tardes	Good afternoon
Buenas noches	Goodnight
¿Qué tal?	How are things?
¿Cómo estás?	How are you?
Estoy muy bien	I am very well
Estoy bien	I am fine
Estoy regular	I am okay
Estoy mal	I am bad
Estoy muy mal	I am very bad
Estoy fatal	I am terrible

HOMEWORK 2	
En mi mochila	**In my school bag**
Tengo …	I have…
No tengo…	I don't have…
un bolígrafo	a pen
un libro	a textbook
un sacapuntas	a pencil sharpener
un cuaderno	an exercise book
un diccionario	a dictionary
un estuche	a pencil case
un lápiz	a pencil
una agenda	a diary /planner
una goma	a rubber
una pluma	a fountain pen
una regla	a ruler

HOMEWORK 5	
Los meses	**The months**
enero	January
febrero	February
marzo	March
abril	April
mayo	May
junio	June
julio	July
agosto	August
septiembre	September
octubre	October
noviembre	November
diciembre	December

HOMEWORK 6	
Los días de la semana	**The days of the week**
lunes	Monday
martes	Tuesday
miércoles	Wednesday
jueves	Thursday
viernes	Friday
sábado	Saturday
domingo	Sunday

¿Cuántos años tienes?
How old are you?
Tengo… años. I am… years old.
¿Cuándo es tu cumpleaños?
When is your birthday?
Mi cumpleaños es el… de…
My birthday is the… of…

Remember!
Dates in Spanish do not have capital letters.

	masculine singular	feminine singular	masculine plural	feminine plural
A / SOME	**un**	**una**	**unos**	**unas**
THE	**el**	**la**	**los**	**las**

Plurals:
- For nouns ending in a vowel (a,e,i,o,u) add 's'

(eg: un libro -- 2 libros).
- For nouns ending in a consonant add 'es'

(eg: un ratón -- 2 ratones).
- For nouns ending in 'z' remove the 'z' and add 'ces'

(eg: un lápiz -- 2 lápices).

HOMEWORK 3	
Los números	**Numbers**
uno	1
dos	2
tres	3
cuatro	4
cinco	5
seis	6
siete	7
ocho	8
nueve	9
diez	10
once	11
doce	12
trece	13
catorce	14
quince	15
HOMEWORK 4	
dieciséis	16
diecisiete	17
dieciocho	18
diecinueve	19
veinte	20
veintiuno	21
veintidós	22
veintitrés	23
veinticuatro	24
veinticinco	25
veintiséis	26
veintisiete	27
veintiocho	28
veintinueve	28
treinta	30
treinta y uno	31

Engineering & Technology – Knowledge Organiser

Year 7 Electronic Product

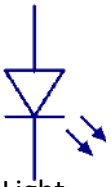
Hwk 1 Identify circuit symbols:


Battery


Resistor


Light Dependent Resistor (LDR)


Diode

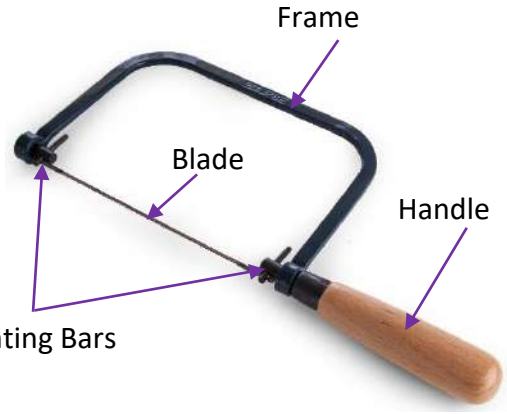

Light Emitting Diode (LED)


Single Pole Single Throw (SPST) Switch


NPN Transistor

Hwk 2

Identify the parts of the coping saw:



Hwk 3

Identify workshop tools & equipment:


Half Round File


Flat File


Round File

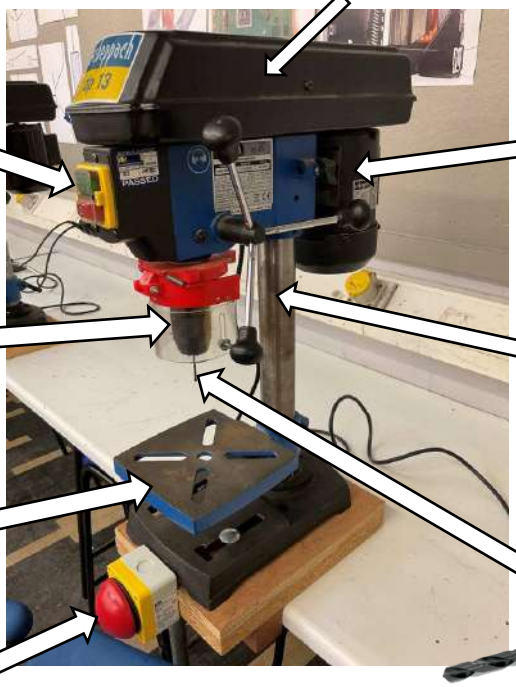

Machine Vice


Wet & Dry

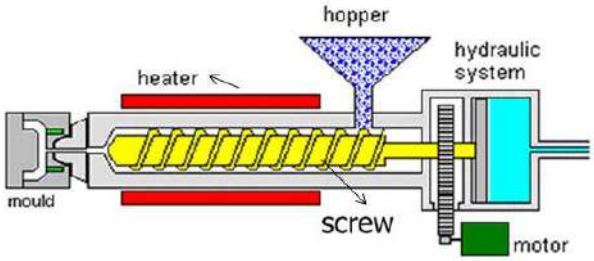

Needle Files

Hwk 4

Identify the parts of the pillar drill:



Hwk 5 Injection Moulding Machine



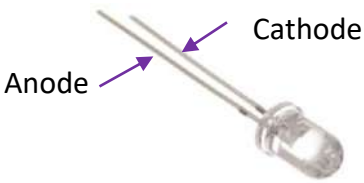
Name the parts of the machine

Watch & LEARN

https://www.youtube.com/watch?v=C3oiy9eekzk


High Impact Polystyrene (Hips)


Acrylic



EXCELLENCE IN EVERYTHING

Engineering & Technology - Knowledge Organiser

Year 7 Graphic Products (Inclusive Design)

Hwk 1 - Learn these terms

Context	The situation we investigate, in order to recognise and understand a problem that needs to be solved
Client	The person or organisation that is paying for your services (rather than a Customer who is buying your product)
Analysis	Investigation of a context or product, to understand its strengths and weaknesses, and recognise areas for improvement
Needs	The fundamental features a product needs in order to function
Wants	The extra features which make the product more appealing
Design Brief	Description of the problem that needs solving, including the key requirements of the solution

Hwk 2 - Investigate these examples of Inclusive Design

Velcro shoe fastening

Automatic doors

Ramp stairs

Braille handrail

All gender toilets

Tactile paving

Big grip cutlery

Adaptive controller

Hwk 3 - Learn and practice these techniques

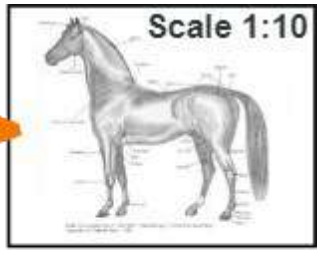
Isometric	3D drawing style with lines at 30^{O} or vertical (for square shapes)
Crating	A technique of constructing complex shapes from simple boxes or 'crates'
Tonal shading	Shading with different tones of the same colour to indicate the direction of the light source
Rendering	Shading with texture to suggest the material used

Hwk 4 - Understand how to Draw to Scale

When drawing small or large objects, we often need to change the scale to fit them on a piece of paper. The scale of a drawing is written as a ratio, for example…

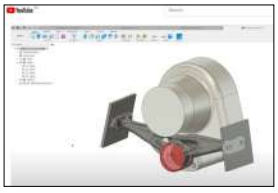
- for a small item 4:1 (drawn : real world) means it is drawn 4 times larger
- For a large item 1:20 means it is drawn 20 times smaller ($^{1}/_{20}$th)

Real Horse
1500 mm high
2000 mm long



Drawn Horse
150 mm high
200 mm long

Hwk 5 - Investigate CAD



Watch & LEARN

CAD (Computer Aided Design)
https://youtu.be/7p_selYYFdE?si=o6g8aB06kBMLGrtc

ExCELLENCE IN EVERYTHING

YEAR 7 FOOD TECHNOLOGY
KNOWLEDGE ORGANISER

WEEK 1
PERSONAL HYGIENE & FOOD SAFETY

PERSONAL HYGIENE – Keep yourself safe!

1. Wash your hands with warm water and soap for 20 seconds.
2. Wear a clean apean.
3. Tie long hair back.
4. Remove jewellery (no rings or wetches).
5. Cover cuts with a blue waterpreof plaster.
6. Do not cook if you are unwell.

FOOD SAFETY – Keep feed safe!

CONTAMINATION

- Green beand = Fruit and salad
- Brown bound = Root vegetables, (o.g. panions, carrots, sweed, sweteot)
- Yellow boond = Cooked meat
- Red heart and poultry

ALWAYS REMEMBER

- Keep work surfaces clean.
- Keep raw meat away from other fredh.
- Store food in the fridge.
- Cook food thoroughly.

WEEK 2
NUTRITION – EAT A BALANCED DIET

We need different nutrients from the foods we eat to keep our bodies healthy and give us energy.

Carbohydrates	Give us energy.
Protein	Growth and repair of the body.
Fat	Energy, insulation and protects our orgars.
Vitamins	Keep us healthy, help our inumune system and fight infections.
Minerals	Keep us healthy, Examples – calcium (strong bones), nom (healthy blood).

Star tip: Try to eat a variety from all the food groups every day!

WEEK 3
CONDITIONS FOR BACTERIA GROWTH

Bacteria grow best when they have:

WARMTH
Bacteria grow fastest batween 5°C and 63°C. (Danger Zonc)

MOISTURE
Bacteria need moisture to grow.

FOOD
Bacteria need food to grow.

TIME
The larger fert it let out, of more bacteria grow.

NEUTRAL pH
Bacteria grow best in neutral conditions.

- Keep in fridge.
- Cook thoroughly.
- Chill quickly.
- Keep surfaces clean.

WEEK 4
KEY TEMPERATURES

Fridge	0 - 5°C Store food in fridge to keep it safe.
Freezer	-18°C or below Stops stopas growing.
Danger Zone	5 - 63°C Bacteria grow quickly in this range.
Cooking temperature	75°C or above Cook food thoroughly (especially meat, poultny)

WEEK 5
WHAT IS FOOD PROVENANCE?

Food Provenance is knowing, produced and how it gets to our plates.

GROWN	PRODUCED	TRANSPORTED	SOLD	CONSUMED
Where the food is grown or greeed.	Where the food is made or processed.	Where the food is transported to shops.	Where the food is sold.	Where wher we the food at exath.

WHY IS IT IMPORTANT?

- Supports local farmers and busineses.
- Helps environment (lower food miles).
- Helps make healthy choices.

KEY MESSAGE: Good hygiene, safe food, balanced nutrition and where food const from, helps us stay healthy, make better choices, ollles and the planet!

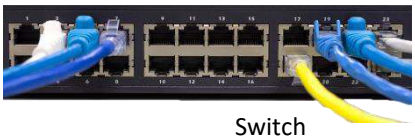
Computing, Engineering Technologies and Nutrition

Computing

Year 7 COMP1

	Key Term	Definition	Examples	
Digital Literacy	Hardware	Physical components of a computer	Keyboard, Mouse, Monitor, Processor.	Homework 1
	Software	The programs that run on the computer.	Word processor, Games.	
	Network	Two or more computers and other devices that are connected together to communicate.	The school network. Star, Bus topologies.	
	Internet	Hardware. A global network of networks.	Servers, Routers, Satellites	
	World Wide Web	Connected web pages accessed on the internet.	BBC web pages.	
E-Safety	Cyberbullying	Bullying other people using electronic devices.	Offensive emails or text messages.	Homework 2
	Digital footprint	The digital trail you leave behind when you have been online. Includes Facebook posts, Instagram pictures, what web sites you have been on.	What comments you have made online.	
	Consequence	The results of an action you have taken – if you work hard you will get good marks!	Achievement Point for great work, X for bad behaviour.	
	Reliability	How trustworthy is the information, is it biased?	The BBC is considered a reliable source for news.	
	Validity	How correct or up to date is the information?	Met Office weather forecast.	
Scratch	Algorithm	A sequence of instructions to perform a particular task.	Input name Output name	Homework 3
	Sequence	Instructions are executed in the order they are written in.	1) Wake up 2) Get dressed	
	Selection	There is a choice in the code of what code to run next.	If Speed > 50 Take picture	
	Iteration	Repeating a set of instructions.	For 10 times, Repeat until score =10	
	Variable	A value that can change.	Age, Shoe Size.	

Homework 4 (identify the following network components)



Switch

Network Interface Card (NIC)

Router

Ethernet cable

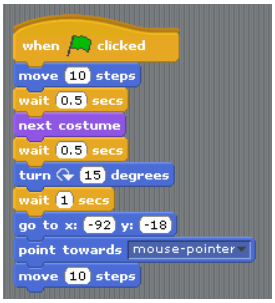
Servers

Wireless NIC

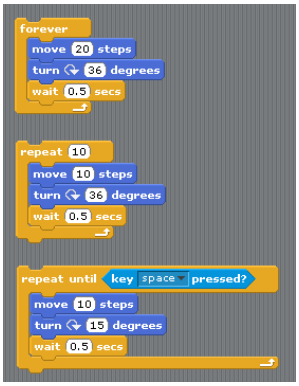
Homework 5
(be able to explain and use the following coding constructs)

SSI in Scratch

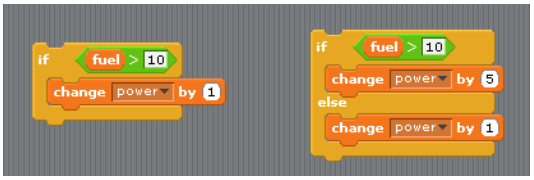
Sequence



Iteration



Selection



ART AND DESIGN Year 7- BIRDS

The Visual Elements are the parts used to make a piece of artwork:

Line, colour, tone, shape, form, space, pattern and texture

Line: The path left by a moving point. For example, a pencil on paper. A line can be horizontal, diagonal or curved and can also change thickness & length.

Tone: How light or dark an object is. Tone can create contrast from shadows to highlights and can help to create a sense of depth or distance.

Shape: A flat area enclosed by line.

Pattern: A design from repeating lines, shapes, colours or tones

Form: Shapes are flat and are 2D Forms have three dimensions. (height, width and depth).

Space: the distances or areas around, between, and within components of a piece.

Texture: the perceived sur face quality of a work of art

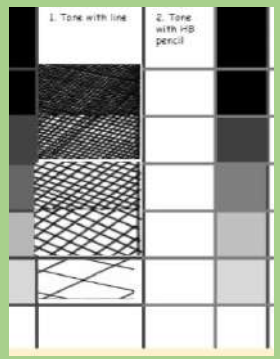
Information about pencils

Pencils come in different grades

H= Hard
B= Black
The normal pencil is HB and this is used for lighter tones

Using marks to make tones

Marks close together will make darker tones because there is less paper visible.

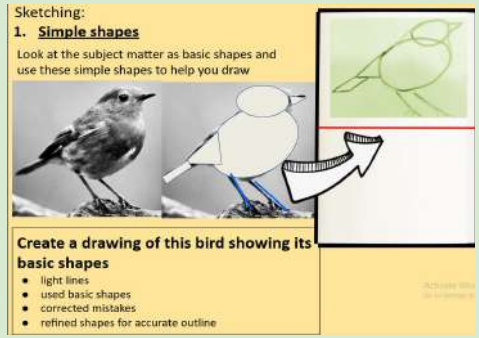


Sketching

Sketching is a quick, informal, and simplified form of drawing used to capture the essence of a subject or idea, often serving as a preliminary step for more detailed works like paintings or finished drawings.

To help with drawing accurately:

Sketch out the simple shapes first



Use your pencil to measure how big things are. This can also help you find the righ angles for your drawing

Steps for observational drawing

1. Look closely
2. Draw the outline REALLY lightly
3. Use a pencil to measure and check sizes
4. Correct any mistakes by re-drawing and then rubbing out the mistake
5. Lightly draw in areas of obvious tone (light and dark)
6. Use the right pencils- 6B= soft and dark, HB = light
7. Build tone gradually
8. Take your time and don't give up!

Drama: Year 7 HT1- Exploring Drama

A 6 Areas to Consider in a Still Image

Facial Expressions	What emotion are they feeling? Where are they looking?
Body Language	Open or closed? Does it help the audience understand their feelings and social position?
Gesture	What are they doing with their hands? Can it help the audience understand what is going on?
Levels	Are lots of different levels used? Do the levels help us understand feelings and social position?
Proxemics (space)	Where do the performers stand in the space? Does the distance between characters tell us anything about their relationships?

B Drama Key Words

Audience	The spectators or listeners at a performance.
Auditorium	The part of the theatre or performance space where the audience sits.
Stage	The area in a performance space where the performers perform.
Protagonist	The leading character in a performance or story.
Narrative	The storyline of a performance.
Tension	The growing feeling of expectation before an important or difficult event. (The edge-of-your-seat feeling you get when you know something big is going to happen)
Dramatic Climax	The highest point of tension within a performance. (The point where the big thing you've been waiting to happen, actually happens!)

C Areas for Assessment

Creating	The ability to work within a group to create and develop performance work.
Performing	The ability to present a character using physical and vocal skills.
Evaluating	The ability to discuss the qualities of a performance using dramatic language.

D Key Concepts- Explorative Strategies

Still image	Performers use their bodies to create a frozen picture (like a photo) which shows emotions, relationships and narrative.
Thought-tracking	Speaking the inner thoughts of your character aloud to understand their feelings.
Hotseating	Questioning a character to discover more information about their past experiences and feelings.
Cross-cutting	A technique where the stage is split to show two or more locations and the action swaps between them. When one area is active, the other is frozen in still image.
Narration	The process of telling a story. External narration is delivered by someone looking in on the action. Internal narration is delivered by a character in the story.
Voices in the Head	A technique to show a character struggling with their inner thoughts or memories. One performer is the protagonist and the others play their thoughts. The technique builds to a dramatic climax.

Threshold Concepts

Audience Awareness	Consider where the audience is in the space and how this may change your performance work. Remember your audience need to see you as much as possible.
Marking the moment	Making a key moment in a performance stand out to the audience by obviously changing dramatic choices like the volume of the speech or the speed of the action.

YEAR 7 | MUSIC | HT1 - KEYBOARD SKILLS

HOMEWORK 1	
Melody	The tune of a piece of music.
Articulation	Are the notes **Smooth** or **Spiky?**
Dynamics	How the **loud** or **quiet** the music is.
Texture	The layers of sound in a piece of music. Music either has **thick** or **thin** texture.

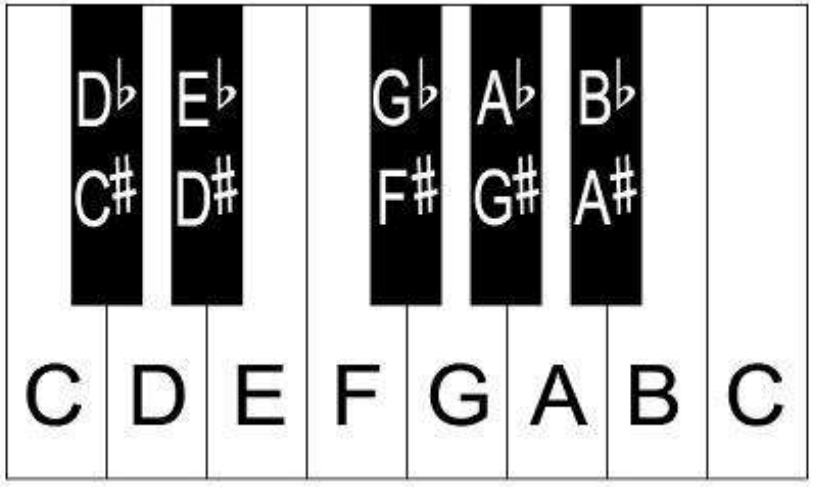
HOMEWORK 2	
Structure	The sections of the music. Examples include Verse/Chorus
Instrumentation	The different instruments used in a piece of music.
Rhythm	The recurrence of notes (of different lengths) and rests (silences) in time.
Tempo	How **fast** or **slow** the music is.

HOMEWORK 3	
Chord	A group of notes played at the same time that often sound good together.
Pitch	How high or low a sound is
Stepwise	When a melody moves to the note that is next door such as C to B or C to D.
Leap	When a melody jump to a note that is further away such as C to G.

Want to Explore more?

Research famous pianists and listen to their music. Start with 'Sergei Rachmaninoff'.

HOMEWORK 4	
Keyboard	A device with piano keys that produces music using electricity for power.
Piano	A large instrument that uses different keys. The strings are stuck by a hammer to make sounds.
Notes	A representation of a musical sound. We use the alphabet A-G to represent them.
Octave	The distance between one note and the next bearing its same name—*like the two Cs in the diagram below!*



John Port Spencer Academy PE Department Knowledge Organiser
YR 7 BADMINTON

Key Skills:

READY POSITION – balanced position, side on, racket up and ready, on toes.

GRIP- shake hands with the racket sideways on. Wrap fingers round the tape.

SERVE –There are several types of serve – short/backhand, long ,flick. A backhand serve should land close to the service line on your opponents side of the net. The racket head must start from below the waist.

UNDERARM CLEAR (long serve) **–** This shot is played high to the back of your opponents court. Start sideways on and use a whip action with the wrist to create power.

OVERHEAD CLEAR – Played to the back of your opponents' court and is a defensive shot. Start sideways on, racket up and behind you, focus on making contact with the shuttle in front of you.

DROP SHOT- a shot played with finesse to land the shuttle as close as possible to the net on your opponent's side. Disguised initially as an overhead clear.

TACTICS -
- Hitting into space – moving your opponent around the court
- Shot selection – selecting the correct shot for the situation
- Targeting opponent's weaknesses
- Playing to your opponent's non-dominant hand

Rules

Game starts with a diagonal serve- right hand side to right hand side

Serve must land over the service line

Play to 21 points – but must win by 2 clear points up to 30. 29-29 next point wins

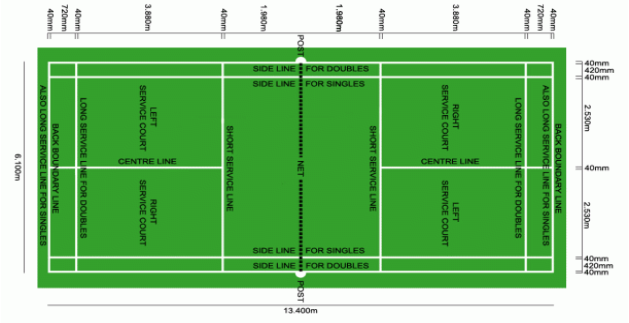
A point is won every rally

Whoever wins the point serves next

When the score is even, serve from right. When the score is odd, serve from left

Court is long and thin for singles, short and wide for doubles

You cannot hit the net with your racket or touch it with any body body part



Stretch and Challenge Task:

-Draw a badminton court in your knowledge book and label it correctly with the lines that are in/out for both singles and doubles.

-Find out who our best players in the country are for men's and ladies doubles, singles and mixed www.badmintonengland.co.uk is a good website to use.

Key Terms to learn:

-Grip -Ready position

-Drop shot -Rally

-Overarm clear -Underarm clear

-Serve –backhand/short, long, flick

John Port Spencer Academy PE Department Knowledge Organiser

Activity: Football

Year: 7

Key Skills:

- Controlling the ball – using different parts of the body – this could be the feet or thigh. Remember to cushion the ball.
- Passing – there are 3 types of passes. Side foot pass, driven pass with the laces and a lofted pass. Using the side of the foot allows you to pass accurately over a short distance, a driven pass allows you to pass the ball on the floor, but a greater distance. Finally, a lofted pass allows you to lift the ball in the air over players and change direction. Remember to keep your standing foot next to the ball when you make the pass.
- Dribbling – dribbling allows you to move the ball quickly around the pitch using the inside and outside of your feet and keeping the ball close to your feet and your head up.
- Turning with the ball and outwitting a defender – turning with the ball allows you to change direction using different techniques, such as dragging the ball back with the sole of your boot. Outwitting and opponent allows you to beat a defender using different techniques such as a step over.
- Shooting – there are different types of shots that allows you to score goals. You instep can be used to control and place the ball into the goal. If you use your laces then this allows more power to be produced.
- Heading – you can use an attacker header, a defensive header or a controlled header, which might be passing the ball back to someone with your head.
- Attacking – keeping possession – making a number of passes allows your team to keep possession and advance up the field.
- Tackling techniques – tackling, jockeying and forcing the player onto their weaker foot.

Basic Rules

1. Game is started by kicking the ball from the centre spot.
2. The U12 game has 9 players – goalkeepers, defender, midfielders and attackers.
3. Referee and two assistants with officiate the game.
4. If a ball goes over a touch line a throw in is taken (kick in on the astro-turf). If an attacker kicks over the goal line it is goal kick and if a defender kicks it over the goal line it is a corner.
5. To score the ball must cross the opposition's goal line.
6. The offside rule also applies where an attacker is in front of all opposing defenders when the ball is kicked.

Stretch and Challenge Task:

- How do you keep the ball low when passing and shooting?
- What technique would you use to tackle a player?
- Why is jockeying important?
- Research the different types of formations (pictured) and positions.

Key Content and Terms to learn:

Passing, dribbling, shooting, heading, attacking, defending, possession, width and depth

John Port Spencer Academy PE Department
Knowledge Organiser – YR 7 NETBALL

Key Skills:

Passing and receiving – different types of passes include chest pass, bounce pass, shoulder pass and overhead pass.

Attacking – getting free from an opponent in order to receive the ball. Includes the skills of sprinting, dodging and changing direction.

Shooting – With one hand under the ball and the other steadying it at the side, keep your eyes on the hoop, bend your knees and push the ball with the fingers.

Defending – Marking your opposite player both with and without the ball.

Footwork – You must land with a 1-2 landing or with 2 feet. You must then not move the landing foot.

POSITIONS

Goal Shooter (GS) – Can only play in their attacking goal third. Marks the GK.

Goal Attack (GA) – Plays in the goal third and centre third. Marks the GD.

Wing Attack (WA) – Plays in the centre third and their teams attacking third. Marks the WD.

Centre (C) – Only player to be able to play in all 3 thirds. Marks C.

Wing Defence (WD) – Plays in centre third and their defending third. Marks the WA.

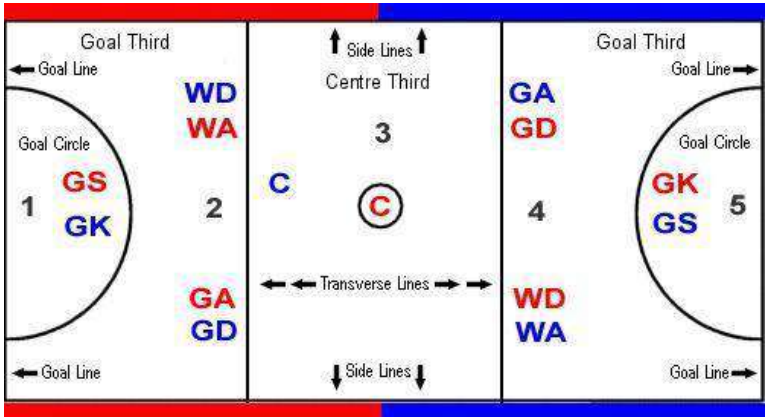
Goal Defence (GD) Plays in the centre third and their defending third.

Goalkeeper (GK) Can only play in their defending goal third. Marks the GS.

Stretch and challenge task

- Watch an international or super league game of netball online. You could use the England netball website. Choose your favourite position and watch a player to see how and where they move.
- Draw a court and mark on the positions for 2 teams in different colours.

Rules: The game starts with a centre pass and the ball must be caught in the centre third.
You must comply with the footwork rule e.g. a 1-2 landing.
You only have 3 seconds to release the ball.
When defending you must be 1 metre away from the player.
There must be no contact with an opposing player.
Only GS and GA may score a goal.
You must stay in the correct area of the court for your position
Teams take it in turns to take a centre pass.
The ball must be touched in each third of the court.



Key content and Terms to learn

Passing and receiving **Shooting**

Attacking

Defending

Footwork

Contact

Dodging

John Port Spencer Academy PE Department
Knowledge Organiser

Activity: Swimming – Technical	Year: 7
Types of Strokes **Backcrawl – Head back, long legs, over arm recovery** **Frontcrawl – Face in, bilateral breathing, flutter kick, over arm recovery** **Breast stroke – Arms pull around and forward, legs kick out and around, breathing to the front** **Butterfly – Dolphin kick, undulating action from head, arms working simultaneously, breathing to front after every arm pull** **Skills –** **Floating - supine & prone** **Push & Gliding - front & back arms extended** **Sculling – head first & feet first** **Surface dives - head first & feet first** **Treading Water - arms sculling, breaststroke legs** **Rotation – horizontal and vertical, half & full**	**Entries – Slide, Jump, Straddle, Dive**  **Warm up task –** **Stretching on poolside** **Front crawl shuttle swims with a partner**
Stretch and Challenge Task: **Who is are local World and Olympic champion Breaststroke swimmer?** **Apart from the 4 main strokes, how many more can you name?** **Find out more at** *https://www.britishswimming.org/*	**Key Content and Terms to learn:** **Streamlined position** **Bilateral Breathing** **Glide** **Sculling** **Propulsion**