YEAR 9 **Autumn Term 2 - Health, Types of reactions, Heating and cooling**

THE MILTON KEYNES ACADEMY
Creative Education Trust

Reactant	Chemicals that are rearranged to form a new substance.
Product	The new chemical formed in a chemical reaction.
Chemical reaction	A change where new substances are formed.
Conservation of mass	Mass is neither created nor destroyed in a chemical reaction
Chemical change	A change in which a new substance is formed.
Balanced	A situation in which different elements are equal on both sides of an equation
Combustion	Combustion is the process of burning something.
Hydrocarbon	A molecule that is made of only hydrogen atoms and carbon atoms
Oxidation	Gain of oxygen is oxidation
Decomposition	A chemical reaction where substances begin to break down
Thermal decomposition	A chemical reaction when a compound breaks down by using heat. (Thermal means heat)
carbonate	A chemical compound that contains carbon and oxygen.
Effervescence	The formation of gas bubbles in a liquid by a chemical reaction
Reactivity	Reactivity tells us how easily a substance reacts chemically with other substances.
Displacement	A process in which a less reactive metal is displaced from its compound by a more reactive metal.
Ore	Naturally occurring rock that contains sufficient mineral for extraction.
Reduction	Reduction is the loss/removal of oxygen atoms
Oxidation	Oxidation is the gain of oxygen atoms
Electrode	An electrode is a small piece of metal or other substance that is used to take an electric current to or from a source of power.
Anode	The positively charged electrode
Cathode	The negatively charged electrode
Corrosive	A substance is corrosive if it can burn your skin or eyes.
pH scale	A scale to measure how acidic/alkaline a substance is.
Indicator	An indicator is a chemical compound that changes its colour in presence of an acid or base.
Neutralise	Neutralisation is a reaction where an acid reacts with an alkali to form a neutral solution of a salt and water.
Chlorides	A salt produced from hydrochloric acid
Sulphates	A salt produced from sulphuric acid
Nitrates	A salt produced from nitric acid
Acid	A substance with pH less than 7
Alkali	A substance with pH more than 7
Indicator	Indicators are substances whose solutions change colour due to changes in pH.

Thermal Equilibrium	When two substances in physical contact with each other no longer exchange heat energy and both reach an equal temperature.

Particle	The smallest possible amount of something.
Thermal (internal) energy	Energy stored by bodies above absolute zero.
Heating	The transfer of energy from one body to another because of a difference in temperature.
Thermometer	A calibrated instrument to measure the temperature that relies on the expansion of liquids when they gain thermal energy.
Thermal Conduction	The movement of heat through an object or from one object to another that has a lower temperature when they are touching each other. Only occurs in solids and liquids.
Thermal insulation	Creation of a barrier between a warm and colder object that reduces heat transfer.
Thermal	To do with heat.
Convection	The flow of heat through a gas or a liquid as the hotter part rises and the cooler part falls.
Expansion	An increase in a materials volume when its temperature increases.
Contraction	A decrease in a material's volume when its temperature decreases.
Thermal radiation	Electromagnetic radiation emitted by a body as a result of its temperature.
Infrared radiation	Part of the electromagnetic spectrum, emitted by all objects however, emission increases with increased thermal energy.
Emission	Sending out energy via electromagnetic waves.
Absorption	Taking in energy via electromagnetic waves.
Refection	When electromagnetic radiation bounces off a surface, without being absorbed.
Radiation	Energy transferred as electromagnetic waves.
Insulator	A substance that does not conduct heat well.
Heat loss	Thermal energy the has escaped to the surrounding.
Energy	The ability to do work.
Insulation	Insulation is a material or barrier used to prevent the transfer of heat, sound, or electricity from one area to another.
Insulator	An insulator is a material that does not conduct heat, sound, or electricity easily. It is used to block or slow down the flow of these forms of energy.
Variables	Variables are factors or characteristics that can change or vary in an experiment or situation. They are elements that researchers or scientists' study to understand their effects on outcomes or observations.
Boiling	Boiling is the process in which a liquid turns into vapor (gas) when it reaches its boiling point, which is a specific temperature for each substance. It typically occurs throughout the entire liquid.
Evaporation	Evaporation is the process by which a liquid turns into vapor (gas) at its surface, typically at a temperature below its boiling point. It occurs as molecules gain enough energy to escape the liquid's surface and enter the gas phase.
Condensation	Condensation is the opposite of evaporation. It is the process in which a gas (vapor) turns into a liquid when it loses enough heat energy, usually by contacting a cooler surface. This results in the formation of liquid droplets.
Energy	Energy is the ability to do work or make things happen. It comes in various forms like heat, light, and motion.
Temperature	Temperature is a measure of how hot or cold something is. It's typically measured in degrees Celsius (°C). It is a measure of the average speed of particles based upon the kinetic energy of individual particles.
Specific heat capacity	Specific heat capacity is a property of a substance that measures how much heat energy it can absorb or release to change its temperature. It tells us how resistant a material is to temperature changes when heat is added or removed.
Electron	Sub-atomic particle found in shells around the nucleus of an atom.

MS Forms

- Homework will be set via MS Forms every week
- You will be given a set of questions alongside key word definitions to answer
- Each week will be a different discipline and will recap your prior learning.

Additional Opportunities

Cognito- This is a youtube channel that can be used to supplement and recap your learning
https://cognitoedu.org/resources/ks3/science