KS3 Curriculum Overview

Subject: Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	**Safety** Scientific attitudes. Experimental skills and investigations. The fire triangle. Hazard symbols.	**Electricity** Electrical safety. Current electricity, series and parallel circuits.	**Magnets** Attraction and repulsion. Magnetic fields.	**Solids, liquids, gases and solutions** States of matter. Changes of state. Particle model. Diffusion.	**Energy** Fossil fuels. Renewable energy. Calculations of fuel cost in domestic context.	**Environment** Habitats. Adaptations. Food chains. Predator and prey.
	Cells Animal and plant cell structure. Skeletal and muscular systems. Specialised cells.	**Variation** Differences between species. Inheritance. Classification.	**Acids and Alkalis** Acids and alkalis in everyday items. Universal indicator. Using the pH scale for measuring acidity alkalinity. Neutralisation. How acids react with metals/ carbonates.			**Rocks and Rock Cycle** Identification of sedimentary, metamorphic and igneous rocks. The rock cycle. How fossils are formed. Plate tectonics**.**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	**Food and Digestion** Healthy diet. Tissues and organs of the digestive system.	**Reproduction** Lifecycles. Reproduction in mammals. Human pregnancy. Gestation.	**Atoms and Elements** Dalton model. Differences between element, compound and mixture.	**Solar System** The solar system. Gravity force and weight. Seasons.	**Compounds and Mixtures** Compare compounds, elements and mixtures. Reactant and products. How to separate mixtures.	**Light** The similarities and differences between light waves and waves in matter.
	Respiration Aerobic and anaerobic respiration. Word equations for the above processes	**Heat energy** Difference between heat and temperature. Conductors. Kelvin scale. Conduction. Radiation.	**Forces** Types of forces. Friction. Density. Balanced and unbalanced forces. Weight and mass. Using a Newton Meter. Speed.	**Microbes and Disease** Types of microbes. How microbes are used in food. How microbes are spread. Immune system and vaccinations.	**Ecological relationships** Interdependence of organisms in an ecosystem including food chains.	**Sound and Hearing** Frequencies of sound waves. How to protect our ears from sound.