

Curriculum Overview for Science- Year 8 (Year 2 in Two Year Pre GCSE Program)

Topics taught in an order that establishes a clear sequence for students to understand content and build skills

When?	What?	Subject	Why?	How?	Support?
Autumn Term	Food and Nutrition	Biology	To learn about what our food contains, why we need to eat a balanced diet and what happens to food inside our bodies.	Using food tests, modelling digestion and finding out why certain foods are good to eat.	Exploring Science KS3 Textbook - Food and Nutrition BBC bitesize Doddle Seneca *focus on nutrients
	Plants and their Reproduction	Biology	To understand how living things are classified and how new plants are made.	Modelling, diagrams and investigation	Exploring Science KS3 Textbook – Plants and their Reproduction BBC bitesize Doddle Seneca *focus on plant structure and function
	The Periodic table	Chemistry	To learn more about the elements and how they are arranged in Mendeleev's periodic table, according to their properties and trends.	Models, chemical experiments and visual aids.	Exploring Science KS3 Textbook – The periodic table BBC bitesize Doddle Seneca *focus on how table is organized
	Reactivity	Chemistry	To learn about physical and chemical changes, the reactivity series and the prevention of rust, energy changes during reactions and the extraction of metals.	Using class experiments and demonstrations with acids, metals and metal ores.	Exploring Science KS3 Textbook –Reactivity BBC bitesize Doddle Seneca *focus reactions of metals

Spring Term	Breathing and Respiration	Biology	To learn about oxygen, how animals breathe and what happens during aerobic and anaerobic respiration.	Using models, practical work and simulations.	Exploring Science KS3 Textbook –Breathing and respiration BBC bitesize Doddle Seneca *focus-aerobic vs anaerobic respiration
	Fluids	Physics	To learn about density, drag forces, how particles in different materials behave, pressure in fluids and what happens when things float, melt, freeze and boil.	Experiments with solids, liquids and gases, models and simulations of particles.	Exploring Science KS3 Textbook -Fluids BBC bitesize Doddle Seneca *focus on pressure
	Earth's Resources	Chemistry	To understand the chemical and physical properties of metals and alloys and what happens when they corrode and react with acids or water.	Practical experiments and demonstrations with metals and chemicals, extended reading and research.	Exploring Science KS3 Textbook –Metals and their uses BBC bitesize Doddle Seneca *focus - reaction of metals with air, water and acids
	Energy Transfer	Physics	To understand about internal energy, conduction, convection, radiation and efficiency.	Investigation work, research using the internet and books.	Exploring Science KS3 Textbook –Energy Transfer BBC bitesize Doddle Seneca *radiation, conduction, convection

Summer Term	Unicellular organisms	Biology	To understand how bacteria, protocists and microscopic fungi can help or harm us and other organisms.	Using microscopes and bio viewers, investigating the science of sewage, food production and good hygiene.	Exploring Science KS3 Textbook –Unicellular organisms BBC bitesize Doddle Seneca *focus bacteria, protocists, fungi
	Chemical Energy	Chemistry	To understand about the role of oxygen when a fuel burns, and what is done to reduce the damage caused by fires and the causes of global warming.	Practical experiments with different fuels, models to explain combustion.	Exploring Science KS3 Textbook –Combustion BBC bitesize Doddle Seneca *focus-oxidation
	Forces and Motion	Physics	To learn about speed, energy and simple machines.	Demonstrations and experiments to look at forces and their effects.	Exploring Science KS3 Textbook –Current Electricity BBC bitesize Doddle Seneca *focus speed and simple matchings
	Force fields and Electromagnets	Physics	To build upon previous work on magnets and gravity to learn about static electricity, electrical resistance and electromagnetism.	Experimenting with circuits and electrical devices to study everyday effects as well as abstract ideas	Exploring Science KS3 Textbook –Light BBC bitesize Doddle Seneca *focus resistance, fields and electromagnets