

Curriculum Overview for Science- year 7 (year 1 in two year GCSE preparation 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 (Foundation units)	7a Cells, tissues, organs and systems	Biology	To explain how living organisms are constructed to be able to stay alive.	Microscope use, slide preparations and modelling	Exploring Science Ks3 Textbook-Cells tissues organs and systems BBC bitesize Doddle Seneca *focus on microscope skills
	7g The Particle model	Chemistry	To explain the basic properties of solids, liquids and gases and understand that they are made of tiny particles	Physical modelling of state of matter and investigation into the properties of solids, liquids and gases.	Exploring Science Ks3 Textbook –The particle model BBC bitesize Doddle Seneca *focus on particle models and diffusion
	7e Mixtures and separation	Chemistry	To explain the different kinds of mixtures and different ways that mixtures are separated at school and in industry.	Investigating different methods of separation.	Exploring Science Ks3 Textbook – Mixtures and separation BBC bitesize Doddle Seneca *focus on ways to separate materials
	7i Energy	Physics	To explain the different types and sources of energy and how energy can move, change or be stored.	Investigating energy changes, relationship of energy transfer and stores, and types of energy resources	Exploring Science Ks3 Textbook -Energy BBC bitesize Doddle Seneca

					*focus on energy transfer and stores
Spring Term	7b Sexual Reproduction in Animals	Biology	To explain what happens when animals mature and reproduce sexually and what happens during pregnancy and birth.	Models, male and female reproductive system diagrams and extended reading, informed class discussion.	Exploring Science Ks3 Textbook –Sexual Reproduction in animals BBC bitesize Doddle Seneca *focus-sexual reproduction system function and structure
	7c Muscles and Bones	Biology	To explain how our body keeps fit, supports and protects itself and moves, the impact of taking drugs.	Modelling of respiratory system, pathway of breathing, lung observation, heart rate and breathing investigation	Exploring Science Ks3 Textbook –Muscles and Bones BBC bitesize Doddle Seneca *focus-respiratory system function and structure
	7f Acids and Alkalis	Chemistry	To explain differences between acids and alkalis, learning about neutralising and the pH scale.	Investigation using acids and alkali, role of indicators and discussion of risk	Exploring Science Ks3 Textbook –Acids and Alkalis BBC bitesize Doddle Seneca *focus-difference between acid and alkali
	7k Forces	Physics	To explain how different kinds of forces (for example weight, friction and up thrust) are used in every life and how they can be observed or measured.	Practical experiments to investigate friction and other forces.	Exploring Science Ks3 Textbook -Forces BBC bitesize Doddle Seneca

					*types of forces and measuring forces
Summer Term	7d Ecosystems	Biology	To explain about variation and adaptation in living organisms, food chains, examples of different habitats and our impact on them.	Fieldwork outside and interpretations of graphs and food webs	Exploring Science Ks3 Textbook -Ecosystems BBC bitesize Doddle Seneca *focus ecosystem structure and food chains
	7h Atoms, Element and Compounds	Chemistry	To explain more about atoms, the air we breathe, and learn about how metals and other chemicals behave.	Practical experiments involving the identification of metals and non-metals and making new chemical compounds.	Exploring Science Ks3 Textbook –Atoms, Element and compounds BBC bitesize Doddle Seneca *focus metals and non-metal properties
	7j Current Electricity	Physics	To learn about static electricity and circuits and their importance in everyday life.	Make series and parallel circuits and interpret circuit diagrams.	Exploring Science Ks3 Textbook –Current Electricity BBC bitesize Doddle Seneca *focus properties of circuit
	8j Light	Physics	To understand properties of light, how it travel through different materials and interacts with those materials	Investigations with reflection and refraction of light. Understand light properties	Exploring Science Ks3 Textbook –Light BBC bitesize Doddle Seneca *focus reflection vs refraction