

Beamont Collegiate Academy Curriculum Map



Year: 8

Subject: Science

Intent	Implementation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Clarity around knowledge	Theme / topic	Diet and Digestion Energy Stores and Transfers	Energy Stores and Transfers Physical Changes and Chemical Reactions	Classification and Biomechanics Electricity Generation and the Atmosphere	Electricity Generation and the Atmosphere The Earth's Resources	The Earth's Resources Cellular Respiration and Breathing Systems	Electricity and Electromagnets Plant Nutrition
	Key substantive knowledge	Biology: Structure and function of living organisms Nutrition and digestion	Biology:	Biology: Structure and function of living organisms The skeletal and muscular systems	Biology:	Biology: Structure and function of living organisms Gas exchange systems Health Material cycles and energy Cellular respiration	Biology: Structure and function of living organisms Nutrition and digestion Gas exchange systems Material cycles and energy Photosynthesis
		Chemistry:	Chemistry: Atoms, elements and compounds Chemical reactions Energetics The Periodic Table Materials	Chemistry:	Chemistry: Materials Earth and atmosphere	Chemistry: Earth and atmosphere	Chemistry:
		Physics Energy Energy changes and transfers Changes in systems	Physics Energy Energy changes and transfers Changes in systems	Physics: Motion and forces Describing Motion	Physics: Energy Calculation of fuel uses and costs in the domestic context	Physics:	Physics: Electricity and electromagnetism Current electricity Static electricity Magnetism

			Matter Physical changes		Energy changes and transfers Changes in systems Electricity and electromagnetism Current electricity		
	Disciplinary knowledge	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement	Scientific attitudes Experimental skills and investigations Analysis and evaluation Measurement
Clarity around sequencing	Main links across the curriculum	Diet and Digestion builds on the Cells and Organisation unit. Energy Stores and Transfers underpins the Electricity Generation and the Atmosphere unit (Y8) and the Electricity and Electromagnets unit (Y8)	Physical Changes and Chemical Reactions builds on the Core Chemistry unit (Y7) and underpins the Further Chemical Reactions unit (Y9)	Classification and Biomechanics builds on the Cells and Organisation unit (Y7) and Fundamental Forces (Y7) It underpins the Cellular Respiration and Breathing Systems unit (Y8)	Electricity Generation and the Atmosphere unit builds on the Energy Stores and Transfers unit (Y8) and underpins the Electricity and Electromagnets unit (Y8) The Earth's Resources unit builds on the Electricity Generation and the Atmosphere unit (Y8)	Earth's Resources unit builds on the Physical Changes and Chemical Reactions unit and underpins the Further Chemical Reactions unit (Y9) The Cellular Respiration unit builds on the Cells and Organisation unit (Y7) and the Classification and Biomechanics unit (Y8)	Electricity and Electromagnets unit builds on the Electricity Generation and the Atmosphere unit (Y8) The Plant Nutrition unit develops on the Cells and Organisation unit (Y7) and the Cellular Respiration and Breathing Systems unit (Y8)
	Authentic cross curricular links	BIOL: PE, Food Tec & PSHE: physical health & wellbeing PHYS: Maths, PE, Engineering	PHYS: Maths, PE, Engineering CHEM: Geography, Food technology	Biol: Geography, history, PE	PHYS: Maths, Technology BIOL: History, Geography	CHEM: Geologist BIOL: PE	

Vocabulary	Key words	BIOL: Macro nutrients Digestion Reagents Enzymes PHYS: Energy stores Transfers Conservation Thermal	PHYS: Energy stores Transfers Conservation Thermal CHEM: Reactant Products Exothermic Endothermic Oxidation Neutralisation	Biol: Classification Linnaean system Vertebrates Invertebrates Skeleton Muscles	PHYS: Electrical current Circuit Potential difference Efficiency Electromagnet BIOL: Tectoic Nitrogen Carbon dioxide Oxygen Photosynthesis	CHEM: Lithosphere Rock cycle Sedimentary Metamorphic Igneous BIOL: Respiration Aerobic Anaerobic Gas exchange Respiratory system	
Assessment	Summative assessment	End of Unit Summative Test Formative Assessment Throughout	End of Unit Summative Test Formative Assessment Throughout	End of Unit Summative Test Formative Assessment Throughout	End of Unit Summative Test Formative Assessment Throughout	End of Unit Summative Test Formative Assessment Throughout	End of Unit Summative Test Formative Assessment Throughout
Links to the real world / careers / PD		BIOL: Nutritionist Science teacher Food scientist Chef Health Visitor Dentist Doctor / surgeon Nurse Midwife Sports scientist Personal trainer Food industry PHYS: Space science Sports science Engineer Nuclear scientist	PHYS: Space science Sports science Engineer Nuclear scientist CHEM: Chemist Medicinal industry Agriculture	BIOL: Zoology Sports scientist Personal trainer Physiotherapist	PHYS: Electrical engineer BIOL: Meteorologist	CHEM: BIOL: Doctor / nurse / healthcare practitioner Therapist Sleep therapist Health scientist (asthma, infection)	