KS4 Curriculum Overview



Subject: Science

Overview for students commencing Year 11 in September 2023 (Finishing summer 2024)

2023-24	Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Hot Stuff	Novel Materials	Food Factory	Nuclear Power	Creepy Crawlies	
Current Year 11	OCR Entry Level	Insulator, conductor, particle model, solar furnace.	Covalent bonds, composite material, alloys and metal properties.	Photosynthesis. Transpiration and translocation.	Function of a nuclear power station, concept of a half-life, radioactive waves.	Ecosystems, food webs, adaptations of predators and prey.	
	OCR GCSE Gateway A	Acids and Alkalis pH scale, lab safety, protons and hydroxide ions, neutralisation.	How Fast, How Slow? Rates of reaction, catalysts, enzymes.	A Place For Everything Structure of an atom, periodic table (groups) Isotopes.	Fooling Your Senses Function and structure of the eye and taste buds. Reaction to stimuli.		

Overview for students commencing Year 10 in September 2023 (Finishing summer 2025)

2023-24	Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Pushes and Pulls	Sorting Out	Attractive Forces	Let's Get Together	Creepy Crawlies	Medical Rays
	OCR Entry	Forces, gravity, Hooke's Law.	Pure substances and mixtures. Chromatography.	Magnetism, electromagnets, earth's magnetic field.	Periodic table, electrolysis. Dot and cross diagrams.	Ecosystems, food webs, adaptations of predators and prey.	X-rays uses and risks. UV ray uses and risks.
	Level	Extinction	Dead or Alive?	Gasping for breath	Are you Overreacting?	Getting the Message	Full Spectrum
Current Year 10	And	Variation, mutations habitats,	MRS GREN, animal cells, plant cells.	Respiratory system function,	Chemical reactions, hydrogen test,	Soundwaves, coding, binary codes, wireless	Electromagnetic spectrum. Infrared uses.
	OCR GCSE Gateway A	extinction.	Cancer as a cell mutation.	hazards of smoking.	reactivity series.	technology.	Visible light uses. Microwave radiation.
		Control Systems Homeostasis, diabetes and insulin.					CSI Plus Crime scene contamination, fingerprints, collection of evidence.

2024-25	Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
cohort							
		Hot Stuff	Novel Materials	Food Factory	Fooling Your Senses	Body Wars	
	OCR Entry Level	Insulator, conductor, particle model, solar furnace.	Covalent bonds, composite material, alloys and metal properties.	Photosynthesis. Transpiration and translocation.	Function and structure of the eye and taste buds. Reaction to stimuli.	Microbes, white blood cells, diseases, vaccinations.	
Year 11	And	Acids and Alkalis	How Fast, How Slow?	A Place For Everything	Nuclear Power		
	OCR GCSE Gateway A	pH scale, lab safety, protons and hydroxide ions, neutralisation.	Rates of reaction, catalysts, enzymes.	Structure of an atom, periodic table (groups) Isotopes.	Function of a nuclear power station, concept of a half-life,		
		neutransation.			radioactive waves.		

Overview for Starting ELC in September 2023

	Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Babies	Genes	You Only Have One Life	Clean Air and Water	Casualty RRS	Heavy Metal
	OCR Entry	Male and female reproductive system. Embryonic	Variation, punnet squares.	Healthy lifestyle including exercise and diet.	Global warming, pollutants.	Anatomy/function of the heart. Healthy heart. Blood cells and functions.	Reactivity series. Rusting. Recycling.
	Level	development.	The make the	Fuels	Altomostico	Driving Along	Our Electrical
	Level	Physical and Chemical	Fly me to the Moon	Fuels	Alternative Energy	Driving Along	Supplies
Current Year 9	And	Changes RRS theory, physical and	Planets, force=mass x acceleration.	Hydrocarbons, fractional distillation, use	Fossil fuels, renewable	Speed=distance/time, speed limits, stopping distance=thinking time	Voltage, production of electricity. Transformers.
	OCR GCSE	chemical	acceleration.	of petrol and	energy.	+braking distance.	Transformers.
	Gateway A	changes.		diesel.		, and the second	
			Final Frontiers Orbit times of planets around the sun. Understand the sun and its place in our solar system.				

	Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Pushes and Pulls Forces, gravity,	Sorting Out Pure substances	Attractive Forces Magnetism,	Let's Get Together Periodic table,	Creepy Crawlies Ecosystems, food	Medical Rays X-rays uses and
		Hooke's Law.	and mixtures. Chromatography	electromagnets, earth's magnetic field.	electrolysis. Dot and cross diagrams.	webs, adaptations of predators and prey.	risks. UV ray uses and risks.
Year 10	OCR Entry Level	Extinction Variation, mutations	Dead or Alive? MRS GREN, animal cells,	Gasping for breath Respiratory system	Are you Overreacting? Chemical reactions,	Getting the Message Soundwaves, coding, binary	Full Spectrum Electromagnetic spectrum.
	And	habitats, extinction.	plant cells. Cancer as a cell mutation.	function, hazards of smoking.	hydrogen test, reactivity series.	codes, wireless technology.	Infrared uses. Visible light uses. Microwave
	OCR GCSE Gateway A						radiation.
		Control Systems Homeostasis, diabetes and insulin.					CSI Plus Crime scene contamination, fingerprints, collection of evidence.

Accreditation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Hot Stuff	Novel Materials	Food Factory	Fooling Your	Body Wars	
OCR Entry Level	Insulator, conductor, particle model, solar furnace.	Covalent bonds, composite material, alloys and metal properties.	Photosynthesis. Transpiration and translocation.	Function and structure of the eye and taste buds. Reaction to stimuli.	Microbes, white blood cells, diseases, vaccinations.	
And	Acids and	How Fast, How	A Place For	Nuclear Power		
OCR GCSE Gateway A	Alkalis pH scale, lab safety, protons and hydroxide ions, neutralisation.	Slow? Rates of reaction, catalysts, enzymes.	Everything Structure of an atom, periodic table (groups) Isotopes.	Function of a nuclear power station, concept of a half-life, radioactive waves.		
	OCR Entry Level And OCR GCSE	Hot Stuff Insulator, conductor, particle model, solar furnace. And Acids and Alkalis pH scale, lab safety, protons and hydroxide ions,	Hot Stuff Insulator, conductor, particle model, solar furnace. And Acids and Alkalis PH scale, lab safety, protons and hydroxide ions, And hydroxide ions, Novel Materials Covalent bonds, composite material, alloys and metal properties. How Fast, How Slow? Rates of reaction, catalysts, enzymes.	Hot Stuff Insulator, conductor, particle model, solar furnace. And OCR GCSE Gateway A Hot Stuff Novel Materials Covalent bonds, composite material, alloys and metal properties. Hot Stuff Novel Materials Food Factory Photosynthesis. Transpiration and translocation. And Acids and Alkalis Slow? Photosynthesis. Transpiration and translocation. A Place For Everything Structure of an atom, periodic table (groups) lsotopes.	Hot Stuff Covalent bonds, composite material, alloys and metal properties. And OCR GCSE Gateway A Hot Stuff Novel Materials Covalent bonds, composite material, alloys and metal properties. Function and structure of the eye and taste buds. Reaction to stimuli. A Place For Everything Structure of an atom, periodic table (groups) lsotopes. Function and structure of the eye and taste buds. Reaction to stimuli. A Place For Everything Structure of an atom, periodic table (groups) lsotopes. Function of a nuclear power station, concept of a half-life,	Hot Stuff Insulator, conductor, particle model, solar furnace. And OCR GCSE Gateway A Hot Stuff Insulator, conductor, particle model, solar furnace. Novel Materials Covalent bonds, composite material, alloys and metal properties. Covalent bonds, composite material, alloys and metal properties. Photosynthesis. Transpiration and structure of the eye and taste buds. Reaction to stimuli. A Place For Everything Structure of an atom, periodic table (groups) ions, neutralisation. Somman Fooling Your Senses Function and structure of the eye and taste buds. Reaction to stimuli. A Place For Everything Structure of an atom, periodic table (groups) isotopes. Insulator, conductor, particle model, solar furnace. A Place For Everything Structure of an atom, periodic table (groups) isotopes. Insulator, conductor, particle model, structure of the eye and taste buds. Reaction to stimuli. A Place For Everything Structure of an atom, periodic table (groups) isotopes. Fooling Your Senses Microbes, white blood cells, diseases, vaccinations.