

Discrete Provision for Learners with Autism KS4 Curriculum Overview



Subject: Science

Formal Pathway

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	<p>Pushes and Pulls Forces, gravity, Hooke's Law.</p> <p>Extinction Variation, mutations habitats, extinction.</p> <p>Control Systems Homeostasis, diabetes and insulin.</p>	<p>Sorting Out Pure substances and mixtures. Chromatography.</p> <p>Dead or Alive? MRS GREN, animal cells, plant cells. Cancer as a cell mutation.</p>	<p>Attractive Forces Magnetism, electromagnets, earth's magnetic field.</p> <p>Body Wars Microbes, white blood cells, diseases, vaccinations.</p>	<p>Let's Get Together Periodic table, electrolysis. Dot and cross diagrams.</p> <p>Getting the Message Soundwaves, coding, binary codes, wireless technology.</p>	<p>Gasping for breath Respiratory system function, hazards of smoking.</p> <p>Are you Overreacting? Chemical reactions, hydrogen test, reactivity series.</p>	<p>Medical Rays X-rays uses and risks. UV ray uses and risks.</p> <p>Full Spectrum Electromagnetic spectrum. Infrared uses. Visible light uses. Microwave radiation.</p>

Year 11	<p>Hot Stuff</p> <p>Insulator, conductor, particle model, solar furnace.</p>	<p>Creepy Crawlies</p> <p>Ecosystems, food webs, adaptations of predators and prey.</p>	<p>Food Factory</p> <p>Photosynthesis. Transpiration and translocation.</p>	<p>Nuclear Power</p> <p>Function of a nuclear power station, concept of a half-life, radioactive waves.</p>	<p>How Fast, How Slow?</p> <p>Rates of reaction, catalysts, enzymes.</p>	<p>Scientific Enquiry</p> <p>Exploring; testing; investigating; experimenting; measuring; applying.</p>
	<p>Acids and Alkalis</p> <p>pH scale, lab safety, protons and hydroxide ions, neutralisation.</p>	<p>Novel Materials</p> <p>Covalent bonds, composite material, alloys and metal properties.</p>	<p>A Place for Everything</p> <p>Structure of an atom, periodic table (groups) Isotopes.</p>	<p>Fooling Your Senses</p> <p>Function and structure of the eye and taste buds. Reaction to stimuli.</p>	<p>CSI Plus</p> <p>Crime scene contamination, fingerprints, collection of evidence.</p>	

Semi-Formal Pathway

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Dead or Alive Life process (MRS GREN); animal and plant cells; microbes; immune response; vaccines.	Final Frontiers The Earth, moon and sun; the solar system; space travel; colonising planets.	Sorting Out Pure substances; mixtures; separation; filtration; chromatography; evaporation; crystallisation; recycling.	Extinction Habitats; adaptations; evolution; natural selection; speciation; variation; adaptation; extinction; endangered species	Pushes and Pulls Forces; Newtons; pushes and pulls; weight and mass; speed; friction; air resistance;	Scientific Enquiry Exploring; testing; investigating; experimenting; measuring; applying.
Year 11	Creepy Crawlies Ecosystems; sampling; food webs; adaptations; effects of man.	Hot Stuff Temperature; states of change; water cycle; thermal insulators and conductors; extreme environments; animal adaptations.	Energy MELTS energy; chemical energy; fossil fuels; renewable energy; wind power	Full Spectrum Properties of light; reflection; refraction; visible spectrum; electromagnetic spectrum; medical rays	Food Factories Plant structure and function; life cycle; classification; pollination; seeds and dispersal; needs of a plant; the importance of plants	Scientific Enquiry Exploring; testing; investigating; experimenting; measuring; applying.