

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Blue	Waves Longitudinal and transverse waves. Light and sound waves Practical skills – Investigating the angle of incidence and the angle of reflection - Drawing conclusions from experimental results.	Acids and Alkalis The pH scale Neutralisation reactions and reactions of acids with metals. Practical Skills – Using indicators to test pH, evaluating a home-made indicator, collecting accurate data	Living things and their interactions MRS GREN – Criteria of living things. Food chains and food webs Skills – Constructing biological pyramids from given data Competition and adaptation of plants and animals.	The building blocks of life Cells, organs and organ systems Bones, the skeleton and its function Joints STEM – Engineering design considerations of making a quality prosthetic limb.	Conduction, Convection and Radiation Conduction, convection and radiation. Practical Skills – Investigating conduction and insulation, absorption and emission of thermal radiation. Skills – Plotting graphs	Organs and Organ Systems The respiratory, digestive and circulatory systems. Anaerobic and aerobic respiration The immune system Practical Skills – experimental variables and evaluating methods
Green	Healthy Diet, Healthy Body Components of a healthy diet and the consequences an unhealthy diet. Practical skills – Testing for food groups, risk assessments and method evaluation, collecting accurate data	Plants and the Carbon Cycle Photosynthesis and the carbon cycle. Leaf structure Deforestation. Practical skills – Follow a procedure to test a leaf for starch, risk assessment.	Extracting useful materials Non-renewable energy resources. Combustion. Geothermal energy Extracting metals Practical Skills – Investigating different fuels, risk assessment, collecting accurate data	Forces and Spaces Forces and their effects Gravity and space travel Our Solar System and the universe. Key stages in space exploration – The scientific process	Physical, Chemical and Energy Changes Chemical or physical change Solids, liquids and gases and changing state. Energy changes. Practical Skills – Investigating the changing state of water, collecting accurate data and plotting graphs.	Marie Curie and her contribution to science Marie Curie and the barriers she had to overcome. The structure of the atom. Radiation and its uses Cancer
Y10 Biology	Cell Biology Animal, plant and bacterial cell structure and cell specialisation. Chromosomes and mitosis. Diffusion and osmosis Active transport Practical Skills – Microscopy and microscope drawing.	Organisation The hierarchy of organisation in the human body. The digestive and circulatory system. Plant organs Practical Skills – Identifying food groups in different foods, collecting accurate data.	Communicable and Non-Communicable Diseases Coronary heart disease and cancer Health issues and associated risk factors Plant and human pathogens Skills – Using scatter diagrams to identify correlation, translating	Defending against pathogens Human barriers to infection The immune system Vaccinations and antibiotics The discovery and development of drugs. Practical Skills - investigating the effect	Bioenergetics Photosynthesis Anaerobic and aerobic respiration Metabolism Practical Skills - investigating the effect of light intensity on the rate of photosynthesis using an aquatic organism.	Homeostasis and Response Homeostasis The human nervous system Hormonal control in humans and plants. Practical skills - Planning and carrying out an investigation into the

			information from numerical to graphical form.	of antiseptics on bacterial growth.		effect of a factor on human reaction time.
Y11 Dual Award	Forces Forces and their interactions Forces and motion – Velocity, speed, distance and time. Practical Skills – Investigating speed and Hooke’s Law, collecting accurate results and presenting data graphically.	Cell Biology Animal, plant and bacterial cell structure and cell specialisation. Chromosomes and mitosis. Diffusion and osmosis Active transport Practical Skills – Microscopy and microscope drawing	Atomic Structure and the Periodic Table Atoms, elements and compounds. Atomic structure Separating techniques. The periodic table Skills – Development of scientific models over time.	Organic Chemistry Crude oil and its products. Fractional distillation. Combustion. Cracking. Alkenes	Infection and Response Pathogens and how they spread. Human defences against disease. Vaccinations and antibiotics. Drug development – the scientific process	Revision and Exam prep

Half Termly Career Focus

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Blue	Ultrasound technician	Laboratory technician Cell biologist	Wind turbine technician	Petroleum engineer Epidemiologist	Pharmacologist	Nuclear reactor operator Radiographer
Green	Dietitian Research scientist	Environmental lawyer	Restoration Ecologist Forensic scientist	Prosthetist	Thermal insulation engineer Analytical Chemist	Engineer