

SUBJECT CURRICULUM OUTLINE

Term	Topic/Unit of work	Knowledge	Skills	Assessment
Autumn Term 1	Introduction Lessons Cell Biology Organisation (Biology)	Safety in the lab and key practical science skills Plant and animal cells Specialised cells Prokaryotic and Eukaryotic cells Light and electron microscopes Chromosomes Cells, tissue, organs	Science skills - defining variables in practical applications Maths for science - units, graphing skill and applying and rearranging simple equations Practical microscope skills -onion cells -red blood or cheek cells Safe use of biohazards	Fortnightly STAMPS assessments Progress check 1 - extended STAMP 1
Autumn Term 2	Particle model of matter (Physics) Atomic structure (Physics) Atomic structure (Chemistry)	States of matter Determining density (required practical) Models of the atom and development Elements, compounds and mixtures Separating mixtures	Understanding how scientific theory evolves Using models to explain ideas Practical - revisiting safety in the lab and using a method, analysing results Practical skills - determining density of regular objects, irregular objects and liquids Maths for Science - Applying and rearranging equations Practical skills - separating mixtures	Fortnightly STAMPS assessments Progress check 2 - extended STAMP 2
Spring Term 1	Atomic structure (Chemistry) Organisation (Biology)	Atomic structure Changes to periodic table Group 0, 1 and 7 Heart Structure Blood vessels Blood	Looking for patterns in data (Group 1, 0 and 7) Making scientific observation Dissection skills Safe biohazards Microscopes	Fortnightly STAMPS assessments
	Organisation (Biology)	Heart health Cancer	Building research skills using reliable resources	Fortnightly STAMPS assessments

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Spring Term 2	Infection & response (Biology) Energy (Physics)	Communicative diseases & human defence systems Introduction to energy and efficiency	Evaluation of data to form evidence based conclusions Science for maths (comparing units, revisiting graphing skills for more complex data, rearranging equations)	Progress check 3 - extended STAMP 3
Summer Term 1	Energy continued (Physics) Electricity (Physics)	Energy resources Electrical charge, current, pd, resistance, Ohm's law Resistors Series & parallel circuits	Justification of choices (use of energy resources) Practical skills - making circuits, investigating circuits, interpreting results - Required practicals Revisiting graph drawing skills - IV graphs Maths for Science - Revisiting applying and rearranging simple equations	Fortnightly STAMPS assessments
Summer Term 2	Teacher 1- Forces Bonding, structure and properties of material (Physics) Teacher 2- Cell Biology Organisation (Biology)	Interaction of forces Gravity and weight Resultant forces Work done Distance and displacement- time graphs Speed and velocity- time graphs Diffusion Factors affecting rate of diffusion Osmosis Organs and the digestive system Enzymes Enzymes in digestion	Practical skills- Hooke's Law Work done- frictional surfaces Maths skills - collecting reliable data and evaluating graphs, measurement skills, comparing units, rearranging equations Revisiting safe use of equipment Diffusion demos: spray, potassium permanganate Osmosis- Potatoes or other root vegetables Enzymes- Food test	Fortnightly STAMPS assessments End of Year 9 Progress check