

AUTUMN 1

Chemistry – Atoms and the Periodic Table Atomic Structure, Groups 1 and 7, History of the Atom and the Periodic Table.	Biology – Cell Biology Eukaryotes, prokaryotes, animal and plant cells, osmosis and active transport.	Physics – Energy Calculations on Kinetic, Elastic and Gravitational energy. Work and power.	Prior Learning Periodic table and groups introduced in Y7&9. Cells introduced in Y7&9. Energy introduced in Y7&9, Work and Power in Y8.
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AUTUMN 2

Chemistry – Structure and Bonding Ionic (structure and properties), simple and giant covalent, metallic bonding, alloys.	Biology – Organisation Cells, tissues, organs, human digestive system.	Physics – Particles Particle theory, measuring density and Internal energy calculations.	Prior Learning Properties of metals in Y7. Nerve cells as specialised cells and reproduction in year 7. Particle theory introduced in Y7, density calculations in Y8. Staying alive, breathing and digestion year 8.
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SPRING 1

Chemistry – Energy Changes, Rate and Extent of Chemical Change, Organic Chemistry Exo/endo reactions/Bond enthalpy, factors affecting RoR, equilibrium,	Biology – Infection and Response Communicable diseases, viral, diseases.	Physics – Atomic Structure: Structure of Atoms, radioactivity and Half Life, contamination and irradiation	Prior Learning Exo/endo reactions in Y8 & 9. . Basic structure of the atom in Y9, Particle diagrams of Solids, liquids & Gases in Y7.
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SPRING 2

Chemistry – Chemical Changes pH scale, reactions of acids, making and naming salts, electrolysis	Biology – Infection and Response Viral, bacterial, fungal diseases, Plant defences	Physics – Electricity Circuits, Ohms Law, Resistance of Wire Practical	Prior Learning Acids/pH scale introduced in Y7&9, some naming of salts. Respiration introduced in Y8&9, looking at equation and linking to exercise. Electricity introduced in Y8 in terms of series and parallel circuits.
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SUMMER 1

Chemistry – Chemical Analysis Pure / impure, formulations, chromatography, testing for gases.	Biology – Bioenergetics Aerobic and anaerobic respiration, plant structure and photosynthesis.	Physics – Electricity Characteristics of components, electricity in the home.	Prior Learning Chromatography introduced in Y8. Photosynthesis as a process and leaf structure introduced in Y8. Electrical circuits introduced in Y8. Year 8 & year 9 Respiration and photosynthesis topics.
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SUMMER 2

Chemistry – Quantitative Chemistry Amounts in reactions, empirical formulae, moles.	Biology – Ecology Adaptation, communities, sampling.	Physics – Forces Scalars & vectors, distance and speed time graphs.	Prior Learning - Conservation of mass introduced in Y8, populations introduced throughout KS2 and studied in more detail in Y7&8. Contact and non-contact forces introduced in Y7&9, plus distance-time graphs. Year 7 Variation and inheritance, year 8 inheritance and evolution
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CAREERS LINKS

Research scientist, laboratory technician, dentist, nurse, dietitian, sports scientists, genetic disease research, taxonomist, wildlife forensics, civil engineer, environmental scientist. engineering, data analyst, healthcare, aviation, defence, construction.

CHARACTER LINKS

Motivation, resilience, and teamwork (performance virtues). Confidence and determination Listening, critical thinking and problem solving (intellectual virtues). Evaluation of ideas and process and seeking improvement through better knowledge and techniques (intellectual virtues). Consideration and construction of moral and ethical arguments in Science (moral virtues).

KEY ASSESSMENT DATES

Half termly assessments covering Biology, Chemistry and Physics in Oct, Dec, Feb, April, May and July.