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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Biology and Chemistry**  **Teacher**  **LA**  **Physics**  **Teacher**  **LP** | **B1 : Cell Biology**  Cell Structure, differentiation and specialisation  Microscopy  Tissues, organs, and organ systems  Transport in cells diffusion/osmosis/active transport  **C1: Atomic Structure and the Periodic Table**  The periodic table.  History of the atom  Model of the atom,  Structure of simple molecular substances  Metals and non metals  Group 1 and group 7 | **B2 Organisation**  Enzymes and Digestion  Food tests.  **B3 Infection and response**  Viral, fungal. protist and bacterial diseases.  Fighting disease: vaccination and drugs.  Developing drugs  **C2: Bonding, Structure and the Properties of Matter**  Ionic bonding and ionic compounds  Metallic bonding | **B2 organisation cont.**  Circulatory system Heart /blood vessels  Cardiovascular disease.  B3: Infection and response cont.  Health and disease  Risk actors for non-communicable disease  cancer  **4 Bonding, Structure and the Properties of Matter cont.**  Covalent bonding  Structure of simple molecular substances and larger covalent substances.  Allotropes of carbon  Metallic bonding | **B2 Organisation cont.**  Health and disease cont.  Risk factors for non-communicable disease  The lungs  Exchange surfaces  **C4: Chemical Changes**  Acids and Alkalis  Reactivity of metals | **B2 Organisation cont.**  Plant cell organisation, transpiration and translocation.  **C4: chemical changes cont.**  Separating metals from metal oxides  electrolysis | **B 4. Bioenergetics**  Photosynthesis  Aerobic and anaerobic respiration  Exercise and metabolism  **B7: Ecology**  Adaptions, food chains/webs  Using quadrats    **C5: Energy changes**  Exothermic /endothermic reactions  Chem practical work/recap |
| **Prior knowledge**  Cell structure KS3  Atoms, elements, compounds and mixtures. KS3  Recap if necessary. | **Prior knowledge**  C1: States of matter. Atomic structure  Recap if necessary. | **Prior Knowledge**  B3 types of pathogen  Prevention of disease  C1 :Atomic structure  Recap if necessary | **Prior knowledge**  B1: Transport in cells diffusion/active transport. Recap if necessary. Disease types of pathogens. Recap if necessary.  PH scale KS3 | **Prior Knowledge**  B2:Cell structure /root hairs  C2: Formation of Ions  Metallic bonding  Recap if necessary | **Prior knowledge**  Ecology KS3 food chains/webs |
| **P1: Energy (1)**  Energy stores and transfers  Energy systems  Conservation and dissipation of energy  Energy, work, power and efficiency  Energy resources | **P3: Particle Model of Matter (1)**  Thermal energy transfers (conduction, convection) Heat, temperature, internal energy and change of state. Pressure. Density.  **P2: Electricity (1)**  Circuits, electric charge, current and potential difference. Ammeters and voltmeters. Resistance and V=IR. Series and parallel circuits. | **P2: Electricity (2)**  Resistance of a Wire, Circuit components and I-V characteristics. LDR’s and thermistors.  DC vs AC. Mains electricity and electrical safety. Wiring a plug. Power and energy transfer. The National Grid. | **P5: Forces (1)**  Contact and non-contact forces. Force fields.  Weight, mass and gravity.  Resultant forces and vector diagrams.  Work done.  Forces and elasticity. | **P6: Waves (1)**  Transverse and longitudinal waves  Electromagnetic waves and the electromagnetic spectrum. Absorption and radiation of IR depending on surface type. Uses and applications of electromagnetic waves. | **P7 Magnetism and Electromagnetism (1)**  Poles of a magnet. Magnetic materials. Permanent and induced magnets. Magnetic fields. Magnetic compass. Electromagnetism. |
|  | **Prior Knowledge**  KS3: Energy | **Prior Knowledge**  P1: Energy (1)  KS3: Particle Model  KS3: Electrical Circuits | **Prior Knowledge**  P2: Electricity (1) | **Prior Knowledge**  P1: Energy (1)  KS3: Forces | **Prior knowledge**  P1: Energy (1)  KS3: Sound  KS3: Light | **Prior Knowledge**  KS3 Magnetism and Electromagnets |

Skills covered: Throughout the course young people learn the key skills linked to The Development of Scientific Thinking, Experimental Skills and Strategies, Analysis and Evaluation, Scientific Vocabulary, Quantities, Units, Symbols and Nomenclature.

Literacy: Science target set to focus on developing a word bank for correct use and spelling of new scientific terminology/ words.

Assessment: In Yr.10 Science consists of an assessment during each term consisting of exam questions drawn from any area of the curriculum studied so far. In addition, students will be assessed on the quality of their written and spoken work during lessons and homework, and end-of-topic tests.

Exam Board: AQA Combined Science (Trilogy)