|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Biology and Chemistry**  **Teacher**  **LA**  **Physics**  **Teacher**  **LP** | **B6: Inheritance, Variation and Evolution**  Mitosis and meiosis Genetic diagrams  X and y chromosomes.  Inherited disorders  **C6. Rate and extent of Chemical Change**  Rate of Reaction  Reaction rate experiments  Rate of reaction graphs  Group 0 | **B6: Inheritance variation and evolution cont.**  Evolution/natural selection selective breeding  Genetic engineering  Stem cells  classification  **C7: Organic chemistry**  Hydrocarbons  Fractional distillation of crude oil  Uses of crude oil.  Cracking crude oil | **4. Homeostasis and response**  The nervous system  The endocrine system  **C8. Chemical Analysis**  Purity, formulations and paper chromatography.  Identification of common gases  **C3: Quantitative Chemistry**  Relative formula mass  The mole  Conservation of mass. | **B5. Homeostasis and response cont.**  Controlling blood glucose  Puberty menstrual cycle  Adrenaline/thyroxine  **C9: Chemistry of the atmosphere**  The composition and evolution of the Earth’s atmosphere  Carbon dioxide and methane as Greenhouse gases.  Atmospheric pollutants and their sources. | **B7: Ecology**  Water cycle  Carbon cycle  Global warming  biodiversity  **C10: Using resources**  Using the Earth’s resources and obtaining potable water.  Waste water treatment.  Life cycle assessment and recycling. | **GCSE Exams** |
| **Prior knowledge**  B1: Cell structure  C1: Periodic table/electron shells  Recap if necessary | **Prior knowledge**  B6 Genetics  C2: covalent bonding  Catalysts  Recap if necessary | **Prior Knowledge**  Boiling /melting points  Compound /mixtures KS3  Recap if necessary | **Prior Knowledge**  B4: hormones  Recap if necessary. | **Prior knowledge**  B7: Ecology topic covered at end of year 10  C9: Chemistry of atmosphere  Recap if necessary | **Young people continue to come into school for revision session on days that they do not have exams.** |
| **P1. Energy (2)**  **P2. Electricity (2)**  **P3. Particle Model of Matter (2)**  Changes in energy calculations. Energy changes in systems. Rate of energy transfer.  Specific heat capacity and specific latent heat | **P4. Atomic Structure and Radioactivity**  (History of the atom)  Atoms and isotopes  Atoms and nuclear radiation  Nuclear equations  Half-life and radioactive decay  Radioactive contamination | **P5: Forces (2)**  Scalar and vector quantities  Distance, displacement, speed, velocity, acceleration.  Forces, motion and Newton’s laws.  Car safety. Reaction time. Momentum. | **P6 Waves (2)**  Wave properties. Measurement of frequency, wavelength and speed of water waves and waves in a solid.  Properties of electromagnetic waves. Refraction and ray diagrams. | **P7 Magnetism and Electromagnetism (2)**  The motor effect. Fleming’s left hand rule and electric motors. | **GCSE Exams** |
|  | **Prior knowledge**  P1. Energy (1)  P2. Electricity (1) (2)  P3. Particle Model of Matter (1)  SI units and maths skills (use of a calculator, orders of magnitude and unit conversions, rounding, standard form, rearranging and solving equations, square/square root) | **Prior knowledge**  C1: Atomic structure and The Periodic Table, (History of the atom) | **Prior knowledge**  P5: Forces (1) | **Prior Knowledge**  P6: Waves (1) | **Prior knowledge**  P7: Magnetism and Electromagnetism (1) | **Young people continue to come into school for revision session on days that they do not have exams.** |

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 11 Science consists of an assessment during each term consisting of GCSE exam questions/papers drawn from any area of the curriculum studied so far. In addition, young people will be assessed on the quality of their written and spoken work during lessons and homework

Exam Board: AQA Combined Science (Trilogy)