| Year 10 | Autumn Term | Spring Term | Summer Term |
|---|---|---|---|
| **Topics Studied in AQA Triology Combined Science** | **Biology:** Bioenergetics<br>**Chemistry:** Bonding and Quantitative Chemistry<br>**Physics:** Particle model and Atomic structure | **Biology:** Organisation (the body)<br>**Chemistry:** Chemical Changes<br>**Physics:** Forces | **Biology:** Ecology<br>**Chemistry:** Chemistry of the Atmosphere |
| **Skills and Key Knowledge Taught** | -Photosynthesis reaction<br>-Aerobic and anaerobic respiration<br>-Atomic structure, ionic bonding and properties<br>-Covalent and Metallic bonding and properties<br>-Allotropes of carbon<br>-Conservation of mass/apparent mass change, mass calculations<br>-States and properties and changing state<br>-Mass conservation<br>-Density equation, density RP<br>-Internal energy, latent heat calculations<br>-Interpreting graphs, specific heat capacity (HT)<br>-Ionising radiation and risk and Atomic Structure<br>-Emission of EM radiation, alpha, beta, gamma<br>-Use of types of radiation, nuclear equations, half-life and nuclear fusion | -Digestive system (including food tests)<br>-Enzyme action<br>-Heart, blood, blood vessels, heart disease, lifestyle and non-communicable disease including cancer<br>-Plant organs and tissues, plant and active transport<br>-Atomic structure, ion formation<br>-Metal oxides, reactivity series, displacement/metal extraction, OILRIG and ionic equations, making salts<br>-Scalar & Vector, Weight calculations, Elasticity, Forces in motion including speed and acceleration, Newton's laws | -Classification and communities<br>-Biotic/abiotic factors<br>-Distribution of organisms, adaptations, producers, consumers<br>-Decomposers, cycling materials, waste management, land use and deforestation, global warming and maintaining biodiversity<br>-Composition of the atmosphere, cycling of Carbon, Greenhouse effect and global warming, atmospheric pollutants. |
| **Links for Support/ Help at Home** | Use of student resources located within WHS SharePoint for students<br>Use of additional homework booklets, therapy work packs, exam papers and/or additional resources from the class teacher via Synergy<br>Use of online platforms such as Seneca for podcasts<br>Watching of documentaries linked to scientific issues studied<br>Homemade experiments at home<br>Youtube videos to watch practical demonstrations and additional teaching<br>Teacher discussions following assessments and/or reports<br>Participation in enrichment opportunities and/or extra-curricular activities | | |

| Year 11 | Autumn Term | Spring Term | Summer Term |
|---|---|---|---|
| **Topics Studied in AQA Trilogy Combined Science** | **Biology:** Homeostasis and Response<br>**Chemistry:** Chemistry of the Atmosphere & Using resources<br>**Physics:** Waves | **Biology:** Inheritance, Variation and Evolution<br>**Chemistry:** Organic Chemistry<br>**Physics:** Forces and Motion and Magnetism/Electromagnetism | **Class-based Variation in Revision Topics**<br>Students will be directed to revision based on student needs from PPE performance/teacher assessments. **GCSE Exams Undertaken** |
| **Skills and Key Knowledge Taught** | -Homeostasis and nervous system comparison<br>-Reaction time, reflex actions and reflex arc<br>-Endocrine system: blood glucose<br>-Kidney function and failure<br>-Reproductive hormones, contraception, hormones to treat infertility<br>- Composition of the atmosphere, cycling of Carbon, Greenhouse effect and global warming, atmospheric pollutants.<br>-Resources on our planet and sustainability. Potable water and wastewater treatment, Life cycle assessments and recycling.<br>-Wave types and properties. Calculating wave speed and the required practical. EM waves and their properties. | -Sexual and asexual reproduction<br>-Meiosis<br>-Sex determination<br>-Protein synthesis<br>-Genetic inheritance and genetic disorders, genetic engineering<br>-Variation, selective breeding, evidence for evolution and extinction<br>-Crude oil, fractional distillation, properties of hydrocarbons and alkanes. Cracking and alkenes<br>-Scalar and vector and interaction pairs<br>-W=mg, Resultant forces, Freebody diagrams<br>-Distance and displacement, Speed and velocity, graphs, momentum, stopping distances, Newton's Laws<br>-Magnetic poles and permanent/induced<br>-Magnetic fields including RH rule, review electricity (current, resistance, PD basics)<br>-Electromagnets, motor effect and Fleming's LH rule, F=BIl, electric motors | -Accumulation of all content and skills |
| **Links for Support/ Help at Home** | Use of student resources located within WHS SharePoint for students<br>Use of additional homework booklets, therapy work packs, exam papers and/or additional resources from the class teacher via Synergy<br>Use of online platforms such as Seneca for podcasts<br>Watching of documentaries linked to scientific issues studied<br>Homemade experiments at home<br>Youtube videos to watch practical demonstrations and additional teaching<br>Teacher discussions following assessments and/or reports<br>Participation in enrichment opportunities and/or extra-curricular activities | | |