




St Richard Reynolds Catholic High School

<p>SUBJECT: SEPARATE SCIENCE YEAR GROUP: 11</p> <p>TOPICS COVERED</p> <p>Biology: Homeostasis; Inheritance, variation and evolution; Ecology</p> <p>Chemistry: Organic Chemistry, Chemical analysis, Chemistry of the atmosphere, Using resources</p> <p>Physics: Magnetism, Waves, Particle model of matter, Atomic structure</p>	
<p style="text-align: center;">PROGRAMME OF STUDY</p>	<p style="text-align: center;">METHOD OF ASSESSMENT</p>
<p>Autumn Term</p> <p>Biology: Homeostasis – to complete from Y10.</p> <p>Inheritance – sexual and asexual reproduction, meiosis, advantages and disadvantages of different reproductive methods, reproductive strategies in organisms like the plasmodium parasite, determination of gender, DNA, gene expression, mutation, inheritance, Mendel and his contribution to genetics, genetic engineering, cloning, variation, selective breeding, evolution, speciation, evidence for evolution, antibiotic resistant bacteria, extinction.</p> <p>Chemistry:</p> <ul style="list-style-type: none">• Organic Chemistry: Hydrocarbons, Fractional distillation, cracking, combustion, reactions of alkenes, reactions and uses of alcohols, carboxylic acids and esters, alternative fuels, addition polymerisation, condensation polymerisation, DNA as polymer, Natural polymers• Chemical analysis: Formulations, Chromatography, Testing for gases, Testing for ions, Flame Emission Spectroscopy• Chemistry of the atmosphere: Development of our atmosphere, Global warming, Climate change, Atmospheric pollutants <p>Physics: Waves, Magnetism and Electromagnetism</p>	<p>Practical assessment</p> <p>End of topic test after each unit</p> <p>Assessed HW tasks</p> <p>Mock exams</p>

<p>Spring Term</p> <p>Biology: Complete Inheritance, variation and evolution, Ecology, classification, communities, distribution, adaptations, trophic levels, pyramids of number and biomass, cycles in nature, decomposition, biodiversity and management of ecosystems, waste, land use and deforestation, global warming and its impact, food security, farming techniques and their impact on the environment, sustainable fishery, the role of GM crops.</p> <p>Revision for mock exams</p> <p>Chemistry:</p> <ul style="list-style-type: none"> • Using resources: Finite resources, Potable water, Treating waste water, Extracting metals, Life Cycle Assessments, Recycling, Rusting and its prevention, Alloys and their uses, Ceramics, polymers and composites, Haber process, Production and uses of NPK fertilisers. • Revision for GCSE exams <p>Physics: Particle model, Atomic structure, Revision for exams</p>	<p>Practical assessment</p> <p>End of topic test after each unit</p> <p>Assessed HW tasks</p>
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<p>Summer Term</p> <p>Revision for exams only</p> <p>Exam board – AQA</p>	<p>Practice past papers for exam preparation</p>
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<p>Key Skills:</p> <ul style="list-style-type: none"> ➤ Experimental work ➤ Collecting data ➤ Interpreting, analysing and evaluating data ➤ Research and hypothesising ➤ Predicting and concluding ➤ Evaluating
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