




St Richard Reynolds Catholic High School

<p>SUBJECT: SCIENCE YEAR GROUP: 7</p> <p>TOPICS COVERED</p> <p>Biology: Cells, Ecology, Reproduction</p> <p>Chemistry: Particle model, Acids and Alkalis, Elements, Compounds and Mixtures</p> <p>Physics: Forces, Electricity, The Solar System, Energy</p>	
<p style="text-align: center;">PROGRAMME OF STUDY</p>	<p style="text-align: center;">METHOD OF ASSESSMENT</p>
<p>Autumn Term</p> <p>Being a scientist: Safety in a science lab, Hazard symbols, Scientific diagrams, Experiments and variables, Reliability, Accuracy, Graph skills</p> <p>Cells: The microscope, Plant and animal cells, Specialised animal and plant cells, unicellular and multicellular organisms, Diffusion, Skeletal system, Muscles and antagonistic pairs.</p> <p>Particle model: Particle arrangement in solids, liquids and gases, Cooling and heating curves, gas pressure, solutions, solvents, solutes, Dissolving, Diffusion</p> <p>Forces: Identifying forces in everyday life, Balanced and unbalanced forces, Friction, Calculations of resultant forces, Springs and elasticity, Hooke's law, Work done.</p>	<p>Practical assessment</p> <p>End of topic test after each unit</p> <p>Assessed tasks/models/projects</p>

Spring Term

Ecology: Habitats, Adaptations of plants and animals, Food chains, Food webs, Classification, Vertebrates and invertebrates

Acids and alkalis: pH scale, Indicators and testing different indicators, Making red cabbage indicator, Neutralisation reactions, Application of neutralisation reactions.

Electricity: Static electricity, Electrical symbols, Current and parallel circuits, Potential difference, Current, Modelling electricity, Magnets, Electromagnets and their uses.

Reproduction: Plant structure and plant reproduction, Puberty, Male and Female reproductive systems, Menstrual cycle, Fertilisation, Pregnancy, Birth and care for the new baby

Practical assessment

End of topic test after each unit

Assessed tasks/models/projects

Summer Term

Solar system: The structure of the Solar system, Days, nights and seasons, Phases of the Moon, Mass and Gravity, Space exploration project

Energy: Energy from food, Food labels and comparison of energy values from different foods, Energy changes, renewable and non-renewable energy sources, generating electricity using fossil fuels, generating electricity using renewable energy resources, How power station works

Atoms, Elements and Compounds: Atomic structure, Elements and their symbols, The periodic table, Compounds, Making compounds – practice

Mixtures: Compare the properties of mixtures and compounds, Separating mixtures techniques including evaporation, filtration, distillation, chromatography, Pure substances

Practical assessment

End of topic test after each unit

Assessed tasks/models/projects

Key Skills:

- Experimental work
- Collecting data
- Interpreting, analysing and evaluating data
- Research and hypothesising
- Predicting and concluding
- Evaluating