

St. Mary's College

Integrated Science

Form One

Course Outline

Term 1

| Proposed Date/ Week | Unit/ Section | Topics | Modules |
|---------------------|---------------|----------------------------------|---|
| Wk 1 | 01 | Science and scientific processes | <ul style="list-style-type: none">• Science and technology• Impacts of science and technology• Scientific skills |
| Wk 2 | | | <ul style="list-style-type: none">• Writing a lab report |
| Wk 3 | | | <ul style="list-style-type: none">• Making scientific drawings• Labelling scientific diagrams |
| Wk 4 | 01 | | <ul style="list-style-type: none">• Scientific apparatus |
| Wk 5 | 02 | Safety in Science | <ul style="list-style-type: none">• Safety symbols• Safety in the school laboratory |
| Wk 6 | 04 | Characteristics of Living Things | <ul style="list-style-type: none">• Growth• Respiration• Irritability• Movement• Nutrition• Excretion• Reproduction |
| Wk 7 | 05 | Cells | <ul style="list-style-type: none">• Animal and plant cells• Structure of animal cell• Structure of plant cell |
| Wk 8 | 06 | Cells, tissues and organs | <ul style="list-style-type: none">• Unicellular organisms• Specialised animal cell• Plant systems• Specialised plant cells |
| Wk 9 | | | <ul style="list-style-type: none">• Skeletal and muscular systems |

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| Wk 10 | 07 | Cellular Processes | <ul style="list-style-type: none"> • Diffusion • Osmosis • Photosynthesis |
| Wk 11- 12 | | | <ul style="list-style-type: none"> • Revision • Christmas Examinations |

Term 2

| Proposed Date/Week | Unit/Section | Topic | Modules |
|--------------------|--------------|-----------------------------------|---|
| Wk 1 | 08 | Properties of Matter | <ul style="list-style-type: none"> • Matter • Properties of gases • Density |
| Wk 2 | | | <ul style="list-style-type: none"> • States of matter • Particles of matter • The effect of heat on matter |
| Wk 3 | | | <ul style="list-style-type: none"> • Melting and solidifying • Boiling and condensation • Sublimation |
| Wk 4 | 09 | Atoms and Elements | <ul style="list-style-type: none"> • Matter's building blocks • Some Common elements • Atoms |
| Wk 5 | | | <ul style="list-style-type: none"> • Structure of atom • Electronic structure |
| Wk 6 | | | <ul style="list-style-type: none"> • Periodic table |
| Wk 7 | 10 | Compounds and Mixtures | <ul style="list-style-type: none"> • Compounds and mixtures • Atoms and molecules |
| Wk 8 | | | <ul style="list-style-type: none"> • Molecules that are elements |
| Wk 9 | 03 | Scientific Measurements and Units | <ul style="list-style-type: none"> • Measurement and SI units • Measuring Length using different instruments |
| Wk 10 | | | <ul style="list-style-type: none"> • Measuring volume of liquids • Measuring volume of irregular solids |

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| Wk 11 | | | <ul style="list-style-type: none"> • Measuring mass • Measuring time • Measuring temperature using thermometers |
| Wk 12 | | | Revision and assessment |

Term 3

| Proposed Date/Week | Unit/Section | Topic | Modules |
|--------------------|--------------|-----------------------|---|
| Wk 1 | 11 | Forces and Energy | <ul style="list-style-type: none"> • Action of forces • Types of forces • Friction • Water resistance and air resistance |
| Wk 2 | | | <ul style="list-style-type: none"> • Representing forces • Resultant forces acting along the same line • Mass and weight • Gravity • Weight in places other than Earth |
| Wk 3 | | | <ul style="list-style-type: none"> • Force and Pressure • Pressure and gases • Everyday examples of pressure |
| Wk 4 | 12 | Energy Transformation | <ul style="list-style-type: none"> • What is energy? • Potential Energy • Kinetic Energy • Heat and light Energy |
| Wk 5 | | | <ul style="list-style-type: none"> • Sound Energy • Electrical Energy • Nuclear Energy • Thermal Energy |
| Wk 5 | | | <ul style="list-style-type: none"> • Energy transformations • Renewable energy resources • Biofuels |
| Wk 7 | | | <ul style="list-style-type: none"> • Transforming Energy • Sankey diagrams • Conservation of energy |
| Wk 8 | | | <ul style="list-style-type: none"> • Revision • End of Year Exams |