

## Science Department Curriculum Map

**Intent:** the aim of the Science department at Salvatorian College is to encourage our pupils to be curious about the world around them. Our intent is to deliver an engaging and stimulating curriculum that seeks to enable the pupils to develop the necessary skills to analyse and question the world in a critical way. Investigative and practical skills are at the heart of this, giving pupils the opportunities to make and test predictions, to collect and analyse data, to draw conclusions and evaluate the work carried out; we want pupils to think and act like scientists do in the real world, to prepare them for a possible future role within the wide-ranging scientific community. We aim to equip our students with the scientific knowledge and skills that are needed to understand the important role Science plays in society, both now and in the future. It is vital that we educate our pupils about key issues in science, such as climate change, energy issues associated with finding alternatives to using finite resources, the ethics of cloning and lifestyle choices that impact our health. Most importantly, we want our pupils to have a heightened awareness about the need for greater sustainability in all that we do as individuals and collectively to ensure the safekeeping of our planet for future generations; helping them to understand the essential role they will play in this.

Term	Autumn 1	Assessment 1	Autumn 2	Assessment 2	Spring 1	Spring 2	Assessment 3	Summer 1	Summer 2
Year 7	Working Scientifically B1.1 Cells	Assessment 1	B1.2 Structure and function of body systems C1.1 Particles and their behaviour	Assessment 2	C1.2 Elements, atoms and compounds P1.1 Forces	P1.2 Sound B1.3 Reproduction	Assessment 3	C1.3 Chemical reactions C1.4 Acids and alkalis	P1.3 Light P1.4 Space
Year 8	C1.4 Acids and alkalis P1.3 Light P1.4 Space	Assessment 1	P2.1 Electricity and magnetism B2.1 Health and Lifestyle	Assessment 2	B2.2 Ecosystem processes C2.1 The Periodic Table	C2.3 Metals and acids P2.2 Energy	Assessment 3	P2.3 Motion and Pressure B2.3 Adaptation and inheritance	C2.2 Separation techniques C2.4 The Earth
Year 9	C1 Atomic structure and the periodic table C2 The periodic table C3 Structure and bonding	Assessment 1	C4 Chemical calculations <i>Required practical Neutralisation</i> C5 Chemical changes <i>Required practical Making salts</i>	Assessment 2	B1 Cell structure and transport <i>Required practical microscopy</i> <i>Required practical Osmosis</i> B2 Cell division	B3 Organisation and the digestive system <i>Required practical Food tests</i> <i>Required practical Enzymes</i> B4 Organising animals and plants	Assessment 3	P1 Conservation and dissipation of energy P2 Energy transfer by heating <i>Required practical Thermal insulation</i> <i>Required practical Specific heat capacity</i>	P3 Energy resources P4 Electric circuits <i>Required practical Resistance</i> <i>Required practical I-V characteristics</i>

<p>Year 10 CS</p>	<p>C1-5 Revision C6 Electrolysis <i>Required practical Electrolysis</i></p>	<p>Assessment 1</p>	<p>C7 Energy changes <i>Required practical Temperature changes</i> C8 Rates and equilibrium <i>Required practical Rates of reaction</i> C9 Crude oil and fuels</p>	<p>Assessment 2</p>	<p>B1-4 Revision B5 Communicable disease B6 Preventing and treating disease B7 Non-communicable diseases</p>	<p>B8 Photosynthesis <i>Required practical Photosynthesis</i> B9 Respiration B10 The human nervous system <i>Required practical Reaction time</i> B11 Hormonal coordination</p>	<p>Assessment 3</p>	<p>P1-3 Revision P4 Electric circuits <i>Required practical Potential difference and resistance</i> <i>Required practical Component characteristics</i> P5 Electricity in the home P6 Molecules and matter <i>Required practical Density</i></p>	<p>P7 Radioactivity P8 Forces in balance P9 Motion P10 Force and motion <i>Required practical Acceleration Required practical Force and extension</i></p>
<p>Year 10 TS</p>	<p>C1-5 Revision C6 Electrolysis <i>Required practical Electrolysis</i> C7 Energy changes <i>Required practical Temperature changes</i> C8 Rates and equilibrium <i>Required practical Rates of reaction</i></p>	<p>Assessment 1</p>	<p>C9 Crude oil and fuels C10 Organic reactions C11 Polymers B1-4 Revision B5 Communicable disease <i>Required practical Microbiology</i></p>	<p>Assessment 2</p>	<p>B6 Preventing and treating disease B7 Non-communicable diseases B8 Photosynthesis <i>Required practical Photosynthesis</i> B9 Respiration B10 The human nervous system <i>Required practical Reaction time</i></p>	<p>B11 Hormonal coordination <i>Required practical Plant responses</i> B12 Homeostasis in action B13 Reproduction</p>	<p>Assessment 3</p>	<p>P4 Electric circuits <i>Required practical Potential difference and resistance</i> <i>Required practical Component characteristics</i> P5 Electricity in the home P6 Molecules and matter <i>Required practical Density</i> P7 Radioactivity</p>	<p>P8 Forces in balance P9 Motion P10 Force and motion <i>Required practical Acceleration Required practical Force and extension</i> P11 Force and pressure</p>

<p><b>Year 11 CS</b></p>	<p>P9 Motion P10 Force and motion <i>Required practical Acceleration</i> <i>Required practical Force and extension</i> P12 Wave properties <i>Required practical Waves</i> P13 Electromagnetic waves <i>Required practical Radiation and absorption</i></p>	<p><b>Mock Exam 1</b></p>	<p>P15 Electromagnetism C9 Crude oil and fuels C12 Chemical analysis <i>Required practical Chromatography</i> C13 The Earth's atmosphere C14 The Earth's resources <i>Required practical Water purification</i></p>	<p><b>Mock Exam 2</b></p>	<p>B10 The human nervous system <i>Required practical Reaction time</i> B11 Hormonal coordination B13 Reproduction B14 Variation and evolution</p>	<p>B15 Genetics and evolution B16 Adaptations, interdependence and competition <i>Required practical Field investigations</i> B17 Organising an ecosystem <i>Required practical decay</i> B18 Biodiversity and ecosystems</p>	<p><b>Mock Exam 3</b></p>	<p><b>Revision and Summer exams</b></p>
<p><b>Year 11 TS</b></p>	<p>P9 Motion P10 Force and motion <i>Required practical Acceleration</i> P11 Force and pressure P12 Wave properties <i>Required practical Waves</i> P13 Electromagnetic waves <i>Required practical Radiation and absorption</i></p>	<p><b>Mock Exam 1</b></p>	<p>P14 Light <i>Required practical Reflection and refraction of light</i> P15 Electromagnetism P16 Space C12 Chemical analysis <i>Required practical Chromatography</i> <i>Required practical Identifying ions</i></p>	<p><b>Mock Exam 2</b></p>	<p>C13 The Earth's atmosphere C14 The Earth's resources <i>Required practical Water purification</i> C15 Using our resources B14 Variation and evolution B15 Genetics and evolution</p>	<p>B16 Adaptations, interdependence and competition <i>Required practical Field investigations</i> B17 Organising an ecosystem B18 Biodiversity and ecosystems</p>	<p><b>Mock Exam 3</b></p>	<p><b>Revision and Summer exams</b></p>