

Science Curriculum Map

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<p>Year 7</p> <p>Assessments are completed at the end of part 1 and part 2 on the content delivered so far.</p> <p>Students have an end of year test in the final term</p>	<p>Intro to Science topic- Covering key skills and fundamentals of Science</p> <p>Biology Part 1- Assessment will be on Food chains, nutrition, diet and energy flows</p>	<p>Biology Part 1 continued...</p> <p>Chemistry Part 1- Assessment will be on Changes of state, elements, compounds, mixtures and combustion</p>	<p>Chemistry Part 1 continued...</p> <p>Physics Part 1- Assessment will be on Energy stores, transfers and efficiency</p>	<p>Biology Part 2- Assessment will be on Photosynthesis, Respiration and Microbiology</p>	<p>Chemistry Part 2- Assessment will be on Planning and completing a Chemistry investigation (combustion)</p>	<p>Physics Part 2- Assessment will be on Heat transfers and Physics investigation</p>
<p>Year 8</p> <p>Assessments are completed at the end of part 1 and part 2 on the content delivered so far.</p> <p>Students have an end of year test in the final term</p>	<p>Physics Part 1- Assessment will be on Forces, Speed, Distance, Time and Mass</p> <p>Chemistry Part 1- Assessment will be on Solutions, Filtration and separation methods</p> <p>Biology project- Ecosystems, Biodiversity and Renewable energy</p>	<p>Chemistry Part 1 continued...</p> <p>Biology Part 1- Assessment will be on Life processes, Cells and the Digestive system</p> <p>Scientific Inquiry (SC1) Introduction- Introduction to key practical skills in Science</p>	<p>Biology Part 1 continued...</p> <p>Chemistry Part 2- Assessment will be on Physical and Chemical changes, pH and neutralisation</p>	<p>Chemistry Part 2 continued...</p> <p>Biology Part 2- Assessment will be on Breathing, Gas exchange, Reproduction and the Circulatory system</p> <p>Physics SC1 investigation- Roto-copters and forces</p>	<p>Biology Part 2 continued...</p> <p>Chemistry SC1- An investigation into acids and alkalis</p>	<p>Physics Part 2- Assessment will be on The Earth, Planets, Magnets and Light</p>

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<p>Year 9</p> <p>Assessments are completed at the end of each topic</p> <p>Small assessments are also conducted at mid points in the topics. These normally consist of small sets of exam style questions, 6 mark questions or multiple choice tests</p> <p>Students will also have an end of year exam covering all three Sciences they have studied</p>	<p>Biology Key Concepts in Biology Cells Microscopes Enzymes Membrane transport</p> <p>Chemistry Key Concepts in Chemistry Matter and mixtures- States of matter Separation techniques Assessment takes place here on this unit/ content covered so far</p>	<p>Biology Key Concepts in Biology continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry Key concepts in Chemistry- Atomic structure Assessment takes place here on this unit/ content covered so far</p>	<p>Biology CB3 Genetics Meiosis DNA Alleles and Inheritance Variation Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry Key concepts in Chemistry- Bonding Assessment takes place here on this unit/ content covered so far</p>	<p>Physics Key Concepts in Physics-CP1/2 Forces and Motion- Vectors/Scalars Measuring and calculating speed Calculating acceleration Motion Graphs Forces and Newton's Laws Weight and Mass Momentum and Collisions Reaction time and stopping distance</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>CP3 Conservation of Energy- Energy Stores Energy transfers Efficiency and Sankey Diagrams Energy Calculations Conductivity and Insulation Energy resources (renewable and non-renewable)</p>	<p>Physics Key Concepts in Physics-CP1/2 Forces and Motion continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP3 Conservation of Energy continued...</p>	<p>Physics Key Concepts in Physics-CP1/2 Forces and Motion continued...</p> <p>Physics CP3 Conservation of Energy continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Revision of Biology and Chemistry content</p>
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<p>Year 10</p> <p>Assessments are completed at the end of each topic</p> <p>Small assessments are also conducted at mid points in the topics. These normally consist of small sets of exam style questions, 6 mark questions or multiple choice tests</p> <p>Students have a synoptic exam in the spring term</p>	<p>Biology CB3 Genetics Meiosis DNA Alleles and Inheritance Variation</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc13 Periodic table Group 1, Group 7, Group 0</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP7/8 Forces and Their Effects Energy stores and transfers Work Done Power Efficiency Forces (contact/non-contact) Vector Diagrams Resultant Forces</p> <p>Assessment takes place here</p>	<p>Biology CB4 Natural Selection and Genetic Modification Natural selection and Evolution Classification Selective Breeding Genetic Engineering</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc14/15 Rates and energy Collision theory Rates of reaction Endo and exothermic reactions, bond energies</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP4/5 Waves and Electromagnetic Spectrum Transverse and Longitudinal Wave Behaviours and Equations EM Spectrum- Uses and Dangers</p>	<p>Biology CB5 Health, Disease and the Development of Medicines Health and Disease STI's Immune system Immunisations and Antibiotics Development of medicines</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc16/17 Fuels and atmosphere Fractional distillation and cracking Combustion and pollution Atmosphere</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP4/5 Waves and Electromagnetic Spectrum continued...</p> <p>Assessment takes place here</p>	<p>Biology CB8 Exchange and Transport in Animals Exchange surfaces The Circulatory System Respiration</p> <p>Chemistry cc10/12 Extraction and equilibrium: Metal reactivity Metal extraction Electrolysis Equilibrium</p> <p>Physics CP6 Radioactivity The Atomic Model Ionisation Types of Radiation Decay Background Radiation Half Life Dangers and Safety</p>	<p>Biology CB8 Exchange and Transport in Animals continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>CB6 Plant Structures and their Functions Photosynthesis Limiting factors Transport in plants</p> <p>Chemistry cc10/12 Extraction and equilibrium: Metal reactivity Metal extraction Electrolysis Equilibrium</p> <p>Physics CP6 Radioactivity continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p>	<p>Biology CB6 Plant Structures and their Functions continued...</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc10/12 Extraction and equilibrium continued... Metal reactivity Metal extraction Electrolysis Equilibrium</p> <p>Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP13 Particle Model and Matter States of Matter Changes of State Density Gas Pressure Specific Heat Capacity Specific Latent Heat Properties of Materials Hooke's Law</p> <p>Assessment takes place here</p>
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Science Curriculum Map

Year 11	Biology	Biology	Biology	Biology	EXAMS	EXAMS
<p>Assessments are completed at the end of each topic</p> <p>Small assessments are also conducted at mid points in the topics. These normally consist of small sets of exam style questions, 6 mark questions or multiple choice tests</p> <p>Students have a synoptic exams in the Autumn and Spring term</p>	<p>CB8 Exchange and Transport in Animals Exchange surfaces The Circulatory System Respiration Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc14/15 Rates and energy Collision theory Rates of reaction (kinetics) Endo and exothermic reactions Bond energies Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP13 Particle Model and Matter States of Matter Changes of State Density Gas Pressure Specific Heat Capacity Specific Latent Heat Properties of Materials Hooke's Law Assessment takes place here</p>	<p>CB6 Plant Structures and their Functions Photosynthesis Limiting factors Transport in plants Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc10/12 Extraction and equilibrium: Metal reactivity Metal extraction Electrolysis Equilibrium Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP9 Electricity Circuit Symbols Current Voltage Ohm's Law Series and Parallel Resistance IV Graphs Sensors AC/DC Energy and Power Plug Safety Assessment takes place here</p>	<p>CB7 Animal coordination, Control and Homeostasis Hormones and Homeostasis Control of Metabolic rate (H) Menstrual Cycle Control of Fertility Diabetes Assessment takes place here on this unit/ content covered so far</p> <p>Chemistry cc9 Key concepts in Chemistry: Chemical calculations Assessment takes place here on this unit/ content covered so far</p> <p>Physics CP10/11 Magnetism and EM Induction Magnetic Fields Electromagnetism Fleming's LHR The Motor Effect Transformers and The National Grid Assessment takes place here on this unit/ content covered so far</p>	<p>CB9 Ecosystems and Material Cycles Ecosystems Biodiversity Carbon cycle Nitrogen cycle Water cycle Assessment takes place here on this unit/ content covered so far</p> <p>REVISION AND EXAM PREP</p>		

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<p>Year 12</p> <p>Assessments are completed at the end of each topic and/ or half termly.</p> <p>Small assessments are also conducted at mid points in the topics. These normally consist of small sets of exam style questions, 6 mark questions or multiple choice tests.</p> <p>Students have a synoptic exams in the Autumn and Spring term.</p>	<p>Biology Topic 1 - Biological Molecules Topic 2 - Cells, Viruses and Reproduction of Living Things</p> <p>Chemistry Topic 1 - Atomic Structure & The Periodic Table Topic 5 - Formulae, Equations & Amounts of Substances Topic 6 - Intro to Organic Chemistry</p> <p>Physics Topic 1 – Working as a Physicist Topic 2 – Mechanics Topic 3 - Electric Circuits Topic 5 - Waves & Particle Nature of Light</p>	<p>Biology Topic 1 - Biological Molecules Topic 2 - Cells, Viruses and Reproduction of Living Things</p> <p>Chemistry Topic 2 – Bonding & Structure Topic 5 - Formulae, Equations & Amounts of Substances Topic 6 - Intro to Organic Chemistry</p> <p>Physics Topic 1 – Working as a Physicist Topic 2 – Mechanics Topic 3 - Electric Circuits Topic 5 - Waves & Particle Nature of Light</p>	<p>Biology Topic 3 - Classification and Biodiversity Topic 4 - Exchange and Transport</p> <p>Chemistry Topic 3 - Redox 1 Topic 4 - Inorganic Chemistry & The Periodic Table Topic 8 – Energetics I Topic 6 - Intro to Organic Chemistry</p> <p>Physics Topic 5 - Waves & Particle Nature of Light Topic 4 – Materials</p>	<p>Biology Topic 3 - Classification and Biodiversity Topic 4 - Exchange and Transport</p> <p>Chemistry Topic 4 - Inorganic Chemistry & The Periodic Table Topic 10 – Equilibrium Topic 7 - Modern Analytical Techniques 1</p> <p>Physics Topic 5 - Waves & Particle Nature of Light Topic 4 – Materials</p>	<p>Biology Topic 10 - Ecosystems</p> <p>Chemistry Topic 13 - Energetics II Topic 9 – Kinetics</p> <p>Physics Topic 11 - Nuclear Radiation Topic 8 - Nuclear & Particle Physics</p>	<p>Biology Topic 10 – Ecosystems</p> <p>Chemistry Topic 13 - Energetics II</p> <p>Physics Topic 11 - Nuclear Radiation Topic 8 - Nuclear & Particle Physics Topic 6 - Further Mechanics</p>
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<p>Year 13</p> <p>Assessments are completed at the end of each topic and/ or half termly.</p> <p>Small assessments are also conducted at mid points in the topics. These normally consist of small sets of exam style questions, 6 mark questions or multiple choice tests.</p> <p>Students have a synoptic exams in the Autumn and Spring term.</p>	<p>Biology Topic 7 - Modern Genetics</p> <p>Topic 5 - Energy for Biological Processes</p> <p>Topic 9 - Control Systems</p> <p>Chemistry Topic 11 - Equilibrium II</p> <p>Topic 17 - Organic Chemistry II</p> <p>Topic 14 - Redox II</p> <p>Topic 16 - Kinetics II</p> <p>Physics Topic 6 - Further Mechanics</p> <p>Topic 8 - Nuclear & Particle Physics</p>	<p>Biology Topic 8 - Origins of Genetic Variation</p> <p>Topic 5 - Energy for Biological Processes</p> <p>Topic 9 - Control Systems</p> <p>Chemistry Topic 17 - Organic Chemistry II</p> <p>Topic 14 - Redox II</p> <p>Topic 16 - Kinetics II</p> <p>Physics Topic 6 - Further Mechanics</p> <p>Topic 13 – Oscillations</p> <p>Topic 9 – Thermodynamics</p> <p>Topic 11 – Radioactivity</p>	<p>Biology Topic 8 - Origins of Genetic Variation</p> <p>Topic 6 - Microbiology and Pathogens</p> <p>Topic 5 - Energy for Biological Processes</p> <p>Topic 9 - Control Systems</p> <p>Chemistry Topic 18 - Organic Chemistry III</p> <p>Topic 15 - Transition Metals</p> <p>Topic 12 - Acid-Base Equilibria</p> <p>Physics Topic 6 - Further Mechanics</p> <p>Topic 10 – Space</p> <p>Topic 7 - Electric & Magnetic Fields</p> <p>Topic 9 – Thermodynamics</p>	<p>Biology Topic 6 - Microbiology and Pathogens</p> <p>Topic 5 - Energy for Biological Processes</p> <p>Topic 9 - Control Systems</p> <p>Chemistry Topic 18 - Organic Chemistry III</p> <p>Topic 15 - Transition Metals</p> <p>Topic 12 - Acid-Base Equilibria</p> <p>Topic 19 - Modern Analytical Techniques II</p> <p>Physics Topic 10 – Space</p> <p>Topic 12 – Gravitational Fields</p> <p>Topic 9 – Thermodynamics</p> <p>Topic 7 - Electric & Magnetic Fields</p> <p>Topic 13 – Oscillations</p>	<p style="text-align: center;">EXAMS</p> <p>Physics Topic 12 - Gravitational Fields</p> <p>13 – Oscillations</p>	<p style="text-align: center;">EXAMS</p>
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Useful links:

YEARS 9, 10 AND 11

EDEXCEL Combined Science Specification <https://bit.ly/388Eug5>

EDEXCEL Triple Biology Specification <https://bit.ly/3wh0l6u>

EDEXCEL Triple Chemistry Specification <https://bit.ly/3wh0vuC>

EDEXCEL Triple Physics Specification <https://bit.ly/3vW1fq5>

YEARS 12 AND 13

EDEXCEL A LEVEL Biology B Specification <https://bit.ly/3soXiZ4>

EDEXCEL A LEVEL Chemistry Specification <https://bit.ly/3kUksCs>

EDEXCEL A LEVEL Physics Specification <https://bit.ly/3Kuw8uv>

YEARS 9-13

Seneca Learning <https://senecalearning.com/en-GB/>

Physics and Maths tutor <https://www.physicsandmathstutor.com>

SNAPREVISE <https://snaprevise.co.uk>

ALL YEARS-

BBC Bitesize

<https://www.bbc.co.uk/bitesize/secondary>

FREESCIENCELESSONS on YouTube

<https://www.youtube.com/c/freesciencelessons>