**Subject: Science - Biology** **Year group: 7**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Cells | Cells, tissues and organs | Organ systems | Skeleton | Reproduction | Plant pollination |
| Plant cells | Diffusion | Levels of organisation | Assessed written task | Adolescence | Fertilisation Germination |
| Animal cells | Unicellular organisms | Respiratory system | Joints | Fertilisation | Seed dispersal |
| Using microscopes | Assessed written task | Breathing system | Muscles | Development of a Foetus | Assessed written task |
| Specialised cells | Revision | Gas exchange | Revision | Menstrual cycle | Revision |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Biology *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Chemistry** **Year group: 7**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Passport to science | Reliability & Accuracy | Particles and their behaviour | More changes of states of matter | Acids and Alkalis | Neutralisation |
| Equipment & lab skills | Drawing tables and graphs | The particle model | Diffusion | Hazard Symbols | Rainbow fizz |
| Investigating the change in temp | Secondary data | States of matter | Gas pressure | Acids | Making salts |
| Measurements and Units | Flying bands | Melting and freezing | Assessed written task | Alkalis | Naming salts |
| Variables | Na Na Batman | Boiling | Revision | The pH scale | Assessed written task |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Chemistry *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Physics** **Year group: 7**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Forces | Friction | Making sound | Light | Space | The moon |
| Weight and Mass | Air resistance | Waves | Reflection | The night sky | Discovering the universe |
| Upthrust | Streamlining | Hearing | Refraction | Sora system | The big bang |
| Balanced & unbalance | Assessed written task | Echoes & Ultrasound | Eye & camera | Earth – day and night | Assessed written task |
| Hooke's law | Revision | Assessed written task | Colour | Earth - seasons | Revision |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Physics *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Biology** **Year group: 8**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Health & Lifestyle | Drugs | Adaptation 7 Inheritance | Inheritance | Photosynthesis | Ecosystems |
| Nutrients | Alcohol | Competition | Natural Selection | The leaf | Aerobic respiration |
| Unhealthy diet | Smoking | Adapting to change | Extinction | Plant minerals | Anaerobic respiration |
| Digestive system | Assessed written task | Variation | Assessed written task | Food chains | Assessed written task |
| Bacteria and enzymes | Revision | Continuous and Discontinuous | Revision | Disrupting food webs | Revision |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Biology *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Chemistry** **Year group: 8**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Atoms, elements & compounds | Thermal decomposition | The Periodic table | Solutions | Acids & metals | Ceramics |
| Chemical formulae | Conservation of mass | Group 1 | Solubility | Metals & oxygen | Polymers |
| Chemical reactions | Exothermic & endothermic | Group 7 | Filtration & evaporation | Metals & water | Composites |
| Word equations | Assessed written task | Group 0 | Distillation | Displacing reactions | Assessed written task |
| Burning fuels | Revision | Mixtures | Chromatography | Extracting metals | Revision |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Chemistry *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Physics** **Year group: 8**

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Charging up | Magnets & magnetic fields | Energy | Energy & power | Motion & pressure | Liquid Pressure |
| Circuits & current | Electromagnets | Conduction | Efficiency | Speed | Pressure on solids |
| Potential difference | Making an electromagnet | Convection | Work done | Distance-time graphs | Moments |
| Series & Parallel | Assessed written task | Radiation | Assessed written task | Acceleration | Assessed written task |
| Resistance | Revision | Energy sources | Revision | Gas Pressure | Revision |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Mid topic assessment | Assessment | Mid topic assessment | Assessment | Mid topic assessment | Assessment |

**Resources to support independent learning:**

Activate Science: Physics *BBC Bitesize:* KS3 - BBC Bitesize

**Subject: Science - Biology** **Year group: 9**

**GCSE title:** GCSE Biology

**Exam Board:** Edexcel

Paper 1 (Paper code: 1BI0/1F, 1BI0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1BI0/2F, 1BI0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 1 – Key concepts in biology: Animal and plant cells | Topic 1 – Key concepts in biology: Diffusion | Topic 2 – Cells and control: Stem cells | Topic 3 - Genetics: Sexual and asexual reproduction | Topic 3 – Genetics: Alleles | Topic 4 – Natural selection and genetic modification - Darwin and evolution. |
| Topic 1 – Key concepts in biology: Microscopes | Topic 1 – Key concepts in biology: Osmosis | **Topic 2 – Cells and control: The Brain** | Topic 3 - Genetics: Meiosis | Topic 3 - Genetics: Alleles | Topic 4 – Natural selection and genetic modification: Human evolution |
| Topic 1 – Key concepts in biology: Specialised cells | Topic 1 – Key concepts in biology: Active transport | Topic 2 – Cells and control: Central Nervous system | Topic 3 - Genetics - Structure and extraction of DNA. | Topic 3 - Genetics: Genomes | Topic 4 – Natural selection and genetic modification: Classification |
| Topic 1 – Key concepts in biology: Enzymes | Topic 2 – Cells and control: Mitosis | Topic 2 – Cells and control: Synapses and the reflex arc | **Topic 3 - Genetics - Protein synthesis** | Topic 3: Genetics - Inheritance and mutations | Topic 4 – Natural selection and genetic modification: Genetic engineering |

| **Topic 1 – Key concepts in biology: Energy in food** | Topic 2 – Cells and control: Growth in animal and plant cells | **Topic 2 – Cells and control: The Eye** | Topic 3 - Genetics: Genetic code | Topic 3: Genetics - Inheritance and mutations | Topic 4 – Natural selection and genetic modification: Selective breeding and **Tissue culture** |
|---|---|---|---|---|---|
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Topic 1 mid test | End of topic 1 test | End of topic 2 test | Y9 Internal assessment | End of topic 3 test | End of topic 4 test |

**Resources to support independent learning:**

GCSE Biology or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Biology or GCSE Combined Science)

BBC bitesize: GCSE Biology

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Chemistry** **Year group: 9**

**GCSE title:** GCSE Chemistry

**Exam Board:** Edexcel

Paper 1 (Paper code: 1CH0/1F and 1CH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1CH0/2F and 1CH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 7 - Rates of reaction: Collision theory | Topic 2 - States of matter & separating te chniques: States of matter | Topic 1a - Atomic structure: Ato mic structure | Topic 6 - Groups in the Periodic Table: Alkali metals | Topic 4a - Metals: Reactivity series | Topic 8b – Atmosphere: Our at mosphere, past and present |
| Topic 7 - Rates of reaction: Effect of changing surface area | Topic 2 - States of matter & separating techniques: Melting point and boiling point | Topic 1a - Atomic structure: Ele ctrons, protons and neutr ons | Topic 6 - Groups in the Periodic Table: Alkali metals | Topic 4a - Metals: Oxidation and reduction | Topic 8b – Atmosphere: Greenh ouse Effect |
| Topic 7 - Rates of reaction: Effect of changing temperature | Topic 2 - States of matter & separating techniques: Distillation | Topic 1a - Atomic structure: Electron configuration | Topic 6 - Groups in the Periodic Table: Halogens | Topic 4a - Metals: Extraction by reduction | Topic 8b – Atmosphere: Greenh ouse Effect |
| Topic 7 - Effect of changing concentration and catalysts | Topic 2 - States of matter & separating techniques: Crystallisation and evaporation | Topic 1b - Periodic Table: Periodic T able position | Topic 6 - Groups in the Periodic Table: Halide displacement reactions | Topic 4a Metals: Extraction by electrolysis and phytomining | Topic 8b – Atmosphere: Mitigati ng factors and data analys is |

| | | | | | |
|---|---|---|---|---|---|
| Topic 7 - Rates of reaction: Energy in reactions and reaction profiles | Topic 2 - States of matter & separating techniques: Chromatography and water purification | Topic 1b - Periodic Table: Mendeleev's Periodic Table | Topic 6 - Groups in the Periodic Table: Noble gases | Topic 4a Metals: Life cycle assessments | Review |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| End of topic 7 test | End of topic 2 test | End of topic 1a/b test | Y9 Internal assessment | End of topic 4a test | End of topic 8a test |

**Resources to support independent learning:**

GCSE Chemistry or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Chemistry or GCSE Combined Science)

BBC bitesize: GCSE Chemistry

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Physics** **Year group: 9**

**GCSE title:** GCSE Physics

**Exam Board:** Edexcel

Paper 1 (*Paper code: 1PH0/1F and 1PH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1PH0/2F and 1PH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 1 – Motion: Vectors and scalars | Topic 2 – Motion and forces | Topic 2 – Motion and forces: Newton's Third Law<br><br>Topic 2 – Motion and forces: Momentum | Topic 3 – Conservation of energy: Energy efficiency | Topic 4 – Waves: Describing waves | Review<br><br>Topic 4 – Waves: Waves crossing boundaries |
| Topic 1 – Motion: Calculating speed and distance-time graphs | Topic 2 – Motion and forces: Resultant forces | Topic 2 – Motion and forces: Stopping distances | Topic 3 – Conservation of energy: Keeping warm | Topic 4 – Waves: Wave speeds | Review<br><br>Topic 4 – Waves: Ears and hearing |
| Topic 1 – Motion: Acceleration | Topic 2 – Motion and forces: Newton's First Law | Review<br><br>Topic 2 – Motion and forces: Braking distance and energy | Topic 3 – Conservation of energy: Stored energies | Topic 4 – Waves: Core practical on investigating waves | Review<br><br>Topic 4 – Waves: Ultrasound |
| Topic 1 – Motion: Velocity-time graphs | Topic 2 – Motion and forces: Mass and weight | Topic 2 – Motion and forces: Crash Hazards | Topic 3 – Conservation of energy: Non-renewable resources | Topic 4 – Waves: Describing waves | Review<br><br>Topic 4 – Waves: Infrasound |

| | | | | | |
|---|---|---|---|---|---|
| Review | Topic 2 – Motion and forces: Newton's Second Law<br><br>Topic 2 – Motion and forces: Core practical on investigating acceleration | Topic 3 – Conservation of energy: Energy stores and transfers | Topic 3 – Conservation of energy: Renewable resources | Topic 4 – Waves: Refracti on | Review |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Topic 1 End of topic test | Topic 2 mid test | Topic 2 End of topic test | Y9 Internal assessment | Topic 4 mid test | Topic 4 End of topic test |

**Resources to support independent learning:**

GCSE Physics or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Physics or GCSE Combined Science)

BBC bitesize: GCSE Physics

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Biology** **Year group: 10**

**GCSE title:** GCSE Biology

**Exam Board:** Edexcel

Paper 1 (Paper code: 1BI0/1F, 1BI0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1BI0/2F, 1BI0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 4 – Natural selection and genetic modification - Darwin and evolution | Topic 5 – Health, disease and the development of medicines: Health and disease | Topic 5 – Health, disease and the development of medicines: Plant diseases and defences | Topic 6 – Plant structures and their functions: Limiting factors of photosynthesis | Topic 7 – Animal coordination, control and homeostasis: Hormones and the endocrine system | Topic 7 – Animal coordination, control and homeostasis - Homeostasis |
| Topic 4 – Natural selection and genetic modification: Human evolution | Topic 5 – Health, disease and the development of medicines: Types of diseases | Topic 5 – Health, disease and the development of medicines: Physical and chemical barriers | Topic 6 – Plant structures and their functions: Absorbing water and mineral ions. | Topic 7 – Animal coordination, control and homeostasis: Adrenaline and thyroxine | Topic 7 – Animal coordination, control and homeostasis - Control of blood glucose |
| Topic 4 – Natural selection and genetic modification: Classification | Topic 5 – Health, disease, and the development of medicines: cardiovascular diseases | Topic 5 – Health, disease, and the development of medicines: Immune system | Topic 6 – Plant structures and their functions: Transpiration and translocation. | Topic 7 – Animal coordination, control and homeostasis: Menstrual cycle | Topic 7 – Animal coordination, control and homeostasis - |
| Topic 4 – Natural selection and genetic | Topic 5 – Health, disease, and the development of | Topic 5 – Health, disease, and the development of | Topic 6 – Plant structures and their functions: Plant adaptations. | Topic 7 – Animal coordination, control and | Topic 7 – Animal coordination, control and |

| | | | | | |
|---|---|---|---|---|---|
| modification: Genetic engineering | medicines: Pathogens and how they spread | medicines: Vaccines, antibiotics, and monoclonal antibodies | | homeostasis: Contraception | homeostasis - Diabetes, type 1 and 2 |
| Topic 4 – Natural selection and genetic modification: Selective breeding and Tissue culture | Topic 5 – Health, disease, and the development of medicines: Viruses | Topic 6 – Plant structures and their functions: Photosynthesis | Topic 6 – Plant structures and their functions: Plant hormones and their uses | Topic 7 – Animal coordination, control and homeostasis: Assisted reproductive therapy | Topic 7 – Animal coordination, control and homeostasis - Kidneys, osmoregulation, ADH and formation of urea in the liver |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Y10 Internal assessment | Topic 5 mid test | End of topic 5 test | End of topic 6 test | Topic 7 mid test | Y 10 Internal assessment |

**Resources to support independent learning:**

GCSE Biology or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Biology or GCSE Combined Science)

BBC bitesize: GCSE Biology

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Chemistry** **Year group: 10**

**GCSE title:** GCSE Chemistry

**Exam Board:** Edexcel

Paper 1 (Paper code: 1CH0/1F and 1CH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1CH0/2F and 1CH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 7 - Rates of reaction: Collision theory | Topic 3a - Acids: pH | Topic 3a – Acids: Solubility | Topic 4a – Metals: Reactivity series | Topic 1a – Atomic Structure | Topic 4b – Equilibrium: Reversible reactions |
| Topic 7 - Rates of Reaction: Effect of changing surface rea and temperature | Topic 3a - Acids: Bases, alkalis and neutralisation | Topic 3b – Electrolysis: Key terms and ideas | Topic 4a – Metals: Oxidation and reduction | Topic 1b - Periodic Table History | Topic 4b – Equilibrium: Dynamic equilibrium |
| Topic 7 - Rates of reaction: Effect of changing concentration and catalysts | Topic 3a - Acids: Making a salt from an insoluble base and an acid | Topic 3b – Electrolysis: Examples of electrolysis | Topic 4a - Metals: Extraction by reduction | Topic 1c - Ionic and Covalent bonding | Topic 4b – Equilibrium: Factors that affect equilibrium |
| Topic 7 - Rates of reaction: Energy in reactions and reaction profiles | Topic 3a – Acids: Reactions of carbonates and metals with acids and testing for gases | Topic 3b – Electrolysis: Oxidation and reduction | Topic 4a - Metals: Extraction by electrolysis and phytomining | Topic 1c - Metallic bonding and calculations in chemistry | Topic 4b – Equilibrium: The Haber Process |
| Topic 1d - Calculations in chemistry review | Topic 3a – Acids: Making a salt from a soluble base and an acid | Topic 3b – Electrolysis: Electrolysis core practical | Topic 4a – Metals: Life cycle assessments | Topic 1d – Calculations in chemistry | Review |

| | | | | | |
|---|---|---|---|---|---|
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Y10 Internal assessment | Topic 3 mid test | End of topic 3 test | End of topic 4a test | End of topic 1 Test | Y10 Internal assessment |

**Resources to support independent learning:**

GCSE Chemistry or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Chemistry or GCSE Combined Science)

BBC bitesize: GCSE Chemistry

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Physics** **Year group: 10**

**GCSE title:** GCSE Physics

**Exam Board:** Edexcel

Paper 1 (*Paper code: 1PH0/1F and 1PH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1PH0/2F and 1PH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 5 – Light and EM spectrum: Core practical on investigating refraction<br><br>Topic 5 – Light and EM spectrum: Ray diagrams | Topic 5 – Light and EM spectrum: Colour | Topic 6 – Radioactivity: Atomic models<br><br>Topic 6 – Radioactivity: Inside atoms | Topic 6 – Radioactivity: Dangers of radioactivity<br><br>Topic 6 – Radioactivity: Radioactivity in medicine | Topic 7 – Astronomy: Origin of the Universe | Review |
| Topic 5 – Light and EM spectrum: EM waves | Topic 5 – Light and EM spectrum: Using long wavelengths<br><br>Topic 5 – Light and EM spectrum: Lenses | Topic 6 – Radioactivity: Electrons and orbits | Topic 6 – Radioactivity: Nuclear energy | Topic 8/9 – Work and power and forces and their effects: Work and power | Targeted revision |
| Topic 5 – Light and EM spectrum: EM spectrum | Topic 5 – Light and EM spectrum: Radiation and temperature | Topic 6 – Radioactivity: Background radiation<br><br>Topic 6 – Radioactivity: Types of radiation | Topic 6 – Radioactivity: Nuclear fission<br><br>Topic 6 – Radioactivity: Nuclear fusion | Topic 8/9 – Work and power and forces and their effects: Objects affecting each other | Targeted revision |

| | | | | | |
|---|---|---|---|---|---|
| Review | Topic 5 – Light and EM spectrum: Core practical on investigating radiation | Topic 6 – Radioactivity: Radioactive decay | Topic 7 – Astronomy: Solar system<br><br>Topic 7 – Astronomy: Gravity and orbits | Topic 8/9 – Work and power and forces and their effects: Vector diagrams | Targeted revision |
| Review | Topic 5 – Light and EM spectrum: Using short wavelengths<br><br>Topic 5 – Light and EM spectrum: EM radiation dangers | Topic 6 – Radioactivity: Half-life<br><br>Topic 6 – Radioactivity: Using radioactivity | Topic 7 – Astronomy: Life cycle of stars<br><br>Topic 7 – Astronomy: Red shift | Topic 8/9 – Work and power and forces and their effects: Rotational forces | Targeted revision |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Y10 Internal assessment | Topic 5 End of topic test | Topic 6 mid test | Topic 6 End of topic test | Topic 7/8/9 End of topic tests | Y10 Internal assessment |

**Resources to support independent learning:**

GCSE Physics or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Physics or GCSE Combined Science)

BBC bitesize: GCSE Physics

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Biology** **Year group: 11**

**GCSE title:** GCSE Biology

**Exam Board:** Edexcel

Paper 1 (Paper code: 1BI0/1F, 1BI0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1BI0/2F, 1BI0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 8 – Exchange and transport in animals: Transport systems and surface area: volume ratio | Targeted revision for internal assessments | Topic 9 – Ecosystems and material cycles: Ecosystems and energy transfer. | Targeted revision for internal assessments | Targeted revision | End of GCSE course |
| Topic 8 – Exchange and transport in animals: Ficks law | Targeted revision for internal assessments | Topic 9 – Ecosystems and material cycles: Abiotic and biotic factors | Targeted revision for internal assessments | Targeted revision | End of GCSE course |
| Topic 8 – Exchange and transport in animals: Blood, the heart and the circulatory system | Targeted revision for internal assessments | Topic 9 – Ecosystems and material cycles: Parasites and mutualism | Targeted revision for internal assessments | Targeted revision | End of GCSE course |

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|---|---|---|---|---|---|
| Topic 8 – Exchange and transport in animals: Lungs, focussing on the structure of alveoli. | Targeted revision for internal assessments | Topic 9 – Ecosystems and material cycles: Biodiversity and food security | Targeted revision for internal assessments | Targeted revision | End of GCSE course |
| Topic 8 – Exchange and transport in animals: Cellular respiration | Targeted revision for internal assessments | Topic 9 – Ecosystems and material cycles: The water, carbon and nitrogen cycles | Targeted revision for internal assessments | Targeted revision | End of GCSE course |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| End of topic 8 test | Internal assessments | End of topic 9 test | Y11 Internal assessments | Targeted tests | GCSE (external) Combined Science/Biology exams |

**Resources to support independent learning:**

GCSE Biology or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Biology or GCSE Combined Science)

BBC bitesize: GCSE Biology

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Chemistry** **Year group: 11**

**GCSE title:** GCSE Chemistry

**Exam Board:** Edexcel

Paper 1 (Paper code: 1CH0/1F and 1CH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1CH0/2F and 1CH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Topic 7 - Rates of Reaction: Collision theory<br><br>Topic 5 - Transition Metals: Properties of Transition Metals | Topic 1 Review - Atomic Structure<br><br>Topic 5 - Quantitative chemistry: Gas volume calculations | Topic 8a Fuels - Hydrocarbons<br><br>Topic 9 - Quantitative chemistry | Revision of all topics<br><br>Topic 9 - Carboxylic acids | Targeted revision | End of GCSE course |
| Topic 7 - Rates of Reaction: Effect of changing surface area<br><br>Topic 5 - Electroplating and Rusting | Topic 1 Review - History of Periodic Table<br><br>Topic 5 - Quantitative chemistry: Gas volume calculations | Topic 8a Fuels - Fractional distillation<br><br>Topic 9 - Reactions of hydrocarbons and testing for alkenes | Revision of all topics<br><br>Topic 9 - Alcohols | Targeted revision | End of GCSE course |
| Topic 7 - Rates of Reaction: Effect of changing temperature<br><br>Topic 5 - Quantitative Chemistry: Atom economy and percentage yield | Topic 1 Review - Bonding<br><br>Topic 5 - Equilibrium and industrial processes | Topic 8a – Fuels: Combustion<br><br>Topic 9 - Polymers and their uses | Revision of all topics<br><br>Topic 9 - Reactions of carboxylic acids and alcohols | Targeted revision | End of GCSE course |

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|---|---|---|---|---|---|
| Topic 7 - Rates of Reaction: Effect of changing concentration and catalysts<br><br>Topic 5 - Quantitative chemistry: Concentration calculations | Topic 1 Review – Calculations in chemistry<br><br>Topic 5 - Equilibrium and industrial processes | Topic 8a – Fuels: Atmospheric p ollution<br><br>Topic 9 - Addition polymerisation | Revision of all topics<br><br>Topic 9 - Bulk materials | Targeted revision | End of GCSE course |
| Topic 7 - Rates of Reaction: Energy in reactions and reaction profiles<br><br>Topic 5 - Quantitative chemistry: Concentration calculations | Topic 1 Review - Calculations in chemistry<br><br>Topic 5 - Fuel cells | Topic 8a – Fuels: Cracking<br><br>Topic 9 - Condensation polymeris ation | Revision of all topics<br><br>Topic 9 - Nanoparticles | Targeted revision | End of GCSE course |
| **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** | **Assessment** |
| Topic 7 End of topic test | Y11 Internal assessments | Topic 8a End of topic test | Y11 Internal assessments | Targeted tests | GCSE (external) Combined Science/Chemistry exams |

**Resources to support independent learning:**

GCSE Chemistry or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Chemistry or GCSE Combined Science)

BBC bitesize: GCSE Chemistry

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor

**Subject: Science - Physics** **Year group: 11**

**GCSE title:** GCSE Physics

**Exam Board:** Edexcel

Paper 1 (*Paper code: 1PH0/1F and 1PH0/1H)
Written examination: 1 hour and 45 minutes
50% of the total qualification
Paper 2 (Paper code: 1PH0/2F and 1PH0/2H)
Written examination: 1 hour and 45 minutes
50% of the total qualification

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|
| Review of previous topics | Topic 10 – Electricity: Current, charge and energy | Topic 10 – Electricity: More about resistance<br><br>Topic 10 – Electricity: Core practical on investigating resistance | Topic 13 – EM induction: Transformers and energy<br><br>Topic 14 – Particle model: Particles and density<br><br>Topic 14 – Core practical: Investigating densities | Targeted revision | End of GCSE course |
| Review of previous topics | Topic 10 – Electricity: Resistance | Topic 10 – Electricity: Transferring energy<br><br>Topic 10 – Electricity: Power<br><br>Topic 10 – Electricity: Transferring energy by electricity | Topic 14 – Particle model: Energy and change of state (with calculations)<br>Topic 14 – Particle model: Core practical on investigating water<br>Topic 14 – Particle model: Gas Temperature and pressure | Targeted revision | End of GCSE course |

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| Review of previous topics | Review and targeted revision | Topic 10 – Electricity: Electrical safety<br><br>Topic 11 – Static electricity: Charges and static electricity<br><br>Topic 11 – Static electricity: Dangers and uses of static electricity | Topic 14 – Particle model: Gas pressure and volume<br><br>Topic 15 – Particle model: Bending and stretching and energy transfers<br><br>Topic 15 – Particle model: Core practical on investigating springs | Targeted revision | End of GCSE course |
| Topic 10 – Electricity: Electric circuits | Review and targeted revision | Topic 11 – Static electricity: Electric fields<br><br>Topic 12 – Magnetism and motor effect: Magnets and magnetic fields<br><br>Topic 12 – Magnetism and motor effect: Electromagnetism | Topic 15 – Particle model: Pressure in fluids<br><br>Topic 15 – Particle model: Pressure and upthrust | Targeted revision | End of GCSE course |
| Topic 10 – Electricity: Current and potential difference | Review and targeted revision | Topic 12 – Magnetism and motor effect: Magnetic forces<br><br>Topic 13 – EM induction: EM induction<br><br>Topic 13 – EM induction: The National grid | Review | Targeted revision | End of GCSE course |

| Assessment | Assessment | Assessment | Assessment | Assessment | Assessment |
|---|---|---|---|---|---|
| Topic 8/9 mid test | Y11 Internal assessments | Topic 10-12 End of topic test | Y11 Internal assessments | Targeted tests | GCSE (external) Combined Science/Chemistry exams |

**Resources to support independent learning:**

GCSE Physics or GCSE Combined Science Edexcel/Pearson Textbook

CGP Revision Guides (Edexcel GCSE Physics or GCSE Combined Science)

BBC bitesize: GCSE Physics

Seneca Learning: Seneca

Physics and maths tutor (for exam questions and notes on all sciences): Physics and maths tutor