

BIOLOGY

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Physics	Chemistry	Organisms: Students will review skills needed from KS2. They will explore how the body is organised and at plant and animal cells.	Physics	Chemistry	Genes 1: Students will then learn about variation, adolescence and the reproductive system. <i>Y7 EOY Exams</i>
8	Physics	Ecosystems 1: Students will look at ecosystems, food chains, flowers, and seed dispersal <i>KS3 End of Block Assessment 1</i>	Chemistry	Physics	Chemistry	Genes 2: Students will explore evolution, natural selection, extinction, DNA and genetics. <i>Y8 EOY Exams</i>
9	Physics/Chemistry	Physics/Chemistry	Organisms 2: Students will look at gas exchange and the digestive system Ecosystems 2: Students will learn about photosynthesis and respiration Chemistry <i>KS3</i> <i>** These will be taught in rotation</i>	Chemistry Organisms 2: Students will look at gas exchange and the digestive system Ecosystems 2: Students will learn about photosynthesis and respiration <i>KS3</i> <i>** These will be taught in rotation</i> <i>End of Block Assessment 2</i>	Physics Cell Biology: Students will explore microscopes, cell organelles, and transporting materials in cells. Students will also learn about cell division and stem cells <i>KS3/KS4</i> <i>** These will be taught in rotation</i>	Cell Biology: Students will explore microscopes, cell organelles, and transporting materials in cells. Students will also learn about cell division and stem cells Physics <i>KS3/KS4</i> <i>** These will be taught in rotation</i> <i>Y9 EOY Exam</i>
10 AQA	Cell Biology: Students will learn about cell division and stem cells AQA Organisation: Students will learn about the structure and function of the heart as well as review the digestive system	AQA Infection and Response: Students will look at different pathogens, the body's defense Students will investigate monoclonal antibodies and effects on plants (T) <i>End of Term Assessment</i>	AQA Bioenergetics Students will explore how photosynthesis works, aerobic respiration, anaerobic respiration and metabolism.	AQA GCSE Paper 1 Revision Students will revise information from cell biology, organisation, infection and response, and bioenergetics.	AQA GCSE Paper 1 Revision, Write Paper, Feedback on paper Students will continue revising until they write their paper and then respond to feedback <i>Y10 PPE exam Paper 1</i>	AQA Homeostasis and Response Students will learn about homeostasis, the nervous system and endocrine system. Students will look at the brain, eye kidneys, and kidney failure. (T)
11 AQA	AQA Homeostasis Response Students learn about the endocrine system, reproduction, controlling blood glucose, kidneys, their role in the body, and kidney failure. (T). AQA Inheritance, Variation and Evolution Students will look at different types of reproduction, DNA, variation and evolution, development of genetics, and classification. Students will look at cloning, speciation, and the theory of evolution (T)	AQA Inheritance, Variation and Evolution Students will look at different types of reproduction, DNA, variation and evolution, development of genetics, and classification. Students will look at cloning, speciation, and the theory of evolution (T) <i>Y11 PPE exam Paper 1</i>	AQA Inheritance, Variation and Evolution Students will look at different types of reproduction, DNA, variation and evolution, development of genetics, and classification. Students will look at cloning, speciation, and the theory of evolution (T) AQA Ecology Students will learn about competition, adaptations, and the organisation of ecosystems. They will then explore ecological cycles, global warming, trophic levels, biomass, and food production.(T)	Revision Topics 5-7 Students will revise information from, homeostasis response, inheritance, variation and evolution, and ecology <i>Y11 Trial exam Paper 2</i>	AQA GCSE Revision Topics 1-7 Students will revise information from cell biology, organisation, infection and response, bioenergetics, homeostasis response, inheritance, variation and evolution, and ecology.	Summer GCSE Exams

CHEMISTRY

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Physics	<p>Matter 1: Students will learn about solids, liquids and gases, elements, compounds and mixtures. They will also learn about the structure of an atom..</p> <p><i>End of Block Assessment 1</i></p>	Biology	Physics	<p>Matter 2: Students will explore ways of naming compounds and find out about the patterns in their physical and chemical properties. They will also learn about methods to separate mixtures</p> <p>Reactions 1: Students will learn what happens to atoms in chemical reactions</p>	Biology
8	Physics	Biology	<p>Reactions 2: Students will learn what happens to atoms in chemical reactions. This will include learning about the pH scale.</p> <p>Physics</p>	Physics	<p>Earth 1: Students will learn about what the Earth is made of and its structure.</p> <p>Earth 2: Students will be learning about climate change, global warming and greenhouse effect, the Earth's resources and their extraction.</p>	Biology
9	<p>Matter: Students will learn the development of the periodic table (Groups 1,7,0 their trends and properties),people involved and properties of matter.</p> <p>Physics</p> <p><i>** These will be taught in rotation</i></p>	<p>Physics</p> <p>Reactions 3: Students will learn in more detail about how metals and non-metals react. They will explore this by looking at structure these substances and the different ways in which they bond.</p> <p><i>** These will be taught in rotation</i></p> <p><i>End of Block Assessment 1</i></p>	<p>Reactions 3: Students will learn in more detail about how metals and non-metals react. They will explore this by looking at structure these substances and the different ways in which they bond.</p> <p>Biology</p> <p><i>** These will be taught in rotation</i></p>	<p>Biology</p> <p>Reactions 3: Students will learn in more detail about how metals and non-metals react. They will explore this by looking at the structure these substances and the different ways in which they bond.</p> <p><i>** These will be taught in rotation</i></p> <p><i>End of Block Assessment 2</i></p>	Physics/Biology	Physics/Biology
10	<p>Quantitative Chemistry: Students will use mathematical skills and equations to calculate conservation of mass, RFM, moles, limiting reactants, concentrations of solutions, using concentrations. yield, atom economy, and gas measurements. (T)</p>	<p>Chemical changes: Students will learn about reactivity of metals, the reactivity series, extraction of metals, oxidation and reduction, reactions of acids, neutralisation of acids pH scale, soluble salts, strong and weak acids, electrolysis and titrations (T).</p>	<p>Chemical changes: Students will learn about reactivity of metals, the reactivity series, extraction of metals, oxidation and reduction, reactions of acids, neutralisation of acids pH scale, soluble salts, strong and weak acids, electrolysis and titrations (T).</p>	<p>Energy changes</p> <p>Students will learn about exothermic and endothermic reactions, reaction profiles, chemical cells and fuel cells (T).</p>	<p>Revision/PPE</p> <p>Revision Paper 1 topics:</p> <p>Atomic Structure</p> <p>Quantitative Chemistry</p> <p>Chemical changes</p> <p>Energy Changes</p> <p><i>Y10 PPE exam Paper 1</i></p>	<p>The rate and extent of chemical change: Students will calculate rates of reactions, factors that effect rate of reaction, collision theory, catalysts, reversible reactions and equilibrium, effects of changing conditions on equilibrium, Haber Process (T).</p>
11	<p>Organic Chemistry: Students will learn about crude oil, hydrocarbons and alkanes, fractional distillation, properties of hydrocarbons, cracking and alkenes, structure and formula of alkenes, reaction of alkenes, alcohols, condensation polymerisation, Amino acids and DNA (T).</p>	<p>Chemical analysis (double): Students will learn pure substances, formulations, chromatography, test for Hydrogen/Oxygen/Carbon Dioxide/Chlorine.</p> <p>Organic Chemistry (triple): carboxylic acids, addition polymerisation, alcohols</p> <p><i>Y11 PPE exam Paper 1</i></p>	<p>Chemical analysis (Triple)</p> <p>Testing positive and negative ions (T). Assessment: Chemical analysis (triple only)</p> <p>Chemistry of the atmosphere (Combined): Students will learn different gases in the atmosphere, changes to atmosphere greenhouse gases, climate change, pollutants</p> <p>Earths resources (Combined): Students will learn about portable water, waste water, methods of extracting metals, Life Cycle assessment and recycling,</p>	<p>Chemistry of the atmosphere (triple): Students will learn different gases in the atmosphere, changes to atmosphere greenhouse gases, climate change, pollutants.</p> <p>Earths resources and Revision (Triple): Students will learn about portable water, waste water, methods of extracting metals, LCA and recycling, Polymers, Alloys, Corrosion, Fertilizers (T).</p> <p><i>Y11 PPE exam Paper 2</i></p>	Revision for summer exams	

PHYSICS

(T) = Physics (triple) only content

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	<p>Working Scientifically Energy : Students will look at ways of calculating energy in fuels and how it energy is transferred. Forces: Students will learn about and explore different contact and non-contact forces.</p>	Chemistry	Biology	<p>Waves: Students will learn about the properties of light and sound waves. Earth : Students will learn about the size and scale of our Solar System and galaxy. <i>End of Block 2 Assessment</i></p>	Chemistry	Biology
8	<p>Density and Pressure: Students will learn about why objects float and sink and about the causes of pressure. Forces and Motion Students will explore the meaning of speed and how to interpret motion graphs. Students will learn about how forces acting on objects can affect their motion.</p>	Biology	<p>Chemistry Energy : Students will look at heating and cooling and different ways in which thermal energy is transferred. <i>** These will be taught in rotation</i></p>	<p>Waves : Students will explore wave behaviour by using models. Electromagnets: Students will recap the basics of what happens in a circuit and how it can be modelled. <i>End of Block 2 Assessment</i></p>	Chemistry	Biology
9	<p>Energy : Students will recap different stores of energy and learn how to calculate certain energy stores. Students will also look at how energy is transferred in particles and radiation. Chemistry <i>** These will be taught in rotation</i></p>	<p>Chemistry Energy: Students will recap different stores of energy and learn how to calculate certain energy stores. Students will also look at how energy is transferred in particles and radiation. <i>** These will be taught in rotation</i> <i>End of Block Assessment 1</i></p>	<p>Biology/Chemistry <i>** These will be taught in rotation</i></p>	<p>Biology/Chemistry <i>** These will be taught in rotation</i> <i>End of Block Assessment 2</i></p>	<p>Matter Students will explore in more detail the behaviour of solids, liquids and gasses and its applications in everyday life. Biology <i>** These will be taught in rotation</i></p>	<p>Biology Matter Students will explore in more detail the behaviour of solids, liquids and gases and its applications in everyday life. <i>** These will be taught in rotation</i> <i>EOY Assessment</i></p>
10 AQA	<p>AQA GCSE P4- Electricity Atomic structure This unit has content similar to the Year 9 Matter unit. Students will start by revising this and building on knowledge of atomic structure. Students will also explore radioactivity (including effects) and how the structure of the atom is related to this.</p>	<p>AQA GCSE P2a- Electricity (Circuits): Students will investigate Ohm's Law. in circuits and look at I-V characteristics of various components. <i>End of term assessment</i></p>	<p>AQA GCSE P2b - Electricity (Mains electricity): Students will learn about how the National Grid transfers energy from power stations to consumers via transformers (T).</p>	<p>AQA GCSE P5a Forces: Students will explore the differences between contact and non-contact forces. They will learn how to calculate resultant forces and how to resolve forces (HT). Students will investigate Hooke's Law and turning forces (T).</p>	<p>Revision of Paper 1 topics/PPE exam Paper 1 topics: P1: Energy P2: Electricity P3: Particle model of matter P4: Atomic structure (some content similar to Chemistry) <i>Y10 PPE exam paper 1</i></p>	<p>AQA GCSE P5b Forces (Motion): Students will look at speed and acceleration. They will also learn how to interpret distance/time graphs and velocity/time graphs. They will explore Newton's three laws and the effects of forces on road safety. They will also investigate momentum (HT) and how this can be conserved (T)</p>
11 AQA	<p>AQA GCSE Revision of P5 Forces (Forces) AQA GCSE P5a Forces Students will explore the differences between contact and non-contact forces. They will learn how to calculate resultant forces and how to resolve forces (HT). Students will investigate Hooke's Law and turning forces (T). AQA GCSE P5b Forces (Motion): Students will look at speed and acceleration. They will also learn how to interpret distance/time graphs and velocity/time graphs. They will explore Newton's three laws and the effects of forces on road safety. They will also investigate momentum (HT) and how this can be conserved (T).</p>	<p>AQA GCSE P5c Forces Students will also learn about pressure and how this is created in the atmosphere and in fluids. Revision of Paper 1 topics/PPE exam Paper 1 topics: P1: Energy P2: Electricity P3: Particle model of matter P4: Atomic structure (some content similar to Chemistry) <i>Y11 Trial exams</i></p>	<p>AQA GCSE P6 Waves Students will also learn about properties of waves and the wave equation. They will also look at the uses of waves in the electromagnetic spectrum</p>	<p>AQA GCSE P7: Magnetism/Electromagnetism Students will learn that when a magnet is moving in a coil, this produces and electric current. They will explore the uses of electromagnets in various devices. <i>Y11 PPE exam paper 2</i></p>	<p>AQA GCSE Space (T): Students will explore the solar system and satellites. They will look at the life start and evidence for the Big Bang theory . <i>KS4</i> Revision for Summer exams</p>	Summer exams