Year 10 Curriculum - Breakdown

Below is the sequencing of learning for Core subjects. Due to the vast array of options and different combinations available, please see the individual subject pages on our website for options subjects.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
English	**Literature – An Inspector Calls** Developing a more secure understanding of: How language, structure and form create meanings in text; Key themes such as, gender, generation gap, rights of workers, class, prejudice and morality; Genre feature such as the detective play, morality plays; Historical context, especially political and social. Learning of quotations to support closed book assessment. Assessment: a timed essay response to the play. **Language – Explorations in Creative Reading and Writing** Exploring a range of fiction extracts from different modern writers in order to develop skills of understanding, inference, language and structure analysis, informed critical response. Writing narrative and descriptive texts, developing ideas and making full use of structure and language for effect. Assessment: past exam paper questions (Language Paper 1)		**Language – Writers' Viewpoints and Perspectives** Exploring a range of non-fiction extracts from writers across the 19th-21st centuries in order to develop skills of understanding, inference, language analysis and comparison. Writing non-fiction texts to express a viewpoint and conform to genre conventions, developing ideas and making full use of structure and language for effect. Assessment: past exam paper questions (Language Paper 2) **Literature – Macbeth** Developing a more secure understanding of: How language, structure and form create meanings in text; Key themes such as, gender, kingship, power, the supernatural and morality; Genre features such as the conventions of tragedy; Historical context, especially political and social. Learning of quotations to support closed book assessment. Assessment: a timed extract to whole text response.		**Literature - Unseen Poetry and Poetry Anthology** Developing the skills needed to respond to a wide range of poems, including studying the effects of voice, language, imagery, and structure. Comparing two poems on a similar theme with precision and efficiency. Assessment: past exam paper questions (Literature Paper 2 Section C) Studying the first group of poems from the AQA 'Power & Conflict' anthology. Exploring the context of both poets and poems, along with how they use language, structure and form to create meanings. Comparing two poems on a similar theme. Learning of quotations to support closed book assessment. Assessment: past exam paper questions (Literature Paper 2 Section B)	
Maths	**Higher** 8b - Constructions, Loci and Bearings (6) 9a - Solving Quadratics and Sim. Equations (8) 9b - Inequalities (6) 10 - Probability (10) 6b - Linear Graphs and Coordinate Geometry (6) 6c - Quadratic, Cubic and Other Graphs (8) 7a - Perimeter, area and circles (8) 7b - 3D forms and volume, cylinders, cones and spheres (8) **Foundation** 8a - Perimeter and area (10) 8b - 3D forms and volume (6) 9a - Real-life graphs (8) 9b - Straight-line graphs (6) 7a - Statistics and sampling (4) 7b - The averages (6) 8a - Perimeter and area (10) 8b - 3D forms and volume (6)	**Higher** 11 - Multiplicative Reasoning (8) 12 - Similarity and Congruence in 2D and 3D shapes (8) 15 - Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics (8) 7c - Accuracy and bounds (5) 8a -Transformations (8) 8b - Constructions, loci and bearings (8) 9a - Solving Quadratics and Sim. Equations (8) **Foundation** 10a - Transformations I: translations, rotations and reflections (6) 10b - Transformations II: enlargements and combinations (8) 11a - Ratio (6) 11b - Proportion (6) 9a - Real-life graphs (9) 9b - Straight-line graphs (6) 10a - Transformations I: translations, rotations and reflections (6)	**Higher** 14a - Collecting data (6) 14b - Cumulative frequency, box plots and histograms (7) 13a - Graphs of trig functions (6) 9b - Inequalities (6) 10 - Probability (10) **Foundation** 12 - Right-angled triangles: Pythagoras and trigonometry (6) 13a - Probability I (5) 13b - Probability II (8) 10b - Transformations II: enlargements and combinations (8) 11a - Ratio (6) 11b - Proportion (5)	**Higher** 13b - Further trigonometry (8) 16a - Circle theorems (6) 16b - Circle Geometry (5) 11 - Multiplicative Reasoning (8) 12 - Similarity and Congruence in 2D and 3D shapes (8) **Foundation** 15a - Plans and elevations (6) 15b - Constructions, loci and bearings (10) 12 - Right-angled triangles: Pythagoras and trigonometry (6) 13a - Probability I (5) 13b - Probability II (8)	**Higher** 17 - Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof (8) 18 - Vectors and geometric proof (10) 13a - Graphs of trig functions (6) 13b - Further trigonometry (10)" **Foundation** 16a - Quadratic equations: expanding and factorising (5) 16b - Quadratic equations: graphs (4) 14 - Multiplicative reasoning (6) 15a - Plans and elevations (6) 15b - Constructions, loci and bearings (10)	**Higher** 19a - Reciprocal and exponential graphs; Gradient and area under graphs (8) 19b - Direct and inverse proportion (8) 14a - Collecting data (6) 14b - Cumulative frequency, box plots and histograms (7) 15 - Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics (8) **Foundation** 17 - Circles, cylinders, cones and spheres (7) 18a - Fractions and Reciprocals (5) 18b - Indices and standard form (6) 16a - Quadratic equations: expanding and factorising (5) 16b - Quadratic equations: graphs (4) 14 - Multiplicative reasoning (6) 17 - Circles, cylinders, cones and spheres (7)

Science (Biology)	**Edexcel GCSE combined and separate biology.** Genetics. The purpose of meiosis is studied and comparisons are made between it and mitosis. The focus then shifts to the structure of DNA and its organisation within cells. Learners need to know a method for extracting DNA. Genetics. Towards the end of the topic learners study variation, inheritance and gene mutations. Natural selection and genetic modification. Learners start the topic by studying the evidence for human evolution and then go on to explore Darwin's theory of evolution by natural selection and classification. Finally, students finish off by studying selective breeding and genetic modification. The benefits and disadvantages of these techniques is covered. Edexcel GCSE separate biology only. Natural selection and genetic modification. The development of Darwin's ideas and genetic modification are studied in greater depth. The subsequent cloning of GM plants is explored by studying tissue culture. Finally, learners study the need to use fertilisers and control pests in crop production. This is explored further in the ecosystems and materials topic in year 11. Separate science candidates go on to study virus life cycles, plant diseases and monoclonal antibodies. They are also required to carry out a core practical investigating the effects of antibiotics on bacteria.	**Edexcel GCSE combined and separate biology.** Health, disease and the development of medicines. Learners start by studying non-communicable diseases, with an emphasis on cardiovascular disease. They then go on to study the organisms responsible for communicable diseases, their transmission and their control. For combined students, they finish off the topic by exploring human defences against disease, including the barriers to transmission and the role of white blood cells in the immune response. Knowledge of the immune response is applied to the study of vaccinations. **Edexcel GCSE separate biology only.** Natural selection and genetic Modification. Separate science candidates go on to study virus life cycles, plant diseases and monoclonal antibodies. They are also required to carry out a core practical investigating the effects of antibiotics on bacteria in the immune response. Knowledge of the immune response is applied to the study of vaccinations. Natural selection and genetic modification.	**Edexcel GCSE combined and separate biology.** Ecosystems and material cycles. The key theme in this topic is to explain that the chemicals in ecosystems are continually cycling through the natural world. Initially learners study a range of different ecological relationships. The influences of abiotic factors on plant populations is studied and learners conduct a core practical, investigating the relationship between organisms and their environment. Fieldwork techniques are used, including quadrats and belt transects. Later in the topic learners study biodiversity, with particular emphasis on human impact and conservation techniques. Finally, students study the water cycle, carbon cycle and nitrogen cycle. **Edexcel GCSE separate biology only.** Ecosystems and material cycles. Separate science students go on to study energy flow through ecosystems and link this to food security. Rates of decomposition and the use of organisms as biological indicators of pollution is also covered.
Science (Chemistry)	**Ionic and Covalent Bonding. Types of Substance.** Students will learn how ionic, covalent and metallic bonds are formed. Students will learn how the physical properties of a substance are linked to its bonding and structure. **Acids and Alkalis** Students will learn about the ions in acids and alkalis and how their concentrations are linked to pH. Students will learn what happens in the reaction between acids and different types of bases. Core Practical - Preparing copper sulphate Acids and Alkalis Students will learn about the reaction between acids and alkalis during titration. Students will learn how different indicators can be used in acid-alkalis reaction. Students will prepare soluble and insoluble salts. Investigating neutralisation	**Electrolytic processes.** Students will learn more about reactivity, Oxidation and Reduction and extraction of metals. Core Practical Electrolysis of copper sulphate. **Reversible reactions and equilibria.** Students will be able to explain further the electrolysis process and link it to equilibria. Students will learn about Haber process and its industrial applications.	**Groups in the periodic table** Students will learn about the properties and reactions of the elements in groups 1,7 and 0.
Science (Physics)	**Energy** This unit develops further work covered in Year 7 and introduces you to ways in which energy can be transferred and stored, how to reduce energy transfers, and the renewable and non- renewable resources we use in everyday life.	**Energy and Forces at Work** Students will learn more about how forces can transfer energy. Students will also learn about force fields (such as those found in magnetism) and how to use vector diagrams to work out what happens when several different forces act on an object at the same time. This topic dovetails and with work done in Year 9 on Energy, as well as synthesising work on Motion and Forces.	**Electricity and circuits** Extending on work done in Year 7 on Electric circuits, students learn how to develop a more sophisticated understanding of current, potential difference and resistance, and how these behave in series and parallel circuits by underpinning definitions on the movement of charge. Students learn about how electricity is supplied and used in different circuits

	Radioactivity Students conclude what they have started on Radioactivity in Year 9 but learning about nuclear fission and fusion. Students learn the nuclear reactions associated with each process, as well as the practical and real-life considerations. Students will also the advantages and disadvantages of nuclear power and the scope for it in the future. **Radioactivity** Students explore the sub-atomic world and identify why isotopes occur and what leads to radioactivity. They discover the types of radiation emitted by unstable nuclides through teacher lead practical demonstration of radioactive decay. **Radioactivity** Students continue developing their understanding of Radioactive decay and dangers of it. Uses of Radiation in the field of medicine is explored, and how radioactive materials are used to diagnose and treat cancer.				**Electrical resistance and electrical power** Students will complete a compulsory core practical where they investigate the changes in potential difference and current for various components that are crucial to modern electronics: the fixed resistor, filament lamp, diode, thermistor, dependent resistor. Students also connect the ideas of circuits transferring of energy to electrical power.	
RS	Islam Beliefs and Teachings	Islam Beliefs and Teachings	Religion and Life	Religion and Life	Islam Practices	Islam Practices