

ASPIRE • BELIEVE • ACHIEVE



King's Academy
Prospect

GCSE Exams 2022: Advance information

- For the majority of GCSE qualifications, advance information has been provided for the summer exams, to give students an indication of the likely assessed content
- It is not permitted to take the advance information into exams
- The information is designed to give students areas of focus for revision, but this does not mean that other areas of the specification can be ignored!
- The advance information relates in particular to the high-tariff questions worth a greater number of marks, and students will still need to have covered and learned content from the rest of the course
- For subjects in which topics are provided, topics not explicitly listed may still be assessed in low tariff, multiple-choice or synoptic questions; students may need to draw upon knowledge, skills and understanding from across the specification in each subject

- When a list of topics is provided, these are listed in specification order, not likely question order

Subject and Exam Board	Dates of Examinations	Advance Information	
CORE			
English Language, AQA	18 May 10 June	There is no advance information on Paper One Paper Two: Writer's viewpoints and perspectives <ul style="list-style-type: none"> • Section A: Reading <ul style="list-style-type: none"> ○ Source A: 21st Century Autobiographical writing ○ Source B: 19th Century Essay • Section B: Writing <ul style="list-style-type: none"> ○ Question 5: Article 	
English Language, AQA	25 May 8 June	Paper One (choose any two) <ul style="list-style-type: none"> • Anthology of Poetry • 19th Century Novel • Modern prose/drama Paper Two <ul style="list-style-type: none"> • Shakespeare (Macbeth) • Unseen poem essay/poetry comparison 	
Mathematics, AQA	20 May 7 June 13 June	Foundation Paper One: Number Arithmetic <ul style="list-style-type: none"> • Four operations • Negative numbers • Order of operations • Estimation Fractions	Higher Paper One Number (see Ratio) Arithmetic <ul style="list-style-type: none"> • Decimal Fractions <ul style="list-style-type: none"> • Arithmetic • Fraction of a number • Value as fraction of another

		<ul style="list-style-type: none"> • Arithmetic • Fraction of a number <p>Indices</p> <ul style="list-style-type: none"> • Laws of Indices <p>Standard Form</p> <ul style="list-style-type: none"> • Conversion • Calculation <p>Other</p> <ul style="list-style-type: none"> • Inequality notation • Systematic listing <p>Algebra</p> <p>Equations</p> <ul style="list-style-type: none"> • Linear <p>Graphs</p> <ul style="list-style-type: none"> • Recognise • Plot • Linear graph • Intersection of lines • Interpret <p>Reasoning</p> <ul style="list-style-type: none"> • Formula <p>Sequences</p> <ul style="list-style-type: none"> • Sequence rule to find a term <p>Ratio (see Number)</p> <p>Conversions</p> <ul style="list-style-type: none"> • Lengths <p>Percentage</p> <ul style="list-style-type: none"> • Percentage of an amount • Amount as a percentage <p>Fraction</p>	<ul style="list-style-type: none"> • Recurring decimals as fractions <p>Percentage</p> <ul style="list-style-type: none"> • Percentage as operator <p>Indices</p> <ul style="list-style-type: none"> • Laws of Indices <p>Standard Form</p> <ul style="list-style-type: none"> • Conversion • Calculation <p>Surds</p> <ul style="list-style-type: none"> • Simplification <p>Algebra</p> <p>Equations</p> <ul style="list-style-type: none"> • Of a straight line • Linear <p>Manipulation</p> <ul style="list-style-type: none"> • Identity • Simplification of algebraic fraction • Simplification • Factorisation of quadratic • Change subject <p>Graphs</p> <ul style="list-style-type: none"> • Recognise • Sketch function • Speed time • Inequality region • Interpret <p>Sequences</p> <ul style="list-style-type: none"> • Algebraic <p>Ratio (see Number)</p> <p>Ratio</p>
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		<ul style="list-style-type: none"> • Order of operations <p>Fractions</p> <ul style="list-style-type: none"> • Fraction of a number • Improper fraction • Fraction to decimal <p>Properties</p> <ul style="list-style-type: none"> • Number line decimal • Number problem • Prime number • Cube number • Decimal place <p>Other</p> <ul style="list-style-type: none"> • Inequality notation <p>Algebra</p> <p>Equations</p> <ul style="list-style-type: none"> • Linear <p>Manipulation</p> <ul style="list-style-type: none"> • Equivalent expressions • Terms • Multiply out • Factorisation <p>Graphs</p> <ul style="list-style-type: none"> • Coordinates • Midpoint • Point on line • Intercept of a line • Gradient of a line • Equation of a line <p>Ratio (see Number)</p> <p>Conversions</p>	<p>Fractions</p> <ul style="list-style-type: none"> • Products <p>Indices</p> <ul style="list-style-type: none"> • Negative <p>Algebra</p> <p>Equations</p> <ul style="list-style-type: none"> • Of a circle • Linear • Quadratic • Number line inequality <p>Manipulation</p> <ul style="list-style-type: none"> • Factorisation of quadratic • Multiply out • Completing the square <p>Graphs</p> <ul style="list-style-type: none"> • Coordinate problem • Perpendicular lines • Turning point <p>Functions</p> <ul style="list-style-type: none"> • Inverse <p>Sequences</p> <ul style="list-style-type: none"> • Triangular number <p>Ratio (see Number)</p> <p>Ratio</p> <ul style="list-style-type: none"> • Share into a ratio • On a line <p>Fraction</p> <ul style="list-style-type: none"> • To percentage <p>Conversions</p> <ul style="list-style-type: none"> • Time
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		<ul style="list-style-type: none"> • Time <p>Percentage</p> <ul style="list-style-type: none"> • Ratio and percentage • Percentage increase • Percentage decrease <p>Ratio</p> <ul style="list-style-type: none"> • n : 1 form <p>Applications</p> <ul style="list-style-type: none"> • Proportion problem • Scale diagram • Better value • Ratio to percentage • Equation to percentage • Rate of output <p>Geometry and Measures</p> <p>Shapes</p> <ul style="list-style-type: none"> • Draw shape • Quadrilateral • Parallelogram • Part of circle • Pythagoras <p>Measures</p> <ul style="list-style-type: none"> • Time problem <p>Area and Volume</p> <ul style="list-style-type: none"> • Compound shape <p>Statistics</p> <p>Pie chart</p> <p>Range</p> <p>Mean</p> <p>Probability</p>	<p>Applications</p> <ul style="list-style-type: none"> • Equation to percentage • Rate of output • Pressure <p>Percentage</p> <ul style="list-style-type: none"> • Percentage increase • Percentage decrease <p>Geometry and measures</p> <p>Area and Volume</p> <ul style="list-style-type: none"> • Compound shape • Cone • Hemisphere • Volume scale factor <p>Shape</p> <ul style="list-style-type: none"> • Plan • Pythagoras <p>Measures</p> <ul style="list-style-type: none"> • Time <p>Other</p> <ul style="list-style-type: none"> • Geometric proof <p>Statistics</p> <ul style="list-style-type: none"> • Estimation from sample • Pie chart • Mean <p>Probability</p> <ul style="list-style-type: none"> • Relative frequency • Expected value • Notation <p>Paper Three</p>
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		<p>Relative frequency Expected value Tree diagram</p> <p>Paper Three Number (see Ratio) Properties</p> <ul style="list-style-type: none"> • Place value • Factor • Multiple • Highest Common Factor • Error interval <p>Indices</p> <ul style="list-style-type: none"> • Calculation <p>Other</p> <ul style="list-style-type: none"> • Money problem • Units of measure <p>Algebra Equations</p> <ul style="list-style-type: none"> • Number machine <p>Manipulation</p> <ul style="list-style-type: none"> • Simplification • Substitution • Formula <p>Graphs</p> <ul style="list-style-type: none"> • Roots • Turning point <p>Sequences</p> <ul style="list-style-type: none"> • Arithmetic • Geometric 	<p>Number (see Ratio) Properties</p> <ul style="list-style-type: none"> • Highest Common Factor • Lowest Common Multiple • Error interval <p>Decimals</p> <ul style="list-style-type: none"> • Ordering • Recurring <p>Other</p> <ul style="list-style-type: none"> • Product rule for counting <p>Algebra Equations</p> <ul style="list-style-type: none"> • Quadratic • Simultaneous linear/quadratic <p>Manipulation</p> <ul style="list-style-type: none"> • Simplification • Triple bracket • Factorisation • Quadratic <p>Graphs</p> <ul style="list-style-type: none"> • Roots • Turning points • Quadratic • Exponential <p>Functions</p> <ul style="list-style-type: none"> • Composite <p>Sequences</p> <ul style="list-style-type: none"> • Arithmetic • Geometric • nth term
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		<ul style="list-style-type: none"> • nth term <p>Ratio (see Number)</p> <p>Conversions</p> <ul style="list-style-type: none"> • Lengths • Time <p>Ratio</p> <ul style="list-style-type: none"> • Share into a ratio <p>Applications</p> <ul style="list-style-type: none"> • Ratio problem • Interpretation • Ratio to graph • Average speed <p>Percentage</p> <ul style="list-style-type: none"> • Percentage increase <p>Fraction</p> <ul style="list-style-type: none"> • Fraction to percentage <p>Geometry and Measures</p> <p>Shape</p> <ul style="list-style-type: none"> • Name • Regular • Line symmetry • Rotational symmetry • Circle • Cylinder • Sphere • Trigonometry <p>Area and Volume</p> <ul style="list-style-type: none"> • Compound shape • Perimeter <p>Angles</p>	<p>Ratio (see Number)</p> <p>Ratio</p> <ul style="list-style-type: none"> • Share into a ratio <p>Applications</p> <ul style="list-style-type: none"> • Average speed • Population density <p>Percentages</p> <ul style="list-style-type: none"> • Percentage increase • Compound interest <p>Geometry and Measures</p> <p>Area and Volume</p> <ul style="list-style-type: none"> • Compound shape • Cylinder <p>Shape</p> <ul style="list-style-type: none"> • Quadrilateral • Circle theorems • Trigonometry • Sine/Cosine rule <p>Vectors</p> <ul style="list-style-type: none"> • Vector arithmetic <p>Other</p> <ul style="list-style-type: none"> • Bearing <p>Statistics</p> <ul style="list-style-type: none"> • Two-way table • Histogram • Box plot • Median, quartiles • Interquartile range • Line of best fit • Outlier
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		<ul style="list-style-type: none"> • Alternate angles <p>Other</p> <ul style="list-style-type: none"> • Vector arithmetic <p>Statistics</p> <p>Two-way table Vertical line diagram Mean from diagram Bar chart</p> <p>Probability</p> <p>Frequency tree Estimate of probability</p>	<p>Probability</p> <ul style="list-style-type: none"> • Independent events
EBacc			
Biology, AQA	17 May 15 June	<p>Foundation Paper One: For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 Cell structure • 4.1.3 Transport in cells • 4.2.2 Animal tissues, organs and organ systems • 4.3.1 Communicable diseases • 4.4.1 Photosynthesis <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: how a light microscope is used to observe plant cells. 	<p>Higher Paper One: For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 Cell structure • 4.1.3 Transport in cells • 4.2.2 Animal tissues, organs and organ systems • 4.2.3 Plant tissues, organs and systems • 4.3.1 Communicable diseases • 4.3.2 Monoclonal antibodies <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: use a light microscope to observe plant cells.

		<ul style="list-style-type: none"> • Required practical activity 3: investigate the effect of a range of concentrations of salt solution on the mass of plant tissue. • Required practical activity 4: use qualitative reagents to test for a range of carbohydrates, lipids and proteins. • Required practical activity 6: investigate the effect of light intensity on the rate of photosynthesis using an aquatic organism such as pondweed. <p>Paper Two For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.2 The human nervous system • 4.5.3 Hormonal control in humans • 4.5.4 Plant hormones • 4.6.1 Reproduction • 4.6.3 The development of understanding of genetics and evolution <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 7: carry out an investigation into human reaction times. • Required practical activity 8: investigate the effect of light on the growth of newly germinated seedlings. • Required practical activity 9: measure the population size of a common species in a habitat. 	<ul style="list-style-type: none"> • Required practical activity 3: investigate the effect of a range of concentrations of salt solution on the mass of plant tissue. • Required practical activity 4: use qualitative reagents to test for a range of carbohydrates, lipids and proteins. <p>Paper Two For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.2 The human nervous system • 4.5.3 Hormonal control in humans • 4.5.4 Plant hormones • 4.6.1 Reproduction • 4.7.2 Organisation of an ecosystem <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 8: investigate the effect of light on the growth of newly germinated seedlings. • Required practical activity 9: measure the population size of a common species in a habitat.
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<p>Chemistry, AQA</p>	<p>27 May 20 June</p>	<p>Foundation Paper One</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes • 4.1.2 The periodic table • 4.2.1 Chemical bonds, ionic, covalent and metallic • 4.2.2 How bonding and structure are related to the properties of substances • 4.2.4 Bulk and surface properties of matter including nanoparticles • 4.4.2 Reactions of acids • 4.5.1 Exothermic and endothermic reactions <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution. • Required practical activity 2: determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration. 	<p>Higher Paper One</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.2 The periodic table • 4.2.1 Chemical bonds, ionic, covalent and metallic • 4.2.2 How bonding and structure are related to the properties of substances • 4.2.3 Structure and bonding of carbon • 4.3.2 Use of amount of substance in relation to masses of pure substances • 4.4.1 Reactivity of metals • 4.4.2 Reactions of acids • 4.4.3 Electrolysis • 4.5.1 Exothermic and endothermic reactions <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution. • Required practical activity 2: determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration.
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		<ul style="list-style-type: none"> • Required practical activity 4: investigate the variables that affect temperature changes in reacting solutions such as, e.g., acid plus metals, acid plus carbonates, neutralisations, displacement of metals. <p>Paper Two</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.6.1 Rate of reaction • 4.6.2 Reversible reactions and dynamic equilibrium • 4.7.1 Carbon compounds as fuels and feedstock • 4.8.3 Identification of ions by chemical and spectroscopic means • 4.9.1 The composition and evolution of the Earth's atmosphere • 4.10.1 Using the Earth's resources and obtaining potable water • 4.10.2 Life cycle assessment and recycling • 4.10.4 The Haber process and the use of NPK fertilisers <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 5: investigate how changes in concentration affect the rates of reactions by a method involving 	<ul style="list-style-type: none"> • Required practical activity 4: investigate the variables that affect temperature changes in reacting solutions such as, e.g., acid plus metals, acid plus carbonates, neutralisations, displacement of metals. <p>Paper Two</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.6.1 Rate of reaction • 4.6.2 Reversible reactions and dynamic equilibrium • 4.7.1 Carbon compounds as fuels and feedstock • 4.9.1 The composition and evolution of the Earth's atmosphere • 4.10.1 Using the Earth's resources and obtaining potable water • 4.10.4 The Haber process and the use of NPK fertilisers <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 5: investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should
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		<p>measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should be an investigation developing a hypothesis.</p> <ul style="list-style-type: none"> • Required practical activity 6: investigate how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate R_f values. • Required practical activity 7: use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates. • Required practical activity 8: analysis and purification of water samples from different sources, including pH, dissolved solids and distillation 	<p>be an investigation developing a hypothesis.</p> <ul style="list-style-type: none"> • Required practical activity 7: use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates.
Physics, AQA	9 June 23 June	<p>Foundation</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 Energy changes in a system, and the ways energy is stored before and after such changes • 4.1.2 Conservation and dissipation of energy • 4.2.1 Current, potential difference and resistance 	<p>Higher</p> <p>For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 Energy changes in a system, and the ways energy is stored before and after such changes • 4.1.2 Conservation and dissipation of energy • 4.2.4 Energy transfers

		<ul style="list-style-type: none"> • 4.2.5 Static electricity • 4.3.1 Changes of state and the particle model • 4.3.2 Internal energy and energy transfers • 4.4.2 Atoms and nuclear radiation <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 2: investigate the effectiveness of different materials as thermal insulators and the factors that may affect the thermal insulation properties of a material. • Required practical activity 5: use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids. Volume should be determined from the dimensions of regularly shaped objects, and by a displacement technique for irregularly shaped objects. Dimensions to be measured using appropriate apparatus such as a ruler, micrometer or Vernier callipers. <p>Paper Two For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.1 Forces and their interactions 	<ul style="list-style-type: none"> • 4.3.1 Changes of state and the particle model • 4.3.2 Internal energy and energy transfers <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 2: investigate the effectiveness of different materials as thermal insulators and the factors that may affect the thermal insulation properties of a material. • Required practical activity 5: use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids. Volume should be determined from the dimensions of regularly shaped objects, and by a displacement technique for irregularly shaped objects. Dimensions to be measured using appropriate apparatus such as a ruler, micrometer or Vernier callipers. <p>Paper Two For this paper, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.1 Forces and their interactions • 4.5.2 Work done and energy transfer • 4.5.3 Forces and elasticity
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		<ul style="list-style-type: none"> • 4.5.2 Work done and energy transfer • 4.5.6.1 Describing motion along a line • 4.6.1 Waves in air, fluids and solids • 4.6.2 Electromagnetic waves • 4.8.1 Solar system; stability of orbital motions; satellites <p>Required practical activity that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 9: investigate the reflection of light by different types of surface and the refraction of light by different substances. 	<ul style="list-style-type: none"> • 4.5.5 Pressure and pressure differences in fluids • 4.5.6.1 Describing motion along a line • 4.5.7 Momentum • 4.6.1 Waves in air, fluids and solids • 4.8.1 Solar system; stability of orbital motions; satellites • 4.8.2 Red-shift <p>Required practical activity that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 9: investigate the reflection of light by different types of surface and the refraction of light by different substances.
Combined Science, AQA	17 May 9 June 15 June 20 June	<p>Foundation</p> <p>Life and environmental sciences</p> <p>For these papers, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 States of matter • 4.1.2 Atomic structure • 4.1.3 Cells in animals and plants • 4.1.4 Waves • 4.2.1 Systems in the human body • 4.2.2 Plants and photosynthesis • 4.3.1 Lifestyle and health • 4.3.3 Preventing, treating and curing disease • 4.4.2 Ecosystems and biodiversity • 4.4.3 Inheritance • 4.4.4 Variation and evolution 	<p>Higher</p> <p>Life and environmental sciences</p> <p>For these papers, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.1.1 States of matter • 4.1.2 Atomic structure • 4.1.3 Cells in animals and plants • 4.1.4 Waves • 4.2.1 Systems in the human body • 4.2.2 Plants and photosynthesis • 4.3.1 Lifestyle and health • 4.3.2 Radiation and risk • 4.3.3 Preventing, treating and curing diseases • 4.4.2 Ecosystems and biodiversity • 4.4.3 Inheritance • 4.4.4 Variation and evolution

		<p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids. Volume should be determined from the dimensions of a regularly shaped object and by a displacement technique for irregularly shaped objects. Dimensions to be measured using appropriate apparatus such as a ruler, micrometer or Vernier callipers. • Required practical activity 4: investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue. • Required practical activity 5: make observations to identify the suitability of apparatus to measure the frequency, wavelength and speed of waves in a ripple tank and waves in a solid and take appropriate measurements. • Required practical activity 7: use qualitative reagents to test for a range of carbohydrates, lipids and proteins. To include: Benedict's test for sugars, iodine test for starch and Biuret reagent for protein. 	<p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 1: use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids. Volume should be determined from the dimensions of a regularly shaped object and by a displacement technique for irregularly shaped objects. Dimensions to be measured using appropriate apparatus such as a ruler, micrometer or Vernier callipers. • Required practical activity 4: investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue. • Required practical activity 5: make observations to identify the suitability of apparatus to measure the frequency, wavelength and speed of waves in a ripple tank and waves in a solid and take appropriate measurements. • Required practical activity 7: use qualitative reagents to test for a range of carbohydrates, lipids and proteins. To include: Benedict's test for sugars, iodine test for starch and Biuret reagent for protein.
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		<ul style="list-style-type: none"> • Required practical activity 9: investigate how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate Rf values. • Required practical activity 12: measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species. <p>Physical Sciences</p> <p>For these papers, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.2 Chemical quantities • 4.6.1 Forces and energy changes • 4.6.2 Structure and bonding • 4.6.3 Magnetism and electromagnetism • 4.7.1 Forces and motion • 4.7.2 Electricity • 4.7.3 Acids and alkalis • 4.7.4 The rate and extent of chemical change • 4.8.1 Carbon chemistry <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 13: investigate the relationship between force and extension for a spring. 	<ul style="list-style-type: none"> • Required practical activity 9: investigate how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate Rf values. • Required practical activity 12: measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species. <p>Physical Sciences</p> <p>For these papers, the following list shows the major focus of the content of the exam:</p> <ul style="list-style-type: none"> • 4.5.2 Chemical quantities • 4.6.1 Forces and energy changes • 4.6.2 Structure and bonding • 4.6.3 Magnetism and electromagnetism • 4.7.1 Forces and motion • 4.7.2 Electricity • 4.7.3 Acids and alkalis • 4.7.4 The rate and extent of chemical change • 4.8.2 Resources of materials and energy <p>Required practical activities that will be assessed:</p> <ul style="list-style-type: none"> • Required practical activity 13: investigate the relationship between force and extension for a spring.
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		<ul style="list-style-type: none"> • Required practical activity 15: use circuit diagrams to construct appropriate circuits to investigate the I–V characteristics of a variety of circuit elements including a filament lamp, a diode and a resistor at constant temperature. • Required practical activity 16: use circuit diagrams to set up an appropriate circuit to investigate the factors affecting the resistance of an electrical component. This should include: <ul style="list-style-type: none"> ○ the length of a wire at constant temperature ○ combinations of resistors in series and in parallel. • Required practical activity 19: investigate how changes in concentration affect the rates of reactions. • Required practical activity 21: investigate what happens when aqueous solutions are electrolysed using inert electrodes. 	<ul style="list-style-type: none"> • Required practical activity 14: investigate the effect of varying the force on the acceleration of an object of constant mass and the effect of varying the mass of an object on the acceleration produced by a constant force. • Required practical activity 15: use circuit diagrams to construct appropriate circuits to investigate the I–V characteristics of a variety of circuit elements including a filament lamp, a diode and a resistor at constant temperature. • Required practical activity 16: use circuit diagrams to set up an appropriate circuit to investigate the factors affecting the resistance of an electrical component. This should include: <ul style="list-style-type: none"> ○ the length of a wire at constant temperature ○ combinations of resistors in series and in parallel. • Required practical activity 19: investigate how changes in concentration affect the rates of reactions.
French, AQA	23 May 24 May 16 June	Foundation Theme 1 – Identity and culture <ul style="list-style-type: none"> • Topic 1: Me, my family and friends • Topic 2: Technology in everyday life • Topic 3: Free-time activities 	Higher Theme 1 – Identity and culture <ul style="list-style-type: none"> • Topic 1: Me, my family and friends • Topic 2: Technology in everyday life • Topic 3: Free-time activities

		<p>Theme 2 – Local, national, international and global areas of interest</p> <ul style="list-style-type: none"> • Topic 1: Home, town, neighbourhood and region • Topic 2: Social issues <p>Theme 3 – Current and future study and employment</p> <ul style="list-style-type: none"> • Topic 1: My studies • Topic 2: Life at school/college • Topic 4: Jobs, career choices and ambitions 	<p>Theme 2 – Local, national, international and global areas of interest</p> <ul style="list-style-type: none"> • Topic 1: Home, town, neighbourhood and region • Topic 2: Social issues • Topic 3: Global issues <p>Theme 3 – Current and future study and employment</p> <ul style="list-style-type: none"> • Topic 1: My studies • Topic 2: Life at school/college • Topic 3: Education post-16 • Topic 4: Jobs, career choices and ambitions
German, AQA	18 May 23 May 6 June	<p>Foundation</p> <p>Theme 1 – Identity and culture</p> <ul style="list-style-type: none"> • Topic 2: Technology in everyday life • Topic 3: Free-time activities <p>Theme 2 – Local, national, international and global areas of interest</p> <ul style="list-style-type: none"> • Topic 1: Home, town, neighbourhood and region • Topic 4: Travel and tourism <p>Theme 3 – Current and future study and employment</p> <ul style="list-style-type: none"> • Topic 2: Life at school/college • Topic 4: Jobs, career choices and ambitions 	<p>Higher</p> <p>Theme 1 – Identity and culture</p> <ul style="list-style-type: none"> • Topic 2: Technology in everyday life • Topic 3: Free-time activities <p>Theme 2 – Local, national, international and global areas of interest</p> <ul style="list-style-type: none"> • Topic 1: Home, town, neighbourhood and region • Topic 4: Travel and tourism <p>Theme 3 – Current and future study and employment</p> <ul style="list-style-type: none"> • Topic 2: Life at school/college • Topic 3: Education post-16 • Topic 4: Jobs, career choices and ambitions

History, Edexcel	19 May 9 June	<p>Paper One Medicine</p> <p>Paper Two Anglo-Saxon and Norman England</p> <p>Paper Three Weimar and Nazi Germany</p>
Geography, Edexcel	23 May 7 June 14 June	<p>Paper One – Global Geographical Issues</p> <ul style="list-style-type: none"> • Topic 1: Hazardous Earth <i>AND EITHER</i> • Topic 2: Development dynamics <i>OR</i> • Topic 3: Challenges of an urbanising world <p>Paper Two - UK Geographical Issues No Change (Questions on students' own fieldwork already removed for 2022). In Section C1 students must answer <i>either</i> Q8 Coasts <i>or</i> Q9 Rivers In Section C2 students must answer <i>either</i> Q10 Urban <i>or</i> Q11 Rural.</p> <p>Paper Three - People and Environment Issues - Making Geographical Decisions No Change.</p> <p>Fieldwork Students will not be required to answer exam questions relating to their own fieldwork experience. The unfamiliar fieldwork questions relating to physical and human geography will be retained in the exam. The following changes will be made:</p> <ul style="list-style-type: none"> • There will be no questions about students' own fieldwork, students will answer unfamiliar fieldwork questions only.
Computer Science, OCR	16 May 27 May	<p>1.1 Systems Architecture</p> <ul style="list-style-type: none"> • Architecture of the CPU <ul style="list-style-type: none"> ○ The purpose of the CPU ○ Common CPU components and their features. ○ Von Neumann architecture <p>1.2 Memory and Storage</p>

- Primary Storage
 - Secondary storage
 - Units
 - The units of data storage
 - Data Storage
 - Numbers
 - Characters
 - Images
 - Sounds
 - Compression
- 1.3 Computer networks, connections and protocols
- Networks and topologies
 - Factors that affect the performance of networks.
 - The hardware needed to connect stand-alone computers into a Local Area Network.
 - The Internet as a worldwide collection of computer networks
 - Wired and wireless networks, protocols and layers
 - Modes of connection.
 - Encryption.
 - IP addressing and MAC addressing.
 - Standards.
 - Common protocols.
- 1.4 Network security
- Identifying and preventing vulnerabilities
 - Common prevention methods
- 1.5 Ethical, legal, cultural and environmental impacts of digital technology
- Ethical, legal, cultural and environmental impact
 - Impacts of digital technology on wider society.
 - Legislation relevant to Computer Science.

Art, Edexcel		Examined through Portfolio only
Photography, Edexcel		Examined through Portfolio only
Drama, AQA	19 May 31 May	<p>Play Blood Brothers by Willy Russell Act Two Start: (page number 68) <i>The classroom sequence breaks up as we see Mrs Lyons staring at a piece of paper. Edward is standing before her.</i> Mrs Lyons (incredulously) Suspended? Suspended? (She looks at the paper.) Because of a locket. Finish: (page number 75) Edward Come on then.....my ma...</p>
Music, BTEC		No advance information
Design Technology, Edexcel	15 June	<p>Paper 1DT0/1A 1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment 1.4 Developments in modern and smart materials, composite materials and technical textiles 1.12 The categorisation of the types, properties and structure of natural and manufactured timbers 2.3 The way in which the selection of ferrous and non-ferrous metal is influenced 2.7 Specialist techniques, tools, equipment and processes that can be used to shape, fabricate, construct and assemble a high-quality ferrous and/or non-ferrous metal prototype 2.8 Appropriate surface treatments and finishes that can be applied to ferrous and non-ferrous metals for functional and aesthetic purposes</p> <p>Paper 1DT0/1B</p>

		<p>1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment</p> <p>1.4 Developments in modern and smart materials, composite materials and technical textiles</p> <p>1.12 The categorisation of the types, properties and structure of natural and manufactured timbers</p> <p>3.2.2 The sources, origins, physical and working properties of papers and boards and their social and ecological footprint</p> <ul style="list-style-type: none"> • Board <p>3.2.6 The sources, origins, physical and working properties of papers and boards and their social and ecological footprint</p> <ul style="list-style-type: none"> • Working properties – the way in which each material behaves or responds to external sources <p>3.3 The way in which the selection of papers and boards is influenced</p> <p>3.7 Specialist techniques, tools, equipment and processes that can be used to shape, fabricate, construct and assemble a high-quality paper and board prototype</p> <p>Paper 1DT0/1C</p> <p>1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment</p> <p>1.4 Developments in modern and smart materials, composite materials and technical textiles</p> <p>1.12 The categorisation of the types, properties and structure of natural and manufactured timbers</p> <p>4.3 The way in which the selection of thermoforming and thermosetting polymers is influenced</p> <p>4.7 Specialist techniques, tools, equipment and processes that can be used to shape, fabricate, construct and assemble a high-quality thermoforming and thermosetting polymers prototype</p> <p>4.8 Appropriate surface treatments and finishes that can be applied to thermoforming and thermosetting polymers for functional and aesthetic purposes</p> <p>Paper 1DT0/1D</p>
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		<p>1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment</p> <p>1.4 Developments in modern and smart materials, composite materials and technical textiles</p> <p>1.12 The categorisation of the types, properties and structure of natural and manufactured timbers</p> <p>5.2.3 The sources, origins, physical and working properties of components and systems and their social and ecological footprint</p> <ul style="list-style-type: none"> • Outputs <p>5.2.6 The sources, origins, physical and working properties of components and systems and their social and ecological footprint</p> <ul style="list-style-type: none"> • Working properties – the way in which each material behaves or responds to external sources <p>5.3 The way in which the selection of components and systems is influenced</p> <p>5.7 Specialist techniques, tools, equipment and processes that can be used to shape, fabricate, construct and assemble a high-quality systems prototype</p> <p>Paper 1DT0/1E</p> <p>1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment</p> <p>1.4 Developments in modern and smart materials, composite materials and technical textiles</p> <p>1.12 The categorisation of the types, properties and structure of natural and manufactured timbers</p> <p>6.2.2 The sources, origins, physical and working properties of natural, synthetic, woven and non-woven, knitted, blended and mixed-fibre textiles and their social and ecological footprint</p> <ul style="list-style-type: none"> • Synthetic <p>6.2.7 The sources, origins, physical and working properties of natural, synthetic, woven and non-woven, knitted, blended and mixed-fibre textiles and their social and ecological footprint</p> <ul style="list-style-type: none"> • Working properties – the way in which each material behaves or responds to external sources
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		<p>6.3 The way in which the selection of natural, synthetic, blended and mixed-fibre textiles is influenced</p> <p>6.7 Specialist techniques, tools, equipment and processes that can be used on natural, synthetic, woven and non-woven, knitted, blended and mixed-fibre textiles to shape, fabricate, construct and assemble a high-quality prototype</p> <p>Paper 1DT0/1F</p> <p>1.2 How the critical evaluation of new and emerging technologies informs design decisions; considering contemporary and potential future scenarios from different perspectives, such as ethics and the environment</p> <p>1.4 Developments in modern and smart materials, composite materials and technical textiles</p> <p>1.12 The categorisation of the types, properties and structure of natural and manufactured timbers</p> <p>7.2.3 The sources, origins, physical and working properties of each natural and manufactured timber and their social and ecological footprint</p> <ul style="list-style-type: none"> • Manufactured timber <p>7.2.6 The sources, origins, physical and working properties of each natural and manufactured timber and their social and ecological footprint</p> <ul style="list-style-type: none"> • Working properties – the way in which each material behaves or responds to external sources <p>7.3 The way in which the selection of each natural and manufactured timber is influenced</p> <p>7.7 Specialist techniques, tools, equipment and processes that can be used on each natural and manufactured timber to shape, fabricate, construct and assemble a high-quality prototype</p>
Media Studies, AQA	25 May 14 June	<p>Media One</p> <p>Theoretical Framework</p> <ul style="list-style-type: none"> • Media Language • Media Representation • Media Contexts • Media Industries • Media Audiences <p>Media Two</p>

		<p>Media Forms and set products</p> <ul style="list-style-type: none"> • Magazine – Tatler • Advertising and Marketing – Galaxy • OSP/Video Games – Lara Croft Go • Music Video – One Direction and Arctic Monkeys
Business Studies, Edexcel	20 May 13 June	<p>Paper 1 (1BS0/01)</p> <p>Topic 1.1 Enterprise and entrepreneurship</p> <p>1.1.2 Risk and reward</p> <p>1.1.3 The role of business enterprise</p> <p>Topic 1.2 Spotting a business opportunity</p> <p>1.2.2 Market research</p> <p>1.2.3 Market segmentation</p> <p>Topic 1.3 Putting a business idea into practice</p> <p>1.3.1 Business aims and objectives</p> <p>1.3.2 Business revenues, costs and profits</p> <p>1.3.3 Cash and cash-flow</p> <p>1.3.4 Sources of business finance</p> <p>Topic 1.4 Making the business effective</p> <p>1.4.1 The options for start-up and small business</p> <p>1.4.2 Business location</p> <p>1.4.3 The marketing mix</p> <p>Topic 1.5 Understanding external influences on business</p> <p>1.5.1 Business stakeholders</p> <p>1.5.2 Technology and business</p> <p>1.5.3 Legislation and business</p> <p>1.5.4 The economy and business</p> <p>1.5.5 External influences</p> <p>Appendix 2: Quantitative skills</p> <p>Calculation</p> <p>Calculations in a business context, including:</p>

- percentages and percentage changes
- revenue, costs and profit
- cash-flow forecasts, including total costs, total revenue and net cash flow

Interpretation

Interpretation and use of quantitative data in business contexts to support, inform and justify business decisions, including:

- information from graphs and charts
- market data, including market share, changes in costs and changes in prices

Paper 2 (1BS0/02)

Topic 2.1 Growing the business

2.1.1 Business growth

2.1.3 Business and globalisation

2.1.4 Ethics, the environment and business

Topic 2.2 Making marketing decisions

2.2.1 Product

2.2.3 Promotion

2.2.4 Place

2.2.5 Using the marketing mix to make business decisions

Topic 2.3 Making operational decisions

2.3.1 Business operations

2.3.2 Working with suppliers

2.3.4 The sales process

Topic 2.4 Making financial decisions

2.4.1 Business calculations

2.4.2 Understanding business performance

Topic 2.5 Making human resource decisions

2.5.1 Organisational structures

2.5.4 Motivation

Appendix 2: Quantitative skills

		<p>Calculation Calculations in a business context, including:</p> <ul style="list-style-type: none"> • averages • revenue, costs and profit • gross profit margin and net profit margin ratios • average rate of return <p>Interpretation Interpretation and use of quantitative data in business contexts to support, inform and justify business decisions, including:</p> <ul style="list-style-type: none"> • information from graphs and charts • market data, including market share, changes in costs and changes in prices
PE, OCR	24 May 10 June	<p>Physical factors affecting performance</p> <p>1.1 Applied anatomy and physiology</p> <p>1.2 Physical training</p> <p>Socio-cultural issues and sports psychology</p> <p>2.1 Socio-cultural influences</p> <p>2.2 Sports psychology</p> <p>2.3 Health, fitness and well-being</p>
PE, BTEC		No advance information
Faith, Philosophy and Ethics, AQA	16 May 26 May	<p>Christianity</p> <p>Beliefs and teachings</p> <ul style="list-style-type: none"> • The nature of God: <ul style="list-style-type: none"> ○ the oneness of God and the Trinity: Father, Son and Holy Spirit. • Different Christian beliefs about creation including the role of Word and Spirit (John 1:1–3 and Genesis 1:1–3). • Different Christian beliefs about the afterlife and their importance, including: resurrection and life after death; judgement, heaven and hell. • Beliefs and teachings about: <ul style="list-style-type: none"> ○ the crucifixion, resurrection and ascension

- the means of salvation, including law, grace and Spirit
- the role of Christ in salvation including the idea of atonement.

Practices

- The role and meaning of the sacraments:
 - the sacrament of baptism and its significance for Christians; infant and believers' baptism; different beliefs about infant baptism.
- The role and importance of celebrations including:
 - the celebrations of Christmas and Easter, including their importance for Christians in Great Britain today.
- The place of mission, evangelism and Church growth.
- The importance of the worldwide Church including:
 - working for reconciliation
 - how Christian churches respond to persecution.

Islam

Beliefs and teachings

- The nature of God: omnipotence, beneficence, mercy, fairness and justice/Adalat in Shi'a Islam, including different ideas about God's relationship with the world: immanence and transcendence.
- Angels, their nature and role, including Jibril and Mika'il.
- Risalah (Prophethood) including the role and importance of Adam, Ibrahim and Muhammad.
- The holy books:
 - Qur'an: revelation and authority
 - the Torah, the Psalms, the Gospel, the Scrolls of Abraham and their authority.
- The imamate in Shi'a Islam: its role and significance.

Practices

- Salah and its significance: how and why Muslims pray including times, directions, ablution (wudu), movements (rak'ahs) and recitations; salah in the home and mosque and

		<p>elsewhere; Friday prayer: Jummah; key differences in the practice of salah in Sunni and Shi'a Islam, and different Muslim views about the importance of prayer.</p> <ul style="list-style-type: none"> • Zakah: the role and significance of giving alms including origins, how and why it is given, benefits of receipt, Khums in Shi'a Islam. • Hajj: the role and significance of the pilgrimage to Makkah including origins, how hajj is performed, the actions pilgrims perform at sites including the Ka'aba at Makkah, Mina, Arafat, Muzdalifah and their significance. • Jihad: different understandings of jihad: the meaning and significance of greater and lesser jihad; origins, influence and conditions for the declaration of lesser jihad. • Festivals and commemorations and their importance for Muslims in Great Britain today, including the origins and meanings of Id-ul-Adha, Id-ul-Fitr, Ashura.
Hospitality and Catering, WJEC		No changes to the specification
Hair and Beauty, VTCT		Internally assessed
Construction		Internally assessed