the LatimerArts College

Ace Your Exams: Topics for Revision 2022

My key actions/areas of focus are:

ENGLISH

Poetry	
Lord Byron	When We Two Parted
Percy Bysshe Shelley	Love's Philosophy
Robert Browning	Porphyria's Lover
Elizabeth Barrett Browning	Sonnet 29 – 'I think of thee!'
Thomas Hardy	Neutral Tones
Charlotte Mew	The Farmer's Bride
C Day Lewis	Walking Away
Maura Dooley	Letters From Yorkshire
Charles Causley	Eden Rock
Seamus Heaney	Follower
Simon Armitage	Mother, any distance
Carol Ann Duffy	Before You Were Mine
Owen Sheers	Winter Swans
Daljit Nagra	Singh Song!
Andrew Waterhouse	Climbing My Grandfather

Macbeth

Context	Main Characters	Themes
• Shakespeare's Time • The Divine Right of Kings • Witches and the Supernatural • James I • The Role of Women • Healthcare and Medicine	• Macbeth • Duncan • The Three Witches • Lady Macbeth • Macduff • Banquo	• Unchecked Ambition • Fate vs Free Will • Gender, Masculinity and Femininity • Inversion of the Natural Order • Relationships

An Inspector Calls

Context	Main Characters	Themes
• J.B. Priestley • Pre and Post-War • Realism and Postmodernism • Socialism • Social and Moral Responsibility • The Titanic	• Arthur Birling • Sybil Birling • Sheila Birling • Eric Birling • The Inspector • Gerald Croft • Eva Smith/Daisy Renton	• Responsibility • Guilt • Age • Class • Gender • The supernatural • Society

MATHS

Foundation Tier

Aggregated Content June 2022 Number (* see Ratio – some overlap of topic areas)

Topic	Detail
Arithmetic	Four operations
	Negative number
	Order of operations
	Estimation
Fractions*	Arithmetic
	Fraction of a number
	Improper fraction
	Fraction to decimal
Properties	Number line decimal
	Number problem
	Place value
	Prime number
	Factor
	Multiple
	Highest Common Factor
	Cube number
	Decimal place
	Error interval
Indices	Laws of indices
	Calculation
StandardForm	Conversion
	Calculation
Other	Inequality notation
	Money problem
	Systematic listing
	Units of measure

Algebra

Topic	Detail
Equations	Number machine
	Linear
Manipulation	Equivalent expressions
	Terms
	Multiply out
	Factorisation
	Simplification
	Substitution
	Formula
Graphs	Coordinates
	Midpoint
	Point on line
	Intercept of a line
	Gradient of a line
	Roots
	Turning point
	Equation of a line
	Recognise
	Plot
	Linear graph
	Intersection of lines

Graphs contd.	Solve equation
	Interpret
Reasoning	Formula
Sequences	Sequence rule to find a term
	Arithmetic
	Geometric
	*n*th term

Ratio (*see Number – some overlap of topic areas)

Topic	Detail
Conversions	Lengths
	Time
Percentage*	Percentage of an amount
	Amount as a percentage
	Ratio and percentage
	Percentage increase
	Percentage decrease
Fraction*	Fraction less than 1
	Fraction to percentage
Ratio	Simplest form
	n : 1 form
	Share into a ratio
	Ratio to fraction
Applications	Ratio problem
	Scale diagram
	Better value
	Interpretation
	Ratio to graph
	Ratio to percentage
	Equation to percentage
	Cost problem
	Rate of output
	Average speed
	Density
	Proportion problem

Geometry and Measures

Topic	Detail
Shape	Draw shape
	Name
	Regular
	Line symmetry
	Rotational symmetry
	Quadrilateral
	Parallelogram
	Naming circle part
	Part of circle
	Circle
	Cylinder
	Sphere
Shape contd.	Types of triangle
	Pythagoras
	Trigonometry
	Translation
Measures	Time problem
Area andVolume	Compound shape
	Perimeter
	Sector of a circle
	In triangles

Angles	Alternate angles
Constructions	Region
Other	Vector arithmetic

Statistics

Diagrams	Two-way table
	Pie chart
	Vertical line diagram
	Bar chart
Measures	Averages problem
	Outlier
	Range
	Mean
	Mean from diagram

Probability

Frequency tree
Relative frequency
Expected value
Problem
Estimate of probability
Venn diagram
Tree diagram

Higher Tier

Aggregated Content June 2022 Number (*see Ratio – some overlap of topic areas)

Topic	Detail
Arithmetic	Decimal
Fractions*	Arithmetic
	Fraction of a number
	Value as fraction of another
	Products
	Recurring decimals as fractions
Properties	Prime number
	Highest Common Factor
	Lowest Common Multiple
	Cube number
	Reciprocal
	Decimal places
	Error interval
	Bounds
Percentage*	Percentage as operator
Decimals	Ordering
	Recurring
Indices	Laws of indices
	Negative
StandardForm	Conversion
	Calculation
Surds	Simplification
Other	Product rule for counting

Algebra

Topic	Detail
Equations	Of a straight line
	Of a circle
	Linear

Equations contd.	Quadratic
	Simultaneous linear/quadratic
	Number line inequality
Manipulation	Identity
	Simplification
	Multiply out
	Simplification of algebraic fraction
	Factorisation of quadratic
	Triple bracket
	Change subject
	Factorisation
	Completing the square
	Quadratic
Graphs	Coordinate problem
	Perpendicular lines
	Roots
	Turning points
	Recognise
	Quadratic
	Exponential
	Sketch function
	Speed time
	Inequality region
	Interpret
Functions	Inverse
	Composite
Sequences	Triangular number
	Arithmetic
	Geometric
	Algebraic
	*n*th term

Ratio (*see Number – some overlap of topic areas)

Topic	Detail
Ratio	Simplest form
	Share into a ratio
	On a line
	Proportion problem
Fraction*	To percentage
Percentage*	Percentage increase
	Percentage decrease
	Compound Interest
Conversions	Time
Applications	Equation to percentage
	Rate of output
	Pressure
	Average speed
	Population density

Geometry and Measures

Topic	Detail
Shape	Quadrilateral
	Congruence
	Circle theorems
	Prism
	Faces
	Plan
	Pythagoras
	Trigonometry

	Exact trigonometrical values
	Sine/Cosine rule
Area andVolume	Compound shape
	Cylinder
	Cone
	Hemisphere
	Sector of a circle
	Volume scale factor
Measures	Time
Vectors	Vector arithmetic
	Vector geometry
Constructions	Region
Other	Bearing
	Geometric proof

Statistics

Topic	**Detail**
Diagrams	Two-way table
	Pie chart
	Cumulative frequency
	Histogram
	Box plot
	Line of best fit
Measures	Mean
	Median, quartiles
	Interquartile range
	Outlier
Populations	Estimation from sample

Probability

Relative frequency
Expected value
Venn diagram
Tree diagram
Notation
Independent events

SCIENCE

A PowerPoint presentation with links to revision websites will be sent to you

AQA GCSE Combined Science Trilogy: Foundation

Biology Paper 1 – Foundation – Exam date 17th May

These specification points will be the **major focus** of this paper.
All other specification points from B1, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP pages in black. Collins pages in green.

Spec point	Concepts	Revision guide pages
4.1.2 Cell Division	-How DNA is arranged as chromosomes -Series of stages in the cell cycles inc. mitosis -Definition and uses of stem cells	15-16 20 - 21
Required practical 1: use of light microscope	-How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification - Microscopy calculations	12-13 18 - 19
4.2.2 Animal tissues, organs and organ systems	- Functions of tissues and organs in the digestive system -Digestive enzymes -Functions of tissues and organs in the circulatory system -Pathway of blood through the heart -adaptations of components of the blood -risk factors of non-communicable diseases	24, 27, 30-32 35-37 25 – 29, 30 – 31 (table)
Required practical 3: test for carbohydrates, lipids and proteins	-Reagent and positive result for carbohydrates, proteins and lipids	28 26
4.3.1 Communicable Diseases	-definition and examples of pathogen -how viruses and bacteria make us ill -examples of diseases caused by each type of pathogen -human defence mechanisms -what happens in a vaccine -comparing antibody production after active and passive immunity -role of antibiotics -stages in the development of drugs	42-49 40 - 45
4.4.1 Photosynthesis	-photosynthesis equation -factors affecting rate of photosynthesis	50-52 Not inc. bottom half of 50 46 – 47 (top)
Required Practical 5: effect of light intensity on rate of photosynthesis	-independent, dependent, control variables -How to measure the dependent variable -method -analysing results	52 47

These specification points **will not be assessed** on this paper.

Spec point	Revision Guide Pages
4.1.3.2 Osmosis	18 22
4.1.3.3 Active Transport	19 23
4.2.2.4 Coronary Heart Diseases	33-34 31
4.4.1.3 Uses of Glucose from Photosynthesis	Bottom half of pg 50 Bottom of p47
4.4.2 Respiration	53-55 48 - 49

Chemistry Paper 1 – Foundation – Exam date 27th May

These specification points will be the **major focus** of this paper.
All other specification points from C1, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP pages in black. Collins pages in red.

Spec point	Concepts	Revision guide pages
5.1.2 The Periodic Table	-The Periodic Table is arranged in order of proton number -What atoms of elements in the same group have in common -What atoms of elements in the same period have in common -development in the Periodic Table -ions formed from metals and non-metals -trends in physical and chemical properties of group 1,7 and 0 elements - Reactions of group 1 and 7 elements	106-111 90 - 93
5.2.2 How bonding and structure are related to the properties of a substance	-interpreting melting and boiling point data to determine state at a certain temp -state symbols -describe and explain properties of ionic compounds -describe and explain properties of simple covalent molecules -describe and explain properties of polymers -describe and explain properties of metals and alloys	115,117-118, 120 95, 97 – 99 (top), 100 - 101
5.2.3 Structure and bonding of carbon	-describe and explain the properties of diamond, graphite, graphene and fullerenes	118-119 99
5.4.1 The Reactivity of Metals	-Metals + oxygen -Reduction and oxidation in terms of oxygen -The Reactivity Series - Displacement reactions - Extraction of metals by reduction	130-131 112 - 113
5.4.2 Reactions of Acids	-Naming Salts -products of the reactions of acids and metals -produces of the reactions of acids and alkalis and insoluble bases -products of the reactions of acids and metal carbonates -pH scale and neutralisation	128-129 114 - 115
5.4.2.3 and **Required Practical 8:** preparation of a pure, dry sample of soluble salts	-method of producing solid salt crystals from insoluble oxide or carbonate and acids -identifying errors in methods and reagents	129 115

Spec point	Concepts	Revision guide pages
5.4.3 Electrolysis	-The process of electrolysis -Electrolysis of molten ionic compounds -Electrolysis of aluminium oxide -Electrolysis of aqueous solutions	130-131 116 - 117
Required Practical 9: investigate what happens when aqueous solutions are electrolysed using inert electrodes.	-Developing a hypothesis -Planning an investigation	128-129 117
Required Practical 10: investigate the variables that affect temperature changes in reacting solutions such as, eg acid plus metals, carbonates, neutralisations, displacement of metals	-Identifying independent, dependent, control variables -Analysing results -identifying exo and endothermic reactions from experimental results	135 118

Physics Paper 1 – Foundation – Exam date 7th June

All other specification points from P1, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP pages in black. Collins pages in blue.

Spec point	Concepts	Revision guide pages
6.1.1 Energy Changes in a system, and the ways energy 1s stored before and after such changes	-identifying the energy changes in systems -Calculate, using equations, the amount of energy associated with a moving object, a stretched spring and an object raised above ground level. -Calculate, using an equation, the amount of energy stored in or released from a system as its temperature changes -Calculate Power	167-172 164 - 165
Required Practical 14: an investigation to determine the specific heat capacity of one or more materials.	linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored	171 165
6.1.3 National and global energy resources	-describe renewable and non-renewable energy resource -compare advantages and disadvantages of different energy resources	176-179 167
6.2.1 Current, potential difference and resistance	-circuit diagram symbols -definition and units of electrical current and charge -calculating charge flow using an equations -definition and units of potential difference -definition and units of resistance -relationship between current, potential difference and resistance -calculate current, potential difference or resistance using an equation -IV graphs of resistor at constant temp, filament lamp, diode -applications of LDRs and thermistors	180-184 182 – 187

Spec point	Concepts	Revision guide pages
Required Practical 16: construct appropriate circuits to investigate the I–V characteristics of circuit elements, inc. a filament lamp, diode and a resistor at constant temp.	-placing ammeter and voltmeter in the correct place in a circuit to measure the current through and potential difference across a component -Plotting graphs -Describing and explaining patterns shown in graphed data	183 184
6.3.1 Changes of state and the particle model	-Define and calculate the density of a substance or object -recognise/draw simple diagrams to model the difference between solids, liquids and gases -explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules. -describe how, when substances change state mass is conserved. -Describe changes of state as physical changes	193-195 202 - 203
6.4.2 Atoms and nuclear radiation	-radioactive decay, types of nuclear radiation and their properties -definition and units of activity and count rate -nuclear equations -half lives -contamination and irradiation	198-201 206 - 209

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
6.2.3 Domestic uses and safety	188 188 - 189
6.3.3 Particle Model and Pressure	Bottom half of pg 193 bottom of p203
6.4.1 Atoms and Isotopes	197 and top of p198 204

Biology Paper 2 – Foundation – Exam date 15th June

All other specification points from B2, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP pages in black. Collins pages in green.

Spec point	Concepts	Revision guide pages
4.5.3 Hormonal Control in Humans	-definition of 'hormone' function of the tissues and organs of the endocrine system -identifying position of glands, and the hormones secreted from them -hormones involved in control of blood glucose concentration -Type 1 and Type 2 diabetes	61-62 50, 52 - 53
4.6.1 Reproduction	-describe the structure of DNA -define 'genome' -structure of a chromosome -definition of 'gene' -definition of key inheritance terms e.g. heterozygous, recessive allele, phenotype -construct punnett squares -determine probability	66, 70-72 65 - 67

4.6.1 Reproduction contd.	-inherited disorders -make informed judgements about the economic, social and ethical issues concerning embryo screening,	

Spec point	Concepts	Revision guide pages
4.7.1 Adaptations, interdependence and competition	-Describe the different levels of organisation in an ecosystem -Describe the importance of interdependence and competition in a community. -Identify biotic and abiotic factors -Suggest the factors for which organisms are competing in a given habitat	83-84 74 - 75
4.7.2 Organisation of an ecosystem	-interpret food chains and webs -identify producers, consumers, predators and prey from food chains and webs -describe the carbon and water cycles	86, 89-90 76 - 77
Required Practical 7: 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	-Using transects and quadrats are used by ecologists to determine the distribution and abundance of species in an ecosystem. -Understand the terms mean, mode and median -Calculate arithmetic means	87-88 75

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
4.5.2 The human nervous system	58-60 51
4.5.3.3 Hormones in human reproduction	63-65 54
4.5.3.4 Contraception	65 55
4.6.1.1 Sexual and asexual reproduction	67 64 - 65
4.6.1.2 Meiosis	68 64 - 65
4.6.1.6 Sex Determination	69 67
4.6.2.1 Variation	73 68
4.6.2.2 Evolution	74 68 - 69
4.6.2.3 Selective Breeding	77 70 (top half)
4.6.3.3 Extinction	74 72
4.6.3.4 Resistant Bacteria	75-76 69
4.7.1.4 Adaptations	85 74 – 75 (top)
4.7.3.1 Biodiversity	91 78
4.7.3.3 Land Use	93 78
4.7.3.4 Deforestation	93 79
4.7.3.5 Global Warming	92 79

4.7.3.6 Maintaining Biodiversity	94 79

Chemistry Paper 2 – Foundation – Exam date 20th June

These specification points will be the **major focus** of this paper.
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Spec point	Concepts	Revision guide pages
5.6.1 Rate of Reaction	-Calculating the rate of a reaction -Describe collision theory -Define activation energy -Describe and explain the factors that increase the rate of reaction -Describe and explain the effect of catalysts on rate of reaction	138-139, 142-143 120 - 122
Required Practical 11: investigate how concentration affects the rates of reaction by a method involving measuring the volume of a gas produced/change in colour	-identify independent, dependent and control variables -describe how to measure the dependent variable -analyse results and draw conclusions from graphed data -calculate rate of reaction from data	140-141, 142-143 121
5.6.2 Reversible reactions and dynamic equilibrium	-identify and give examples of reversible reactions -apply the conservation of energy to reversible reactions -define dynamic equilibrium	144 123
5.7.1 Carbon compounds as fuels and feedstock	-describe crude oil as a mixture of different length hydrocarbons -define the term hydrocarbon -identify the first 4 alkanes from their chemical formula and name them -Describe the trend in properties as hydrocarbon chain length increases -Describe and explain the process of fractional distillation -describe the process of cracking -describe the use of alkenes	146-149 132 - 135
5.8.1 Purity, formulations and chromatography	-Define the term pure substance in chemistry -Use melting and boiling point data to identify pure and impure substances -Define the term formulation and give examples	150 136
Required Practical 12: investigate how paper chromatography can be used to separate and tell the difference between coloured substances.	-Describe the properties of the mixtures that chromatography can be used to separate -Describe and explain the experimental process of chromatography -Explain how substances are separated using chromatography -Interpret chromatograms + -Calculate Rf values	151-152 136 - 137

Spec point	Concepts	Revision guide pages
5.9.1 The composition and evolution of the Earth's Atmosphere	-describe the composition of the current atmosphere -describe the composition of the early atmosphere and explain theories of how the early atmosphere formed -explain how the early atmosphere changed to that of the present atmosphere	155 138 - 139
5.9.3 Common atmospheric pollutants and their sources	-State the atmospheric pollutants released into the atmosphere from the complete and incomplete combustion of fossil fuels -Describe the negative impacts of these pollutants on health and the environment	158 140
5.10.1 Using the Earth's resources and obtaining potable water	-Describe the renewable and non-renewable resources that we get form the Earth and its atmosphere -Define the term potable water -Describe how potable water can be produced. -Describe the differences in the treatment of waste water, salt water and ground water	159, 163-165 142 - 143

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
5.9.2 Carbon dioxide and methane as greenhouse gases	156-157 140 (top)

Physics Paper 2 – Foundation – Exam date 23rd June

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Spec point	Concepts	Revision guide pages
6.5.1 Forces and their interactions	-Describe the difference between scalar and vector quantities and give examples -give examples of contact and non-contact forces -Describe the relationship between mass, weight and gravitational field strength -Use an equation to calculate weight -Calculate the resultant force acting on an object -use free body diagrams to describe qualitatively examples where several forces lead to a resultant force on an object, including balanced forces when the resultant force is zero	203-205 154 - 155
6.5.4.1: Describing motion along a line	-Describe the difference between distance and displacement -Use an equation to calculate speed -describe the difference between speed and velocity -Interpret distance-time graphs and velocity-time graphs -Use an equation to calculate acceleration -Describe how an object reaches terminal velocity	208-211 158 – 160, 162 (top)

Spec point	Concepts	Revision guide pages
6.5.4.2 Force, accelerations and Newton's Laws of motion	-Describe Newton's first law of motion -Describe Newton's second law of motion and use an equation to calculate the force required to make an object with a certain mass accelerate at a certain speed -Describe Newton's third law of motion	212-213 159, 161, 162
6.5.4.3: Forces and braking	-Describe the stopping distance of a car -Define thinking distance -Describe factors that affect a driver's reaction time -evaluate measurements from methods to measure the different reaction times -Define braking distance -Describe factors that affect a car's braking distance -Explain the dangers caused by large decelerations	215-217 162 - 163
6.6.2 Electro-magnetic Waves	-Describe the order of the electromagnetic spectrum -Describe the properties of the different parts of the EM spectrum -Describe the uses of the different parts of the EM spectrum -Describe the hazards associated with the different parts of the EM spectrum - Describe how changes in atoms and the nuclei of atoms can result in EM waves being generated	223-225, 228 178, 180 - 181
Required Practical 21 investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.	-Identify dependent, independent and variables -Plan a method to ensure valid results are collected -Draw conclusions from data	226-227 180
6.7.1: Permanent and induced magnetism, magnetic forces and fields	-Describe the difference between a permanent and an induced magnet -Describe the attraction and repulsion between unlike and like poles for permanent magnets . -Define the 'magnetic field'. -Describe the properties of the magnetic field of a magnet -Describe how to plot the magnetic field of a magnet using a compass -Draw the magnetic field pattern of a bar magnet -Explain how a compass behaves when not in the magnetic field of a magnet	229 200
6.7.2 The motor effect	-Describe how an electromagnet is made -Describe how to change the strength of the electromagnet	230 201

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
6.5.3 Forces and elasticity	206-207 154 - 155

AQA GCSE Combined Science Trilogy: Higher

Biology Paper 1 – Higher – Exam date 17th May

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Spec point	Concepts	Revision guide pages
4.1.2 Cell Division	-How DNA is arranged as chromosomes -Series of stages in the cell cycles inc. mitosis -Definition and uses of stem cells	15-16 20-21
4.2.2 Animal tissues, organs and organ systems	- Functions of tissues and organs in the digestive system -Digestive enzymes -Functions of tissues and organs in the circulatory system -Pathway of blood through the heart -adaptations of components of the blood -risk factors of non-communicable diseases -Explain the cause of CHD -Evaluate the advantages and disadvantages of treating cardiovascular diseases by drugs, mechanical devices or transplant	24 – 38 24 - 31
Required practical 3: test for carbohydrates, lipdis and proteins	-Reagent and positive result for carbohydrates, proteins and lipids	29 26
Required Practical 4 investigate the effect of pH on the rate of reaction of amylase enzyme.	-action of enzymes -describe and explain the effect of extreme pH on rate of enzymes -testing for starch -identify independent, dependent, control variables -How to measure the dependent variable -method -analysing results	25-27 26 - 27
4.4.1 Photosynthesis	-photosynthesis equation -factors affecting rate of photosynthesis -explain graphs of photosynthesis rate involving 2/3 factors and decide which is the limiting factor. -understand and use inverse proportion – the inverse square law and light intensity -explain the important of limiting factors in enhancing the conditions in greenhouses to gain the maximum rate of photosynthesis while still maintaining profit.	50-53 46 - 47
Required Practical 5: effect of light intensity on rate of photosynthesis	-independent, dependent, control variables -How to measure the dependent variable -method -analysing results	52 47

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
4.1.1.5 Microscopy	12-13 18 - 19
4.1.3 Transport in cells	17-19 22- 23
4.2.3 Plant tissues, organs and systems	39-41 32 - 33
4.3.1.2 Viral Diseases	44 40
4.3.1.4 Fungal Diseases	44 41
4.3.1.5 Protist Diseases	44 41
4.3.1.6 Human Defence Systems	46-47 42 - 43
4.4.1.3 Uses of Glucose from Photosynthesis	Middle section pg 50 bottom of p47
4.4.2.2 Response to exercise	56 48 - 49

Chemistry Paper 1 – Higher – Exam date 27th May

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All other specification points from C1, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP in black. Collins revision guides pages in red.

Spec point	Concepts	Revision guide pages
5.2.2 How bonding and structure are related to the properties of a substance	-interpreting melting and boiling point data to determine state at a certain temp -link energy needed to change state to strength of forces between particles -state symbols -describe & explain properties of ionic compounds -describe & explain properties of simple covalent molecules -describe & explain properties of polymers -describe & explain properties of metals and alloys	114, 116-117, 119-121 94 - 101
5.3.2 Use of amount of substance in relation to masses of pure substances	-calculating relative formula mass -calculating the number of moles in a given mass of a substance, calculating the mass of a certain no. of moles of a substance -Avogadro's constant – the number of particles in 1 mole of every substance -calculate the masses of reactants and products from the balanced symbol equation and the mass of a given reactant or product. -using molar ratios to balance equations -identifying limiting reactants and explaining the effect on yield of products -define concentration of a solution -calculate the concentration of a solution, or the mass of a solute dissolved in a given volume to create a solution of given concentration	123-124, 126-128 102 - 105

Spec point	Concepts	Revision guide pages
5.4.1 The Reactivity of Metals	-Metals + oxygen -Reduction and oxidation in terms of oxygen -reduction and oxidation in terms of electrons -identify in a given reaction, symbol equation or half equation which species are oxidised and which are reduced -The Reactivity Series - Displacement reactions - Extraction of metals by reduction	132-134 114 - 115
5.4.2 Reactions of Acids	-Naming Salts -products of the reactions of acids and metals -explain the reactions of metals and acids in terms of loss and gain of electrons -products of the reactions of acids and alkalis and insoluble bases -products of the reactions of acids and metal carbonates -pH scale and neutralisation -difference between strong and weak acids	131, 134 116 - 117 129-130
5.4.2.3 and **Required Practical 8:** preparation of a pure, dry sample of soluble salts	-method of producing solid salt crystals from insoluble oxide or carbonate and acids -identifying errors in methods and reagents	131 117
5.4.3 Electrolysis	-The process of electrolysis -identifying oxidation and reduction in terms of electrons -writing half equations for oxidation/reduction reactions occurring at each electrode -Electrolysis of molten ionic compounds -Electrolysis of aluminium oxide -Electrolysis of aqueous solutions, predicting products formed	135-6 118 - 119
Required Practical 9: investigate what happens when aqueous solutions are electrolysed using inert electrodes.	-Developing a hypothesis -Planning an investigation	136 119
5.5.1 Exothermic and endothermic reactions	-describe the law of the conservation of energy -define exo and endothermic reactions and describe their features -give examples of exo and endothermic reactions -define activation energy -represent exo and endothermic reactions with reaction profiles -describe bond breaking in the reactants as an endothermic process -describe bond formation in the products as an exothermic process -calculate the energy transferred in chemical reactions using bond energies supplied -Use energy change values to identify if a reaction is exo/endothermic	138-140 120 - 123
Required Practical 10: investigate the variables that affect temperature changes in reacting solutions such as, eg acid plus metals,	-Identifying independent, dependent, control variables -Analysing results -identifying exo and endothermic reactions from experimental results	139 120

carbonates, neutralisations, displacement of metals		

Physics Paper 1 – Higher – Exam date 7th June

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All other specification points from P1, other those on the next slide that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP in black. The Collins revision guide pages are in blue.

Spec point	Concepts	Revision guide pages
6.1.1 Energy Changes in a system, and the ways energy us stored before and after such changes	-identifying the energy changes in systems -Calculate, using equations, the amount of energy associated with a moving object, a stretched spring and an object raised above ground level. -Calculate, using an equation, the amount of energy stored in or released from a system as its temperature changes -Define power -Calculate Power and state is units	167-170 170 – 172, 195
Required Practical 14: an investigation to determine the specific heat capacity of one or more materials.	linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored	169 171
6.2.4 Energy Transfers	-Use the equation that links energy transferred, charge flow and potential difference -Use the equation that links power, current and potential difference	187-188 188 – 189, 196 193
Required Practical 16: construct appropriate circuits to investigate the I–V characteristics of circuit elements, inc. a filament lamp, diode and a resistor at constant temp.	-placing ammeter and voltmeter in the correct place in a circuit to measure the current through and potential difference across a component -Plotting graphs -Describing and explaining patterns shown in graphed data	180-181 190 - 191
6.3.1 Changes of state and the particle model	-Define and calculate the density of a substance or object -recognise/draw simple diagrams to model the difference between solids, liquids and gases -explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules. -describe how, when substances change state mass is conserved. -Describe changes of state as physical changes	191-192 210 - 211

Spec point	Concepts	Revision guide pages
6.3.3 Particle Model and pressure	-Describe the motion of gases -explain how the motion and the average kinetic energy of the molecules in a gas is related to both its temperature and its pressure	191 211
6.4.1 Atoms and isotopes	-Describe the structure of an atom. -Compare the radius of the nucleus to the radius of the atom -Describe how electrons are arranged on energy levels -Describe how electrons can move energy levels further from or towards the nucleus -define the atomic number and mass number of elements -calculate the number of protons, neutrons and electrons in atoms -state the features of protons, neutrons and electrons -describe the similarities and differences between atoms of isotopes of the same element -development of the model of the atom	96-97, 195-196 90 – 91, 212 - 213
6.4.2 Atoms and nuclear radiation	-radioactive decay, types of nuclear radiation and their properties -definition and units of activity and count rate -nuclear equations -half lives -calculate the net decline, expressed as a ratio, in a radioactive emission after a given number of half-lives -contamination and irradiation	196-199 214 – 217

These specification points **will not be** assessed on this paper.

Spec point	Revision Guide Pages
6.2.2 Series and Parallel Circuits	183-184 192
6.2.3 Domestic uses and safety	186 194 – 195 (top)
6.3.2 Internal Energy and Energy Transfers	193-194 211

Biology Paper 2 – Higher – Exam date 15th June

These specification points will be the **major focus** of this paper.
All other specification points from B2, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP in black. Collins revision guide pages in green.

Spec point	Concepts	Revision guide pages
4.5.3 Hormonal Control in Humans	-definition of 'hormone' function of the tissues and organs of the endocrine system -identifying position of glands, and the hormones secreted from them -hormones involved in control of blood glucose concentration -Type 1 and Type 2 diabetes -explain how glucagon interacts with insulin in a negative feedback cycle to control blood glucose (sugar) levels in the body. -describe the roles of hormones in human reproduction, including the menstrual cycle	62-67 50, 52 - 55

4.5.3 Hormonal Control in Humans contd.	-explain the interactions of FSH, oestrogen, LH and progesterone, in the control of the menstrual cycle -explain the use of hormones in modern reproductive technologies to treat infertility. -explain the roles of thyroxine and adrenaline in the body. Thyroxine levels are controlled by negative feedback	

Spec point	Concepts	Revision guide pages
4.7.2 Organisation of an ecosystem	-interpret food chains and webs -identify producers, consumers, predators and prey from food chains and webs -describe the carbon and water cycles	86, 89-90 76 - 77
4.7.3 Biodiversity and the effect of human interaction on an ecosystem	-Define biodiversity -Describe ways in which pollution can occur, and the impacts of this pollution on biodiversity -Describe ways to manage this pollution -describe some of the biological consequences of global warming. -Describe the things that scientists have introduced to reduce the negative effects of humans on ecosystems and biodiversity.	91-92, 94 78 - 79
Required Practical 7: 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	-Using transects and quadrats are used by ecologists to determine the distribution and abundance of species in an ecosystem. -Understand the terms mean, mode and median -Calculate arithmetic means	87-88 75

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
4.5.2 The human nervous system	59-61 51
4.5.3.4 Contraception	Bottom half of pg 65 Top half of p55
4.6.1.1 Sexual and asexual reproduction	69 64
4.6.1.3 DNA and the genome	68 65
4.6.1.4 Genetic Inheritance	72-73 66
4.6.1.5 Inherited Disorders	74 67
4.6.1.6 Sex Determination	71 67
4.6.2 Variation and Evolution	75-77 68
4.6.3. The development of understanding of genetics and evolution	78-80 69 - 71
4.7.1.4 Adaptations	85 Bottom half of p74
4.7.3.3 Land Use	93 Bottom of p78
4.7.3.4 Deforestation	93 Top of p79 (bullet points 2 and 3)

Chemistry Paper 2 – Higher – Exam date 20th June

These specification points will be the **major focus** of this paper.
All other specification points from C2, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP in black. Collins revision guides pages in red.

Spec point	Concepts	Revision guide pages
5.6.1 Rate of Reaction	-Calculating the rate of a reaction -Calculate the gradient of a tangent to the curve on these graphs as a measure of rate of reaction at a specific time. -Describe collision theory -Define activation energy -Describe and explain the factors that increase the rate of reaction -Describe and explain the effect of catalysts on rate of reaction	142-146 124 - 125
Required Practical 11: investigate how concentration affects the rates of reaction by a method involving measuring the volume of a gas produced/change in colour	-identify independent, dependent and control variables -describe how to measure the dependent variable -analyse results and draw conclusions from graphed data -calculate rate of reaction from data	145 125
5.6.2 Reversible reactions and dynamic equilibrium	-Identify and give examples of reversible reactions -Apply the conservation of energy to reversible reactions -Define dynamic equilibrium -Describe Le Chatelier's principle -Describe and explain the effect of changing the following conditions on equilibrium; concentration, temperature, pressure	147-148 126 - 127
5.7.1 Carbon compounds as fuels and feedstock	-describe crude oil as a mixture of different length hydrocarbons -define the term hydrocarbon -identify the first 4 alkanes from their chemical formula and name them -Describe the trend in properties as hydrocarbon chain length increases -Describe and explain the process of fractional distillation -describe the process of cracking -describe the use of alkenes	150-152 136 - 139
5.8.1 Purity, formulations and chromatography	-Define the term pure substance in chemistry -Use melting and boiling point data to identify pure and impure substances -Define the term formulation and give examples	153-154 140
Required Practical 12: investigate how paper chromatography can be used to separate and tell the difference between coloured substances.	-Describe the properties of the mixtures that chromatography can be used to separate -Describe and explain the experimental process of chromatography -Explain how substances are separated using chromatography -Interpret chromatograms + -Calculate Rf values	154 140 - 141

Spec point	Concepts	Revision guide pages
5.9.1 The composition and evolution of the Earth's Atmosphere	-describe the composition of the current atmosphere -describe the composition of the early atmosphere and explain theories of how the early atmosphere formed -explain how the early atmosphere changed to that of the present atmosphere	157 142 - 143
5.10.1 Using the Earth's resources and obtaining potable water	-Describe the renewable and non-renewable resources that we get form the Earth and its atmosphere -Define the term potable water -Describe how potable water can be produced. -Describe the differences in the treatment of waste water, salt water and ground water -Describe and evaluate alternative methods of extracting metals e.g. phytomining and bioleaching	161-162, 164-165 146 - 147

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
5.8.2 Identification of common gases	155 141

Physics Paper 2 – Higher – Exam date 23rd June

These specification points will be the **major focus** of this paper.
All other specification points from P2, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. CGP in black. The Collins revision guide pages are in blue.

Spec point	Concepts	Revision guide pages
6.5.1 Forces and their interactions	-Describe the difference between scalar and vector quantities and give examples -give examples of contact and non-contact forces -Describe the relationship between mass, weight and gravitational field strength -Use an equation to calculate weight -Calculate the resultant of two forces that act in a straight line. -Use vector diagrams to illustrate the resolving of forces e.g. two components acting at right angles to each other -Use free body diagrams to describe qualitatively examples where several forces lead to a resultant force on an object, including balanced forces when the resultant force is zero	201-204 158 - 159
6.5.4.1: Describing motion along a line	-Describe the difference between distance and displacement -Use an equation to calculate speed -describe the difference between speed and velocity -explain that motion in a circle involves constant speed but changing velocity. -Interpret distance-time graphs and velocity-time graphs -Calculate speed of an accelerating object at any particular time by drawing a tangent and measuring the gradient of the distance–time graph at that time -Calculate the distance travelled /displacement of an object by calculating the area under a velocity–time graph. -Use an equation to calculate acceleration -Describe how an object reaches terminal velocity	207 – 210 162 – 164, 166 (top)

Spec point	Concepts	Revision guide pages
6.5.4.2 Force, accelerations and Newton's Laws of motion	-Describe Newton's first law of motion -Describe Newton's second law of motion and use an equation to calculate the force required to make an object with a certain mass accelerate at a certain speed -Explain that inertial mass is a measure of how difficult it is to change the velocity of an object -Describe Newton's third law of motion	211 – 213 163, 165, 166
6.6.5 Momentum	-Use an equation to calculate the momentum of an object from its mass and velocity -Describe the law of the conservation of momentum -Explain examples of momentum in an event, such as a collision	216 166 - 167
6.6.2 Electro-magnetic Waves	-Describe the order of the electromagnetic spectrum -Describe the properties of the different parts of the EM spectrum -Describe the uses and hazards of the different parts of the EM spectrum - Describe how changes in atoms and the nuclei of atoms can result in EM waves being generated -Describe how waves are refracted at the boundary of two materials with different densities -Construct ray diagrams to illustrate the refraction of a wave at the boundary between two different media. -Use wave front diagrams to explain refraction in terms of the change of speed that happens when a wave travels from one medium to a different medium -Describe how radio waves can be produced by oscillations in electrical circuits.	220-224, 226 184 - 187
Required Practical 21 investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of the surface.	-Identify dependent, independent and variables -Plan a method to ensure valid results are collected -Draw conclusions from data	225 186
6.7.2 The motor effect	-Describe how an electromagnet is made -Describe how to change the strength of the electromagnet -Show that Fleming's left-hand rule represents the relative orientation of the force, the current in the conductor and the magnetic field. -Describe the factors that affect the size of the force on the conductor. -Use an equation to calculate the force acting on the conductor from the magnetic flux density, current and length of the wire -Explain how the force on a conductor in a magnetic field causes the rotation of the coil in an electric motor	228-230 207 - 209

These specification points will **not be assessed** on this paper.

Spec point	Revision Guide Pages
6.5.3 Forces and elasticity	205-206 160 - 161
6.5.4.3 Forces and braking	214-215 168 - 169

6.7.1 Permanent and induced magnetism, magnetic forces and fields	227 206

AQA GCSE Biology: Higher tier

Triple Biology Paper 1 – Higher – Exam date 17th May

These specification points will be the **major focus** of this paper.
All other specification points from B1, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision.

Spec point	Concepts	CGP Biology revision guide pages
4.1.1 Cell Structure	-Difference between prokaryotic and eukaryotic cells -Comparison of plant cells and animal cells -Function of organelles -Cell differentiation and specialised plant cells and animal cells	11, 14 8-9, 16
Required practical 1: use of light microscope to observe cells	- How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification -Microscopy calculations -Unit conversions (mm, micrometres etc)	12-13 10
4.1.3 Transport in cells	-Diffusion -Factors affecting the rate of diffusion -Osmosis -Active transport	20-22 14-15
Required practical 3: Investigate the effect of a range of concentrations of salt solution on the mass of plant tissue	-Calculate rate of water uptake -Identify independent, dependent and control variables -Calculate percentage change in mass -Interpret graph to find salt/ sugar concentration in potato	21 15
4.2.2 Animal tissues, organs and organ systems	- Functions of tissues and organs in the digestive system -Digestive enzymes -Functions of tissues and organs in the circulatory system -Pathway of blood through the heart -**adaptations** of components of the blood -risk factors of non-communicable diseases	28, 30, 31, 33, 34, 35, 37, 38 – 40 17-19, 20-21 22
Required practical 4: Use qualitative reagents to test for a range of carbohydrates, lipids and proteins	-Reagents used to test for sugars, starch, proteins and lipids -Positive result for each food test -Conditions required to carry out food test	32 18
4.2.3 Plant tissues, organs and systems	- cross section of a leaf - functions and adaptations of xylem and phloem -transpiration -translocation	42 – 44 24-25

Spec point	Concepts	CGP revision guide pages
4.3.1 Communicable Diseases	-definition and examples of pathogen -how viruses and bacteria make us ill -examples of diseases caused by each type of pathogen -human defence mechanisms -what happens in a vaccine -comparing antibody production after active and passive immunity	46 – 50 34-35 36-37
4.3.2 Monoclonal antibodies	-Describe what a monoclonal antibody is -Describe how monoclonal antibodies are produced -Describe how monoclonal antibodies can be used	53 – 54 39

These specification points will **not be assessed** on this paper.

Spec point	CGP Biology Revision Guide Pages
4.2.2.3 Blood	36 20
4.2.2.7 Cancer	41 23
4.3.1.8 Antibiotics and painkillers	51 38-39
4.3.1.9 Discovery and the development of drugs	52 38-39
4.4.2.2 Response to exercise	63 44-45

Triple Biology Paper 2 – Higher – Exam date 15th June

These specification points will be the **major focus** of this paper.
All other specification points from B2, other than those that are not explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision.

Spec point	Concepts	CGP revision guide pages
4.5.2 The human nervous system	-Function of the NS -Control of body temperature - Response to high/ low temperatures	72 48 46-47
4.5.3 Hormonal control in humans	- The endocrine system -Function of hormones within the endocrine system -Control of blood glucose -Diabetes -Kidneys and the role of ADH -Adrenaline and thyroxine	73 – 76, 80 50, 51
4.5.4 Plant hormones	-Site of auxin production -Role of auxin in producing phototropism / gravitropism	81 54-55

Spec point	Concepts	CGP revision guide pages
Required practical 8 – Investigate the effect of light on the growth of newly germinated seedlings	- identify independent, dependent and control variables - Describe how variables can be controlled	81 55
4.6.1 Reproduction	-Sexual and asexual reproduction -Gametes -Meiosis	87-89 74-75
4.7.2 Organisation of an ecosystem	-interpret food chains and webs -identify producers, consumers, predators and prey from food chains and webs -describe the carbon and water cycles	86, 89-90 86 88-89
Required Practical 7: 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	-Using transects and quadrats are used by ecologists to determine the distribution and abundance of species in an ecosystem. -Understand the terms mean, mode and median -Calculate arithmetic means	110-111 87

These specification points will **not be assessed** on this paper.

Spec point	CGP Revision Guide Pages
Topic 5: Homeostasis and response	
4.5.2.1 Structure and function	66 – 68 /48
4.5.2.2 The brain	69 /49
4.5.2.3 The eye	70-71 /49
4.5.2.3 Hormones in human reproduction	77- 79 /52
4.5.3.5 Contraception	78 /53
4.5.3.6 The use of hormones to treat infertility	78 /53
4.5.3.7 Negative feedback	65 /46
4.5.4.2 Uses of plant hormones	82 /55
Topic 6: Inheritance, variation and evolution	
4.6.1.3 Advantages/ Disadvantages of sexual and asexual reproduction	89 (top half) /75
4.6.1.8 Sex determination	90 /79
4.6.2 Variation and evolution	95-97 /80-81
4.6.3 The development of understanding of genetics and evolution	94 /78
4.6.4 Classification of living organisms	104 / 84

Spec point	CGP Revision Guide Pages
Topic 7: Ecology	
4.7.1.4 Adaptations	108 /86
4.7.2.4 Impact of environmental change	112 /(not really covered)
4.7.3.1 Biodiversity	116 /90
4.7.3.4 Deforestation	118 /91
4.7.4.1 Trophic levels	120 /89
4.7.4.2 Pyramids of Biomass	121 /92
4.7.5.3 Sustainable fisheries	123 (middle section) /93
4.7.5.4 Role of biotechnology	124 /93

AQA GCSE Chemistry: Higher tier

Triple Chemistry Paper 1 – Higher – Exam date 27th May

These specification points will be the **major focus** of this paper.
All other specification points from C1, other than those that are explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision.

Spec point	Concepts	CGP revision guide pages Collins revision guide pages
4.1.2 The Periodic Table	-The Periodic Table is arranged in order of proton number -What atoms of elements in the same group have in common -What atoms of elements in the same period have in common -development in the Periodic Table -ions formed from metals and non-metals -trends in physical and chemical properties of group 1,7 and 0 elements - Reactions of group 1 and 7 elements	20-26 10-13
4.2.1 Chemical bonds, ionic, covalent and metallic	-Describe the process of ionic bonding -Describe the process of covalent bonding -Describe the process of metallic bonding -explain chemical bonding in terms of electrostatic forces and the transfer or sharing of electrons. -work out the charge on the ions of metals and non-metals from the group number of the element, limited to the metals in Groups 1 and 2, and non-metals in Groups 6 and 7 -Describe the structure of ionic compounds -draw dot and cross diagrams for the molecules of hydrogen, chlorine, oxygen, nitrogen, hydrogen chloride, water, ammonia and methane -Describe the structure of metals	28-31,35 16-20

Spec point	Concepts	CGP revision guide pages Collins revision guide pages
4.2.2 How bonding and structure are related to the properties of a substance	-interpreting melting and boiling point data to determine state at a certain temp -link energy needed to change state to strength of forces between particles -state symbols -describe & explain properties of ionic compounds -describe & explain properties of simple covalent molecules -describe & explain properties of polymers -describe & explain properties of metals and alloys	28-32, 35-37 14-20
4.2.3 Structure and bonding of carbon	-describe and explain the properties of diamond, graphite, graphene and fullerenes	33-34 22
4.3.2 Use of amount of substance in relation to masses of pure substances	-calculating relative formula mass -calculating the number of moles in a given mass of a substance, calculating the mass of a certain no. of moles of a substance -Avogadro's constant – the number of particles in 1 mole of every substance -calculate the masses of reactants and products from the balanced symbol equation and the mass of a given reactant or product. -using molar ratios to balance equations -identifying limiting reactants and explaining the effect on yield of products -define concentration of a solution -calculate the concentration of a solution, or the mass of a solute dissolved in a given volume to create a solution of given concentration	41-47 30-34
4.4.1 The Reactivity of Metals	-Metals + oxygen -Reduction and oxidation in terms of oxygen -reduction and oxidation in terms of electrons -identify in a given reaction, symbol equation or half equation which species are oxidised and which are reduced -The Reactivity Series - Displacement reactions - Extraction of metals by reduction	55-57 38-39
4.4.2 Reactions of Acids	-Naming Salts -products of the reactions of acids and metals -explain the reactions of metals and acids in terms of loss and gain of electrons -produces of the reactions of acids and alkalis and insoluble bases -products of the reactions of acids and metal carbonates -pH scale and neutralisation -difference between strong and weak acids	51,53-54 40-41
4.4.2.3 and **Required Practical 1:** preparation of a pure, dry sample of soluble salts	-method of producing solid salt crystals from insoluble oxide or carbonate and acids -identifying errors in methods and reagents	Bottom half pg 54 Top half of 41

Spec point	Concepts	CGP revision guide pages Collins revision guide pages
4.4.2.5 and Required practical 2: determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration.	-Method -control variables and how to monitor them -quantitative analysis of results	52 34-35
4.4.3 Electrolysis	-The process of electrolysis -identifying oxidation and reduction in terms of electrons -writing half equations for oxidation/reduction reactions occurring at each electrode -Electrolysis of molten ionic compounds -Electrolysis of aluminium oxide -Electrolysis of aqueous solutions, predicting products formed	58-59 42-43
4.5.1 Exothermic and endothermic reactions	-describe the law of the conservation of energy -define exo and endothermic reactions and describe their features -give examples of exo and endothermic reactions -define activation energy -represent exo and endothermic reactions with reaction profiles -describe bond breaking in the reactants as an endothermic process -describe bond formation in the products as an exothermic process -calculate the energy transferred in chemical reactions using bond energies supplied -Use energy change values to identify if a reaction is exo/endothermic	61-63 56-58
Required Practical 4: investigate the variables that affect temperature changes in reacting solutions such as, eg acid plus metals, carbonates, neutralisations, displacement of metals	-Identifying independent, dependent, control variables -Analysing results -identifying exo and endothermic reactions from experimental results	62 56

These specification points will **not be assessed** on this paper.

Spec point	CGP revision guide pages Collins revision guide pages
4.2.4 Bulk and surface properties of matter including nanoparticles	38-39 23

Triple Chemistry Paper 2 – Higher – Exam date 20th June

These specification points will be the **major focus** of this paper.
All other specification points from C2, other than those that are explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision.

Spec point	Concepts	CGP revision guide pages Collins revision guide pages
4.6.1 Rate of Reaction	-Calculating the rate of a reaction -Calculate the gradient of a tangent to the curve on these graphs as a measure of rate of reaction at a specific time. -Describe collision theory -Define activation energy -Describe and explain the factors that increase the rate of reaction -Describe and explain the effect of catalysts on rate of reaction	67-71 60-61
Required Practical 5: investigate how concentration affects the rates of reaction by a method involving measuring the volume of a gas produced/change in colour	-identify independent, dependent and control variables -describe how to measure the dependent variable -analyse results and draw conclusions from graphed data -calculate rate of reaction from data	70 61
4.6.2 Reversible reactions and dynamic equilibrium	-Identify and give examples of reversible reactions -Apply the conservation of energy to reversible reactions -Define dynamic equilibrium -Describe Le Chatelier's principle -Describe and explain the effect of changing the following conditions on equilibrium; concentration, temperature, pressure	72-73 62-63
4.7.1 Carbon compounds as fuels and feedstock	-describe crude oil as a mixture of different length hydrocarbons -define the term hydrocarbon -identify the first 4 alkanes from their chemical formula and name them -Describe the trend in properties as hydrocarbon chain length increases -Describe and explain the process of fractional distillation -describe the process of cracking -describe the use of alkenes	75-78 64-66
Required practical 7: use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates.	-Describe reagents and positive results for each ion -Describe method of flame tests	88-89 86-87

Spec point	Concepts	CGP revision guide pages Collins revision guide pages
4.9.1 The composition and evolution of the Earth's Atmosphere	-describe the composition of the current atmosphere -describe the composition of the early atmosphere and explain theories of how the early atmosphere formed -explain how the early atmosphere changed to that of the present atmosphere	91 88-89
4.10.1 Using the Earth's resources and obtaining potable water	-Describe the renewable and non-renewable resources that we get form the Earth and its atmosphere -Define the term potable water -Describe how potable water can be produced. -Describe the differences in the treatment of waste water, salt water and ground water -Describe and evaluate alternative methods of extracting metals e.g. phytomining and bioleaching	99, 2nd section 100, 102 92-93
4.10.4 The Haber process and the use of NPK fertilisers	-Describe the purpose of the Haber process, the reaction and raw materials involved -interpret graphs of reaction conditions versus rate -apply the principles of dynamic equilibrium in Reversible reactions and dynamic equilibrium (4.6.2) to the Haber process -explain the trade-off between rate of production and position of equilibrium -explain how the commercially used conditions for the Haber process are related to the availability and cost of raw materials and energy supplies, control of equilibrium position and rate -Describe NPK fertilisers as formulations of various salts containing appropriate percentages of the elements. -Describe the composition of NPK fertilisers and how they are made -recall the names of the salts produced when phosphate rock is treated with nitric acid, sulfuric acid and phosphoric acid	104-105 96-97

These specification points will **not be assessed** on this paper.

Spec point	CGP revision guide pages Collins revision guide pages
4.9.2 Carbon dioxide and methane as greenhouse gases	92-94 90-91

AQA GCSE Physics: Higher tier

Triple Physics Paper 1 – Higher – Exam date 9th June

These specification points will be the **major focus** of this paper.
All other specification points from P1, other than those that are explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision. Collins revision guide pages are in blue.

Spec point	Concepts	CGP/Collins revision guide pages
4.1.1 Energy changes in a system, and the ways energy is stored before and after such changes	-identifying the energy changes in systems -Calculate, using equations, the amount of energy associated with a moving object, a stretched spring and an object raised above ground level. -Calculate, using an equation, the amount of energy stored in or released from a system as its temperature changes -Calculate Power	11-14 26-28
4.1.2 Conservation and dissipation of energy	-Describe the law of the conservation of energy -Describe, and give examples of how energy is dissipated, or 'wasted' -Explain ways of reducing unwanted energy transfers -Describe thermal conductivity in relation to the rate of energy transfer by conduction, through a material -Calculate the efficiency of a device, process or system	15-17 28
Required Practical 2: investigate the effectiveness of different materials as thermal insulators and the factors that may affect the thermal insulation properties of a material	-Identify dependent, independent and control variables -How to measure the dependent variable -Analysing results -Plotting graphs -Drawing conclusions from data	16 28
4.2.4 Energy Transfers	Use the equation that links energy transferred, charge flow and potential difference -Use the equation that links power, current and potential difference -Describe how electricity is transmitted across the National Grid -Explain the role of step-up and step-down transformers -Explain how the efficiency of energy transfer is increased in the National Grid	P32-34 62-63
Required Practical 5: determine the densities of regular and irregular solid objects and liquids.	-Method to determine density of regular shaped objects -Method to determine density of irregular shaped objects -Measurements needed to determine mass and volume of objects -Equipment and apparatus	P38 84
4.3.1 Changes of state and particle model	-Define and calculate the density of a substance or object -recognise/draw simple diagrams to model the difference between solids, liquids and gases -explain the differences in density between the different states of matter in terms of the arrangement of atoms/molecules. -describe how, when substances change state mass is conserved. -Describe changes of state as physical changes	P38-39 84

Spec point	Concepts	CGP revision guide pages
4.3.2 Internal energy and energy transfers	-Define internal energy, specific heat capacity & specific latent heat -Calculate, using an equation, the amount of energy stored in or released from a system as its temperature changes -interpret heating & cooling graphs -Use an equation that links energy transferred, mass and specific latent heat	P39-40 84-85

These specification points will **not be assessed** on this paper.

Spec point	CGP Revision Guide Pages
4.2.1 Current, potential difference and resistance	P24-27 54-55
4.2.2 Series & parallel circuits	P28-30 58
4.2.3 Domestic uses and safety	P31 60
4.3.3 Particle model and pressure	P41 85
4.4.1 Atoms and isotopes	P43, P44 (top half on isotopes) 86
4.4.3 Hazards and uses of radioactive emissions and of background radiation	P47 (top half on background radiation), P48 90, 92
4.4.4 Nuclear fission and fusion	P49 92-93

Triple Physics Paper 2 – Higher – Exam date 23rd June

These specification points will be the **major focus** of this paper.
All other specification points from P2, other than those that are explicitly omitted, **may still be assessed** in multiple choice questions/linked to a previous answer, so cannot be completely ignored in your revision

Spec point	Concepts	CGP revision guide pages
4.5.1 Forces and their interactions **4.5.1** Forces and their interactions contd.	Describe the difference between scalar and vector quantities and give examples -give examples of contact and non-contact forces -Describe the relationship between mass, weight and gravitational field strength -Use an equation to calculate weight -Calculate the resultant of two forces that act in a straight line. -Use vector diagrams to illustrate the resolving of forces e.g. two components acting at right angles to each other -Use free body diagrams to describe qualitatively examples where several forces lead to a resultant force on an object, including balanced forces when the resultant force is zero	P51-54 8-9

4.5.2 Work done and energy transfer	-Use an equation to calculate the work done to an object -Convert between newton-metres and joules. -Work done against the frictional forces acting on an object causes a rise in the temperature of the object.	P53 10-11
4.5.3 Forces and elasticity	-Give examples of the forces involved in stretching, bending or compressing an object -Describe the difference between elastic deformation and inelastic deformation caused by stretching forces. -Describe the relationship between the extension of an elastic object and the force applied, provided that the limit of proportionality is not exceeded. -Use an equation that links force applied, the spring constant and extension of a spring -Calculate work done/energy stored in stretching a spring (up to the limit of proportionality)	P55 10-11
4.5.5 Pressure and pressure differences in fluids	-Use an equation to calculate the pressure at the surface of a fluid -Use an equation to calculate the pressure due to a column of liquid -calculate the differences in pressure at different depths in a liquid. -Describe the factors which influence floating and sinking.	P58-59 12-13
4.5.6.1: Describing motion along a line	-Describe the difference between distance and displacement -Use an equation to calculate speed -describe the difference between speed and velocity -explain that motion in a circle involves constant speed but changing velocity. -Interpret distance-time graphs and velocity-time graphs -Calculate speed of an accelerating object at any particular time by drawing a tangent and measuring the gradient of the distance–time graph at that time -Calculate the distance travelled /displacement of an object by calculating the area under a velocity–time graph. -Use an equation to calculate acceleration -Describe how an object reaches terminal velocity	P60-63 14-17
4.5.7 Momentum	-Use an equation to calculate the momentum of an object from its mass and velocity -Describe the law of the conservation of momentum -Explain examples of momentum in an event, such as a collision -Calculate change in momentum -explain safety features with reference to the concept of rate of change of momentum.	P70-71 18-19
4.6.1 Waves in air, fluids and solids	-Describe the differences between transverse and longitudinal waves and give examples -Define the property terms of waves -Compare properties of waves -Use an equation to calculate a time period -Use an equation that links wave speed, frequency and wavelength -describe a method to measure the speed of sound waves in air -describe a method to measure the speed of ripples on a water surface. -construct ray diagrams to illustrate the reflection of a wave at a surface.	P73-75; P88-90 30-33;38-39

4.6.1 Waves in air, fluids and solids contd.	-describe the effects of reflection, transmission and absorption of waves at material interfaces.	

Spec point	Concepts	CGP revision guide pages
Required practical 9: investigate the reflection of light by different types of surface and the refraction of light by different substances.	-Identify dependent, independent and control variables -How to measure the dependent variable -Analysing results -Plotting graphs -Drawing conclusions from data	P77 32-33
4.8.1 Solar system, stability of orbital motions, satellites	-Describe the structure of the universe and our solar system -Describe the life cycle of a star -explain how fusion processes lead to the formation of new elements. -describe the similarities and distinctions between the planets, their moons, and artificial satellites. -explain qualitatively how for circular orbits, the force of gravity can lead to changing velocity but unchanged speed, for a stable orbit, the radius must change if the speed changes.	P100-101 94-96
4.8.2 Red shift	-Explain how red-shift provides evidence for the expansion of the universe and the Big Band model -Describe the Big Bang theory -Explain that the change of each galaxy's speed with distance is evidence of an expanding universe - Explain how scientists are able to use observations to arrive at theories such as the Big Bang theory	P102 96-97

These specification points will **not be assessed** on this paper.

Spec point	CGP Revision Guide Pages
4.5.4 Moments, levers and gears	P57 11
4.6.2 Electromagnetic waves	P76, P78-85 36-37
4.6.3 Black body radiation	P86-87 41
4.7.1 Permanent and induced magnetism, magnetic forces and fields	P92 66-67

PSYCHOLOGY

Everything on this list will be examined.		
Paper 1: Cognition and behaviour		
Memory	Processes of memory: encoding (input) storage and retrieval (output)	Different types of memory: episodic memory, semantic memory and procedural memory.
	Structures of memory	Primacy and recency effects in recall: the effects of serial position. Murdock's serial position curve study.
	Memory as an active process	The Theory of Reconstructive Memory, including the concept of 'effort after meaning'. *Bartlett's War of the Ghosts study* – you won't be asked directly about this study but it is helpful for reconstructive memory. Factors affecting the accuracy of memory, including interference, context and false memories.
Perception	Visual cues and constancies	Monocular depth cues: height in plane, relative size, occlusion and linear perspective. Binocular depth cues: retinal disparity, convergence.
	Gregory's constructivist theory of perception – the influence of nurture	Perceptual set and the effects of the following factors affecting perception: culture, motivation, emotion, expectation. The Gilchrist and Nesberg study of motivation and the Bruner and Minturn study of perceptual set.
	Early brain development	A basic knowledge of brain development, from simple neural structures in the womb, of brain stem, thalamus, cerebellum and cortex, reflecting the development of autonomic functions, sensory processing, movement and cognition. The roles of nature and nurture.
Cognitive Development	Piaget's stage theory and the development of intelligence The role of Piaget's theory in education	Piaget's Theory of Cognitive Development including concepts of assimilation and accommodation. The four stages of development: sensorimotor, pre-operational, concrete operational and formal operational. Application of these stages in education. Reduction of egocentricity, development of conservation. McGarrigle and Donaldson's 'naughty teddy study'; Hughes' 'policeman doll study'.
	The effects of learning on development	Dweck's Mindset Theory of learning: fixed mindset and growth mindset. The role of praise and self-efficacy beliefs in learning. Learning styles including verbalisers and visualisers. Willingham's Learning Theory and his criticism of learning styles.
	Formulation of testable hypotheses	Null hypothesis and alternative hypothesis
Research methods	Types of variable	Independent variable, dependent variable, extraneous variables.
	Sampling methods	Target populations, samples and sampling methods and how to select samples using these methods: • random • opportunity • systematic • stratified. Strengths and weaknesses of each sampling method. Understanding principles of sampling as applied to scientific data.
	Designing research	Quantitative and qualitative methods: • The experimental method (experimental designs, independent groups, repeated measures, matched pairs,

Research methods contd.	Designing research contd.	including strengths and weaknesses of each experimental design) • Laboratory experiments • Field and natural experiments • Interviews • Questionnaires • Case studies • Observation studies (including categories of behaviour and inter-observer reliability). Strengths and weaknesses of each research method and types of research for which they are suitable.
	Correlation	An understanding of association between two variables and the use of scatter diagrams to show possible correlational relationships. The strengths and weaknesses of correlations.
	Research procedures	The use of standardised procedures, instructions to participants, randomisation, allocation to conditions, counterbalancing and extraneous variables (including explaining the effect of extraneous variables and how to control for them).
	Planning and conducting research	How research should be planned, taking into consideration the reliability and/or validity of: • Sampling methods • Experimental designs • Quantitative and qualitative methods.
	Ethical considerations	• Ethical issues in psychological research as outlined in the British Psychological Society guidelines. • Ways of dealing with each of these issues.
	Data handling	• The difference between quantitative and qualitative data. • The difference between primary and secondary data. • Computation - Recognise and use expressions in decimal and standard form: use ratios, fractions and percentages, estimate results, find arithmetic means and use an appropriate number of significant figures. • Descriptive statistics - Understand and calculate mean, median, mode and range. • Construct and interpret frequency tables and diagrams, bar charts, histograms and scatter diagrams for correlation. • The characteristics of normal distribution.
	Data handling	• The difference between quantitative and qualitative data. • The difference between primary and secondary data. • Computation - Recognise and use expressions in decimal and standard form: use ratios, fractions and percentages, estimate results, find arithmetic means and use an appropriate number of significant figures. • Descriptive statistics - Understand and calculate mean, median, mode and range. • Construct and interpret frequency tables and diagrams, bar charts, histograms and scatter diagrams for correlation. • The characteristics of normal distribution.
Paper 2: Social context and behaviour – Everything on this list will be examined.		
Social influence	Obedience	• Identification and explanation of how social factors (group size, anonymity and task difficulty) and dispositional factors (personality, expertise) affect conformity to majority influence. • Asch's study of conformity.

		• Milgram's Agency theory of social factors affecting obedience including agency, authority, culture and proximity. • Explanation of dispositional factors affecting obedience including Adorno's theory of the authoritarian personality.
	Prosocial behaviour	Bystander behaviour: identification and explanation of how social factors (presence of others and the cost of helping) and dispositional factors (similarity to victim and expertise) affect bystander intervention. • Piliavin's subway study
	Crowd and collective behaviour	Prosocial and antisocial behaviour in crowds: identification and explanation of how social factors (social loafing, deindividuation and culture) and dispositional factors (personality and morality) affect collective behaviour.
	Differences between human and animal communication	• Limited functions of animal communication (survival, reproduction, territory, food). • Von Frisch's bee study.
Language, thought and communication	Non-verbal communication	• Definitions of non-verbal communication and verbal communication.
	Explanations of non-verbal behaviour	• Darwin's evolutionary theory of non-verbal communication as evolved and adaptive. • Evidence that non-verbal behaviour is learned. Yuki's study of emoticons.
	Structure and function of the nervous system	• The autonomic nervous system and the fight or flight response. The James-Lange theory of emotion.
	Neuron structure and function	• Sensory, relay and motor neurons. Synaptic transmission: release and reuptake of neurotransmitters. Excitation and inhibition. An understanding of how these processes interact.
Brain and neuropsychology	Structure and function of the brain	• Brain structure: frontal lobe, temporal lobe, parietal lobe, occipital lobe and cerebellum. • Basic function of these structures. • Localisation of function in the brain: motor, somatosensory, visual, auditory and language areas. • Penfield's study of the interpretive cortex.
	An introduction to neuropsychology	• The use of scanning techniques to identify brain functioning: CT, PET and fMRI scans.
	An introduction to mental health.	• Characteristics of mental health, e.g. positive engagement with society, effective coping with challenges.
	Theories of depression	• Psychological explanation (influence of nurture): negative schemas and attributions.
Psychological problems	Interventions or therapies for addiction	• Aversion therapy. • Self-management programmes, e.g. self-help groups, 12 step recovery programmes. • How these improve mental health, reductionist and holistic perspectives.

FRENCH

Below are the topics that are covered in GCSE French. Students need to be able to recognise the vocabulary from the topic when listening and reading, and also be able to use it accurately when speaking and writing.

Identity and culture	Local, national, international and global areas of interest	Current and future study and employment
• Me, my family and friends • Technology in everyday life • Free time activities	• Home, town, neighbourhood and region • Social issues <u>Higher Tier Only</u> • Global issues	• My studies • Life at school/college • Jobs, career choices and ambitions <u>Higher Tier Only</u> • Education post-16

Speaking And Writing – we suggest that you have memorised at least 2 phrases per building block to use to create your answers. All of the grammar covered in Studio could be assessed.

GEOGRAPHY

Paper 1

Hazardous Earth	Development Dynamics	Challenges of an Urbanising World
• How winds, air pressure and ocean currents (Labrador/Gulf Stream) regulate Earth's temperature. • What causes the ITCZ, "movement" of the ITCZ and how it affects rainfall in West Africa. • Global circulation patterns, hadley cells & how to interpret climate graphs. • Climate change theories (eruption, asteroid, orbital & sunspots), studying past climates (tree rings, ice cores, historical sources) • Climate change/global warming causes & impacts. • What are cyclones, formation of cyclones, how they're measured. • Stages of cyclone formation, where they develop and why. • Cyclone Aila: causes, SEE effects and responses. • Hurricane Katrina, causes SEE effects and responses. Why was it more severe than expected? • Warning systems Bangladesh and USA. • Layers of the Earth, differences between the layers & differences between oceanic & continental crust	• Measuring development & development indicators, Human Development Index • Interpreting population pyramids, development factors affecting populations (women's health & education) • Global inequality, why there's a North-South divide, how development is changing (NIC, RIC, BRIC countries) • Physical, social & political barriers to development: Malawi (Landlocked, pollution, trade, cash crops, WTO) • Why are some countries poor? • Rostow's Model: Five Stages of Economic Development. • Frank's Dependency Theory: how the developing 'periphery' (LICs) depend on the developed 'core' (HICs). • How globalisation benefits different countries & effects of Foreign Direct Investment (FDI) • Clark-Fisher Model: how employment structure changes with development • Impacts/benefits of globalisation & industrialisation in India • Case Study: India as an emerging country	• Past, present & future trends of urbanisation • Explaining why the world is becoming more urbanised • What a megacity, world city & primate city (urban primacy) is. What makes a city a world city'. • Net growth & causes of net growth. • Causes of migration: rural-urban in Mumbai, knowledge & international migration in other cities and population decline (Detroit) • How and why informal & formal economies differ in developed (New York), emerging (New Delhi) & developing (Kampala) cities. • New York/ Mumbai: How and why suburbanisation, counter-urbanisation & re-urbanisation took place • How urban land use changes in cities & why (New York/ Mumbai) • Case study: Mumbai as a megacity in an emerging country • Mumbai's site & situation, city structure and connections. Mumbai's spatial growth. • Mumbai's rapid growth causes: rural-urban migration and natural increase.

• Convection currents, radioactive decay, formation of Earth's magnetic field • Plate boundaries (convergent, divergent, conservative & collision) • Features of volcanoes, volcanic hazards & primary and secondary effects of volcanoes. • Earthquake causes, how they're measured, primary & secondary effects. • Earthquakes in developed and developing countries: Haiti, Japan	• Understanding India's significance socially, politically, environmentally & culturally. • Why rapid globalisation is happening in India, operation & impact of TNC's e.g. BT • Economic, environmental and social change • How top-down and bottom-up development is helping India (Narmada River Project & Biogas by ASTRA). • India's next steps: challenges ahead.	• Inequality in Mumbai, reasons for variations in quality of life. • Challenges facing Mumbai caused by population growth. Social & environmental issues. • Opportunities for Mumbai's population • Sustainable development in Mumbai. What sustainability is. • Top-down development • Bottom-up development

Paper 2		
UK's Evolving Physical Landscape	**UK's Evolving Human Landscape**	**Geographical Investigations**
• How geology (rock type, strata); tectonics (uplift, fault scarps); and glaciation (glaciers) created/changed UK's upland landscapes. • Igneous, Metamorphic and Sedimentary rock. How they influence landscapes & relief. • Processes affecting upland (Lake District) and lowland (Herefordshire) landscapes. • How people affect the landscape through agriculture, forestry and settlements • Difference between hard and soft rock coasts. Concordant & discordant coastlines. • Headland/hard rock erosion. (Caves, arches, stacks & stumps) • Waves: how they're caused and difference between constructive & destructive waves. • Types of erosion (solution, attrition, hydraulic action & abrasion) • Deposition process & landforms: beaches and how longshore drift creates spits, bars etc. • Human impacts on coastal landscapes (development, housing, industry & coastal management • Coastal flooding: causes (storm surges & sea level rise) & risks to people and property (2014 Storms)	• UK's urban core: population density of the UK, why it is different around the country • UK's rural periphery: demographics of rural periphery areas • The gap between urban and rural development: ways to reduce the gap • Causes of population growth: net immigration & rising birth rate. Impacts of immigration • Why the 'old economy' declined (primary and secondary sectors) in Dinnington • Why the 'new knowledge economy' rose (tertiary and quaternary sectors) in Canary Wharf • Impacts of TNCs, globalisation, privatisation and FDI in the UK. • Case study: London as a major UK city • Location, site & situation, connectivity (with UK and world) and city structure. • Causes of migration in London. Impacts on 3 suburbs: Newham (low income), Lambeth (middle income) and Richmond upon Thames (high income). • Inequalities within London, causes and impacts (comparing Newham & Richmond upon Thames) • London's decline (suburbanisation, decentralisation, dock closures)	• River fieldwork • Rural fieldwork • Primary and secondary sources of data. How primary data was collected. • Sampling strategies used • How data was presented (graphs, charts, diagrams, sketches) • Accuracy and reliability of primary and secondary data collection (why/why not reliable?) • Evaluation of fieldwork: were the right sites chosen? Good methods of data collection? What could have affected results? Reasons for any anomalous data/results • Conclusion & results presentation and analysis

• Coastal management: hard and soft engineering. (Christchurch Bay) • Upper course: erosion & transportation, waterfall formation, weathering & mass movement • Middle course: meander & ox bow lake formation. How valley shape changes. • Lower course: landforms (levees, mudflats, valley shape), Bradshaw Model & river long profile • Interpreting storm hydrographs, what human & physical factors affect their shape • Sheffield floods '07: human & physical causes, SEE impacts and responses • Increasing risks of flooding (Somerset), physical and human causes • Managing flood risks: hard and soft engineering. Advantages and disadvantages	• Regeneration (re-urbanisation). rebranding (Olympics 2012), opportunities • Improving London (sustainability problems/challenges and solutions) • London's rural periphery (Terling, Essex) accessibility and dependency on London. • Social and economic change in rural areas (Devon) and pressures as a result (on housing, leisure and recreation • Challenges (rural deprivation) and opportunities for development in Cornwall	

Paper 3		
People and the Biosphere	**Forests Under Threat**	**Consuming Energy Resources**
• What are the world's major biomes and where are they found? • How temperature, latitude & elevation affect biome location • How precipitation (rainfall) affects biome location • Atmospheric circulation (hadley cells, ferrel cells & polar cells) and how they affect air pressure & rainfall • How sunshine hours affects biomes • Local factors affecting biomes: rock & soil type, water availability & drainage, altitude. • How soil type influences type of trees in UK • Biotic & abiotic factors of ecosystems & biomes • Interpreting climate graphs • What goods and services ecosystems (e.g. tropical rainforest) provide • Sustainable use: how the Efe tribe use the rainforest sustainably.	• How abiotic & biotic factors influence the forest ecosystem • How plants and animals are adapted to their climate • The nutrient cycle in the Rainforest and Taiga • Food webs and biodiversity in the Rainforest and Taiga • Causes of deforestation in the Rainforest and Taiga (BR163, Athabasca Tar Sands) • Why climate change is an indirect threat to the Rainforest How acid rain, forest fires, disease and pests result in a loss of biodiversity in the Taiga • The cost and benefits of global approaches to conserving the biosphere (CITES & REDD) • Sustainable forestry management (Kilum Ijim & Juma) • The costs and benefits of national parks (Buffalo, Canada) • Conflicting views on the use of different biomes	• The categories and examples of different types of energy: non-renewable; renewable and recyclable • How extracting energy through mining and drilling can have negative impacts on the environment • To explain how the global distribution of energy is influenced by geology, accessibility and climate. • To describe the global pattern of energy consumption and explain why there are differences between developed, emerging and developing places. • Describe the variations in patterns of oil reserves • Explain why the global consumption of oil is increasing (rising GDP, rapid industrialisation) • Explain why oil supply is affected by political relations (conflicts & diplomatic relations) as well as

• How ecosystems are being exploited, role of TNCs. • Main causes of deforestation in the rainforest in LICs (ranching, palm oil, farming, mining, logging) • Consequences of exploiting the rainforest; future of the rainforest.		economic factors such as recession or under supply.

HISTORY

Paper 1 Medicine in Britain, c1250–present		
c1250–c1500: **Medicine in medieval England**	**c1500–c1700:** **The Medical Renaissance in England –**	**c1700–c1900:** **Medicine in eighteenth- and nineteenth-century Britain**
• Supernatural and religious explanations of the cause of disease. • Rational explanations: the Theory of the Four Humours and the miasma theory; the continuing influence in England of Hippocrates and Galen. • Approaches to prevention and treatment and their connection with ideas about disease and illness: religious actions, bloodletting and purging, purifying the air, and the use of remedies. • New and traditional approaches to hospital care in the thirteenth century. The role of the physician, apothecary and barber surgeon in treatment and care provided within the community and in hospitals, c1250–1500. • Dealing with the Black Death, 1348–49; approaches to treatment and attempts to prevent its spread.	• Continuity and change in explanations of the cause of disease and illness. • A scientific approach, including the work of Thomas Sydenham in improving diagnosis. • The influence of the printing press and the work of the Royal Society on the transmission of ideas. • Continuity in approaches to prevention, treatment and care in the community and in hospitals. • Change in care and treatment: improvements in medical training and the influence in England of the work of Vesalius. • Key individual: William Harvey and the discovery of the circulation of the blood. • Dealing with the Great Plague in London, 1665: approaches to treatment and attempts to prevent its spread.	• Continuity and change in explanations of the cause of disease and illness. • The influence in Britain of Pasteur's Germ Theory and Koch's work on microbes. • The extent of change in care and treatment: improvements in hospital care and the influence of Nightingale. The impact of anaesthetics and antiseptics on surgery. • New approaches to prevention: the development and use of vaccinations and the Public Health Act 1875. • Key individual: Jenner and the development of vaccination. • Fighting Cholera in London, 1854; attempts to prevent its spread; the significance of Snow and the Broad Street pump.

c1900–present: **Medicine in modern Britain**	**British sector of the Western Front, 1914–18: injuries, treatment and the trenches**
• Advances in understanding the causes of illness and disease: the influence of genetic and lifestyle factors on health. • Improvements in diagnosis: the impact of the availability of blood tests, scans and monitors. • The extent of change in care and treatment. The impact of the NHS and science and technology: improved access to care; advances in medicines, including magic bullets and antibiotics; high-tech medical and surgical treatment in hospitals.	• The context of the British sector of Western Front and the theatre of war in Flanders and northern France: the Ypres salient, the Somme, Arras and Cambrai. The trench system - its construction and organisation, including frontline and support trenches. • The use of mines at Hill 60 near Ypres and the expansion of tunnels, caves and quarries at Arras. Significance for medical treatment of the nature of the terrain and problems of the transport and communications infrastructure.

• New approaches to prevention: mass vaccinations and government lifestyle campaigns • Key individuals: Fleming, Florey and Chain's development of penicillin. • The fight against lung cancer in the twenty-first century: the use of science and technology in diagnosis and treatment; government action.	• Conditions requiring medical treatment on the Western Front, including the problems of ill health arising from the trench environment. The nature of wounds from rifles and explosives. The problem of shrapnel, wound infection and increased numbers of head injuries. The effects of gas attacks. • The work of the RAMC and FANY. The system of transport: stretcher bearers, horse and motor ambulances. The stages of treatment areas: aid post and field ambulance, dressing station, casualty clearing station, base hospital. The underground hospital at Arras. • The significance of the Western Front for experiments in surgery and medicine: new techniques in the treatment of wounds and infection, the Thomas splint, the use of mobile x-ray units, the creation of a blood bank for the Battle of Cambrai. • The historical context of medicine in the early twentieth century: the understanding of infection and moves towards aseptic surgery; the development of x-rays; blood transfusions and developments in the storage of blood. • Knowledge of national sources relevant to the period and issue, e.g. army records, national newspapers, government reports, medical articles. • Knowledge of local sources relevant to the period and issue, e.g. personal accounts, photographs, hospital records, army statistics. • Recognition of the strengths and weaknesses of different types of source for specific enquiries. • Framing of questions relevant to the pursuit of a specific enquiry. • Selection of appropriate sources for specific investigations.

Paper 2 The Anglo-Saxon and Norman England, c1060–88		
1060–66 **Anglo-Saxon England and the Norman Conquest**	**1066–87** **Key topic 2: William I in power: securing the kingdom**	**1066-88** **Norman England**
• Monarchy and government: the power of the English monarchy; earldoms, local government and the legal system. • The economy and social system: towns and villages; the influence of the Church • The house of Godwin: Harold Godwinson's succession as Earl of Wessex; the power of the Godwins • Harold Godwinson's embassy to Normandy • The rising against Tostig and his exile	• The submission of the earls, 1066 • Rewarding followings and establishing control on the borderlands through the use of earls • The Marcher earldoms • Reasons for the building of castles; their key features and importance • The revolts of Earls Edwin and Morcar in 1068 • Edgar the Aethling and the rebellions in the North, 1069 • Hereward the Wake and rebellion at Ely, 1070–71 • The reasons for and features of the Harrying of the North, 1069–70	• The feudal hierarchy: the role and importance of tenants-in-chief and knights; the nature of feudalism (landholding, homage, knight service, labour service); forfeiture • The Church in England: its role in society and relationship to government, including the roles of Stigand and Lanfranc; the Normanisation and reform of the Church in the reign of William I • The extent of change to Anglo-Saxon society and economy • Changes to government after the Conquest: centralised power and

• The death of Edward the Confessor • The motives and claims of William of Normandy, Harald Hardrada and Edgar • The Witan and the coronation and reign of Godwinson • Reasons for, and significance of, the outcome of the Battles of Fulford and Stamford Bridge • The Battle of Hastings • Reasons for William's victory, including the leadership skills of Harold and William, Norman and English troops and tactics	• Its immediate and long-term impact, 1069–1087 • Changes in landownership from Anglo-Saxon to Norman, 1066–87 • How William I maintained royal power • Reasons for and features of the revolt • The defeat of the revolt and its effects	the limited use of earls under William I; the role of regents • The office of the sheriff and the demesne; introduction and significance of the 'forest' • Domesday Book and its significance for Norman government and finance • The culture and language of the Norman aristocracy • The career and significance of Bishop Odo • Character and personality of William I and his relations with Robert • Robert and revolt in Normandy, 1077–80 • William's death and the disputed succession • William Rufus and the defeat of Robert and Odo

Paper 3: Modern Depth Study: Weimar and Nazi Germany, 1918-1939	
1918–29 **The Weimar Republic**	**1919-33** **Hitler's rise to power**
• The legacy of the First World War. The abdication of the Kaiser, the armistice and revolution, 1918–19. • The setting up of the Weimar Republic. The strengths and weaknesses of the new Constitution. • Reasons for the early unpopularity of the Republic, including the 'stab in the back' theory and the key terms of the Treaty of Versailles. • Challenges to the Republic from Left and Right: Spartacists, Freikorps, the Kapp Putsch. • The challenges of 1923: hyperinflation; the reasons for, and effects of, the French occupation of the Ruhr. • Reasons for economic recovery, including the work of Stresemann, the Rentenmark, the Dawes and Young Plans and American loans and investment. • The impact on domestic policies of Stresemann's achievements abroad: the Locarno Pact, joining the League of Nations and the Kellogg-Briand Pact. • Changes in the standard of living, including wages, housing, unemployment insurance. • Changes in the position of women in work, politics and leisure. • Cultural changes: developments in architecture, art and the cinema.	• Hitler's early career: joining the German Workers' Party and setting up the Nazi Party, 1919–20. • The early growth and features of the Party. The Twenty-Five Point Programme. The role of the SA. • The reasons for, events and consequences of the Munich Putsch. • Reasons for limited support for the Nazi Party, 1924–28. Party reorganisation and *Mein Kampf*. The Bamberg Conference of 1926. • The growth of unemployment – its causes and impact. The failure of successive Weimar governments to deal with unemployment from 1929 to January 1933. The growth of support for the Communist Party. • Reasons for the growth in support for the Nazi Party, including the appeal of Hitler and the Nazis, the effects of propaganda and the work of the SA. • Political developments in 1932. The roles of Hindenburg, Brüning, von Papen and von Schleicher. • The part played by Hindenburg and von Papen in Hitler becoming Chancellor in 1933.
Nazi control and dictatorship	**1933-39** **Life in Nazi Germany**

• The Reichstag Fire. The Enabling Act and the banning of other parties and trade unions. • The threat from Röhm and the SA, the Night of the Long Knives and the death of von Hindenburg. Hitler becomes Führer, the army and oath of allegiance. • The role of the Gestapo, the SS, the SD and concentration camps. • Nazi control of the legal system, judges and law courts. • Nazi policies towards the Catholic and Protestant Churches, including the Reich Church and the Concordat. • Goebbels and the Ministry of Propaganda: censorship, Nazi use of media, rallies and sport, including the Berlin Olympics of 1936. • Nazi control of culture and the arts, including art, architecture, literature and film. • The extent of support for the Nazi regime. • Opposition from the Churches, including the role of Pastor Niemöller. • Opposition from the young, including the Swing Youth and the Edelweiss Pirates.	• Nazi views on women and the family. • Nazi policies towards women, including marriage and family, employment and appearance. • Nazi aims and policies towards the young. The Hitler Youth and the League of German Maidens. • Nazi control of the young through education, including the curriculum and teachers. • Nazi policies to reduce unemployment, including labour service, autobahns, rearmament and invisible unemployment. • Changes in the standard of living, especially of German workers. The Labour Front, Strength Through Joy, Beauty of Labour. • Nazi racial beliefs and policies and the treatment of minorities: Slavs, 'gypsies', homosexuals and those with disabilities. • The persecution of the Jews, including the boycott of Jewish shops and businesses (1933), the Nuremberg Laws and Kristallnacht.

RS

Philosophy and Ethics: Christian Beliefs and Practices		
Beliefs	**Practices: *Worship and festivals:* Different forms of worship and their significance**	**Good and Evil**
• The nature of God: God as omnipotent, loving and just and the problem of evil. • 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). **Focus For 15 Mark Question** • Jesus Christ and Salvation**:** Beliefs and teaching about the incarnation and Jesus as the Son of God and the crucifixion. • Jesus Christ and Salvation**:** Beliefs and teaching about the resurrection and ascension and life after death • Jesus Christ and Salvation**:** Different Christian beliefs about the afterlife and their importance, including: resurrection and life after death: judgement, heaven and hell.	• Liturgical, non-liturgical and informal, including the use of the Bible and private worship. Prayer and its significance, including Lord's Prayer and informal prayer. • The role and meaning of the sacraments: The meaning of sacrament, the sacrament of baptism and its significance for Christians; infant and believers baptism; different ways in which it is celebrated and different interpretations of its meaning. • The sacrament of Eucharist (Holy Communion) and its significance for Christians, including different ways in which it is celebrated and different interpretations of its meaning. • The role and importance of pilgrimage and celebrations including: two contrasting examples of Christian pilgrimage: Lourdes and Iona. The celebrations of Christmas and	• Examples of forgiveness arising from personal beliefs (eg. Gee Walker). • Philosophical perspectives on the origin of evil: Original Sin (free will) and 'soul-making' (Irenaeus and John Hick). • Philosophical challenges posed by belief in God, free will and the existence of evil and suffering. • The key concepts and their definitions for this unit. **Focus For 15 Mark Question** • Different ideas about what makes an act 'wrong'? • Religious and ethical ideas about relative and absolute morality, conscience, virtues, sin. • Beliefs and attitudes about the causes of crime and the aims of punishment: justice, retribution, deterrence and reformation. • The treatment of criminals and the work of prison reformers and prison chaplains.

• Jesus Christ and Salvation: Beliefs and teaching about sin, including original sin, the means of salvation, including, law, grace and Spirit, the role of Christ in salvation and atonement.	Easter, including their importance for Christians in Great Britain today. • *The role of the church in the local and worldwide community*: The role of the Church in the local community, including food banks and street pastors. The place of mission, evangelism and Church growth. **Focus For 15 Mark Question** • The importance of the worldwide church including: The work for reconciliation, how Christian church respond to persecution and the work of Christian Aid.	• Varied Conservative and Liberal Christian responses to the Death Penalty, including interpretations of Christian teaching: Exodus 20:13, Matthew 5:38-39, 43-47. • Christian teachings about forgiveness, including interpretations of teachings: Matthew 18:21-22, Matthew 6: 14-15. •

Philosophy and Ethics: Islam Beliefs and Practices	
Beliefs	**Practices: Worship**
• The six articles of faith in Sunni Islam and five roots of Ulul ad-Din in Shi'a Islam, including key similarities and differences. • The oneness of God (Tawhid), Quran Surah 112 and 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 Mikar'il and predestination and human freedom and its relationship to the Day of Judgement. • Authority: Prophet hood (Risalah) including the role and importance of Adam, Ibrahim and Muhammad. • The six articles of faith in Sunni Islam and five roots of Ulul ad-Din in Shi'a Islam, including key similarities and differences. • Authority: 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. **Focus For 15 Mark Question** • Life after Death (Akhirah), human responsibility and accountability, resurrection, heaven and hell.	• Duties and festivals: Jihad: Different understandings of jihad: the meaning and significance of great and lesser jihad, origins and conditions for the declaration of lesser jihad. • Duties and festivals: Festivals and commemorations and their importance for Muslims in Great Britain today, including the origins and meaning of Id-ul-Adha, Id-ul-Fitr, Ashura. **Focus For 15 Mark Question** • Five Pillars of Sunni Islam and the Ten Obligatory Acts of Shi'a Islam (student should study the 5 pillars and jihad in both Sunni and Shi'a Islam and the additional duties of Shi'a Islam). Shahadah: Declaration of faith and its place in Muslim practice. • 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 elsewhere; Friday prayer (Jummah); key differences in practices of Salah in Sunni and Shi'a Islam, and different Muslim views about the importance of prayer. • Duties and festivals: Sawm: the role and significance of fasting during the month of Ramadan including origins, duties, benefits of fasting, the exceptions and their reasons, and the Night of Power • Duties and festivals: Zakah: 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.

Philosophy and Ethics: Component 1 Theme 1 - Issues of Relationships (Christian Denominations)		
Relationships	**Sexual Relationships**	**Issues of Equality: Gender prejudice and discrimination**
Focus For 15 Mark Question • Christian beliefs, attitudes and teachings about the nature and purpose of relationships in the twenty first century • The role of families and how Christianity encourages family units. The roles of women and men • The purpose of families, including: procreation, stability and the protection of children, educating children in a faith. • Contemporary family issues including: same-sex parents and polygamy • Marriage outside the religious tradition and cohabitation • The nature and purpose of marriage as expressed through the Christian marriage ceremonies and teachings: Mark 10:6-10 and the Church of England Synod • Varying Christian attitudes towards adultery, divorce and annulment and separation and re-marriage. Interpretations of Matthew 19:8-9, Mark 10:9	• Christian teachings about the nature and purpose of sex • Christian teachings about the use of contraception including varied interpretations of Thomas Aquinas' Five Precepts • Diverse attitudes within and across Christian traditions towards same sex relationships, including varied interpretations of: Leviticus 18:22, 20:3 and 1 Timothy 1: 8-10 • Human sexuality including: heterosexual and homosexual relationships.	• Diverse attitudes within Christianity toward the roles of women and men in worship and authority • Interpretations of teachings: 1 Timothy 2:11-12, Galatians 3:2729 • Gender equality: Gender prejudice and discrimination including examples

Philosophy and Ethics: Component 1 Theme 3 - Issues of Good and Evil (Christian Denominations)		
Crime and Punishment	**Forgiveness**	**Good, Evil and Suffering**
Focus For 15 Mark Question • Religious and ethical responses: relative and absolute morality, conscience, virtues, sin • Beliefs and attitudes about the causes of crime and the aims of punishment: justice, retribution, deterrence and reformation • The treatment of criminals and the work of prison reformers and prison chaplains • Varied Christian responses to the Death Penalty, including interpretations of Christian teaching: Exodus 20:13, Matthew 5:38-39, 43-47	• Christian teachings about forgiveness, including interpretations of teachings: Matthew 18:21-22, Matthew 6: 14-15 • Examples of forgiveness arising from personal beliefs.	• Philosophical perspectives on the origin of evil: Original Sin (free will) and 'soul-making' • Philosophical challenges posed by belief in God and the existence of evil and suffering **Key Concepts** • good/evil • forgiveness • free will • justice • morality • punishment • sin • suffering

Philosophy and Ethics: Component 1 Theme 4 - Issues of Life and Death (Christian Denominations)		
The World	**The Origin and Value of Human Life**	**Beliefs about Death and the Afterlife**
• Diverse Christian beliefs, teachings and attitudes about the accounts of the origin of the universe: **Genesis 1 and 2** • The relationship between Christian views and non-religious views of creation and the extent to which they conflict • Christian beliefs, teachings and attitudes about dominion, stewardship, environmental responsibility, sustainability, and global citizenship: **Genesis 1:28, Psalm 8:6**	**Focus For 15 Mark Question** • Diverse Christian beliefs, teachings and attitudes toward the origin and sanctity of human life: **Genesis 1:31, Jeremiah 1:5** • Diverse Christian attitudes towards abortion and euthanasia • Non-religious views about the origin and value of human life, including attitudes toward abortion and euthanasia	• Christian beliefs and teachings about life after death, including soul, judgement, heaven and hell: **John 11:24-27, 1 Corinthians 15: 42-44** • Diverse Christian beliefs about the after-life • How Christian and non-religious funerals reflect beliefs about the after-life **Key Concepts** • afterlife • environmental sustainability • euthanasia • evolution • abortion • quality of life • sanctity of life • soul

COMPUTER SCIENCE

Computer Science
• 1.1 Systems Architecture – Architecture of the CPU, CPU Performance, Embedded Systems • 1.2 Memory and Storage – Primary Storage, Secondary Storage, Units and Data Storage, Compression • 1.3 Networks, Connections and Protocols – Networks and topologies, Wired and Wireless Networks, protocols and layers • 1.4 Network Security – Threats to computer systems and networks, identifying and preventing vulnerabilities • 1.5 Systems Software – Operating Systems, Utility Software • 1.6 Ethical, Legal, Cultural & Environmental impacts of digital technology • 2.1 Algorithms – computational thinking, designing, creating and refining algorithms, searching and sorting algorithms • 2.2 Programming fundamental – programming fundamental, data types, additional programming techniques • 2.3 Producing robust programs – defensive design, testing • 2.4 Boolean Logic • 2.5 Programming language and Integrated Development Environments – Language, IDE

FOOD AND NUTRITION

Higher mark questions will mainly focus on topics highlighted in bold		
Food, Nutrition and Health	**Food Science**	**Food Safety**
• **The relationship between diet, nutrition and health** • **Major diet related health risks** • **Healthy eating guidelines** • **Nutritional needs of different life stages** • **Planning meals for different life stages & specific dietary groups**	• **Carbohydrates: gelatinisation, Dextrinisation, Caramelisation** • Cooking and heat transfer • Proteins: denaturation, coagulation, gluten, foams • Fats and oil: shortening, aeration, emulsification • Raising agents	• **Safety principles of buying and storing food** • **Safety principles when preparing cooking and serving food** • Spoilage and contamination • Micro-organisms and enzymes • Bacteria

• **How to maintain a healthy body weight throughout life.** • Vitamins • Minerals		
Food Choice	**Food Provenance**	
• **Portion size and costing when planning a meal** • **Know and understand factors which influence food choice.** • Religion • Dietary needs • Marketing and labelling • International cuisine	• **Environmental issues associated with food.** • **Food production – primary and secondary stages of food production** • **Food production -How processing affects the sensory and nutritional properties of ingredients.** • Sustainability	

DESIGN TECHNOLOGY

Higher mark questions will mainly focus on topics highlighted in bold		
Core Technical Principles (10% overall GCSE)	**Specialist Technical Principles (40% overall GCSE)**	**Designing and Making Principles (NEA 50% and Exam)**
• Energy generation and storage • New technologies • New materials • Systems approach to designing, • Mechanical devices • Materials and working properties	• **Selection of materials and components** • **Specialist techniques and processes** • **Ecological and social footprint** • Forces and stresses • Sources and origins • Using and working with materials • Stock forms, types and sizes • Scales of production • Surface treatments and finishes	• **Environmental, Social and Economic challenge** • **Communication of design ideas** • **Prototype development** • **Materials management** • **Specialist techniques and processes** • Investigation • Primary and Secondary data • The work of others • Design strategies • Selection of materials and components • Tolerances • Specialist tools and equipment • Designing and making principles

DRAMA

Component 1		
Written Paper - Section A	**Written Paper - Section B**	**Written Paper - Section C**
• Theatre roles • Responsibilities • Terminology • Staging/stage space *Students will need to look at the theatre roles/responsibilities and terminology lists and staging configurations to remind themselves of this information.*	• Blood Brothers *Read over notes and any character work. Students will have a copy of the play in the exam so DO NOT NEED to learn quotes but knowing where useful sections are will help save time in the exam.*	• Live theatre *Students need to remember **THE PRODUCTION, THE VENUE AND DATE.** They must know in detail **several KEY MOMENTS** from the production they have seen. **Revise 3 KEY MOMENTS and at least 2 ACTORS/CHARACTERS in detail linking to specific moments.** **For*

	For the purpose of this year (due to the impact of COVID) your extract will be taken from this larger section: *Act 2 pages 68-75.* *However it is important to know that for a 6.4 response, students will need to link to many different areas of the whole script.*	***Mocks students will write about a recorded piece.***
Time spent in the exam	**Time spent in the exam**	**Time spent in the exam**
5 minutes	60 minutes	40 minutes

MUSIC

The Concerto Through Time • Classical concerto • Romantic Concerto **Rhythms of the World** • Indian Classical • Bhangra • Greek • Israeli • Palestine **Conventions of Pop** • Rock and roll of 1950's and 1960's • Pop Ballads of 1970's, 1980's and 1990's **Film Music**

DANCE

Performance
Knowledge, understanding and skills
Physical skills and attributes: • posture • alignment • balance • coordination • control • flexibility • mobility • strength • stamina • extension • isolation **Technical skills**: • action content • dynamic content • spatial content • relationship content – for duet/trio performance only • timing content • rhythmic content • movement in a stylistically accurate way **Expressive skills:** • projection • focus • spatial awareness • facial expression • phrasing **For duet/trio performance only**: • musicality • sensitivity to other dancers • communication of choreographic intent, including mood(s), meaning(s), idea(s) **Mental skills and attributes (during performance)**: • movement memory • commitment • concentration • confidence **Safe working practices (during performance)**: • safe execution • appropriate dancewear, including: footwear, hairstyle, absence of jewellery **Mental skills and attributes (process)**: • systematic repetition • mental rehearsal • rehearsal discipline • planning of rehearsal • response to feedback • capacity to improve **Safe working practices (process)**: • warming up • cooling down • nutrition • hydration

Choreography

Knowledge, understanding and skills for choreography:	Critical appreciation of 6 professional set works:
Action content: • travel • turn • elevation • gesture • stillness • use of different body parts • floor work • transfer of weight **Dynamic content:** • fast/slow • sudden/sustained • acceleration/deceleration • strong/light • direct/indirect • flowing/abrupt **Spatial content:** •pathways • levels • directions • size of movement • patterns • spatial design **Relationship content:** • lead and follow • mirroring • action and reaction • accumulation • complement and contrast • counterpoint • contact • formations **Choreographic processes:** • researching • improvising • generating • selecting • developing • structuring • refining and synthesising **Structuring devices and form:** • binary • ternary • rondo • narrative • episodic • beginning/middle/end • unity • logical sequence • transitions **Choreographic devices:** • motif and development • repetition • contrast • highlights • climax • manipulation of number • unison and canon **Aural settings (and how they affect choreographic outcomes):** • song • instrumental • orchestral • spoken word • silence • natural sound • found sound • body percussion **Effects on choreographic outcomes:** • mood and atmosphere • contrast and variety • structure • relationship to theme/idea **Performance environments:** • proscenium arch • end stage • site-sensitive • in-the-round **Communication of choreographic intent:** • mood(s) • meaning(s) • idea(s) • theme(s) • style/style fusion(s)	**Features of production:** • staging/set eg projection, furniture, structures, backdrop, screens and features of these such as colour, texture, shape, decoration, materials • lighting eg colour, placement, direction, angles etc • properties eg size, shape, materials, how used etc • **costume** (including footwear, masks, make-up and accessories): features such as colour, texture, material, flow, shape, line, weight, decoration and how they define character or gender, identify dancers, enhance or sculpt the body and enhance the action • dancers (number, gender) • aural settings eg song, instrumental, orchestral, spoken word, silence, natural sound, found sound, body percussion, style, structure and musical elements such as tone, pitch and rhythm • dance for camera eg placement, angle, proximity, special effects **Performance environments:** • proscenium arch • end stage • site-sensitive • in-the-round **Choreographic content:** • movement content as per the knowledge, skills and understanding for choreography specified in Choreography • structuring devices and • choreographic devices **Choreographic intent:** • mood(s) • meaning(s) • idea(s) • theme(s) • style/style fusion(s)
	Professional Works:
	4 works to be focused on this year: Artificial Things A Linha Curva Infra Emancipation of Expressionism