

AQA GCSE Combined Science Trilogy: Biology Paper 1 Foundation

Advance Information of Assessed Content 2022

Link to specification:

<https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF>

These specification points will be the **major focus** of this paper.

Biology Paper 1 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
4.1.2 Cell Division	<ul style="list-style-type: none"> -How DNA is arranged as chromosomes -Series of stages in the cell cycles inc. mitosis -Definition and uses of stem cells 	15-16	https://www.bbc.co.uk/bitesize/guides/z2kmk2p/revision/2 https://www.bbc.co.uk/bitesize/guides/z2kmk2p/revision/3	https://www.youtube.com/watch?v=RHvZVmbiA78 https://www.youtube.com/watch?v=Kh27eyjxvYM&t=24s
Required practical 1: use of light microscope	<ul style="list-style-type: none"> -How to prepare slides -How to use the microscope to improve field of view, clarify, change magnification - Microscopy calculations 	12-13	https://www.bbc.co.uk/bitesize/guides/zpqqhv/revision/1	https://www.youtube.com/watch?v=jBVxo5T-ZQM&t=8s
4.2.2 Animal tissues, organs and organ systems	<ul style="list-style-type: none"> - 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	https://www.bbc.co.uk/bitesize/guides/z89mk2p/revision/1 https://www.bbc.co.uk/bitesize/guides/zsnrsrd/revision/1	https://www.youtube.com/watch?v=4ui4oSHHnzA https://www.youtube.com/watch?v=VLK2wANjQm0 https://www.youtube.com/watch?v=bpYaKM2hVFY
Required practical 3: test for carbohydrates, lipids and proteins	-Reagent and positive result for carbohydrates, proteins and lipids	28	https://www.bbc.co.uk/bitesize/guides/z89mk2p/revision/3	https://www.youtube.com/watch?v=SqWTJWOBww4

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Biology Paper 1 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
4.3.1 Communicable Diseases	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/topics/z9kww6f	https://www.youtube.com/watch?v=dbd5iydu3EY https://www.youtube.com/watch?v=5X9MkILVhlw https://www.youtube.com/watch?v=HSrrPdJDqxM https://www.youtube.com/watch?v=uPeZBhJYlnU https://www.youtube.com/watch?v=w3ykU52K-Hw
4.4.1 Photosynthesis	<ul style="list-style-type: none"> -photosynthesis equation -factors affecting rate of photosynthesis 	50-52 Not inc. bottom half of 50	https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1	https://www.youtube.com/watch?v=rAJGnS_ktk4
Required Practical 5: effect of light intensity on rate of photosynthesis	<ul style="list-style-type: none"> -independent, dependent, control variables -How to measure the dependent variable -method -analysing results 	52	https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/5	https://www.youtube.com/watch?v=cBCKedXdFeE

These specification points will **May be assessed in linked or low tariff questions.**

Spec point	CGP Revision Guide Pages
4.1.1.1 Eu and Prokaryotic cells	11
4.1.1.2 Animal and Plant cells	11
4.1.1.3 Cell specialisation	14
4.1.1.4 Cell differentiation	14
4.1.1.5 Microscopy	12, 13
4.1.3.1 Diffusion	17
4.2.3 Plant tissues, organs and systems	39, 40

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

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

AQA GCSE Combined Science Trilogy: Chemistry Paper 1 Foundation

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.1.2 The Periodic Table	<ul style="list-style-type: none"> -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	<p>https://www.bbc.co.uk/bitesize/guides/zwt2k2p/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/ztrxdxs/revision/1</p>	<p>https://www.youtube.com/watch?v=IdS9roW7IzM&t=119s</p> <p>https://www.youtube.com/watch?v=uwzXfZoCP_k</p> <p>https://www.youtube.com/watch?v=dZGDUKQa_6g</p> <p>https://www.youtube.com/watch?v=HT1zAPQIBAQ</p>
5.2.2 How bonding and structure are related to the properties of a substance	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/topics/z33rrwx	<p>https://www.youtube.com/watch?v=leVxy7cjZMU</p> <p>https://www.youtube.com/watch?v=DECGNyC-x_s</p> <p>https://www.youtube.com/watch?v=EP0zfm_FVqc</p> <p>https://www.youtube.com/watch?v=A-wTpLPICd0</p>
5.2.3 Structure and bonding of carbon	<ul style="list-style-type: none"> -describe and explain the properties of diamond, graphite, graphene and fullerenes 	118-119	https://www.bbc.co.uk/bitesize/guides/zgq8b82/revision/2	https://www.youtube.com/watch?v=tGH0mXCcEFU

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These specification points will be the **major focus** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.4.1 The Reactivity of Metals	<ul style="list-style-type: none"> -Metals + oxygen -Reduction and oxidation in terms of oxygen -The Reactivity Series - Displacement reactions - Extraction of metals by reduction 	130-131	https://www.bbc.co.uk/bitesize/guides/zy7dgd/revision/1	https://www.youtube.com/watch?v=Lk1V0buHEFs https://www.youtube.com/watch?v=2i5Lm7BMtpo https://www.youtube.com/watch?v=MXTSels6e2Y
5.4.2 Reactions of Acids	<ul style="list-style-type: none"> -Naming Salts -products of the reactions of acids and metals -products 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	https://www.bbc.co.uk/bitesize/guides/ztv2dxs/revision/1	https://www.youtube.com/watch?v=ofw6oHSYGFI https://www.youtube.com/watch?v=QISsle_jSQ8
5.4.2.3 and Required Practical 8: preparation of a pure, dry sample of soluble salts	<ul style="list-style-type: none"> -method of producing solid salt crystals from insoluble oxide or carbonate and acids -identifying errors in methods and reagents 	129	https://www.bbc.co.uk/bitesize/guides/ztv2dxs/revision/5	https://www.youtube.com/watch?v=9GH95172Js8&t=16s

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These specification points will be the **major focus** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.4.3 Electrolysis	<ul style="list-style-type: none"> -The process of electrolysis -Electrolysis of molten ionic compounds -Electrolysis of aluminium oxide -Electrolysis of aqueous solutions 	130-131	https://www.bbc.co.uk/bitesize/guides/z9h9v9q/revision/1	https://www.youtube.com/watch?v=AhTRiL6xjBA&t=2s https://www.youtube.com/watch?v=iINOpROacf0 https://www.youtube.com/watch?v=YcyMEIBEzAY https://www.youtube.com/watch?v=6WjC_Vi4roA
Required Practical 9: : investigate what happens when aqueous solutions are electrolysed using inert electrodes.	<ul style="list-style-type: none"> -Developing a hypothesis -Planning an investigation 	128-129	https://www.bbc.co.uk/bitesize/guides/z9h9v9q/revision/3	https://www.youtube.com/watch?v=ukbtTTG1Kew
Required Practical 10: investigate the variables that affect temperature changes in reacting solutions such as, eg acid plus metals, carbonates, neutralisations, displacement of metals	<ul style="list-style-type: none"> -Identifying independent, dependent, control variables -Analysing results -identifying exo and endothermic reactions from experimental results 	135	https://www.bbc.co.uk/bitesize/guides/z2b2k2p/revision/2	https://www.youtube.com/watch?v=Bz0C9mmF2tw

Chemistry Paper 1 - F

Exam date: 27th May

These specification points will **May be assessed in linked or low tariff questions.**

Spec point	CGP Revision Guide Pages
5.1.1 A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes	96-98
5.2.1 Chemical bonds, ionic, covalent and metallic	113-119
5.3 Quantitative chemistry	123-128
5.5 Energy changes	138-140

AQA GCSE Combined Science Trilogy: Physics Paper 1 Foundation

Advance Information of Assessed Content 2022

Link to specification:

<https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF>

Link to revised Physics equation sheet:

<https://filestore.aqa.org.uk/resources/science/AQA-8464-8465-ES-INS.PDF>

These specification points will be the **major focus** of this paper.

Physics Paper 1 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
6.1.1 Energy Changes in a system, and the ways energy is stored before and after such changes	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zskp7p3/revision/1 https://www.bbc.co.uk/bitesize/guides/z8pk3k7/revision/1 https://www.bbc.co.uk/bitesize/guides/zy8g3k7/revision/1	https://www.youtube.com/watch?v=JGwcDCeYRYo https://www.youtube.com/watch?v=zy9eWzmGe4 https://www.youtube.com/watch?v=Qw_9kX9PARc https://www.youtube.com/watch?v=63OTIdNb-TE https://www.youtube.com/watch?v=EDT0DPhaaMY
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	https://www.bbc.co.uk/bitesize/guides/zy8g3k7/revision/4	https://www.youtube.com/watch?v=Hs5x0-IU2F4 https://www.youtube.com/watch?v=loeRLKNeUsc
6.1.3 National and global energy resources	<ul style="list-style-type: none"> -describe renewable and non-renewable energy resource -compare advantages and disadvantages of different energy resources 	176-179	https://www.bbc.co.uk/bitesize/guides/z2wfxfr/revision/1	https://www.youtube.com/watch?v=1dJKvxhGEgA https://www.youtube.com/watch?v=pqzvUur7QRw

These specification points will be the **major focus** of this paper.

Physics Paper 1 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
6.2.1 Current, potential difference and resistance	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/1	https://www.youtube.com/watch?v=sFUmuuJjAcw https://www.youtube.com/watch?v=ts7WumFAaSg https://www.youtube.com/watch?v=hRojfU77c38
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.	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/5	https://www.youtube.com/watch?v=A1SyKvdHoqY&t=29s

Physics Paper 1 - F

Exam date: 9th June

These specification points will be the **major focus** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
6.3.1 Changes of state and the particle model	<ul style="list-style-type: none"> -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	<p>https://www.bbc.co.uk/bitesize/guides/zqjy6yc/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zwwfxfr/revision/1</p>	<p>https://www.youtube.com/watch?v=hkBrw2fG75U</p> <p>https://www.youtube.com/watch?v=-EZmXVOSa20</p>
6.4.2 Atoms and nuclear radiation	<ul style="list-style-type: none"> -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	<p>https://www.bbc.co.uk/bitesize/guides/zxbnh39/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zp4vfcw/revision/1</p>	<p>https://www.youtube.com/watch?v=F_Y1-JieCrg</p> <p>https://www.youtube.com/watch?v=nW0S1C6wVrg</p> <p>https://www.youtube.com/watch?v=wj9BzGFao8k</p> <p>https://www.youtube.com/watch?v=teGu0VAPIOo</p>

These specification points will **may be assessed in linked or low tariff questions.**

Spec point	CGP Revision Guide Pages
6.1.2 Conservation and dissipation of energy	170
6.2.2 Series and parallel circuits	183,184
6.2.4 Energy Transfers	167

Physics Paper 1 - F

Exam date: 9th June

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

Spec point	CGP Revision Guide Pages
6.2.3 Domestic uses and safety	188
6.3.3 Particle Model and Pressure	Bottom half of pg 193
6.4.1 Atoms and Isotopes	

AQA GCSE Combined Science Trilogy: Biology Paper 2 Foundation

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These specification points will be the **major focus** of this paper.

Biology Paper 2 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
4.5.3 Hormonal Control in Humans	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zq4mk2p/revision/1 (1 to 5)	https://www.youtube.com/watch?v=c6olhi88KZs https://www.youtube.com/watch?v=77oyUdNZ054
4.6.1 Reproduction	<ul style="list-style-type: none"> -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 -inherited disorders -make informed judgements about the economic, social and ethical issues concerning embryo screening, 	66, 70-72	https://www.bbc.co.uk/bitesize/guides/zycmk2p/revision/3 https://www.bbc.co.uk/bitesize/guides/zcdfmsg/revision/1	https://www.youtube.com/watch?v=vw1TQXBQ6wQ https://www.youtube.com/watch?v=zNEtVaNQ0s8 https://www.youtube.com/watch?v=mvWy5IbUoHA https://www.youtube.com/watch?v=sYPwWHszLDo

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These specification points will be the **major focus** of this paper.

Biology Paper 2 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
4.7.1 Adaptations, interdependence and competition	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/z86gpbk/revision/1 (1 to 7)	https://www.youtube.com/watch?v=XVD5izWXmKo https://www.youtube.com/watch?v=0mjafH5pVLA
4.7.2 Organisation of an ecosystem	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/1	https://www.youtube.com/watch?v=dRFQ8rZCK6Q https://www.youtube.com/watch?v=urzpnjwazV0
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	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zqskv9q/revision/3	https://www.youtube.com/watch?v=2MW6nwf80XM https://www.youtube.com/watch?v=RhMOCxXcDrQ https://www.youtube.com/watch?v=yLHz2Ea10Mg&t=2s

Biology Paper 2 - F

Exam date: 15th June

These specification points will **May be assessed in linked or low tariff questions.**

Spec point	CGP Revision Guide Pages
4.5.1 Homeostasis	58
4.6.2.4 Genetic Engineering	78
4.6.3.1 evidence for evolution	79
4.6.3.2 fossils	79
4.6.4 Classification of living organisms	81
4.7.1.4 Adaptations	85
4.7.3.2 Waste Management	91

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

Spec point	CGP Revision Guide Pages
4.5.2 The human nervous system	58-60
4.5.3.3 Hormones in human reproduction	63-65
4.5.3.4 Contraception	65
4.6.1.1 Sexual and asexual reproduction	67
4.6.1.2 Meiosis	68
4.6.1.6 Sex Determination	69
4.6.2.1 Variation	73
4.6.2.2 Evolution	74
4.6.2.3 Selective Breeding	77
4.6.3.3 Extinction	
4.6.3.4 Resistant Bacteria	75-76
4.7.1.4 Adaptations	85
4.7.3.1 Biodiversity	91
4.7.3.3 Land Use	93
4.7.3.4 Deforestation	93
4.7.3.5 Global Warming	92
4.7.3.6 Maintaining Biodiversity	94

AQA GCSE Combined Science Trilogy: Chemistry Paper 2 Foundation

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Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.6.1 Rate of Reaction	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zpkp7p3/revision/1	https://www.youtube.com/watch?v=UkrBJ6-uGFA https://www.youtube.com/watch?v=GCR5xeduq2o https://www.youtube.com/watch?v=-4HXaUBbv04 https://www.youtube.com/watch?v=hel8fQjxcO8
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	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zpkp7p3/revision/6	https://www.youtube.com/watch?v=N5p06i9ilmo https://www.youtube.com/watch?v=GI6LVI7oAIU
5.6.2 Reversible reactions and dynamic equilibrium	<ul style="list-style-type: none"> -identify and give examples of reversible reactions -apply the conservation of energy to reversible reactions -define dynamic equilibrium 	144	https://www.bbc.co.uk/bitesize/guides/z32bpbk/revision/1 Only page 1	https://www.youtube.com/watch?v=66qcNNJFy6E

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These specification points will be the **major focus** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.7.1 Carbon compounds as fuels and feedstock	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zxd4y4j/revision/1	https://www.youtube.com/watch?v=CX2IYWggEBc https://www.youtube.com/watch?v=3I7yCkSXPos https://www.youtube.com/watch?v=7AWwjKbRa_o
5.8.1 Purity, formulations and chromatography	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zp2wrwx/revision/1	https://www.youtube.com/watch?v=3OjxWwcnfJY
Required Practical 12: investigate how paper chromatography can be used to separate and tell the difference between coloured substances.	<ul style="list-style-type: none"> -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 R_f values 	151-152	https://www.bbc.co.uk/bitesize/guides/zp2wrwx/revision/3	https://www.youtube.com/watch?v=TdJ57SQ6GAQ https://www.youtube.com/watch?v=pnTGNAfu6GE

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These specification points will be the **major focus** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.9.1 The composition and evolution of the Earth's Atmosphere	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/z9pk3k7/revision/1	https://www.youtube.com/watch?v=t1Z3GINldLA https://www.youtube.com/watch?v=l0h_-3MOPso
5.9.3 Common atmospheric pollutants and their sources	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zq3797h/revision/1	https://www.youtube.com/watch?v=yLp6LOgPHml
5.10.1 Using the Earth's resources and obtaining potable water	<ul style="list-style-type: none"> -Describe the renewable and non-renewable resources that we get from 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	https://www.bbc.co.uk/bitesize/guides/zswfxfr/revision/1 https://www.bbc.co.uk/bitesize/guides/zg6cfcw/revision/1	https://www.youtube.com/watch?v=-XczTGavTZU https://www.youtube.com/watch?v=n7pYRQs20bl

These specification points will be the **may be assessed in linked or low tariff questions** of this paper.

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
5.1.1 Atoms elements and compounds	<ul style="list-style-type: none">- Name and recognise the symbols of the first 20 elements- Describe the history of the model of the atom- Charge and mass of sub-atomic particles- RAM- Electronic structure	96-99 103-110		
5.2.1 Chemical bonds, ionic, covalent and metallic	<ul style="list-style-type: none">- Chemical bonds- Ionic bonding (diagrams)- Ionic compounds- Covalent bonding and diagrams- Metallic bonding	113-119		
5.3 Quantitative chemistry	<ul style="list-style-type: none">- Conservation of mass- RFM- Mass changes in chemical reactions	123128		

Chemistry Paper 2 - F

Exam date: 20th June

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

Spec point	CGP Revision Guide Pages
5.9.2 Carbon dioxide and methane as greenhouse gases	156-157

AQA GCSE Combined Science Trilogy: Physics Paper 2 Foundation

Advance Information of Assessed Content 2022

Link to specification:

<https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF>

Link to revised Physics equation sheet:

<https://filestore.aqa.org.uk/resources/science/AQA-8464-8465-ES-INS.PDF>

These specification points will be the **major focus** of this paper.

Physics Paper 2 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
6.5.1 Forces and their interactions	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zskn2nb/revision/1 https://www.bbc.co.uk/bitesize/guides/zcxcfcw/revision/1 https://www.bbc.co.uk/bitesize/guides/z232k2p/revision/1	https://www.youtube.com/watch?v=P1ISWWUkMdQ https://www.youtube.com/watch?v=xxK8N23nx9M https://www.youtube.com/watch?v=W2aBVbcHr_k https://www.youtube.com/watch?v=PL8ATKipoB4
6.5.4.1: Describing motion along a line	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/z2wy6yc/revision/1	https://www.youtube.com/watch?v=QaU9jMHh7gE https://www.youtube.com/watch?v=M_0FRiX8wIM https://www.youtube.com/watch?v=DkCw2C-DkT0 https://www.youtube.com/watch?v=b0VKIpetP9A https://www.youtube.com/watch?v=Kzx8GBTI5VM

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Physics Paper 2 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
6.5.4.2 Force, accelerations and Newton's Laws of motion	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zgv797h/revision/1	https://www.youtube.com/watch?v=i5PtaCJJFjw https://www.youtube.com/watch?v=DpQ_ikFKru0
6.5.4.3: Forces and braking	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zgv797h/revision/7	https://www.youtube.com/watch?v=drMKdcMq3o0
6.6.2 Electromagnetic Waves	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/z3yq4qt/revision/3	https://www.youtube.com/watch?v=u5vkYjV1V1A&t=3s https://www.youtube.com/watch?v=L0iivb-acqU&list=RDLVu5vkYjV1V1A&index=2

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Physics Paper 2 - F

Spec point	Concepts	CGP revision guide pages	Bitesize	YouTube
Required Practical 21 investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.	<ul style="list-style-type: none"> -Identify dependent, independent and variables -Plan a method to ensure valid results are collected -Draw conclusions from data 	226-227	https://www.bbc.co.uk/bitesize/guides/ztpm7p3/revision/1	https://www.youtube.com/watch?v=LFwio38EK9s
6.7.1: Permanent and induced magnetism, magnetic forces and fields	<ul style="list-style-type: none"> -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	https://www.bbc.co.uk/bitesize/guides/zpt9v9q/revision/1	https://www.youtube.com/watch?v=sRyy7-jEu3Q
6.7.2 The motor effect	<ul style="list-style-type: none"> -Describe how an electromagnet is made -Describe how to change the strength of the electromagnet 	230	https://www.bbc.co.uk/bitesize/guides/zg43y4j/revision/1 (just page 1)	https://www.youtube.com/watch?v=79_SF5AZtzo

Physics Paper 1 - F

Exam date: 23rd June

These specification points will **May be assessed in linked or low tariff questions.**

Spec point	CGP Revision Guide Pages
6.5.2 Work done and energy transfer	203
6.6.1 Waves in air, fluids and solids	218-221

Physics Paper 2 - F

Exam date: 23rd June

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

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