

SUBJECT: GCSE Combined Science FOUNDATION

EXAM BOARD: AQA

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

Exam Dates - https://filestore.aqa.org.uk/admin/t_table_pdf/AQA-TT-GCSE-JUN22-CONFIRMED.PDF

Week	Focus	Key Knowledge	Revision Guide	Web Links
21/2/22 Paper 1	4.1.2 Cell Division BIOLOGY	<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 	Revise - Pages 20-21 Practise – Page 21	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=RHyZVmbiA78 https://www.youtube.com/watch?v=Kh27eyjxvYM&t=24s
	5.1.2 The Periodic Table CHEMISTRY	<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 	Revise - Pages 88-89, Pages 92-93 Practise - Page 89, 93	https://www.bbc.co.uk/bitesize/guides/zwt2k2p/revision/1 https://www.bbc.co.uk/bitesize/guides/ztrxdxs/revision/1 https://www.youtube.com/watch?v=ldS9roW7IzM&t=119s https://www.youtube.com/watch?v=uwzXfZoCP_k https://www.youtube.com/watch?v=dZGDUKQa_6g https://www.youtube.com/watch?v=HT1zAPQIBAQ
	6.1.1 Energy changes in a system, and the ways energy is stored before and after such changes PHYSICS	<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 	Revise - Pages 170-172 Practise - Page 171	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=EDTODPhaaMY

Week	Focus	Key Knowledge	Revision Guide	Web Links
28/2/22 Paper 2	4.5.3 Hormonal Control in Humans BIOLOGY	<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) 	Revise - Pages 52-53 Practise - Page 63	https://www.bbc.co.uk/bitesize/guides/zq4mk2p/revision/1 https://www.youtube.com/watch?v=c60lhi88KZs https://www.youtube.com/watch?v=77oyUdNZ054
	5.6.1 Rate of Reaction Required Practical 11: Concentration and rate of reaction 5.6.2 Reversible reactions and dynamic equilibrium CHEMISTRY	<ul style="list-style-type: none"> - Calculating the rate of a reaction and describe collision theory - Define activation energy - Describe and explain the factors that increase the rate of reaction, including catalysts - Identify variables and describe how to measure the dependent variable - Analyse results and draw conclusions from graphed data - Identify and give examples of reversible reactions and define dynamic equilibrium 	Revise - Pages 124 Practise - Page 135 Revise - Pages 125 Practise - Page 135 Revise - Pages 126 Practise - Page 135	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 https://www.bbc.co.uk/bitesize/guides/zpkp7p3/revision/6 https://www.youtube.com/watch?v=N5p06i9ilmo https://www.youtube.com/watch?v=GI6LVI7oAlU https://www.bbc.co.uk/bitesize/guides/z32bpbk/revision/1 https://www.youtube.com/watch?v=66qcNNJFy6E
	6.5.1 Forces and their interactions PHYSICS	<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 	Revise - Pages 158-159, 170 Practise - Page 178	https://www.bbc.co.uk/bitesize/guides/zskn2nb/revision/1 https://www.bbc.co.uk/bitesize/guides/zcxcfw/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

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7/3/22 Paper 1	<p>Required practical 1: use of light microscope</p> <p>BIOLOGY</p>	<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 	<p>Revise - Pages 18-19</p> <p>Practise - Page 19, 34</p>	<p>https://www.bbc.co.uk/bitesize/guides/zpqqghv/revision/1</p> <p>https://www.youtube.com/watch?v=jBVxo5T-ZQM&t=8s</p>
	<p>5.2.2 How bonding and structure are related to the properties of a substance</p> <p>CHEMISTRY</p>	<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 	<p>Revise - Pages 94-95 (states of matter), 96-97 (ionic), 98-99 (covalent)</p> <p>Practise - Page 111-112</p>	<p>https://www.bbc.co.uk/bitesize/topics/z33rrwx</p> <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>
	<p>Required Practical 14: an investigation to determine the specific heat capacity of one or more materials.</p> <p>PHYSICS</p>	<ul style="list-style-type: none"> - Linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored 	<p>Revise - Pages 170-171</p> <p>Practise - Page 171</p>	<p>https://www.bbc.co.uk/bitesize/guides/zy8g3k7/revision/4</p> <p>https://www.youtube.com/watch?v=Hs5x0-IU2F4</p> <p>https://www.youtube.com/watch?v=loeRLKNeUsc</p>

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14/3/22 Paper 2	4.6.1 Reproduction BIOLOGY	<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, 	Revise - Pages 65-67 Practise - Page 84-85	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=ww1TQXBQ6wQ https://www.youtube.com/watch?v=zNEtVaNQ0s8 https://www.youtube.com/watch?v=mvWy5lbUoHA https://www.youtube.com/watch?v=sYPwWHszLDo
	5.7.1 Carbon compounds as fuels and feedstock CHEMISTRY	<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 	Revise - Pages 136-139 Practise - Page 154	https://www.bbc.co.uk/bitesize/guides/zxd4y4j/revision/1 https://www.youtube.com/watch?v=CX2IYWggEBc https://www.youtube.com/watch?v=3l7yCkSXPos https://www.youtube.com/watch?v=7AWwjKbRa_o
	6.5.4.1: Describing motion along a line PHYSICS	<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 	Revise - Pages 162-164 Practise – Page 179-180	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=b0VKlpetP9A https://www.youtube.com/watch?v=Kzx8GBTI5VM
21/2/22 Mock exam week				

Week	Focus	Key Knowledge	Revision Guide	Web Links
28/3/22 Paper 1	4.2.2 Animal tissues, organs and organ systems BIOLOGY	<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 	Revise - Pages 25-26, 28-31 Practise – Page 38	https://www.bbc.co.uk/bitesize/guides/z89mk2p/revision/1 https://www.bbc.co.uk/bitesize/guides/zsnscrd/revision/1 https://www.youtube.com/watch?v=4ui4oSHHzA https://www.youtube.com/watch?v=VLK2wANjQm0 https://www.youtube.com/watch?v=bpYaKM2hVFY
	5.2.3 Structure and bonding of carbon CHEMISTRY	<ul style="list-style-type: none"> - Describe and explain the properties of diamond, graphite, graphene and fullerenes 	Revise - Pages 99-100 Practise - Page 101	https://www.bbc.co.uk/bitesize/guides/zgq8b82/revision/2 https://www.youtube.com/watch?v=tGH0mXCcEFU
	6.1.3 National and global energy resources PHYSICS	<ul style="list-style-type: none"> - Describe renewable and non-renewable energy resource - Compare advantages and disadvantages of different energy resources 	Revise - Pages 173 Practise - Page 181	https://www.bbc.co.uk/bitesize/guides/z2wfxfr/revision/1 https://www.youtube.com/watch?v=1dJKvxhGEgA https://www.youtube.com/watch?v=pqzvUur7QRw

Week	Focus	Key Knowledge	Revision Guide	Web Links
4/4/22 Paper 1	<p>Required practical 3: test for carbohydrates, lipids and proteins</p> <p>BIOLOGY</p>	<ul style="list-style-type: none"> - Reagent and positive result for carbohydrates, proteins and lipids 	<p>Revise - Pages 26</p>	<p>https://www.bbc.co.uk/bitesize/guides/z89mk2p/revision/3</p> <p>https://www.youtube.com/watch?v=SqWTJWOBww4</p>
	<p>5.4.1 The Reactivity of Metals</p> <p>CHEMISTRY</p>	<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 	<p>Revise - Pages 114-115</p> <p>Practise – Page 132</p>	<p>https://www.bbc.co.uk/bitesize/guides/zy7dgdM/revision/1</p> <p>https://www.youtube.com/watch?v=Lk1V0buHEFs</p> <p>https://www.youtube.com/watch?v=2i5Lm7BMtpo</p> <p>https://www.youtube.com/watch?v=MXTSels6e2Y</p>
	<p>6.2.1 Current, potential difference and resistance</p> <p>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.</p> <p>PHYSICS</p>	<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 - 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 	<p>Revise – Pages 188-191</p> <p>Practise - Page 204</p> <p>Revise – Pages 188-191</p> <p>Practise - Page 204</p>	<p>https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/1</p> <p>https://www.youtube.com/watch?v=sFUmuuJjAcw</p> <p>https://www.youtube.com/watch?v=ts7WumFAaSg</p> <p>https://www.youtube.com/watch?v=hRojfU77c38</p> <p>https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/5</p> <p>https://www.youtube.com/watch?v=A1SyKvdHoqY&t=29s</p>

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