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Dear Parent/Carer(s),

Re: GCSE Triple Science Examination Requirements

As you are aware, because of the ongoing impacts of the Coronavirus (COVID-19) pandemic, some changes have been made to the Science GCSE that will be assessed in 2022.

To help students focus their exam preparation, the exam board (AQA) has released advance information on what content the exams will cover. The format/structure of the papers remains unchanged. However, for each exam paper AQA has released a list of topic areas that will be the major focus of the content of the exam. Each paper may cover some, or all, of the content in the listed topic. Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all the papers.

Topics not explicitly given in any list may appear in low tariff questions or via 'linked' questions. Linked questions are those that bring together knowledge, skills and understanding from across the specification. Students will still be expected to apply their knowledge to unfamiliar contexts.

With this new information in mind I have attached a copy of the topics that your child will be expected to know for each of their six science exam papers. The topic areas have been listed according to the chapters in their online Kerboodle textbooks.

We will discuss with the students how to best use this information but please also talk to your child about this and encourage them to use this information to focus their revision. They have access to the Year 11 Science Revision Google Classroom where we have posted revision resources for each exam paper. They also have access to their online textbooks via Kerboodle.

They have also been given an analysis of their PPE papers showing the areas they need to work on with Kerboodle textbook chapters so they have plenty to work on in their independent study time at home in the run up to the exams.

If you have any questions please feel free to contact me.

Yours sincerely,

Miss K Luckhurst
Key Stage 4 Science Coordinator



YEAR 11 TRIPLE Science - GCSE 2022 Exams

Below is a table to show the topics that AQA have identified to be the major focus in each of the six science TRIPLE exam papers this coming summer. Please make note of whether your child is sitting Higher or Foundation papers as the topics do differ. **Remember, if a topic is not listed it does not mean it won't be examined - it just means it won't be a major focus in that paper.**

HIGHER Paper	BIOLOGY Topics HIGHER	CHEMISTRY Topics HIGHER	PHYSICS Topics HIGHER
PAPER 1	B1: Cell structure	C2: The periodic table	P1: Energy changes and stores
	B1: Transport in cells	C3: Chemical bonds, ionic, covalent and metallic	P1: Conservation and dissipation of energy
	B3: Animal tissues, organs and organ systems	C3: How bonding and structure are related to the properties of substances	P2: Energy transfers
	B4: Plant tissues, organs and systems	C3: Structure and bonding of carbon	P6: Changes of state & particle model
	B5: Communicable diseases	C4: Use of amount of substance in relation to masses of pure substances	P6: Internal energy and energy transfers
	B6: Monoclonal antibodies	C5: Reactivity of metals	P2: Required Practical activity 2: Different materials as thermal insulators
	B1: Required practical activity 1: How a light microscope is used to observe plant cells.	C5: Reactions of acids	P6: Required Practical activity 5: Density of regular and irregular objects.
	B1: Required practical activity 3: Osmosis on potato	C6: Electrolysis	
	B3: Required practical activity 4: Food tests	C7: Exothermic and endothermic reactions	
		C5: Required practical activity 1: Preparation of a salt	
		C5: Required practical activity 2: Neutralisation by titration	
	C7: Required practical activity 4: Temperature changes		
PAPER 2	B10: The human nervous system	C8: Rates of reaction	P8: Forces and their interactions
	B11: Hormonal control in human	C8: Reversible reactions and dynamic equilibrium	P1.3 Work done and energy transfer
	B11: Plant hormones	C9: Carbon compounds as fuels and feedstock	P10: Forces and elasticity
	B13: Reproduction	C13: The composition and evolution of the Earth's atmosphere	P11: Pressure and pressure differences in fluids
	B17: Organisation of an ecosystem	C14: Using the Earth's resources and obtaining potable water	P9: Describing motion along a line
	B11: Required practical activity 8: Effect of light on the growth of newly germinated seedlings	C15: The Haber process and the use of NPK fertilisers	P10: Momentum
	B16: Required practical activity 9: Use of quadrats to measure a population size.	C8: Required practical activity 5: Rates of reaction methods	P12: Waves in air, fluids and solids
		C12: Required practical activity 7: Identifying the ions in unknown ionic compounds.	P16: Solar system, stability of orbital motions; satellites
			P16: Red-shift
		P14: Required practical activity 9: Reflection and refraction of light by different substances	

Foundation Paper	BIOLOGY Topics FOUNDATION	CHEMISTRY Topics FOUNDATION	PHYSICS Topics FOUNDATION
PAPER 1	B1: Cell structure	C1: A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes	P1: Energy changes and stores
	B1: Transport in cells	C2: The periodic table	P1: Conservation and dissipation of energy
	B3: Animal tissues, organs and organ systems	C3: Chemical bonds, ionic, covalent and metallic	P4: Current, Potential difference and resistance
	B5: Communicable diseases	C3: How bonding and structure are related to the properties of substances	P4: Static electricity
	B8: Photosynthesis	C3: Bulk and surface properties of matter including nanoparticles	P6: Changes of state & particle model
	B1: Required practical activity 1: How a light microscope is used to observe plant cells.	C5: Reactions of acids	P6: Internal energy and P2: energy transfer
	B1: Required practical activity 3: Osmosis on potato	C7: Exothermic and endothermic reactions	P7: Atoms and nuclear radiation
	B3: Required practical activity 4: Food tests	C5: Required practical activity 1: Preparation of a salt	P2: Required Practical activity 2: Different materials as thermal insulators
	B8: Required practical activity 6: Photosynthesis	C5: Required practical activity 2: Neutralisation by titration	P6: Required Practical activity 5: Density of regular and irregular objects.
		C7: Required practical activity 4: Temperature changes	
PAPER 2	B10: The human nervous system	C8: Rates of reaction	P8: Forces and their interactions
	B11: Hormonal control in human	C8: Reversible reactions and dynamic equilibrium	P1.3 Work done and energy transfer
	B11: Plant hormones	C9: Carbon compounds as fuels and feedstock	P9: Describing motion along a line
	B13: Reproduction	C12: Identification of ions by chemical and spectroscopic means	P12: Waves in air, fluids and solids
	B15: The development of understanding of genetics and evolution	C13: The composition and evolution of the Earth's atmosphere	P13: Electromagnetic waves
	B10: Required practical activity 7: carry out an investigation into human reaction times.	C14: Using the Earth's resources and obtaining potable water	P16: Solar system, stability of orbital motions; satellites
	B11: Required practical activity 8: Investigate the effect of light on the growth of newly germinated seedlings	C14: Life cycle assessment and recycling	P14: Required practical activity 9: Reflection and refraction of light by different substances
	B16: Required practical activity 9: Use of quadrats to measure a population size.	C15: The Haber process and the use of NPK fertilisers	
		C8: Required practical activity 5: Rates of reaction methods	
		C12: Required practical activity 6: Paper Chromatography and R _f values	
		C12: Required practical activity 7: Identifying the ions in unknown ionic compounds.	
		C14: Required practical activity 8: Analysis and purification of water samples	

SCIENCE REVISION RESOURCES:

- **Kerboodle online** – this is a school resource that allows access to online textbooks which contain exam questions and activities to help recap content. All students have been issued with a username and password as follows:
 - Username: first initial of first name followed by surname.
 - Password: same as username (need to change this once logged in)
 - Institution code: vp8
- **Year 11 Revision Google Classroom** this contains lots of revision resources for all three exams – Science Revision classroom code: **oznq76a**
- **CGP AQA NEW Grade 9-1 revision guide** – many students have these already, however these can be purchased online or in bookshops.
- **www.my-gcse-science.com/students/** - this offers a free package or the option to pay extra with a range of video tutorials on all topics covered.
- **www.senecalearning.com/students/** – video tutorials with questions.
- **www.revisionscience.com** – free access to past exam papers
- **BBC Bitesize GCSE Science** – this offers revision notes, tests and quizzes