



Headteacher
Debbie Smith B.Ed, NPQH

Sandhurst School

the opportunity to succeed

Owlsmoor Road, Owlsmoor, Sandhurst, Berkshire GU47 0SD

Tel: (01344)775678

Website: www.sandhurstschool.org.uk

E-mail: contactus@sandhurstschool.org.uk

11th March 2022

Dear Parent/Carer(s),

Re: GCSE Combined 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.

Students 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 of information to help them 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 COMBINED Science - GCSE 2022 Exams

Below is a table to show the topics that AQA has identified to be the major focus in each of the six science COMBINED 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.**

FOUNDATION paper topics include:

Foundation Paper	BIOLOGY Topics	CHEMISTRY Topics	PHYSICS Topics
PAPER 1	B2: Cell division	C2: The periodic table	P1: Energy changes in a system, and the ways energy is stored before and after such changes
	B3: Animal tissues, organs and organ systems	C3: How bonding and structure are related to the properties of substances	P3: National and global energy resources
	B5: Communicable diseases	C3: Structure and bonding of carbon	P4: Current, potential difference and resistance
	B8: Photosynthesis	C5: Reactivity of metals	P6: Changes of state and the particle model
	B1: Required practical activity 1: Use of a light microscope.	C5: Reactions of acids	P7: Atoms and nuclear radiation
	B3: Required practical activity 3: Food tests	C6: Electrolysis	P2: Required practical activity 14: Specific heat capacity
	B8: Required practical activity 5: Effect of light intensity on photosynthesis	C5: Required practical activity 8: Preparation of a pure, dry sample of a soluble salt.	P4: Required practical activity 16: Resistance in a wire
		C6: Required practical activity 9: Electrolysis	
		C7: Required practical activity 10: Temperature change	
PAPER 2	B11: Hormonal control in humans	C8: Rate of reaction	P8: Forces and their interactions
	B13: Reproduction	C8: Reversible reactions and dynamic equilibrium	P9: Describing motion along a line
	B16: Adaptations, interdependence and competition	C9: Carbon compounds as fuels and feedstock	P9: Forces, accelerations and Newton's Laws of motion
	B17: Organisation of an ecosystem	C12: Purity, formulations and chromatography	P10: Forces and braking
	B18: Required practical activity 7: Using quadrats to measure population size	C13: The composition and evolution of the Earth's atmosphere	P13: Electromagnetic waves
		C13: Common atmospheric pollutants and their sources	P15: Permanent and induced magnetism, magnetic forces and fields
		C14: Using the Earth's resources and obtaining potable water	P15: The motor effect
		C8: Required practical activity 11: Measuring rates of reactions	P13: Required practical activity 21: Absorption and emission of infrared radiation
		C12: Required practical activity 12: Chromatography with Rf value calculations	

HIGHER paper topics include:

HIGHER Paper	BIOLOGY Topics	CHEMISTRY Topics	PHYSICS Topics
PAPER 1	B2: Cell division	C3: How bonding and structure are related to the properties of substances	P1: Energy changes in a system, and the ways energy is stored before and after such changes
	B3: Animal tissues, organs and organ systems	C4: Use of amount of substance in relation to masses of pure substances	P2: Energy transfers
	B8: Photosynthesis	C5: Reactivity of metals	P6: Changes of state and the particle model
	B3: Required practical activity 4: Effect of pH on the rate of reaction of amylase enzyme.	C5: Reactions of acids	P6: Particle model and pressure
	B3: Required practical activity 3: Food tests	C6: Electrolysis	P7: Atoms and Isotopes
	B8: Required practical activity 5: Effect of light intensity on photosynthesis	C7: Exothermic and endothermic reactions	P7: Atoms and nuclear radiation
		C5: Required practical activity 8: Preparation of a pure, dry sample of a soluble salt.	P2: Required practical activity 14: Specific heat capacity
		C6: Required practical activity 9: Electrolysis	P4: Required practical activity 16: Resistance in a wire
		C7: Required practical activity 10: Temperature change	
PAPER 2	B11: Hormonal control in humans	C8: Rate of reaction	P8: Forces and their interactions
	B17: Organisation of an ecosystem	C8: Reversible reactions and dynamic equilibrium	P9: Describing motion along a line
	B18: Biodiversity and the effect of human interaction on an ecosystem	C9: Carbon compounds as fuels and feedstock	P10: Forces, accelerations and Newton's Laws of motion
	B18: Required practical activity 7: Using quadrats to measure population size	C12: Purity, formulations and chromatography	P10: Momentum
		C13: The composition and evolution of the Earth's atmosphere	P13: Electromagnetic waves
		C14: Using the Earth's resources and obtaining potable water	P15: The motor effect
		C8: Required practical activity 11: Rates of reaction methods	P13: Required practical activity 21: Absorption and emission of infrared radiation
		C12: Required practical activity 12: Chromatography with Rf values	

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