



# Year 10 Summer Support 2023-24

## SCIENCE (AQA Combined Science Trilogy Qualification)

| <b>Advice and support for all Year 10 students</b><br><b>Regular independent study will aid the recall of knowledge and enhance your skills to ensure targets are met next year</b>  | <b>Tick when complete</b> |
|--|---------------------------|
| <ul style="list-style-type: none"><li>• Print off revision checklists/audits– These summarise everything you need to learn</li><li>• Use GCSE Pod - Listen to the podcasts and complete the attached quizzes</li><li>• Download and practice past papers from the AQA website</li><li>• Complete exam questions in timed conditions at home</li><li>• Write a list of your strengths and weaknesses using the checklists on Teams</li><li>• Create a revision timetable that includes all units covered, ensure you allocate extra time for the areas you have identified as a weakness</li><li>• Use your exercise books and revision guide or the knowledge organisers to revise all units</li></ul> | <input type="checkbox"/>  |
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### Internet websites and apps for study support

AQA Website: Past papers, specification, equation sheet, periodic table

<https://filestore.aqa.org.uk/resources/science/AQA-8465-ES-INS-JUN24.PDF>

<https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464/assessment-resources>

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

<https://filestore.aqa.org.uk/resources/science/AQA-8462-8464-8465-INS-PT.PDF>

Other websites:

<http://reviseonline.pearson.com>

<http://kerboodle.com>

<http://Senecalearning.com>

<https://www.bbc.co.uk/bitesize/subjects/zrkw2hv>

[https://www.youtube.com/channel/UCqbOeHaAUXw9II7sBVG3\\_bw](https://www.youtube.com/channel/UCqbOeHaAUXw9II7sBVG3_bw)

<https://www.youtube.com/channel/UCBgvma18AR4QIK2e0EfJwaA>

<https://docbrown.info/index.htm>

<https://www.physicsandmathstutor.com/biology-revision/gcse-aqa/>

### Recommended textbooks:

Oxford Biology for GCSE Combined Science: Trilogy

Oxford Chemistry for GCSE Combined Science: Trilogy

Oxford Physics for GCSE Combined Science: Trilogy

*All books available through the Kerboodle platform*

### Books about science:

Fiction: 'The Martian' by Andy Weir, (also a very good film starring Matt Damon).

Non-fiction – 'A Short History of Nearly Everything' by Bill Bryson is a good place to start, although it is a long book, so maybe pick a dozen or so chapters that sound interesting.

| Study areas to practise or complete   | Where to find the information to revise                          | Tick when complete |
|---|--|--------------------|
| <b>Paper 1 Biology: Cell Biology; Organisation; Infection and Response; and Bioenergetics</b>   | Independent Learning Folder on Teams<br>All links attached above |                    |
| <ul style="list-style-type: none"> <li>- <u>Cell Biology</u>: different types of cells and their structures, cell differentiation and division, microscopy and three types of transport.</li> </ul>   |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Organisation</u>: structure of cells, tissues, organs and organ systems in humans; how lifestyle choices impact a person's health and the cells, tissues, organs and organ systems in plants.</li> </ul>        |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Infection and Response</u>: understanding of the transmission, symptoms, cures/treatments available for specific diseases and how the body protects itself; development and use of medicines.</li> </ul>        |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Bioenergetics</u>: photosynthesis; aerobic and anaerobic respiration.</li> </ul>  |  |                    |
| <b>Paper 1 Chemistry: Atomic Structure and the Periodic Table; Bonding, Structure, and the Properties of Matter; Quantitative Chemistry; Chemical Changes; and Energy Changes.</b>  | Independent Learning Folder on Teams<br>All links attached above |                    |
| <ul style="list-style-type: none"> <li>- <u>Atomic Structure and the Periodic Table</u>: the development of the periodic table; the elements and structure of atoms and ions; key features of groups 1, 7 and 0 elements.</li> </ul>                        |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Bonding, Structure, and the Properties of Matter</u>: ionic, covalent and metallic bonding; how bonding affects properties of the substance (e.g. boiling point and ability to conduct electricity).</li> </ul> |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Quantitative Chemistry</u>: Calculating relative formula mass, moles, concentration, balancing equations.</li> </ul>  |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Chemical Changes</u>: Reactivity series and extracting metals; reactions of acids and pH scale; electrolysis.</li> </ul>  |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Energy Changes</u>: exothermic and endothermic reactions.</li> </ul>  |  |                    |
| <b>Paper 1 Physics: Energy; Electricity; Particle Model of Matter; and Atomic Structure.</b>  | Independent Learning Folder on Teams<br>All links attached above |                    |
| <ul style="list-style-type: none"> <li>- <u>Energy</u>: Different stores of energy and how energy is transferred, calculating values for the various energy stores and providing arguments for and against energy resources.</li> </ul>                     |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Electricity</u>: symbols and drawing circuits, calculating charge, current, potential difference, resistance, power; national grid, hazards and plugs.</li> </ul>   |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Particle Model of Matter</u>: Changes of state, density, specific heat capacity and specific latent heat, how particles behave.</li> </ul>  |  |                    |
| <ul style="list-style-type: none"> <li>- <u>Atomic Structure</u>: Structure of atoms and isotopes; development of the atom; radiation.</li> </ul>   |  |                    |

| Key skills to practise   | Where to find support on how to practise   | Tick when complete |
|--|--|--------------------|
| Ensure you learn the first 20 elements of the Periodic Table by rote, along with their symbols       | The Periodic Table found in your science book or online  |                    |
| Ensure you are learning the physics equations and can comfortably apply and rearrange the equations. | The equation sheet (link provided in section above)  |                    |
| I can compare advantages and disadvantages on a given topic  | Independent learning folder on Teams: practise questions   |                    |
| I can write a clear judgement based on advantages and disadvantages of a given topic                 | Independent learning folder on Teams: practise questions   |                    |
| Familiarise yourself with the required practicals for each of the sciences                           | YouTube Videos (links provided in section above)<br>Exercise book and independent learning folder on Teams |                    |