

19<sup>th</sup> January 2026

Dear Parent / Carer,

## Science GCSE Mock Exam Preparation

Your child is currently studying towards their Science GCSEs. In order to prepare them for these exams, they will complete a Paper 2 mock exam in Biology, Chemistry and Physics. The mock exams will take place in the weeks beginning 23rd February and 2nd March.

The topics students will need to revise include:

**Biology:** Homeostasis and response, Inheritance, Variation and Evolution, Ecology

**Chemistry:** Rate and extent of chemical change, Organic Chemistry, Chemical analysis, Chemistry of the atmosphere, Using resources.

**Physics:** Forces, Waves, Magnetism and Electromagnetism, Space Physics.

Thorough preparation for these is vital for students to achieve well and in order for us to pinpoint genuine areas of weakness to work on over the weeks before the final exams. If students prepare fully, it is likely to put them in a significantly better position for the exams they will sit in the summer.

At the end of this letter is a list of things students need to revise broken down and starting next week so they are able to revise everything before the mock exams begin. There is also a list of exam tips to help them to achieve success.

It is highly recommended that students use a revision guide alongside their class notes when revising. If they are unsure, students should ask their class teacher which revision guide is suitable for them. I have also included details of the Meridian Trust Science Masterclasses which will support students in the run up to the exams. The key dates are as follows:

<b>Date</b>	<b>Masterclass Theme</b>	<b>Registration link- must be logged into school email to register</b>
26/1/26	Preparing for Paper 2 <b>Biology</b> (including required practicals)	<a href="https://events.teams.microsoft.com/event/cab08da1-9fac-49d3-b40c-1f8ef5877662@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e">https://events.teams.microsoft.com/event/cab08da1-9fac-49d3-b40c-1f8ef5877662@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e</a>
29/1/26	<b>Chemistry</b> Paper 2 – Maths skills and required practicals	<a href="https://events.teams.microsoft.com/event/d66bfc14-b465-419b-a181-d0832ef29be6@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e">https://events.teams.microsoft.com/event/d66bfc14-b465-419b-a181-d0832ef29be6@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e</a>
2/2/26	Preparing for Paper 2 <b>Chemistry</b>	<a href="https://events.teams.microsoft.com/event/a5059d00-59e7-4328-a7a2-2fdaa81df95a@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e">https://events.teams.microsoft.com/event/a5059d00-59e7-4328-a7a2-2fdaa81df95a@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e</a>
9/2/26	Preparing for Paper 2 <b>Physics</b> (including required practicals)	<a href="https://events.teams.microsoft.com/event/554cada1-72b9-4943-8cd9-f59c4149f694@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e">https://events.teams.microsoft.com/event/554cada1-72b9-4943-8cd9-f59c4149f694@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e</a>
11/2/26	Tackling challenging calculation questions in Physics paper 2	<a href="https://events.teams.microsoft.com/event/4c1221c0-0bec-4507-9f36-f4da98fec1e0@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e">https://events.teams.microsoft.com/event/4c1221c0-0bec-4507-9f36-f4da98fec1e0@e1d9b829-9816-4c54-9d9c-ade2d8e3aa6e</a>



Principal: Simon Warburton



Downham Road, Ely, Cambridgeshire, CB6 2SH

t: 01353 667763

e: [office@elycollege.co.uk](mailto:office@elycollege.co.uk)

w: [www.elycollege.com](http://www.elycollege.com)

This information, along with revision resources, can also be found on the science revision page: [Home](#)

Kindest Regards,

Rebecca Moore  
Curriculum Leader Science



<b>Week Beginning</b>	<b>Biology topics to revise (tick when complete!)</b>
26 <sup>th</sup> January	<ul style="list-style-type: none"> <li>○ Homeostasis</li> <li>○ The nervous system</li> <li>○ Synapses and reflexes</li> <li>○ REQUIRED PRACTICAL – investigating reaction time</li> <li>○ The brain</li> <li>○ The eye</li> <li>○ Correcting vision defects</li> <li>○ Controlling body temperature</li> <li>○ The endocrine system</li> <li>○ Controlling blood glucose</li> <li>○ The kidneys</li> <li>○ Kidney failure</li> </ul>
2 <sup>nd</sup> February	<ul style="list-style-type: none"> <li>○ Puberty and the menstrual cycle</li> <li>○ Controlling fertility</li> <li>○ Adrenaline and thyroxine (HT only)</li> <li>○ Plant Hormones</li> <li>○ Uses of plant hormones (HT only)</li> <li>○ REQUIRED PRACTICAL – germination</li> <li>○ DNA and the Genome</li> <li>○ The structure of DNA</li> <li>○ Protein synthesis (HT only)</li> <li>○ Mutations (HT only)</li> <li>○ Reproduction</li> <li>○ Meiosis</li> <li>○ X and Y chromosomes</li> <li>○ Genetic diagrams and inherited disorders</li> <li>○ The work of Mendel</li> </ul>
9 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Variation</li> <li>○ Evolution</li> <li>○ Selective breeding and genetic engineering</li> <li>○ Cloning</li> <li>○ Fossils</li> <li>○ Extinction</li> <li>○ Speciation</li> </ul>

	<ul style="list-style-type: none"> <li>○ Antibiotic resistant bacteria</li> <li>○ Classification</li> <li>○ Competition</li> <li>○ Abiotic and biotic factors</li> <li>○ Adaptations</li> <li>○ Food Chains</li> <li>○ Using quadrats and transects</li> <li>○ REQUIRED PRACTICAL – Sampling</li> </ul>
16 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Environmental change (HT only)</li> <li>○ The carbon cycle</li> <li>○ Decay</li> <li>○ REQUIRED PRACTICAL – Decay</li> <li>○ Biodiversity and waste management</li> <li>○ Global warming</li> <li>○ Deforestation and Land Use</li> <li>○ Maintaining Ecosystems and biodiversity</li> <li>○ Trophic levels</li> <li>○ Pyramids of biomass</li> <li>○ Biomass transfer</li> </ul>

<b>Week Beginning</b>	<b>Physics topics to revise (tick when complete!)</b>
26 <sup>th</sup> January	<ul style="list-style-type: none"> <li>○ Contact and non-contact forces</li> <li>○ Weight, mass and gravity</li> <li>○ Resultant forces and work done</li> <li>○ Calculating forces</li> <li>○ Forces and elasticity</li> <li>○ Moments</li> <li>○ Upthrust and atmospheric pressure</li> <li>○ REQUIRED PRACTICAL - Investigating Springs</li> <li>○ Distances, displacement, speed and velocity</li> <li>○ Acceleration</li> <li>○ Distance-time and velocity-time graphs</li> <li>○ Newton's first, second and third laws</li> <li>○ Inertia and Newton's third law</li> <li>○ REQUIRED PRACTICAL - acceleration</li> </ul>
2 <sup>nd</sup> February	<ul style="list-style-type: none"> <li>○ Stopping distances</li> <li>○ Reaction times</li> <li>○ Momentum (HT only)</li> <li>○ Transverse and longitudinal waves</li> <li>○ REQUIRED PRACTICAL – Wave speed Ripple tank</li> <li>○ Electromagnetic waves and refraction</li> <li>○ REQUIRED PRACTICAL – Light (reflection and refraction)</li> <li>○ Radio waves</li> <li>○ EM waves and their uses</li> <li>○ Dangers of EM waves</li> <li>○ Lenses</li> </ul>
9 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Images and Ray Diagrams</li> <li>○ Concave lenses and magnification</li> <li>○ Visible light</li> <li>○ Infrared radiation and temperature</li> </ul>

	<ul style="list-style-type: none"> <li>○ Black body radiation</li> <li>○ Sound waves</li> <li>○ Ultrasound (HT only)</li> <li>○ Exploring structures using waves (HT only)</li> <li>○ Permanent and induced magnets</li> <li>○ Electromagnetism</li> <li>○ The motor effect (HT only)</li> </ul>
16 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Electric motors (HT only)</li> <li>○ Loudspeakers (HT only)</li> <li>○ The generator effect (HT only)</li> <li>○ Generators and microphones (HT only)</li> <li>○ Transformers (HT only)</li> <li>○ The life cycle of stars</li> <li>○ The solar system and orbits</li> <li>○ Red-shift and the big bang</li> </ul>

<b>Week Beginning</b>	<b>Chemistry topics to revise (tick when complete!)</b>
26 <sup>th</sup> January	<ul style="list-style-type: none"> <li>○ Rates of reaction</li> <li>○ Factors affecting rates of reaction</li> <li>○ Measuring rates of reaction</li> <li>○ REQUIRED PRACTICAL – measuring rate of reaction (two practicals)</li> <li>○ Finding reaction rates from graphs</li> <li>○ Reversible reactions</li> <li>○ Le Chatelier's Principle (HT only)</li> </ul>
2 <sup>nd</sup> February	<ul style="list-style-type: none"> <li>○ Hydrocarbons</li> <li>○ Fractional distillation</li> <li>○ Uses and cracking of crude oil</li> <li>○ Alkenes</li> <li>○ Reactions of alkenes</li> <li>○ Addition polymers</li> <li>○ Alcohols</li> <li>○ Carboxylic acids</li> <li>○ Condensation polymerisation (HT only)</li> <li>○ Naturally occurring polymers</li> </ul>
9 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Purity and formulations</li> <li>○ Chromatography</li> <li>○ Tests for gases</li> <li>○ Tests for anions and cations</li> <li>○ REQUIRED PRACTICAL – testing for ions</li> <li>○ Flame emission spectroscopy</li> <li>○ Evolution of the atmosphere</li> <li>○ Greenhouse gases and climate change</li> <li>○ Air pollution</li> </ul>
16 <sup>th</sup> February	<ul style="list-style-type: none"> <li>○ Ceramics, composites and polymers</li> <li>○ Re-use and recycling</li> <li>○ Life cycle assessments</li> <li>○ Potable water</li> </ul>

	<ul style="list-style-type: none"><li>○ REQUIRED PRACTICAL – how to test and distil sea water</li><li>○ Waste water treatment</li><li>○ The Haber process</li><li>○ NPK Fertilisers</li></ul>
--	---

### Tips for success in the mock exams and beyond

1. Start your revision early – this will mean you have enough time to revise everything.
2. If you are unsure of something, find your teacher in advance so that they can help you.
3. Use a revision guide and the resources on the science revision page: [Home](#)
4. Practice applying your knowledge to questions – use the CGP workbooks and/or practice exam questions which you can find on the AQA website.
5. Sign up and use this website as an extra (don't use it to replace all your revision though!): <https://www.senecalearning.com/>
6. Preparation is key – if you prepare fully, the feedback you get after it will be more relevant to you and will help you to pinpoint actual areas of weakness rather than areas you just didn't revise fully.