

Dear Parent or Carer,

Please find below important information regarding your child's GCSEs in Science.

The key message from us is that in order to be successful in Science, students should follow the '20-minute rule'. They should spend 20 minutes every evening making notes on GCSE Pod using the template we provide or practicing their Knowledge Organisers. This is checked regularly by their teachers to ensure that students are revising consistently and efficiently ahead of their exams.

Please take the time to read through this guide with your child and help to ensure they are making use of the resources we are providing in order to support their progress toward a strong grade in Science.

What is included in GCSE Science?

- Students are entered for Edexcel Combined Science or separate Science GCSEs (referred to as Triple Science).
- They will receive 2 GCSEs from Combined Science and 3 GCSEs from Triple Science.
- The specifications can be found here:
 - Combined Science
<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences-2016.html>
 - Biology (Triple Science)
<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences-2016.html#tab-Biology>
 - Chemistry (Triple Science)
<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences-2016.html#tab-Chemistry>
 - Physics (Triple Science)
<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/sciences-2016.html#tab-Physics>

The specifications explain the key areas students need to cover in their revision. There is no coursework, but as part of their GCSE they will cover 'core practicals' which they will also be tested on in the exams.

They will sit six exams (two in Biology, two in Chemistry and two in Physics) in May and June 2021. Combined Science exams are 70 minutes and Triple Science exams are 105 minutes.

Exam dates, as it stands for now (it has recently been announced that the Summer exams will be delayed by at least three weeks), are as follows (the dates are the same for Combined and Triple Science):

Exam	Original proposed date	New date
Biology 1 exam	19th May 2021	To be confirmed
Chemistry 1 exam	24th May 2021	
Physics 1 exam	27th May 2021	
Biology 2 exam	14th June 2021	
Chemistry 2 exam	17th June 2021	
Physics 2 exam	22nd June 2021	

Below are the recommended revision resources that students should own and be using when studying for their Science GCSEs throughout the year. These can be bought directly from the school at a significantly discounted price in comparison to the recommended retail price (RRP) offered in the shops.

Revision resources available for Combined Science

Revision guides for Combined Science (£5 if bought through school)

- GCSE Combined Science: Edexcel Revision Guide with Online Edition - Foundation
- GCSE Combined Science: Edexcel Revision Guide with Online Edition - Higher



Revision question cards for Combined Science (£3 each if bought through school)

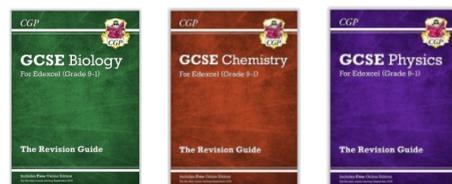
- GCSE Combined Science: Biology Edexcel Revision Question Cards
- GCSE Combined Science: Chemistry Edexcel Revision Question Cards
- GCSE Combined Science: Physics Edexcel Revision Question Cards



Revision resources available for Triple Science

Revision guides for Triple Science (£5 if bought through school)

- GCSE Biology: Edexcel Revision Guide with Online Edition
- GCSE Chemistry: Edexcel Revision Guide with Online Edition
- GCSE Physics: Edexcel Revision Guide with Online Edition



Revision question cards for Triple Science (£3 each if bought through school)

- 9-1 GCSE Biology Edexcel Revision Question Cards
- 9-1 GCSE Chemistry Edexcel Revision Question Cards
- 9-1 GCSE Physics Edexcel Revision Question Cards



How should students revise for Science?

We are advocating a **minimum of 20 minutes of Science per day**. Between now and the first Science exam this will equate to over 80 hours of revision!

This time should be spent wisely. Students should not exclusively be reading or copying out of a revision guide as this is not helpful to them.

In each 20 minute slot they should be completing one of the following activities:

- **Using their revision guides and knowledge organisers to 'look, cover, write, check'**. This ensures students are actively spending time memorising and mastering their knowledge in each area.
- **Revisiting key information by watching videos on GCSEPod** (<https://www.gcsepod.com/>). They should make notes using the GCSE Pod template on the right (this can be copied into their book). This ensures they are organising their notes in a useful way for revision.

Keywords	
Notes	
Useful diagrams	
Questions to check with teacher	

- **Completing revision activities on ActiveLearn** (www.pearsonactivelearn.com). Login details are on ShowMyHomework.
- Once knowledge has been mastered, **practicing exam questions and going through the mark scheme** making corrections. Exam questions organised by topic have been uploaded to Google Classroom.

Students should use the quizzes and pods that have been specially designed to ensure that they revisit knowledge and learning from Year 10 and Year 11 topics. Consistent use will help to build their memory and understanding. Follow the schedule on the next page to ensure that all topics have been successfully covered in time for the start of the Science GCSE exams.

The following schedule is a useful framework for weekly revision:

Monday: Watch GCSE Pods on Year 10 topics

Tuesday: Use notes and revision guide to make notes on these topics

Wednesday: Complete ActiveLearn tasks on these topics

Thursday: Watch GCSE Pods on Year 11 topics

Friday: Use notes and revision guide to make notes on these topics

Saturday: Complete ActiveLearn tasks on these topics

Sunday: Try exam questions downloaded from their Science Google Classroom

Week	Year 10 topics to revise this week	Week	Year 11 topics to revise this week
1	Bio: Microscopes, cells Chem: States of matter Phys: Vectors, scalars	13	Bio: Photosynthesis Chem: Isotopes Phys: Work and power <i>[Triple only - gravity and orbits]</i>
2	Bio: Enzymes, transporting substances Chem: Separation techniques Phys: Distance-time and velocity-time graphs <i>[Triple only - factors affecting diffusion]</i>	14	Bio: Plants absorbing water and minerals Chem: Electronic configuration Phys: Circuits and resistance <i>[Triple only - plant adaptations, static electricity]</i>
3	Bio: Mitosis and growth Chem: Purifying water Phys: Acceleration, velocity calculations	15	Bio: Transpiration and translocation Chem: Metallic bonding and properties Phys: Electrical power and safety <i>[Triple only - alloys]</i>
4	Bio: Nervous system Chem: Atomic structure Phys: Resultant forces, mass and weight	16	Bio: Hormones and menstrual cycle Chem: Empirical formulae Phys: Magnets and magnetic fields <i>[Triple only - plant hormones, electric fields]</i>
5	Bio: Meiosis and DNA Chem: Periodic table Phys: Newton's 3 laws <i>[Triple only - transition metals]</i>	17	Bio: Hormones and blood glucose Chem: Ores Phys: Transformers <i>[Triple only - osmoregulation]</i>

6	Bio: Alleles, inheritance, mutation Chem: Ionic and covalent bonding Phys: Stopping distances and crash hazards <i>[Triple only - tests for ions]</i>	18	Bio: Diabetes Chem: Life cycle assessment and recycling Phys: Density <i>[Triple only - kidneys & thermoregulation, solar system]</i>
7	Bio: Evolution and classification Chem: Ionic and covalent substances Phys: Energy stores and efficiency <i>[Triple only - nanoparticles]</i>	19	Bio: Transport and exchange Chem: Dynamic equilibrium Phys: Specific heat capacity <i>[Triple only - haber process, origin of the universe, d ift]</i>
8	Bio: Natural selection and GM Chem: Acids and alkalis Phys: Renewable and non-renewable resources <i>[Triple only - seismic waves, ultrasound]</i>	20	Bio: Circulatory system and heart Chem: Groups 1, 7 and 0 Phys: Specific latent heat <i>[Triple only - life cycle of stars]</i>
9	Bio: Communicable disease Chem: Calculations involving masses Phys: Waves and refraction <i>[Triple only - concentration, titration, lenses]</i>	21	Bio: Blood and respiration Chem: Factors affecting rate of reaction Phys: Hooke's Law calculations <i>[Triple only - decomposition, gas pressure]</i>
10	Bio: Non-communicable disease Chem: Electrolysis Phys: The EM spectrum <i>[Triple only - electroplating, radiation & temperature]</i>	22	Bio: Biotic and abiotic factors, biodiversity Chem: Catalysts, exothermic/endothermic reactions Phys: Equation revision <i>[triple only - energy transfer in food chains, fluid Tressure]</i>
11	Bio: Immune system Chem: Reactivity Phys: Radioactivity and half-life <i>[triple only - fission/fusion, radioactivity in medicine]</i>	23	Bio: Parasitism and mutualism Chem: Hydrocarbons and crude oil Phys: Equation revision <i>[Triple only - food security, polymers, alkanes]</i>
12	Bio: Biology core practicals Chem: Chemistry core practicals Phys: Physics core practicals	24	Bio: Water, carbon and nitrogen cycles Chem: Earth's atmosphere Phys: Equation revision <i>[Triple only - assessing pollution]</i>

What other resources are available to support revision?

- All students have logins to GCSEPod and ActiveLearn.
 - GCSEPod consists of short videos summarising every topic.
 - ActiveLearn has activities based on every topic and provides access to an online version of the GCSE textbook.
 - If students have problems accessing either site, they must speak to their science teacher.
- Revision guides are available from the Science Office and at Parents' Evenings.
- BBC Bitesize is an excellent resource for general revision of topics.
(<https://www.bbc.co.uk/bitesize/examspecs/zqkww6f>)
- Electronic versions of resources have been uploaded to Google Classroom:
 - Online knowledge organisers
 - Exam questions listed by topic



Note:- students DO NOT need to log on to access ShowMyHomework. Just click the “quick links” tab on the Beacon High website.

Higher or Foundation Tier?

Your child’s teacher will enter their students at either Foundation or Higher Tier, in agreement with the Head of Science - Mr. James Hayward. On the Higher Tier it is possible to get Grade 4 (a low C-grade) to Grade 9 and on the Foundation Tier it is possible to get a Grade 1 to Grade 5 (a high C-grade). However, students who score lower than a Grade 4 on Higher Tier will not receive a GCSE grade, so the decision to enter a student for Higher Tier is made very carefully. Students consistently scoring a Grade 5 and above in mock exams and in-class tests are considered for entry at Higher Tier level.

We hope that you have found this useful.

If you have any more questions please do not hesitate to ask the Science Team.

Head of Science - Mr. James Hayward

KS4 Coordinator for Science - Mr. Colin McAndrew