Science Faculty – Spring term communications – Year 2

Dear Parent/Carer,

Happy New Year! We have now entered the year in which your child will be completing their examinations and final deadlines. This term, many subjects will conclude the delivery of their content and begin focused revision. Students will take part in mock exams and other past paper assessments (where applicable) to help them prepare for their upcoming exams.

Each subject in the faculty has provided an update on what students will be studying and what they can expect this term. We are grateful for your continued support as we work together to ensure your child's success. To view the updates for their relevant subjects, please click on the hyperlinks below.

Product Design
Applied Science (BTEC)
Biology
Chemistry
Economics
Electronics
Engineering (BTEC)
Environmental Science
Geology
Maths – single A-level
Maths – double A-level
Maths – GCSE
Maths – Core Maths
Maths – FMAS
Physics
Psychology

Kind regards

Hannah Page

Director of Faculty – Science

3D Design	Back
This term in 3D Design students will complete their personal investigation coursework. This is 60% of their overall grade. These have now been finished, and no more changes can be made. Our focus now shifts onto the exam prep, which is the other 40% of their grade. The exam themes are released on 2/2. At which point students will select a theme and start to research and plan for their exam	
This term students may notice stress for students at this stage can be quite high as the run up to exams across all subjects starts. We have from 2/2 to 5/5 to do the exam prep. This prep can be taken into the exam with the students when they complete their 15 hours over two days. The more prep they do the better the exam will go, and will also count towards the final mark for the exam. It is worth noting that a good exam can help bring their coursework grade up, and on the flip side a poor exam will drag their grade down so it is important to stay focused and motivated during this time.	
Independent study this term: continuing with exam prep outside of lesson time	
Pro-study this term: practicing any skills you would like to include in your exam	
Next assessment(s): the exam prep will be assessed every two weeks	
Further information: Workshop timetable: Tuesday and Thursday Lunchtimes.	**Other reminders:**

Applied Science BTEC	Back
This term in Applied Science: This term, we will shift focus from assignments to the content for the Unit 3 exam, which is centered on practical skills. As this unit accounts for 33% of their final grade, it has the potential to significantly impact their overall outcomes.	
This term students may notice : that there is a need to focus on improving their evaluation skills and exam techniques, as well as refining their ability to draw tables and graphs. These skills can be enhanced through consistent practice, making the completion of the homework tasks essential. Additionally, they will revisit key practicals, many of which will be familiar from GCSE. Mastering the recall of these practicals is crucial for success in this exam unit.	
Independent study this term: All tasks are set on Teams and will focus on preparing students for the Unit 3 exam. These could include past paper questions, or worksheets to practice key skills.	
Pro-study this term: Students will need to work on their recall of key practicals and terms. There is a Unit 3 Teams site with a variety of resources for them to access.	
Next assessment(s): Unit 3 Mock exam will be held before Easter.	
Further information: Workshop timetable: Workshops will be held on Monday lunch time. These are open to all	**Other reminders:** Students need a file for their work, a calculator and other stationery items like a pen, pencil and ruler. These need to be bought into every lesson. **Phones are not a substitute for a calculator**.

students as a drop-in but are compulsory for students currently on an Action Plan.	

Biology	Back
This term in Biology we move onto the final module - 6. This will include the following topics: Cellular control. Patterns of inheritance. Manipulating genomes. Cloning and biotechnology.	
This term students may notice: That the topics covered in this module are more challenging, as they will encounter new concepts and unfamiliar content. Additionally, students will be required to research and design an experiment as part of the practical endorsement. As a result, it is essential that students learn to take swift action if they encounter any uncertainties in class. They are encouraged to proactively seek support from available resources, such as their teachers, SharePoint, peer mentoring, and workshops. Mastery of key terminology remains crucial to their success, so students will need to focus on learning the specific terms related to each topic.	
Independent study this term: Students are provided with a study guide and PPQs for each topic. The expectation is that students complete, and self-mark all the PPQ questions and relevant sections of the study guide before the end of topic test. Mark schemes are available on the Biology SharePoint site. We will also provide revision materials to help students prepare for the exams. Support is available during drop-in workshops, and students are expected to seek help as and when required. In addition to the study guide packs, PPQs, PPTs and revision materials on SharePoint, we have a wealth of online resources, these can all be accessed via the biology SharePoint site.	
Pro-study this term: Pro-study tasks are designed to support and extend students' understanding of the content covered in lessons. Suggested activities and study schedule can be found on the Biology SharePoint site. Some weeks teachers will set specific tasks for students to complete. Pro-study should be uploaded to Teams by the deadline. Teams' assignments will not allow late hand-ins, and we will not check late work. We expect students to complete a minimum of 5 hours of independent study per week.	
Next assessment(s): Students will sit a topic test on photosynthesis and respiration week beginning 19/1/26, then regular assessments approximately every three weeks. Contingency exams take place week beginning 9/2/26	

Students will receive advance notice of upcoming tests, usually through announcements on Teams, so they should make sure they have notifications for that switched on. Test dates can also be found on the scheme of work document.

Further information:	**Other reminders:**
Workshop timetable: Biology workshops run on Wednesday and Thursday lunchtimes in S207.	21/1- Biology Olympiad 2/2- Anatomy experience 11/3 -Trip to Portsmouth University

Chemistry	Back
This term in Chemistry we will be looking at our 6th and final module which concentrates on organic Chemistry. This develops their understanding from module 4 in Year 1. Their knowledge is developing so that they can now answer questions in paper 3 of the OCR exams. Again, students need to continually revise previous material.	
This term students may find organic Chemistry challenging as it would have been nearly a year since they first studied organic chemistry. We do, however, revise Year 1 organic Chemistry to support the students at this time. As always support is available to all students through their tutor, teacher, TEAMS, SharePoint, workshops and the study support and wellbeing teams.	
Independent study this term: As always students are given past paper questions (PPQs) for all topics we study, and these prepare them well for any tests or exams, internal or external. Our expectation is still that students attempt all questions in all sections of the PPQs and ask for clarification if anything is unclear. PPQs have 3 sections. Section A is current material and completed by the student before Section B, which is also current and either marked by the teacher or peer marked. Section C is synoptic and again is completed and marked by the student prior to section B. All answers can be found on SharePoint. Papers will also be coming in regularly now.	
Pro-study this term: Pro study for the week can be found on the 2A SharePoint page. Again, the remaining time should be spent going through past PPQs and end of topic tests they may not have done so well in and spend more time on revision of past topics. The expectation is still that students spend 6 hours of study in total outside of the classroom.	
Next assessments:	
Further information: Year 2 Workshops: Tuesday lunchtimes 1.20pm-2.00pm Revision Wednesday lunchtimes 1.20pm-2.00pm Current material Wednesday 3.15pm-4.15pm Revision Tuesday 12.20-1.20pm Revision	**Other reminders:**

Economics	Back

This term in Economics

- This term we will be completing the input for the syllabus material. This is likely to be in late Feb/early March. This will include the following areas:
- **Microeconomics:** Labour markets, distribution of income and government intervention.
- **Macroeconomics:** Trade and exchange rate systems, development economics.

- We will be focusing much more on essay writing as this will make up the majority of the marks available for students in their final exams.
- There will be a mock exam sat under external examination conditions. The format of the paper will be the same as the external exams 7136/1 (Microeconomics) and 7136/2 (Macroeconomics), but due to time constraints the mock paper will contain elements of both Micro **and** Macro. Examples of these papers can be found by following the links.
- **It is imperative that students prepare as fully as possible to gain maximum benefit from this mock.**
- Following the completion of the taught syllabus, we will commence revision and preparation for the final synoptic paper (7136/3). Most of the questions in this paper will already be familiar to the students, but again the link will give examples of past papers.

This term students may notice:

- They will be expected to have commenced independent revision and should know material that has been studied throughout the course.
- They will be linking syllabus areas together more frequently than before.
- They will get group and individual opportunities to receive feedback on essay writing skills. Our expectations are that they will rewrite sections of essays using this feedback to make rapid improvements.

Independent study this term:

- Students will be expected to be revising for their final examinations. There is a schedule and revision resources on the Economics SharePoint page.
- In preparation for lessons students should watch the – EzyEconomics videos and upload evidence to Teams.
- Revision will be in addition to their normal preparation for lessons and homework questions to upload to Teams.

Next assessment(s):
Mock exam 13 February

Further information:	**Other reminders:**
Workshop timetable: Tuesday, Thursday and Friday in G102	Students should bring correct resources to every lesson and arrive to lessons ready to focus and learn. Students are asked to check that they have made the £10 contribution to their EzyEconomics subscription.

Electronics	Back
This term in Electronics: This term's focus will be on covering topics included in their paper 2. They also will start working on their design project worth 15% of the final grade. They have all except 4 learners returned their PIC project coursework worth 5%. Grading is in progress. On 10 Feb 2026 learners will sit their Mock test.	
This term students may notice For their Design Projects, learners are expected to submit their progress in each task according to a set schedule. The final report will consist of a collation of each task.	
Independent study this term: Carry on their weekly flip learning and focus on solving exam-type questions from their Winter and Spring problem sets.	
Pro-study this term: Revise topics covered in AS and go through problems from their Summer, Winter and Spring problem sets.	
Next assessment(s): Monthly tests (January, February), bi-weekly mini-tests and speed tests (1 minutes per mark)	
Further information: Workshop timetable: Workshop timetable to be confirmed.	**Other reminders:** Attend workshops, Take flip learning seriously, and revise for their Mock and monthly tests.

Engineering BTEC	Back
This term in Engineering This terms students will sit their major exams in unit 1 and unit 3 (2nd week in January). After the examinations students will start Unit 10, Computer Aided Design in Engineering. This unit is internally assessed by 3 assignments. One assignment is on 2D design and the second and third on 3D design. After the completion of this unit in May students may retake units 1 and 3	
This term, students may notice that After the initial pressure of exams, students will gain considerable skills in using industrial packages such as AutoCAD, Fusion 360. Gain skills that are vital to the workplace. The focus will be time management, and a quick pace of gaining new skills.	
Independent study this term: Completing assignment 1 – CAD 2D design	
Pro-study this term: Completing assignment 1 – CAD 2D design	
Next assessment(s): Assignment 1 – CAD 2D design (20th February 2026)	
Further information: Workshop Timetable: TBC, this will be found on the Student SharePoint.	**Other reminders:** Industrial exhibition to the southern manufacturing show 5th February 2026

Environmental Science	Back
This term in Environmental Science: we will move on to the Biological Resources Module that includes units on Agriculture, Fishing and Forestry. We also aim to cover the Sustainability and Circular Economy aspects. There are several 'Kirsty Brown' talks that relate directly to the course, and guest speakers that are experts on the 'Circular Economy' come in to teach that aspect.	
This term students may notice that there will be more links back to the Biological Environment first year topics and more synoptic aspects towards the end of the term. There will also be some focus on exams.	
Independent study this term: Homework tasks will be to complete relevant past paper questions and the revision schedule for the final exams will begin later in the term.	
Pro-study this term: Pro study tasks will be related to lesson content and the schedule is on SharePoint.	
Next assessment(s): There will be an assessment on Pollution towards the start of the term	
Further information: Workshop timetable: Monday: 12.15 – 2.05, Friday: 9.45 – 10.50 in J201	**Other reminders:** Check the 'Kirsty Brown' schedule for talks on plastic pollution and carbon storage in peat

Geology	Back
This term in Geology, we will focus on the Geological Themes topics, which are exclusively examined in Component 3. We will begin with Geohazards, covering topics such as earthquakes and mass movements, followed by the Geology of Britain, and concluding with Geological Map Applications. Many students will have the opportunity to attend the enriching trip to Iceland. Additionally, there will be another term of engaging talks that students are encouraged to attend.	
This term students may notice a lot of the topics have an element of synopticity, and topics often build on knowledge previously learned. Retrieval questions will help bring all concepts together towards the end of the course.	
Independent study this term: Students will get a past paper each week and the revision schedule starts in February.	
Pro-study this term: Students will continue to practice cross sections and map extract questions to practice and develop these skills.	
Next assessment(s): Students will be aiming for the contingency mock at February half term that will be a component 2 past paper. There will be an assessment on Natural Resources before that.	
Further information: Workshop timetable: Monday: 12.15 – 2.05, Friday: 9.45 – 10.50 in J201	**Other reminders:** Retrieval practice questions at the start of every lesson will cover material from last year, last term and last lesson

Maths: Single A-level	Back
This term in Maths, we will complete the remaining A-level maths content, covering several topics in mechanics and statistics. These have been saved for the end, as they build upon skills developed	

earlier in the course. We will conclude with a few smaller pure maths topics, which were left until the end as they are not prerequisites for any other areas of study.

This term, students may notice an increased focus on exam practice and exam technique in lessons. Questions will involve a greater element of problem solving and will require topics from both years, so students should regularly review past content and address areas of weakness. Accuracy in working also becomes vitally important and so efficient checking methods will also be emphasized.

Independent study this term: students will have a weekly problem set comprising of skills questions and 12 problems to complete. Our expectation is that students complete and understand **all** questions in the problem set so that they gain the most learning from this experience. They should use the hints provided along with support from their teacher, peers, and workshops. This work will be submitted weekly on Teams and teachers will feedback if appropriate.

Pro-study this term: most weeks, pro-study will comprise of a problem set test, assessing students' understanding of the content covered in the last problem set. This should take students around 20 minutes to complete. The remaining time should be spent completing the follow-on work from their last assessment, prioritising the content they struggled with the most. In some weeks, there will be no follow-on work and, instead, students will be asked to retake their last assessment and mark it.

Next assessment(s): The next assessments are w/c 12/01, w/c 9/02 and w/c 16/03
Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.

Further Information:	**Other reminders:**
Workshops MONDAY 11:10 -12:15 (GJB) B204 12:15 – 13:20 (BRM) B204 TUESDAY 11:10 -12:15 (JDH) B204 12:15 – 13:20 (LCH) B204 WEDNESDAY 11:10 -12:15 (HFP) B204 THURSDAY 11:10 -12:15 (GJJ) B204 14:05 – 15:10 (SJC) B204	The suggested revision schedule begins this term. (This is a SharePoint link which is available to Students).

This term: students will begin working on their preferred option modules. We aim to complete both of their chosen option modules, along with the remaining content from the Decision module, by the end of the term.

In Further Pure, students will build upon the pure topics covered in the previous term, extending their knowledge to a level commonly encountered in first-year degree programs.

In Further Statistics, students will deepen their understanding of probability functions by exploring new distributions, learning advanced hypothesis tests, and delving into algebraic methods such as probability generating functions.

In Further Mechanics, students will study collisions between particles in both one- and two-dimensional scenarios, including oblique angle collisions. They will also explore the conservation of energy in moving systems.

To complete the Decision content, students will learn the Simplex method for solving optimization problems and tackle critical path analysis problems under given constraints.

This term, students may notice that although new content and techniques may seem simple, they are often examined in complex questions involving large amounts of problem solving or accurate algebraic manipulation. Sufficient practice of fundamental topics is key before moving onto more involved questions.

Independent study this term: Students should continue to complete the "A" and "B" half problem sets. These still comprise a mix of A-level maths questions, 1 decision maths question and the remainder covering a variety of the topics studied in that half of their course. Our expectation is that students complete and understand **all** questions in the problem set so that they gain the most learning from this experience. They should use the hints provided along with support from their teacher, peers, and workshops. This work will be submitted weekly on Teams and teachers will feedback if appropriate.

Pro-study this term: this is mostly self-directed with some suggestions provided. (this link is only accessible to students). Students should use this time to and the suggested resources to tackle topics or questions from recent assessments that they struggled with or lost marks until they are fully confident on these topics.

Next assessment(s): The next assessments are w/c 12/01/26.

Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.

Further Information:	**Other reminders:**
Workshops MONDAY 11:10 -12:15 (GJB) B204 12:15 – 13:20 (BRM) B204 TUESDAY 11:10 -12:15 (JDH) B204	The suggested revision schedule begins this term. (This is a SharePoint link which is available to Students)

12:15 – 13:20 (LCH) B204 WEDNESDAY 11:10 -12:15 (HFP) B204 13:20 – 14:05 (MEH – GCSE ONLY) B214 THURSDAY 11:10 -12:15 (GJJ) B204 14:05 – 15:10 (SJC) B204	

Maths: GCSE	Back
This term we start going through all the GCSE topics at a slower pace, allowing time for students to be reminded of key ideas and plenty of time to practice using exam style questions. We rotate through the key strands of algebra, number, geometry, ratio and statistics so that students can see links between these and regularly revisit the strands.	
This term students may notice that we adopt a "revision year" approach. Students have already been introduced to all the topics at school, so we focus on reminding them of the content and developing exam techniques using these skills.	
Independent study this term: There will be assignments set weekly on MyMaths. Students should log in to complete these and attend a workshop for help if they get stuck.	
Pro-study this term: Complete the independent study described above.	
Next assessment(s): The next assessments are w/c 12/01, w/c 09/02, w/c 09/03 and w/c 13/04. Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.	
Further links: Workshops MONDAY 11:10 -12:15 (GJB) B204 12:15 – 13:20 (BRM) B204 TUESDAY 11:10 -12:15 (JDH) B204 12:15 – 13:20 (LCH) B204 WEDNESDAY 11:10 -12:15 (HFP) B204 13:20 – 14:05 (MEH – GCSE ONLY) B214 THURSDAY	**Other reminders:** Results day for students who sat the November exam is Thursday 8th January 2026

11:10 -12:15 (GJJ) B204 14:05 – 15:10 (SJC) B204	

Maths: Core	Back
This term we finish teaching the Core Maths content and, in the last few weeks before Easter, we begin revising. Students will continue extending topics from GCSE such as standard form, exchanging currency and ratio, as well as looking at new areas such as logarithms and more hypothesis tests.	
This term, students may notice that there is a greater emphasis on whether results are realistic, reliable and useful in the original content. There is an increasing need to think about context and develop problem solving skills, so it is vital students seek help from staff or at workshops whenever needed.	
Independent study this term: Most weeks this will consist of one or two section tests on integral Maths covering a recent topic. It is important that this content is understood, so if students have any difficulties with the questions, they should attend a workshop or speak to (or email) their teacher to get help.	
Pro-study this term: Most weeks this will consist of one or two interactive activities to further explore the taught topic and deepen student's understanding of the key skills and principles.	
Next assessment(s): The next assessments are in the week beginning January 12th and then in the week beginning 9th February. The February exam is a Contingency Mock exam. Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.	
Further links: Workshops MONDAY 11:10 -12:15 (GJB) B204 12:15 – 13:20 (BRM) B204 TUESDAY 11:10 -12:15 (JDH) B204 12:15 – 13:20 (LCH) B204 WEDNESDAY 11:10 -12:15 (HFP) B204 13:20 – 14:05 (MEH – GCSE ONLY) B214 THURSDAY 11:10 -12:15 (GJJ) B204 14:05 – 15:10 (SJC) B204	**Other reminders:**

Maths: FMAS	Back
This term, we will cover the final two option modules: Further Mechanics (FM) and Further Statistics (FS). In Decision, we will explore shortest distances, graph theory and route inspection algorithms. In FP, students will examine more methods with vectors, t-formulae and numerical methods of solving differential equations. For students not taking one or both units, dedicated class time will be provided for revision practice of core maths skills.	
This term students may notice that there is still an increased requirement for self-directed study, including watching introductory videos and making notes before a topic is started, and using textbooks and online resources for further practice after a lesson.	
Independent study this term: Complete assigned worksheets and use textbooks for extra practice on topics covered in class, particularly any areas of weakness. As topics get more challenging and involve greater problem solving it is imperative that students attend workshops or ask for help via email or in person when required.	
Pro-study this term: Watch and make notes on any videos or pre-reading set in preparation for practising these topics in class and considering exam technique in these areas. Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.	
Next assessment(s): Students will always receive advance notice of upcoming tests through announcements on teams, so they should make sure they have notifications for that switched on.	
Further links: MONDAY 11:10 -12:15 (GJB) B204 12:15 – 13:20 (BRM) B204 TUESDAY 11:10 -12:15 (JDH) B204 12:15 – 13:20 (LCH) B204 WEDNESDAY 11:10 -12:15 (HFP) B204 13:20 – 14:05 (MEH – GCSE ONLY) B214 THURSDAY 11:10 -12:15 (GJJ) B204 14:05 – 15:10 (SJC) B204	**Other reminders:**

Physics	Back
This term in Physics we shall continue building on the material covered in year 1 with more complex topics: • The 'Advancing Physics' unit shall cover the option choice of Astrophysics • The 'Exploring Physics' unit shall finish Fields, and then investigate the theory and behavior of Capacitors We shall be building on the practical skills introduced last year with a number of core practicals, and develop key skills such as using software for data processing.	
This term students may notice that the mathematical elements of some topics may become more stretching and so those not taking Mathematics A Level are encouraged to use the resources on Century to review 'logarithms'. Students should also see cross topic links in their application within the Astrophysics context.	
Independent study this term: will continue in the established model, where students use the Century application to review and consolidate material delivered in lessons by completing online 'nuggets' of questions. Further question practice is completed with the study guidebooks which are reviewed in class.	
Pro-study this term: We encourage students to split their time between consolidating new material and reviewing content from last year – this is particularly important in preparation for their mid-year exam. It would also be valuable for students to be completing AS papers for comprehensive revision of 1st year material. There is a wide selection of question practice linked on the Physics classroom, and they can revisit previous content on Century.	
Next assessment(s): • Fields topic test w/c 5th January • **Mid-year progress exam w/c 10th February** • Astrophysics topic test w/c 23rd March	
Further information: Workshop timetable: • Monday R203: Y2 Exploring content *tutorial* workshop. • Thursday R203 Y1 +2 *drop-in* • Thursday R203 Y2 Advancing content *tutorial* workshop. • Friday R203, Y1 content *tutorial* workshop. All workshops lunchtime 1.20 - 2.05pm	**Other reminders:**

Psychology	Back

This term in Psychology:
We will be finishing off the cognitive development topics. We will start the forensic topic and will finish this before easter. We will start some of the schizophrenia topic. Paper 2 and paper 1 mocks before Feb half term, paper 3 mock last week before Easter.

This term students may notice
The pace in lessons may increase as students' understanding of the approaches and evaluations improve. Students should start to see similarities between topics. They should be able to evaluate based on their understanding of an application, as opposed to learning specific points from the textbook (excluding study details). Many may realise that they need to prioritize research methods each week as part of their revision.

Independent study this term:

6hrs of independent study outside of lessons

- Completion of all pro study tasks
- Using resources on share point
- Reviewing Y1 content weekly
- Reviewing and updating class notes (paper 2 and 3)
- Creating revision materials of prior content
- Using checklists to organise revision (paper 2 and 1 mocks this half term)
- Following the revision checklist to prepare for the paper 2 mock after Christmas and then the paper 1 checklist
- Reflecting/ acting on assessment feedback
- Working with a peer- study buddy
- Reviewing previously covered Y2 content
- Revising for assessments - minimum of 3hrs per 30 min assessment (this may not be in one week)
- Reviewing lesson PPT's where needed
- Watching supporting video clips- e.g. psych boost
- Listening to podcasts

- Completion of weekly flipped learning notes
- Completion of weekly quiz on teams
- Completion of weekly exam question booklets (both writing exam questions then marking and annotating using the mark schemes)
- Completion of mind maps
- Revision of Y1 content

Next assessment(s):
Paper 2 mock in week 27
Paper 1 mock in week 22
Assessment 5 in week 25
Paper 3 mock in week 27

Further information:	**Other reminders:**
Workshop timetable: **Y2:** Monday 1.20-2pm J101. RM and paper 1 All welcome.	Students should continue to integrate revision of Y1 content into their independent study routine.

Y2: Tuesday 1:20 – 2pm J101. Review of Y2 content. All welcome. **Y2:** Thursday 1:20-2pm J102. 16 M planning and RM. All welcome Mon- Fri- 1:20-2pm J101/ J102. Rooms are free for peer review / mentoring.	Students should continue to create revision resources for all Y2 content. Reviewing of prior content should be happening each week If underperforming students should be attending a weekly workshop and be working with a peer or a selected peer mentor. All students should be working with another psychology student outside of lessons to help review content.