Summer Bridging Unit

This work is to be completed over the summer and handed in to your subject teacher at the end of your third full week in Sixth Form.

Name: ..... **Date: .....**

Work to be completed	**How this will link to the start of course in September**	**Progress - *teacher use only*** 1: **Above** the expected standard of an A Level study 2: The **expected** standard of A Level study 3: **Below** the expected standard of A Level study
Task 1: Demonstrating understanding of the course content and how you will be assessed. Read the Edexcel physics A level specification (Specification - A level) & answer the questions on the following form - Physics A level Bridging Unit - Task 1 – Fill in form Questions 1) Provide information about each of the A level physics exams you will sit. How long are they? what units do they each cover? and what percentage of the total A level are they worth? 2) For the mechanics unit (unit 2); identify the specification points that you have covered the basics of in GCSE.	Understand of the course structure and examinations. Identify the links to GCSE and the underlying knowledge gaining at GCSE for the first two units you will cover. It is important that you have a solid foundation from GCSE which you can build on during your A level. You should always review the related GCSE unit when you start the unit at A level.	Above: 100% correct on the forms quiz. Below: Provide information on the exams but is unable to accurately identify knowledge from GCSE required in units 2 and 3. Meeting: Provide information on the exams and identify the basic knowledge required, from GCSE, for the mechanics and electrical circuits topics, with a few mistakes.

3) For the electrical circuits unit (unit 3); identify the specification points that you have covered the basics of in GCSE.		
Task 2 Demonstrating the key skill of combining uncertainties which is required for this course. Please see the attached PPT on uncertainties. This PPT contains instructions on how to calculate uncertainties along with clips and questions. You need to self-mark your answers to check that you are calculating the uncertainties correctly. You will be assessed on this skill as part of your introduction assessment at the end of September.	Unit 1 of the A level course is 'working as a physicist'. As part of this you need to be able to calculate uncertainties. This skill will be required throughout the units in the course. You will be required to be able to combine uncertainties when carrying out calculations. Uncertainties can be determined in experimental work or given to you within questions.	Above: Be able to combine percentage and absolute uncertainties for a variety of calculations including powers and repeat measurements. Below: Unable to combine percentage uncertainties correctly. Meeting: Be able to combine percentage uncertainties, with the occasional mistake.
Task 3 Review GCSE Electricity and forces content. Suggested ways to review the GCSE content • Quizlet flashcard sets https://quizlet.com/join/9XHZtTk2A?i=6zygvy&x=1bqt • Seneca - Free Homework & Revision for A Level, GCSE, KS3 & KS2 • Cognito - Login | Cognito • Isaac Physics - GCSE Physics — Isaac Science • Past exam questions - AQA GCSE (9-1) Physics Revision - PMT You will be assessed on this as part of your introduction assessment at the end of September. The assessment will contain GCSE level questions as well as appropriate A level questions.	The first two units you will be completing are mechanics (unit 2) and electrical circuits (unit 3). It is important that you have a solid foundation from GCSE which you can build on during your A level. You should always review the related GCSE unit when you start the unit at A level.	Above: Be able to write detailed answers to longer answer questions on electricity and forces for both GCSE and A level questions Below: Unable to answer GCSE level questions using correct physics knowledge and terminology Meeting: Application of correct knowledge and terminology in answers to GCSE level questions as well as most A level questions.

Additional information

Useful resources to support:	Head Start to A-Level Physics (with Online Edition): bridging the gap between GCSE and A-Level: Amazon.co.uk: CGP Books, CGP Books: 9781782942818: Books A-Level Physics: Essential Maths Skills: for the 2026 and 2027 exams (CGP A-Level Essential Skills): Amazon.co.uk: CGP Books, CGP Books: 9781782944713: Books
Essential equipment for September:	Scientific calculator Protractor
Optional: Further ways to demonstrate intellectual curiosity:	**1: Physics in the Real World (Short Investigation)** **Task** Choose a real-world situation, device, or phenomenon that interests you (for example: braking distances in cars, mobile phone signals, wind turbines, MRI scanners, satellites, sound in concert halls). Explain: • What physics ideas are involved • What you already understand • One or two questions you still have about how it works You may present this as: • A short written piece (≈300 words) • A one-page infographic **2: A Level Preview Question** **Task** Pick one A-level Physics concept you have not formally studied yet (e.g. vectors, electric fields, circular motion, quantum ideas, astrophysics). Research the topic and produce a brief explanation aimed at another GCSE student: • What the idea is • Why it matters • One misconception you discovered while researching You do not need to understand everything—showing what you *tried to understand* matters more.

	3: Physics Thought Experiment **Task** Create your own *"what if?"* physics question. Examples: • What if gravity on Earth were half as strong? • What if light travelled slightly slower? • What if cars had no friction with the road? Explain: • What would change • Which physics ideas are involved • What assumptions you had to make