

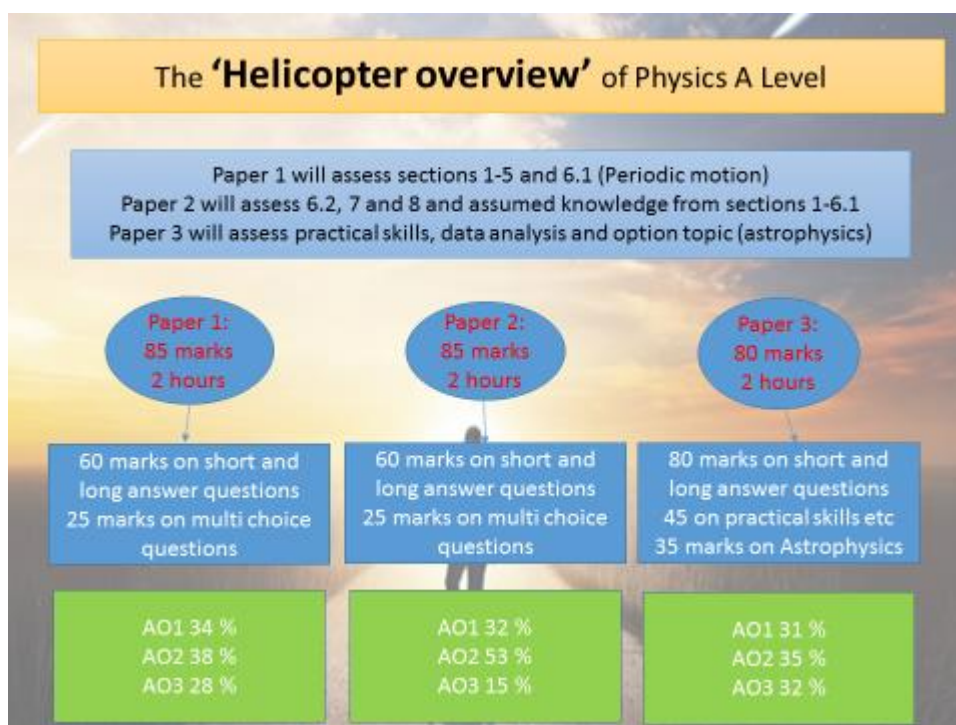
Tarporley Sixth Form College



Physics A Level Programme of Study

Exam Board: AQA
100% Examination
and a Practical Competency
Assessment

NAME:	
TARGET GRADE	
ASPIRATIONAL GRADE	



Your Assessment Objectives

Assessment Objectives	Description
AO1	Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.
AO2	Apply knowledge and understanding of scientific ideas, processes, techniques and procedures: <ul style="list-style-type: none"> • in a theoretical context • in a practical context • when handling qualitative data • when handling quantitative data.
AO3	Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to: <ul style="list-style-type: none"> • make judgements and reach conclusions • develop and refine practical design and procedures.

Your Key Topics During The Course

Paper	Topic	Overview
Paper 1	Particle physics	The study of the atom and particles as Hadrons, Baryons, Mesons, Leptons and Bosons and the interactions between these groups.
Paper 1	Electromagnetic Radiation and Quantum Phenomena	The photoelectric effect, energy changes by electrons in the atom and wave particle duality
Paper 1	Electricity	The study of electrical circuits and the factors that affect these circuits
Paper 1	Mechanics and Materials	How forces and energy affect the motion of objects and the bulk property of solids
Paper 1	Waves	How to describe and use the processes of refraction, diffraction and interference. To be able to describe and distinguish between progressive and stationary waves and between longitudinal and transverse waves
Paper 1	Periodic Motion and Further Mechanics	The mathematical description of simple harmonic motion and circular motion
Paper 2	Thermal Physics	The factors that affect how substances get hot and change state and the mathematical description of an ideal gas

Paper 2	Fields	How to describe and use the theory associated with gravitational, electric and magnetic fields
Paper 2	Capacitance	The use and mathematical description of capacitors to include charging/discharging, parallel plate structures and the energy stored in such devices
Paper 2	Nuclear Physics	The description of the processes associated with nuclear decay, the use of nuclear fission and fusion processes and how nuclei are stable/unstable
Paper 3	Astrophysics	The study of the wider universe, looking at measuring this and descriptions of stars
Paper 3	Practical Experiments and data analysis	Using the practical techniques to answer questions on the required practicals and being able to apply to unknown tasks.
Practical Competency Assessment	Practical Assessment Tasks	Developing all your practical skills and analytical techniques for processing data, by performing a range of investigative tasks through all topic areas
All Areas	Measurement and Errors	Being able to apply methods to determine values of measurements and the associated errors made within these tasks.

How Your Course is Structured

Year 12: Mr Howdon	Year 12: Mr Toase
<ul style="list-style-type: none"> Mathematical Techniques Practical Sessions Particle Physics Electricity <p>Assessment 1: Mathematical Techniques Assessment 2: Particle Physics Assessment 3: Assessing the Key Skills on Practical Competency <i>Required practical 4</i> <i>Required practical 5</i> <i>Required practical 6</i></p>	<ul style="list-style-type: none"> EM Radiation & Quantum Phenomenon Mechanics <p>Assessment 1: Test on Radiation & Quantum <i>Required practical 1</i> <i>Required practical 2</i> <i>Required practical 3</i></p>
Christmas	Holidays
<ul style="list-style-type: none"> Practical Sessions Waves <p>Assessment 1: Assessing the Key Skills on Practical Competency Assessment 2: Test on Waves</p>	<ul style="list-style-type: none"> Finish Mechanics Materials <p>Assessment 1: Test on Materials and Mechanics</p>

Easter	Holidays
<ul style="list-style-type: none"> • Thermal Physics Assessment 1: Test on Waves Assessment 2: Assessing the Key Skills on Practical Competency	<ul style="list-style-type: none"> • Periodic Motion and Further Mechanics Assessment 1: Test on Periodic Motion Assessment 2: End of Year exam
Summer	Holidays

Year 13: Mr Howdon	Year 13: Mr Toase
<ul style="list-style-type: none"> • Gravitational Fields • Electric Fields • Capacitance Assessment 1: Assessing the Key Skills on Practical Competency Assessment 2: Test on Gravitational and Electric Fields <i>Required practical 8</i> <i>Required practical 10</i>	<ul style="list-style-type: none"> • Nuclear Physics • AstroPhysics (start) Assessment 1: Test on Further Mechanics and Thermal Physics Assessment 2: Test on Capacitance and Mechanics <i>Required practical 7</i> <i>Required practical 9</i>
Christmas	Holidays
<ul style="list-style-type: none"> • Magnetic Fields Assessment 1: Test on Gravitational, Magnetic and Electric Fields Assessment 2: Mock Exams <i>Required practical 11</i> <i>Required practical 12</i>	<ul style="list-style-type: none"> • AstroPhysics (finish) Assessment 1: Test on AstroPhysics
Easter	Holidays
<ul style="list-style-type: none"> • Revision • Timed exam practice External exams Ongoing – timed weekly exam practice	<ul style="list-style-type: none"> • Revision • Timed exam practice External exams Ongoing – timed weekly exam practice
Summer	Holidays

Top Study Tips:

Have One Lever Arch Folder At Home – put into two sections

Use file dividers to organise each topic. File your notes carefully each week – remember to date classwork so you remember the sequence of each lesson. This will make revision easier.

Have a two weekly file – keep this with you

Always have the last two weeks work in a file so you can refer to recent work

Practice Your Mathematics Skills

Ask your teacher for exercises on this if you need to revisit these techniques

Use the work to make cue cards

For each topic you will come across key terms. Use the glossaries in books/ notes to make cue cards – put the term on one side and the definition on the other - useful now and a great revision aid for later.

Keep Your Lab Book Up To Date

Follow the criteria on how to record your investigative work. Hand in your book every two weeks to get important feedback

Type up class notes.

This is a great way to consolidate your knowledge, commit things to memory and make your knowledge deeper. Make your notes concise. Just get the key ideas down.

Keep revisiting work and topics

Don't simply file away and forget. Routinely to go over last term / year's work.

Read around the subject and be excited about your work!