

Tavistock College Sixth Form

When you sign up for a subject please note that you will be expected to study that subject for the whole two years.

There will be a formal assessment in the Autumn term, after four weeks and that is the only time when students will be allowed to swap or change subjects. After this, too much will have been missed.

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| Subject: Physics | | Qualification: A level |
| Exam board: OCR A | Entrance criteria: Grade 6 in Physics or 6-6 in Double Science Grade 6 in Maths | |
| Topics covered: <u>Unit 1: Development of practical skills in physics</u> Physics is a practical subject and experimental work provides you with important skills as well as enhancing your understanding of Physics. <u>Unit 2: Foundations in physics</u> This unit introduces you to important ideas that permeate the fabric of physics. You will develop critical thinking skills, reasoning, logic and mathematical skills. <u>Unit 3: Forces and motion</u> You will learn how to mathematically model the motion of objects and learn how forces affect objects. You will gain and insight into the links between force and energy. <u>Unit 4: Electrons, waves and photons</u> Quantum Physics is one of mankind’s greatest achievements. We can use it to make incredibly accurate predictions of what happens on a scale far smaller than an atom. This unit takes you through electrical circuits to wave properties and ends with quantum Physics. <u>Unit 5: Newtonian world and astrophysics</u> Here you will investigate the most fundamental ideas in Physics; from heat, temperature and energy to the most perplexing question of all—how did the Universe begin? <u>Unit 6: Particles and medical physics</u> Physics is the study of all things great and small. In this module we concentrate on the smallest things imaginable — particles. The topic also covers electric, magnetic and gravitational fields and medical physics. | | |
| How the subject will be taught: The subject will be taught by 2 teachers. Units 1 and 2 will be taught within both sections and Units 3-6 will be split between the teachers. There is a mixture of practical and theoretical work, with an emphasis on using the theoretical and mathematical knowledge to explain the results of practical work Physics is mainly about the application of ideas, so lessons will be focussed on ensuring that you understand these ideas. You will be required to learn information at home, matching your hours in class. | | |
| Expectations of students: <ul style="list-style-type: none">• Review content and check understanding• Ensure that all notes are written up clearly• Revise independently• Apply mathematical ideas to Physics• Ask if you are unsure! | | |
| Summer work: Complete Isaac Physics work over the summer Go to isaacphysics.org You will need to go to teacher connections and link using the code UNGE3L Most of this is revision of GCSE content. but any questions email mi.harris@tavistockcollege.org | | |