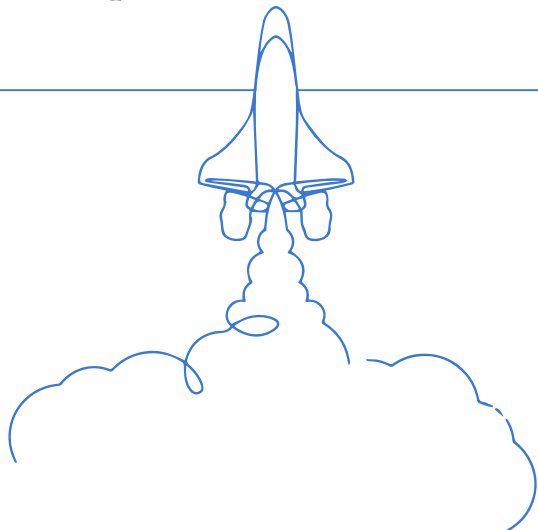


# Physics



## About the course

Physics is the study of the Universe—what it is made of, the forces that govern it and the energy within it. In year 12 students cover 5 contrasting topics over the course of the year.

Particle physics looks at the fundamental forces that hold the universe together and the standard model that makes up everything around us.

Electricity builds on previous study and provides lots of experimental work.

Mechanics is the study of forces and motion and students will learn to predict how objects will move. Waves are a means of transferring energy and we will concentrate on light.

The final section is measurements and their errors, this will be covered through practical work and involves planning and carrying out experiments that provide accurate results.

In year 13 students cover 4 topics. Further mechanics and thermal physics includes studying oscillations and heat transfer. Fields and their consequences is the study of gravitational, electrical and magnetic fields. Nuclear physics allows students to explain radioactivity and nuclear power. The final topic is our option—astrophysics. Students can follow their interest in cosmology and space, culminating in a conclusion on the age of the universe.

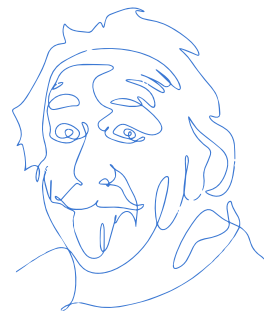
Throughout the course students develop their analytical thinking skills and problem solving abilities. You will learn to look at the Universe and how it works in a critical way, and be able to explain how and why it behaves using clear scientific language and explanations. You will find out how scientists carry out investigations to test theories and make conclusions about physical phenomena.

## Assessment

Students sit three 2-hour exams in May/June of year 13. Papers 1 and 2 are worth 34% of the A level and cover all topics covered in year 12 and 13. They include multiple choice, short and long answer questions. Paper 3 is worth 32% and covers practical skills, data analysis and astrophysics. It is made up of short and long answer questions. Students will also be awarded a practical endorsement if they complete 12 experiments over the course of their two years of study and demonstrate that they are competent in practical work.

## Careers

Physics A level can prepare you well for further scientific study and is required for physics, engineering or astrophysics at university. It is also a great subject if you are considering architecture, optometry, earth science, geology or natural sciences. If you want to pursue a career in medicine, dentistry or veterinary science it is the favoured third science. Physics is also a highly regarded subject in fields such as business and finance. The numerical skills developed when answering physics questions is easily transferable to many careers in these sectors.



## Entry Requirements

You need to be a self motivated learner who has an interest in physics and an enquiring mind. A minimum of two grade 6's in GCSE combined science is a requirement for this course. Students studying physics, chemistry and biology as separate sciences must achieve a minimum of grade 6 in GCSE physics and one other science. You must also achieve a minimum of a 6 in GCSE maths.

## Find Out More

Please contact [kathryn.evans@whitleybayhighschool.org](mailto:kathryn.evans@whitleybayhighschool.org) and use the following links

[A level Physics](#)

[Careers in Physics](#)

