

PHYSICS



ROYAL
HOSPITAL
SCHOOL





PHYSICS IN THE SIXTH FORM

Physicists explore the fundamental nature of almost everything we know of. They probe the furthest reaches of the universe to study the smallest pieces of matter. Physics is crucial to understanding the world around you; it is about how everything around you works.

WHY STUDY PHYSICS?

You should study physics if:

- You want to investigate the limits of space, the beginning of time and everything in between
- You want to understand how technology works
- You want to understand the fundamentals of science

REQUIREMENTS TO STUDY PHYSICS

A Level Physics is not easy, therefore we recommend the following:

- Grade 7 or above in GCSE Maths (40% of the A Level marks require mathematical skills)
- Grade 7 in GCSE Physics or 7/7 in Double Award Science

ALL OF PHYSICS IS EITHER IMPOSSIBLE OR TRIVIAL. IT IS IMPOSSIBLE UNTIL YOU UNDERSTAND IT, AND THEN IT BECOMES TRIVIAL.

– Ernest Rutherford

WHAT WILL YOU STUDY?

A Level Physics at RHS follows the AQA syllabus.

The topics covered during the two year course are:

- Measurements and their errors
- Particles and radiation
- Waves
- Mechanics and materials
- Electricity
- Periodic motion
- Thermal physics
- Fields
- Nuclear physics
- Astrophysics

Throughout the course you will also carry out practical work which will be assessed by your teachers. This will lead to the 'practical endorsement' which will be reported on your certificate if you pass it.

EXAMS

There are three exams at the end of the two year course, all of which are 2 hours long.

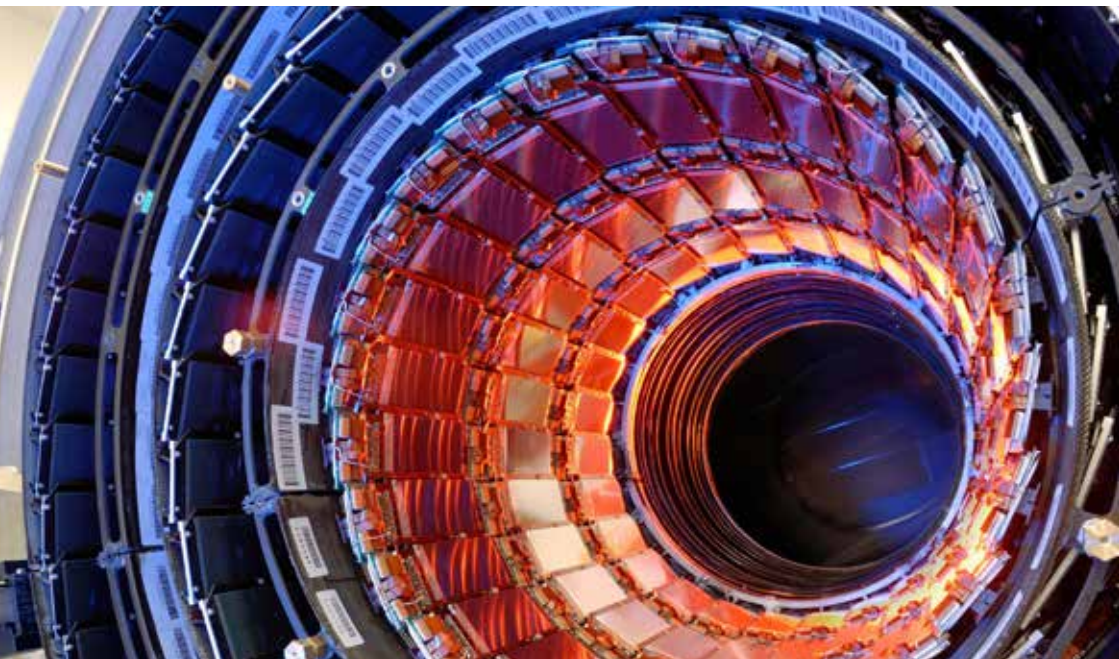
The papers will comprise a mixture of short and long answer questions as well as multiple choice.

15% of the written papers will relate to practical knowledge and understanding.



EXTRA CURRICULAR

There are many opportunities to extend and enrich your studies in physics. We regularly enter the annual Physics Olympiad: a highly competitive international physics competition. In addition, your son or daughter can take part in an engineering design and build competition run in partnership with the Royal Navy. We also attend regular sixth form talks at the University of Cambridge on a huge variety of topics in physics.



CAREERS

Physics can lead directly to many career paths.

INDUSTRIAL RESEARCH ENVIRONMENTAL RESEARCH
MANAGEMENT CONSULTANCY **BIOTECHNOLOGY**
THEORETICAL PHYSICS **TEACHING** **ELECTRONICS**
ENGINEERING **ASTROPHYSICS** **STOCKBROKER** **ACCOUNTANCY** SCIENCE JOURNALISM
TELECOMMUNICATIONS **LAW** **BANKING** **CIVIL SERVICE**
MEDICAL PHYSICS **COMPUTING**

If you would like to discuss the A Level specification and the options that the Physics Department offer, please don't hesitate to contact
Dr Marcus Gibbs, Head of Physics.

e mgibbs@royalhospitalschool.org