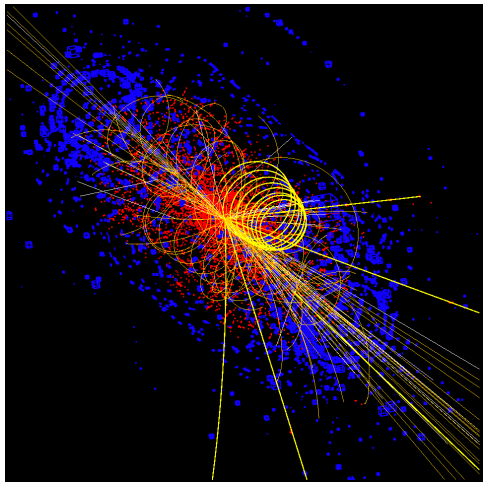
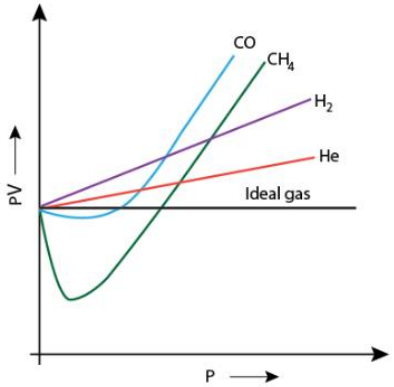
'All science is either physics or stamp-collecting.'

Ernest Rutherford, 1871-1937
Known as the "Father of the Nuclear Age," he discovered the atomic nucleus and won the Nobel Prize for Chemistry for his pioneering work in nuclear physics.

Welcome to A Level Physics





What is Physics?

- Physics is the study of matter, energy, forces and how they interact.

- Everyone uses Physics – we might not recognise it!

- Whenever we enjoy the use of technology, there are probably a bunch of proud physicists with tears in their eyes...

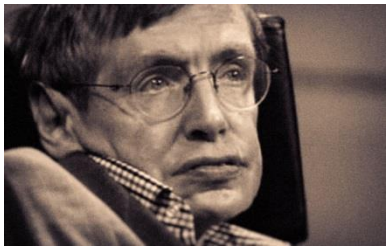
Why study Physics?

- Enhance your problem-solving skills

- Finally apply your mathematical abilities!

- Answers to some very interesting questions… or at least using Physics in the real world!

- Develop practical skills that support a huge range of career choices.



- Or because someone you know recommended it!

The study of Physics is a gateway to many university courses and careers.

The long version...

You will develop excellent Physics understanding, analytical skills, good work ethic, problem solving skills, team working and independent study skills. You will develop skills in the application of theory to practical situations and investigate problems. You will acquire more expertise in the areas of scientific writing and the ability to apply knowledge to new information.

All of these skills are transferable and will be highly desirable in the world of work or further education.

Most importantly do you enjoy unpicking what life is?

Understanding how you and everything around you functions to exist?

Physics and Careers

In my time as a Physics student and teacher, I've seen people do all kinds of things after they've completed their courses.

Here are a few examples:

Medical imaging with huge companies like Siemens

Teaching Science and Physics at various key stages

Pure mathematics degree at Oxford (last summer!)

All kinds of engineering, including automotive

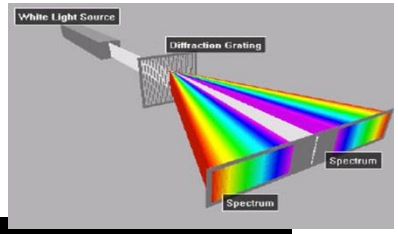
Statistical modelling for banking and finance – big money!

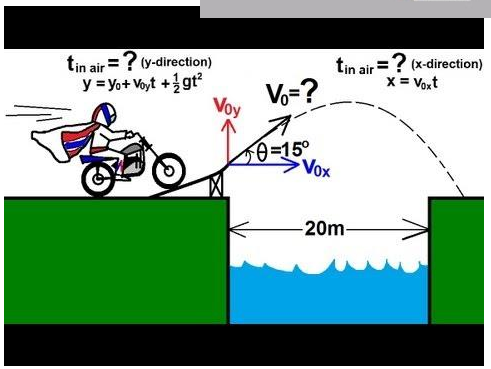
Next – let's look at what we cover in our course.

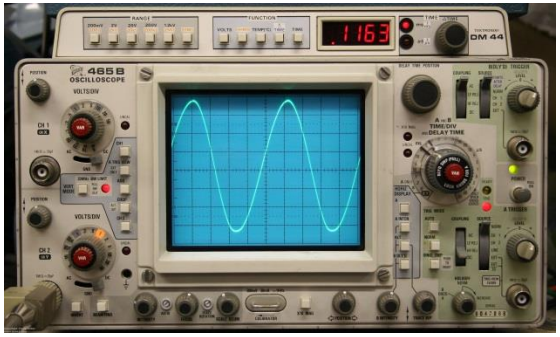
Year 12 Physics

Four distinct areas

- Particles and Radiation
- Waves and Optics
- Mechanics, Materials and Energy
- Electricity



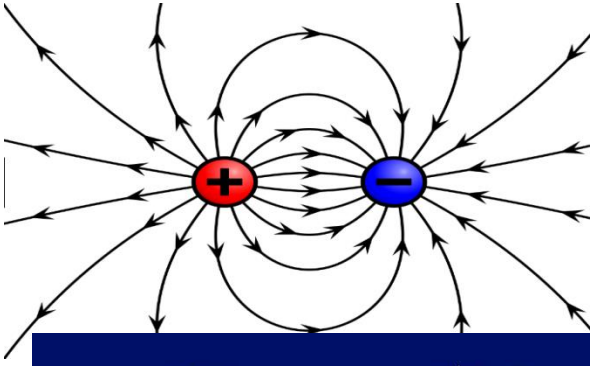


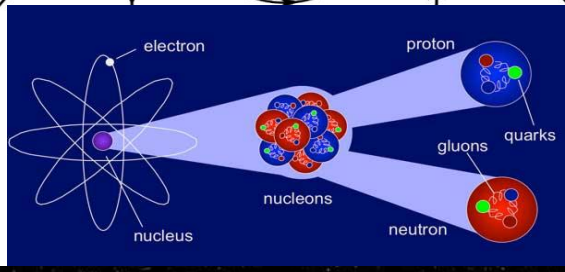


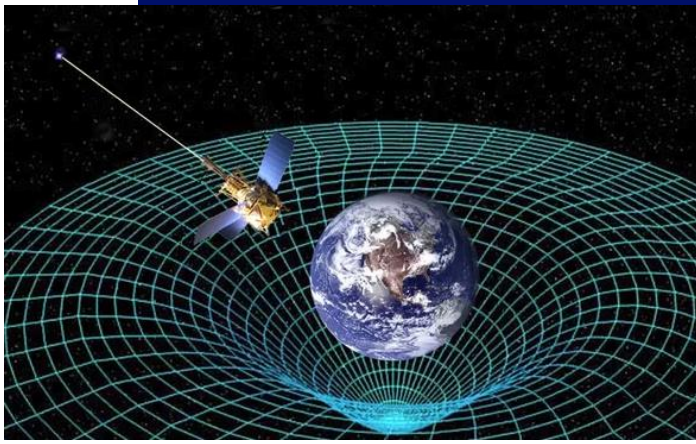
Year 13 Physics

Assessed through 3 x 2 hour exams

- Year 12 Physics
- Further Mechanics and Thermal Physics
- Fields and their Consequences
- Nuclear Physics
- Turning Points in Physics (options)







The practical endorsement

- Universities and exam boards developed a core set of skills that students would benefit from.
- There are 12 required practical activities that relate to key areas of the course.
- In these practicals you learn how to follow written methods, take readings and measurements, use equipment safely, record your results in appropriate ways as well as write reports with references.
- These skills will be examined across all of the A-Level assessments.

Why would you choose to study Physics?

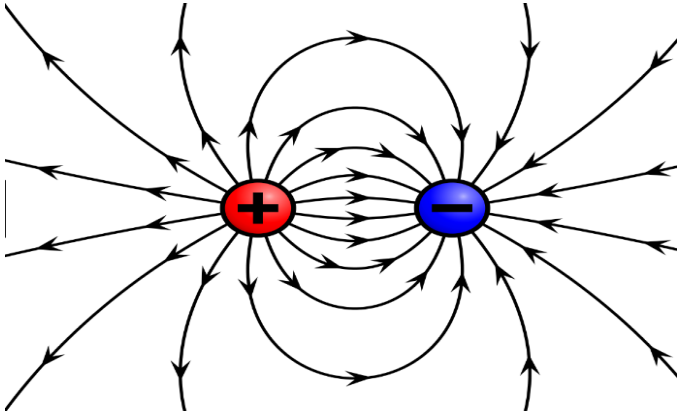
"It's really satisfying when it all clicks into place and you get the right answer to a tough question."

"The Y12 stuff has been really weird so far but I enjoy the quantum mechanics because it's so strange and physics in general is really current."

The challenges?

"The step up from GCSE is big but it's nice to be able to focus most of my energy on a subject which I've chosen to do."

"The maths can be quite hard but I get twice the lessons on it because I do maths as well."



Enjoy the rest of your evening!