

## Particle Physics

One of main topics in Year 12 will be Particle Physics. This summer work should give you an overview of the topic. Don't worry about understanding it all - it is more important that it raises questions and sparks your interest!

### PART 1

Begin by exploring the Particle Adventure website. You need to be familiar with all parts of the section called The Standard Model, but the other parts are useful too.

<http://www.particleadventure.org/standard-model.html>

There are lots of good books around on Particle Physics - if you are interested try the 'popular science' section of a library or bookshop.

### PART 2

Once you have gained an overview you are going to focus on one aspect of the topic. Make a poster exploring one area of Particle Physics e.g.

Fundamental Forces

The Family Tree of Particles

Antimatter

Particle Accelerators (e.g. Cern)

The Search for the Higgs boson

Neutrinos

The Discovery of Quarks

PET Scanners

These are just examples - follow your own interests and research whatever aspect of particle physics you are interested in. The poster can be hand drawn or word-processed but should be in your *own words*, not copied and pasted text from the internet.