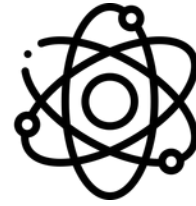


Transition Project



PHYSICS



In the GCSE course, most of the particle theory work you did focussed on what effect the electron has on our lives (as in the electricity unit). In the A Level course we need to unpick some of these assumptions and delve deeper into what is inside an atom.

You need to approach the physics course with an open mind... you are going to have lots of your misconceptions from GCSE challenged, but after studying the course you will be able to explain the world around you in far more detail.

This task is designed to introduce you to a new world of particle physics, and provoke more questions than it answers. Come armed with your questions in September and we will be able to answer most of them.

The Task

From the Greeks to present times people have wondered what stuff is made from. Watch the two video links as an introduction to the topic.

<https://www.youtube.com/watch?v=HVxBdMxgVX0>

<https://www.youtube.com/watch?v=WGWIT8SqXLM>

1. Prepare a timeline of different discoveries for particle physics. Include important personalities, experiments, equipment and the particles discovered. Also include any false starts like the plum pudding model.

2. CERN is a project that is in the media all the time, but what actually is it?

Write a report to explain:

- What a particle accelerator is.
- What CERN physically is.
- How CERN works.
- What the major sensors are.
- What major discoveries have come from CERN.
- What scientists hope to discover in the future at CERN or other accelerators.

3. Include a reference section and prepare a list of questions that you hope to get answered in the particle physics module. i.e. what did you find out that you didn't understand?

If you have any questions or need any support with your transition work, please contact your subject teacher using the email address below.

We hope you enjoy the tasks and look forward to welcoming you to Glossopdale Sixth Form in September.