

Physics Department

National 4 Physics guide

Entry Requirements

Entry to this course is at the discretion of the Science faculty. This is to make certain that you are ready for the requirements of the course.

The Course Content

The course consists of three units (40 hours each):

Unit 1 Electricity and Energy	Unit 2 Waves and Radiation	Unit 3 Dynamics and Space
Subtopics: <ul style="list-style-type: none">• Generation of electricity• Electrical Power• Electromagnetism• Practical electrical and electronic circuits• Gas laws and the kinetic model	Subtopics: <ul style="list-style-type: none">• Wave characteristics• Sound• Electromagnetic Spectrum• Nuclear radiation	Subtopics: <ul style="list-style-type: none">• Speed and Acceleration• Relationship between forces, motion and energy• Satellites• Cosmology

Assessment

There are several pieces of assessment during this course.

- 1) Outcome 1 –
 - **Assessment standards 1.1-1.5 'Investigation'**
 - You will conduct an investigation and produce an accurate scientific report.
- 2) Outcome 2 –
 - **Assessment standard 2.1/2.4 'Key Area Test' (KAT).**
 - This assesses knowledge and understanding as well as problem solving skills. The problem solving skills covered are selecting, processing and predicting. These are completed in class and marked by staff to SQA exam board standards.
 - **Assessment standard 2.2/2.3 'Short report'.**
 - You will research an area of physics and produce a short report (70-100 words) that discusses your findings in relation to its effect on society and the environment
- 3) Assignment
 - You are required to research an aspect of physics and write about its effect on society and the environment. You are expected to select, analyse and present data in your work as well as to reference where your information came from.

There is no exam for this award.

You must pass all forms of assessment before you can receive a course award.

In S6, you could have an alternative Pathway to Higher Physics

