

## Why Physics?

Physics is the study of the universe, from the largest galaxies to the smallest subatomic particles. Physicists play a key role in meeting society's needs in areas such as medicine, energy, industry, material development, the environment and sustainability.

## Course outline

From the sources of the energy we use, to the exploration of space, Physics covers a range of applications that affect our lives. Studying Physics allows you to gain an insight into the underlying nature of our world and its place in the universe. It will help you to develop your logical and critical thinking, solve problems and make decisions.

# PHYSICS HIGHER

## Details of Course Components

The course has **three** compulsory units, plus a **researching Physics** unit that assesses your practical skills.

### Physics: Our Dynamic Universe

In this unit you will develop an understanding of:

- Equations of motion and graphs
- Forces, energy and power
- Collisions, explosions and impulse
- Gravity and mass
- Special relativity
- The expanding Universe

### Physics: Electricity

In this unit you will develop an understanding of:

- Monitoring and measuring a.c.
- Current, potential difference, power and resistance
- Electrical sources and internal resistance
- Capacitors
- Conductors, semiconductors and insulators

### Physics: Particles and Waves

In this unit you will develop an understanding of:

- The standard model
- Forces on charged particles
- Nuclear reactions
- Wave particle duality
- Interference and diffraction
- Refraction of light
- Spectra

## ASSESSMENT

Your work will be assessed by your teacher on an ongoing basis and by the SQA at the end of the course

### The course award is determined by:

#### Final exams (80%)

Paper 1 25 marks

Paper 2 95 marks

#### Assignment (20%)

An investigation written up in class and submitted to the SQA to be marked. 30marks

The Course assessment is graded A–D. Your grade will depend on the total marks gained from the assignment and final exams.



## FACULTY OF SCIENCE

### Biology Staff :

Mr Alan Stickle, Ms Rowan Cannell,  
Miss Sue Rodwell

### Chemistry Staff:

Mr Stephen McNeil, Ms Kat Barnard,  
Mrs Maryann Blakeborough

### Physics Staff:

Mrs Abi Gibbon, Mr Tom Court

### Career Areas:

Physicists play a key role in meeting society's needs in areas such as medicine, energy, industry, material development, the environment and sustainability.

### Courses in Turriff Academy

Level 4 NPA Science & Technology

National 4 Chemistry

National 4 Physics

Level 5 NPA Applied Science

National 5 Biology

National 5 Chemistry

National 5 Physics

Level 6 NPA Scientific Technologies

Higher Biology

Higher Chemistry

Higher Physics

Advanced Higher Biology

Advanced Higher Chemistry

Advanced Higher Physics

### Useful websites to help you with your choices:

[www.myworldofwork.co.uk](http://www.myworldofwork.co.uk)

[www.skillsdevelopmentscotland.co.uk](http://www.skillsdevelopmentscotland.co.uk)

*Further advice and information on these options is available from your subject teacher, guidance teacher and careers adviser.*