

PHYSICS (National 5)

What are the aims of this course?

The course gives learners an insight into the underlying nature of our world and its place in the universe. From the study of the electrical and heat energy that we use in our society, to the exploration of space, it covers a range of applications of the relationships that have been discovered through experiment and calculation, including those used in modern technology. The course highlights the application of Physics to our everyday lives from the rapid progression of the electronics industry for our communication and leisure to breakthroughs in medical physics and the ongoing discoveries we are making about our Universe.

What will I be learning about in this course?

The course has three main units:

- § **Electricity and Energy**- Energy transfer, heat, gas laws
- § **Waves and Radiations**- Wave parameters and behaviours, electromagnetic spectrum, light, nuclear radiation.
- § **Dynamics and Space**- Velocity and displacement, velocity time graphs, acceleration, Newtons laws, projectile motion, space exploration, cosmology

What skills I develop?

- Knowledge and understanding of physics
- Scientific research/enquiry skills
- Scientific analytical thinking skills (including selecting and processing information, carrying out experiments, written exercises and explaining the impact of applications to society/the environment).
- Literacy and numeracy

What learning and teaching approaches will I experience?

This course has practical and experiential learning opportunities, with a strong skills-based approach to learning, coupled with rigorous problem solving and knowledge-based learning. It takes account of the needs of all learners and learning styles as teachers will use a variety of media and activities to explore different concepts.

How will I be assessed?

Each of the component units will be assessed by a short written test,

There is also an assignment which carrying out an investigation, researching the topic and writing a report to show their findings. This assignment report is marked externally by the SQA and contributes 20% of the overall grade at N5 Physics. The external exam is a 2.5 hour paper consisting of both Multiple Choice and Extended Response questions.

What are the homework requirements?

In addition to reading over their notes, pupils will be expected to complete a series of questions, on a fortnightly basis, to check their knowledge and understanding.

What are the possible progression routes?

This Course or its components may provide progression to:

- Higher Physics
- National 5 or Higher in another science subject
- Skills for Work Courses (SCQF level 5 or 6)
- National Certificate Group Awards
- National Progression Awards (SCQF level 5 or 6)
- Employment