

$$E = \frac{1}{2}mv^2$$

NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Physics National 5

PHYSICS
SCIENCES

NATIONAL
5

3
UNITS

ELECTRICITY AND ENERGY
WAVES AND RADIATION
DYNAMICS AND SPACE

+
COURSE
ASSESSMENT

COURSE ASSESSMENT: ASSIGNMENT + QUESTION PAPER

What skills will my child develop?

- in-depth knowledge and understanding of physics
- applying this knowledge and understanding to new situations
- an understanding of the role of physics in scientific issues and relevant applications of physics in society and the environment
- scientific inquiry, investigative, analytical and evaluative thinking skills in physics and real life contexts
- the ability to use technology, equipment and materials
- problem-solving skills and creativity in a physics context
- extended scientific literacy, in everyday contexts, to communicate ideas and issues
- an insight into the underlying nature of our world and its place in the universe
- a deeper understanding of the processes behind scientific advances
- information-handling skills
- drawing valid conclusions and formulating hypotheses



WHAT WILL MY CHILD EXPERIENCE DURING THE COURSE?

- Active and independent learning through self and peer evaluations, setting targets, making independent decisions, using feedback
- A blend of classroom approaches including challenging experimental, practical and investigative approaches, whole class discussions and interactive teaching
- Collaborative learning: working with others in group or partner activities; intercurricular learning with other sciences, mathematics, technologies, religious and moral education; with organisations such as STEMNET
- Space for personalisation and choice: learners can choose what to observe or measure and their methodology; learners will choose the topic for their Assignment
- Applying learning
- Embedding literacy and numeracy skills: researching, selecting, summarising and presenting information using a range of sources; evaluating; recording and interpreting more complex data; using technology and data loggers.

ASSESSMENT

- To gain National 5, learners must pass all Units and the Course Assessment (the Assignment and the Question Paper)
- Units are assessed as pass or fail by the school/centre (following SQA external quality assurance to meet national standards)
- Unit assessment (or 'evidence of learning') will ensure that learners can apply knowledge and understanding and scientific skills to an experiment or practical investigation. This may be evidenced in a portfolio of work
- The Course Assessment will consist of an Assignment and a two-part Question Paper (both are marked by the SQA). For the Assignment, learners will research a topical issue, then write it up. The Course Assessment is graded A to D.

DISCUSSION IN THE CLASSROOM



We were given the question: "Is space exploration good value for money?" First of all, we had to decide how to answer the question. Some suggested a debate, with 'yes' and 'no' positions. In the end, we put together a double-page spread for an imaginary science magazine. We looked at real magazines to work out layout and word counts, and decided how we would divide the tasks. The 'yes' page and the 'no' page each had an editor who wanted the strongest possible arguments. Some of us researched the costs of specific space projects, others found information on what had been achieved (or not). Each was turned into a small story. We ended up with a great feature, packed full of information.



the National Parent
Forum of Scotland

www.parentforumscotland.org
enquiries@parentforumscotland.org

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National 5 progresses onto Higher Physics

For more detailed course information:

SQA: Physics National 5: www.sqa.org.uk/sqa/47430.html

Education Scotland: www.educationscotland.gov.uk/nationalqualifications/index.asp

Curriculum for Excellence Key Terms and Features Factfile:

www.educationscotland.gov.uk/Images/CfEFactfileOverview_tcm4-665983.pdf