

NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Engineering Science National 5

ENGINEERING
SCIENCE
TECHNOLOGIES

NATIONAL
5

3
UNITS

ENGINEERING CONTEXTS AND CHALLENGES
ELECTRONICS AND CONTROL
MECHANISMS AND STRUCTURES

+
COURSE
ASSESSMENT

COURSE ASSESSMENT: ASSIGNMENT + QUESTION PAPER

What skills will my child develop?

- knowledge and understanding of key engineering facts and ideas
- understanding the relationships between engineering, maths and science
- an understanding of mechanical, structural, pneumatic and electronic systems
- the ability to apply analytical, design, construction and evaluation skills to a range of engineering problems
- knowledge of the workings of a range of engineered objects
- the ability to communicate engineering concepts clearly
- an understanding of the role and impact of engineering in society
- knowledge of the relevance of energy, sustainability and efficiency to engineering problems and solutions
- the ability to use materials and equipment for a range of practical projects
- design and problem-solving skills
- planning, organising and researching in a technological context

WHAT WILL MY CHILD EXPERIENCE DURING THE COURSE?

- Active and independent learning through self and peer evaluations, setting targets, using feedback, reflecting on learning, making independent decisions
- A blend of classroom approaches including hands-on practical tasks, such as experiments and open-ended investigations; whole class interactive learning; group work and peer learning; visits
- Collaborative learning: working in pairs, small groups or teams to develop; links with other curricular areas such as physics, maths and social studies subjects; links with employers and businesses
- Space for personalisation and choice: learners can choose their Assignment for the Course Assessment
- Applying learning
- Embedding literacy and numeracy skills: measuring; estimation; managing production timing; communicating; reflecting and reviewing; researching and presenting information; using technology.

ASSESSMENT

- To gain National 5, learners must pass all Units and the Course Assessment (Assignment and 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') could be presented in a variety of ways such as notebooks, records of group discussions, presentations, reviews, testing, videos and experiments. A portfolio of work may be prepared
- The Course Assessment consists of a Question Paper (exam marked by the SQA) and an Assignment. The Assignment will require learners to solve an engineering problem and demonstrate skills in analysis, simulations, construction, testing and reporting. The Course Assessment is graded A to D.

National 5 progresses onto Higher Engineering Science

For more detailed course information:

SQA: Engineering Science National 5: www.sqa.org.uk/sqa/47458.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



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