

NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Design & Manufacture National 4

DESIGN &
MANUFACTURE
TECHNOLOGIES

NATIONAL

4

2
UNITS

DESIGN
MATERIALS AND MANUFACTURING

+
ADDED
VALUE
UNIT

ADDED VALUE UNIT: DESIGN AND MANUFACTURE ASSIGNMENT

What skills will my child develop?

- skills in the design and manufacturing of straightforward models, prototypes and products
- knowledge and understanding of manufacturing processes and materials
- an understanding of the impact of design and manufacturing technologies on our environment and society
- knowledge and understanding of industrial designers and commercial production
- the ability to devise design and manufacturing solutions to straightforward practical problems
- the ability to use simple modelling and manufacturing techniques in 3 D
- the ability to select and use with guidance a range of tools, equipment, software and materials with guidance
- the ability to communicate design proposals
- creativity in an exciting and dynamic technological context
- the ability to read drawings and diagrams
- planning, analysing and evaluation skills with support

WHAT WILL MY CHILD EXPERIENCE DURING THE COURSE?

- Active and independent learning through self and peer evaluations, reflecting on learning, setting targets, evaluating progress, making independent decisions, responding to feedback
- A blend of classroom approaches including practical, exploratory and experiential learning; using ICT; group work and peer learning
- Collaborative learning: partnerships with learners and staff in other curricular areas such as Graphic Communication and Art and Design; partnerships with the wider community and professional practitioners eg architects, manufacturers, design studios
- Space for personalisation and choice: there are opportunities for personalisation and choice throughout the course, including in the Assignment
- Applying learning
- Embedding literacy and numeracy skills: explaining and justifying decisions; researching and presenting information; evaluating; communicating; using ICT.

ASSESSMENT

- To gain National 4, learners must pass all Units
- 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 sketch books, notes from group discussions, presentations, reviews and product evaluations, computer-generated class work. A portfolio of work may be prepared
- The Added Value Unit (Assignment) will involve learners being given a brief to which they will respond, applying skills and knowledge gained from the Units, to prepare a design folio and a prototype.

National 4 progresses onto National 5

For more detailed course information:

SQA: Design and Manufacture National 4: www.sqa.org.uk/sqa/45646.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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