

# NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Design & Manufacture National 5

DESIGN &  
MANUFACTURE  
TECHNOLOGIES

NATIONAL  
5

2  
UNITS

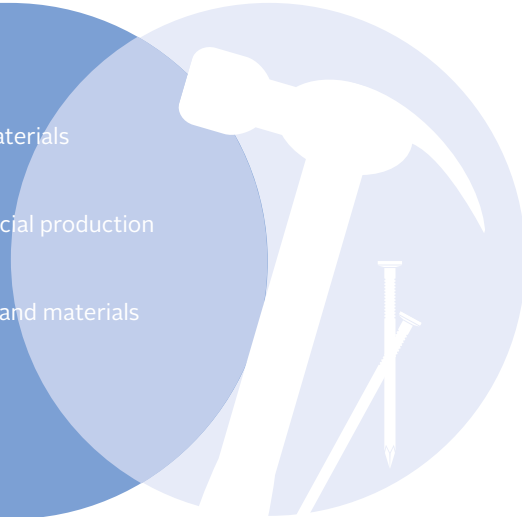
DESIGN  
MATERIALS AND MANUFACTURING

+  
COURSE  
ASSESSMENT

COURSE ASSESSMENT: QUESTION PAPER + 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 and more complex practical problems
- the ability to select and use a range of tools, equipment, software and materials
- the ability to use modelling and manufacturing techniques in 3 D
- the ability to communicate design proposals
- creativity in an exciting and dynamic technological context
- the ability to evaluate and apply suggestions for improvement
- the ability to read drawings and diagrams
- planning, analysing and evaluation skills



## 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 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 5, learners must pass all Units and the Course Assessment
- 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 Course Assessment consists of a two-section Question Paper (exam marked by the SQA) and an Assignment (marked in accordance with SQA guidelines). For the Assignment, learners will be given a brief for which they prepare a design folio and a prototype, applying skills and knowledge gained from the Units. The Course Assessment will be graded A to D.



Our design brief was to create some outdoor seating for the school grounds. It had to be sustainable, affordable and appealing to young people. We worked in groups, first of all undertaking research on the internet about school seating designs and seats in public places. The tricky part was the choice of materials - what would be comfortable, attractive and cope with wear and tear? Our group chose to use wood, sourced from fallen timber in the nearby park. We designed the seating with a very natural look, like a large log, to fit in with the location at the edge of the school playing field, and also because we remembered how much we liked to sit on logs in the local woods when we were younger.



National 5 progresses onto Higher Design and Manufacture

For more detailed course information:

SQA: Design and Manufacture National 5: [www.sqa.org.uk/sqa/47457.html](http://www.sqa.org.uk/sqa/47457.html)

Education Scotland: [www.educationscotland.gov.uk/nationalqualifications/index.asp](http://www.educationscotland.gov.uk/nationalqualifications/index.asp)

Curriculum for Excellence Key Terms and Features Factfile:

[www.educationscotland.gov.uk/Images/CfEFactfileOverview\\_tcm4-665983.pdf](http://www.educationscotland.gov.uk/Images/CfEFactfileOverview_tcm4-665983.pdf)



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