NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland National 5 Summary

NATIONAL 5

Design & Manufacture

TECHNOLOGIES

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 e.g. 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

- The course will be assessed through a question paper (exam) and two assignments, which will be marked by SQA and graded A to D.
- The question paper is worth 80 marks and makes up 44% of the total assessment mark. Learners answer questions on the topics of design, workshop-based manufacture and commercial manufacture.
- The two assignments are linked and make up 56% of the total assessment mark. The design assignment is worth 55 marks and requires learners to develop a proposed design in response to a set brief. For the practical assignment, learners manufacture their proposed product. The practical assignment is worth 45 marks.

National 5 progresses onto Higher Design and Manufacture

DISCUSSION IN THE CLASSROOM

> 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.

For more detailed course information:

SQA: Design and Manufacture National 5: www.sqa.org.uk/sqa/47457.html

Education Scotland: https://education.gov.scot/nationalqualifications

Curriculum for Excellence Key Terms and Features Factfile:

https://education.gov.scot/parentzone/Documents/CfEFactfileOverview.pdf

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