Curriculum for Excellence (CfE) S1-S3 Engineering, Craft, Design and Graphics Course Levels 3/4







N4/5

N4/5 Graphic

N4/5

Engineering Science

Communication



### Who Teaches your child?

Mr. R. Baldie (Principal Teacher):- Graduated from Dundee College of Technology in Mechanical and Industrial Engineering and has been teaching at Forfar Academy since 2004 and is a former pupil.

Mr. N. MacArthur:- Graduated from Glasgow University in Technology Teaching and has worked as Teacher of Technical Subjects from 2005 in a various of schools.

Mr. A. McParland:- Graduated From Napier University in Mechanical Engineering and has worked in the department for 28 years.

Miss C. McDyer:- Graduated from Duncan Jordanstone College of Art & Design in Interior and Environmental Design and has been teaching in the department since 2014



### How can I contact you?

If you have any further questions you can contact Mr R.Baldie (Principal Teacher EDT) by e-mail:

R.Baldie@angusschools.org.uk



Any useful websites?

http://www.sga.org.uk/sga/70972.html

https://education.gov.scot/scottish-education-system/senior-phase-and-beyond

https://www.mvworldofwork.co.uk/

http://www.skillsdevelopmentscotland.co.uk/

http://www.parentforumscotland.org/

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# Engineering Design & Technology

# S1 In a Nutshell









### How we think?

### **Our Curriculum Rationale:**

Our aim is to inspire your child through active learning in all aspects of Engineering, Graphics, Design & Manufacture.

Project based learning is used to develop knowledge and practical skills in context to make decisions about further education and career pathways.

Pupils will engage with emerging technologies and traditional techniques that will build skills and attributes needed to succeed in the 21st century world of work.



Follow your child's progress:





### What will your child experience?

From S1-S3 your child will follow a course in Craft, Design, Engineering and graphics with experiences and outcomes outlined in the Technologies benchmarks below, with an emphasis on safe working practice.

https://education.gov.scot/improvement/documents/ technologiesbenchmarkspdf.pdf

# 1) Graphic Communication

Our pupils focus on:

- **Manual sketching & rendering techniques.** 2D & 3D idea presentations.
- Technical drawing. Using 3D Computer Aided Design (CAD) techniques to produce virtual artefacts that could be realised using Computer Aided Manufacture (CAM).
- Computer Aided Graphics (GAG) & and Desk Top Publishing (DTP). Producing logos, invitations, cards, posters and website pages.

### 2) Engineering Science

Pupils cover one of the following Units:

- Computer control— using software to control model traffic lights and motors.
- Mechanical systems design, build and test a scaled model of a medieval catapult or 'Trebuchet'
- Electrical Systems- design, build and race a car using an electric motor and pulley system.

## 3) The Design Process

Pupils produce two **Design Folios.** 

These take a client–based approach and are used to develop creative design solutions for the manufacture of a key-tag and a spatula, that could be realised through the use of hand and machine tools.

### 4) Practical Craft

Pupils will produce 4 artefacts:

**Working in wood, metal and plastics** pupils acquire skills in the safe use of tools, machinery and finishing processes.

### How Do we Assess your child?

We work towards achieving *level 3 experiences and outcomes* by the end of S1. Practical models and units of work are *continually assessed* using related criteria and self evaluation sheets that includes teacher and pupil comments. There is *set homework* throughout the year relating to each unit of work. All Design Technology paperwork and photographs are combined into a folder that produces a comprehensive pupil record.

### Is there a Cost?

There will be a small *materials re-charge* of £8 per academic year for material used. This averages out over S1-S3 to £1 per academic month and is paid through an I-pay system. You will sent a letter to guide you through the process.

### Is t In *E*

### Is there Homework?

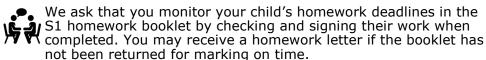
In **EDT** we use homework to reinforce class learning and to prepare pupils for **class assessments**.

All homework tasks within this booklet are achievable within 20-30 minutes.

We would encourage you to work along your child to **create a focussed atmosphere**. All the answers to the questions are covered in class but can be found readily on this website:

### WWW.TechnologyStudent.com

### Can You Help?



Some homework is given by staff to help complete portfolio work on time, or as revision for tests. Homework will not be given more than once per week.

### What can they go on to do?

**Technical Subjects** provide progression to **University** based courses that lead to careers in the following sectors:

Engineering, The Creative Industries, Construction, Renewables, The Built Environment, Oil and Gas, Agriculture, Food & Drink and many others.

Alternatively, through *Further Education* and *National Progression Awards (NPAs)* pupils can follow career pathways in a range of other practical Technological based courses in *Skills for Work* and sector-specific *SQA Courses*, employment, and/or training including:

**Modern Apprenticeships** in Industrial/ domestic trades such as Mechanic, Joiner, Electrician, Plumber, *CAD* technician, Armed Forces, Welder, Fitter, CNC machinist to mention a few.