NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Practical Electronics National 4

PRACTICAL ELECTRONICS TECHNOLOGIES

NATIONAL 4

3 UNITS

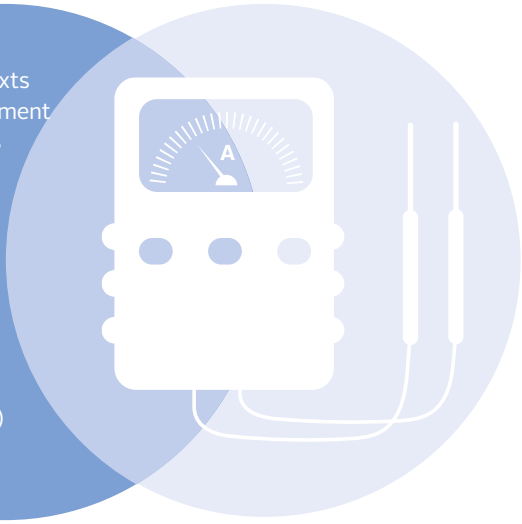
CIRCUIT DESIGN
CIRCUIT SIMULATION
CIRCUIT CONSTRUCTION

\+ ADDED VALUE UNIT

ADDED VALUE UNIT: PRACTICAL ACTIVITY - DEVELOPING AN ELECTRONIC SOLUTION

What skills will my child develop?

- electronic knowledge and skills in a range of straightforward contexts
- an awareness of some electronics impacts on society and the environment
- knowledge and understanding of the systems approach to electronics
- understanding of key electrical concepts — current, voltage, resistance, analogue/digital
- knowledge and understanding of key electronic components
- introductory knowledge and understanding of combinational logic
- awareness of safe working practices
- simulating, testing and evaluating solutions to straightforward electronic problems, with guidance
- skills in using basic test equipment
- constructing simple electronic circuits using permanent (soldering) and non-permanent methods, with given layouts



WHAT WILL MY CHILD EXPERIENCE DURING THE COURSE?

- Active and independent learning through self and peer evaluations, group feedback, reflecting on learning, making independent decisions
- A blend of classroom approaches including practical and experiential learning in real-life contexts; whole class learning; team working; visits
- Collaborative learning: working in pairs, small groups or larger groups; working with partners in other Technologies subjects, Maths, Sciences
- Space for personalisation and choice: learners can choose how they develop their Practical Activity
- Applying learning
- Embedding literacy and numeracy skills: interpreting drawings/ diagrams, measuring, marking out, analysing data, designing.

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 presented in a variety of ways such as completed tasks, records of the task development (blogs, diaries). A portfolio of work (including a learner checklist) may be prepared
- The Added Value Unit (Practical Activity) will require learners to solve an electronics problem, completing a record of progress, a report on testing the solution and on the final solution.

National 4 progresses onto National 5

For more detailed course information:
SQA: Practical Electronics National 4: www.sqa.org.uk/sqa/47453.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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