

# NATIONALS IN A NUTSHELL

The National Parent Forum of Scotland Summary of Computing Science National 4

COMPUTING  
SCIENCE  
TECHNOLOGIES

NATIONAL  
4

2  
UNITS

SOFTWARE DESIGN AND DEVELOPMENT  
INFORMATION SYSTEM DESIGN AND DEVELOPMENT

ADDED VALUE UNIT: COMPUTING SCIENCE ASSIGNMENT

+  
ADDED  
VALUE  
UNIT

## What skills will my child develop?

- understanding the technologies that underpin the digital world
- essential skills for everyday life
- understanding and applying computational processes and thinking across straightforward contexts
- knowledge and understanding of key facts and ideas in computing science
- analysing, designing, modelling, implementing and testing digital solutions to straightforward problems
- programming skills
- communicating basic computing concepts
- planning, researching, organising and problem-solving
- understanding the impact of computing science on our society
- understanding the relationship between software, hardware and system performance
- understanding information representation and transfer

## 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
- A blend of classroom approaches including problem-solving in teams with specific roles, sharing learning through group and class discussion
- Collaborative learning: the subject brings aspects of technology, science and creative digital media together, providing the opportunity for cross curricular learning and team-work
- Space for personalisation and choice: learning activities can link to learners' own interests and learners can choose their issue for their Added Value Unit (Assignment)
- Applying learning
- Embedding literacy and numeracy skills: researching and presenting information; evaluating; discussing; listening; talking; number processes; information handling
- The Assignment will involve learners analysing and solving a computing science problem and gathering evidence of progress (this could be recorded using a blog or a diary)
- The Added Value Unit is an Assignment which requires learners to analyse and solve a computing science problem and to gather evidence of progress (eg in a blog or diary).

## 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 written evidence, tests, oral evidence, computer-generated class work.

National 4 progresses onto National 5

For more detailed course information:

SQA: Computing Science National 4: [www.sqa.org.uk/sqa/56922.html](http://www.sqa.org.uk/sqa/56922.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)

First we designed three objects using Paint. We made a canon, a ball of ketchup and a splat of ketchup. We programmed the canon to move around and summon the ball of ketchup which we also programmed to move. We then programmed the ketchup ball to transform into a splat at random intervals. It was a very interesting way to get started with programming.



the National Parent  
Forum of Scotland