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**North Duffield community primary school**

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# **Key Stage 1 Curriculum design** **Structure of the units of work**

## Teach Computing Curriculum overview

### Brief overview

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|  | **Computing systems and networks1** | **Creating media** | **Programming A** | **Data and information** | **Creating media** | **Programming B** |
| **Year 1** | Technology around us  (1.1)\* | Digital painting  (1.2) | Moving a robot  (1.3) | Grouping data  (1.4) | Digital writing  (1.5) | Programming animations (1.6) |
| **Year 2** | Information technology around us  (2.1) | Digital photography  (2.2) | Robot algorithms  (2.3) | Pictograms  (2.4) | Making music  (2.5) | Programming quizzes  (2.6) |

1Networks are not part of the key stage 1 national curriculum for computing but the title is used as a strand across primary.

\*The numbers in the brackets are a ‘quick code’ reference for each unit, eg 1.3 refers to the third Year 1 unit in the recommended teaching order.

**Unit summaries**

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|  | **Computing systems and networks** | **Creating media** | **Programming A** | **Data and information** | **Creating media** | **Programming B** |
| **Year 1** | **Technology around us**  Recognising technology in school and using  it responsibly. | **Digital painting**  Choosing appropriate tools in a program to create art, and  making comparisons with working non-digitally. | **Moving a robot**  Writing short algorithms and programs for floor robots, and predicting program outcomes. | **Grouping data**  Exploring object labels, then using them to sort and group objects by properties. | **Digital writing**  Using a computer to create and format  text, before comparing to writing non-digitally. | **Programming animations**  Designing and programming the movement of a character on screen to tell stories. |
| **Year 2** | **Information technology around us**  Identifying IT and how its responsible use improves our world in school and beyond. | **Digital photography**  Capturing and changing digital photographs for different purposes. | **Robot algorithms**  Creating and debugging programs, and using logical reasoning to make predictions. | **Pictograms** Collecting data in tally charts and using attributes to organise and present data  on a computer. | **Making music**  Using a computer as a tool to explore rhythms and melodies, before creating a musical composition. | **Programming quizzes**  Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. |

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| **National Curriculum Coverage —**  **Key Stage 1 Computing Curriculum** | 1.1 Technology around us | 1.2 Digital painting | 1.3 Moving a robot | 1.4 Grouping data | 1.5 Digital writing | 1.6 Programming animations | 2.1 Information technology around us | 2.2 Digital photography | 2.3 Robot algorithims | 2.4 Pictograms | 2.5 Making music | 2.6 Programming quizzes |
| Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Create and debug simple programs |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Use logical reasoning to predict the behaviour of simple programs |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Use technology purposefully to create, organise, store, manipulate and retrieve digital content | ✓ | ✓ |  | ✓ | ✓ | ✓ | ✓ | ✓ |  | ✓ | ✓ | ✓ |
| Recognise common uses of information technology beyond school | ✓ |  | ✓ | ✓ |  |  | ✓ | ✓ |  |  |  |  |
| Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies | ✓ |  |  |  | ✓ | ✓ | ✓ |  |  | ✓ |  |  |