# Structure of the units of work

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**North Duffield community primary school**

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Every unit of work in the Teach Computing Curriculum contains: a unit overview; a learning graph, to show the progression of skills and concepts in a unit; lesson content — including a detailed lesson plan, slides for learners, and all the resources you will need; and formative and summative assessment opportunities.

## Teach Computing Curriculum overview

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|  | **Computing systems and networks** | **Creating media** | **Programming A** | **Data and information** | **Creating media** | **Programming B** |
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| **Year 3** | Connecting computers (3.1) | Stop-frame animation (3.2) | Sequencing sounds (3.3) | Branching databases (3.4) | Desktop publishing (3.5) | Events and actions in programs  (3.6) |
| **Year 4** | The internet (4.1) | Audio editing (4.2) | Repetition in shapes (4.3) | Data logging (4.4) | Photo editing (4.5) | Repetition in games (4.6) |
| **Year 5** | Sharing information (5.1) | Video editing (5.2) | Selection in physical computing (5.3) | Flat-file databases (5.4) | Vector drawing (5.5) | Selection in quizzes (5.6) |
| **Year 6** | Internet communication (6.1) | Webpage creation (6.2) | Variables in games (6.3) | Introduction to spreadsheets (6.4) | 3D  modelling (6.5) | Sensing (6.6) |

**Unit summaries**

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| --- | --- | --- | --- | --- | --- | --- |
|  | **Computing systems and networks** | **Creating media** | **Programming A** | **Data and information** | **Creating media** | **Programming B** |
| **Year 3** | **Connecting computers** Identifying that digital devices have inputs,  processes, and outputs, and how devices can be connected  to make networks. | **Stop-frame animation**  Capturing and editing digital still images to produce a stop-frame animation that  tells a story. | **Sequencing sounds** Creating sequences in a block-based programming language to  make music. | **Branching databases**  Building and using branching  databases to group objects using yes/no questions. | **Desktop publishing** Creating documents by modifying text, images, and page layouts for a specified purpose. | **Events and actions in programs** Writing algorithms and programs that  use a range of events to trigger sequences of actions. |
| **Year 4** | **The internet** Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. | **Audio editing** Capturing and editing audio to produce a podcast, ensuring that copyright  is considered. | **Repetition in shapes** Using a text-based programming language to explore count-controlled loops when  drawing shapes. | **Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation. | **Photo editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. | **Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game. |

**Unit summaries**

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|  | **Computing systems and networks** | **Creating media** | **Programming A** | **Data and information** | **Creating media** | **Programming B** |
| **Year 5** | **Sharing information** Identifying and exploring how information  is shared between digital systems. | **Video editing** Planning, capturing, and editing video to produce a short film. | **Selection in physical computing**  Exploring conditions and selection using a programmable microcontroller. | **Flat-file databases** Using a database to order data and create charts to answer questions. | **Vector drawing**  Creating images  in a drawing program by using layers and groups of objects. | **Selection in quizzes** Exploring selection in programming to design and code an interactive quiz. |
| **Year 6** | **Internet communication** Recognising how the WWW can be used  to communicate and be searched to find information. | **Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. | **Variables in games** Exploring variables when designing and coding a game. | **Introduction to spreadsheets** Answering questions by using spreadsheets  to organise and calculate data. | **3D modelling** Planning, developing, and evaluating 3D computer models of physical objects. | **Sensing**  Designing and coding a project that captures inputs from a physical device. |

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| **National Curriculum Coverage — Years 3 and 4** | 3.1 Connecting computers | 3.2 Stop-frame animation | 3.3 Sequencing sounds | 3.4 Branching databases | 3.5 Desktop publishing | 3.6 Events and actions in programs | 4.1 The Internet | 4.2 Audio editing | 4.3 Repetition in shapes | 4.4 Data logging | 4.5 Photo editing | 4.6 Repetition in games |
| Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Use sequence, selection, and repetition in programs;  work with variables and various forms of input and output | ✓ |  | ✓ |  |  | ✓ |  |  | ✓ | ✓ |  | ✓ |
| Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration | ✓ |  |  |  |  |  | ✓ |  |  |  |  |  |
| Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content |  |  |  |  | ✓ |  | ✓ | ✓ |  |  | ✓ |  |
| Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact |  |  |  |  |  |  | ✓ | ✓ |  |  | ✓ |  |

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| **National Curriculum Coverage — Years 5 and 6** | 5.1 Sharing information | 5.2 Video editimg | 5.3 Selection in physical computing | 5.4 Flat-file databases | 5.5 Vector drawing | 5.6 Selection in quizzes | 6.1 Internet  communication | 6.2 Webpage creation | 6.3 Variables in games | 6.4 Introduction to spreadsheets | 6.5 3D modelling | 6.6 Sensing |
| Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts | ✓ |  | ✓ |  |  | ✓ | ✓ |  | ✓ |  |  | ✓ |
| Use sequence, selection, and repetition in programs;  work with variables and various forms of input and output | ✓ |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs |  |  | ✓ |  |  | ✓ |  |  | ✓ |  |  | ✓ |
| Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration | ✓ |  |  |  |  |  | ✓ |  |  |  |  |  |
| Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content |  | ✓ |  | ✓ |  |  | ✓ | ✓ |  |  |  |  |
| Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | ✓ | ✓ |  |  |  |  |  | ✓ | ✓ |  | ✓ |  |