

## **Teach Computing Curriculum overview**

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

## **Unit summaries**

|        | 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<br>in programs<br>Writing algorithms<br>and programs that<br>use a range of events<br>to trigger sequences<br>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.            |
|        | 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                 | Variables in games Exploring variables when designing and coding a game.  | Introduction to spreadsheets Answering questions by using spreadsheets to organise and                                      | 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.  |

| 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   |                          |                          | 1                     |                         |                        | 1                                  |                  |                   | 1                        |                  |                   | 1                       |
| Use sequence, selection, and repetition in programs; work with variables and various forms of input and output   | 1                        |                          | 1                     |                         |                        | 1                                  |                  |                   | 1                        | 1                |                   | 1                       |
| Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs   |                          |                          | 1                     |                         |                        | 1                                  |                  |                   | 1                        |                  |                   | 1                       |
| 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   | 1                        |                          |                       |                         |                        |                                    | 1                |                   |                          |                  |                   |                         |
| Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content   |                          |                          |                       |                         | 1                      |                                    | 1                | 1                 |                          |                  | 1                 |                         |
| 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 | 1                        | 1                        | 1                     | 1                       | 1                      | 1                                  | 1                | 1                 | 1                        | 1                | 1                 | 1                       |
| Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact  |                          |                          |                       |                         |                        |                                    | 1                | 1                 |                          |                  | 1                 |                         |

| 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<br>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   | 1                       |                   | 1                                   |                         |                    | 1                        | 1                             |                      | 1                      |                                  |                  | 1           |
| Use sequence, selection, and repetition in programs; work with variables and various forms of input and output   | 1                       |                   | 1                                   |                         |                    | 1                        |                               |                      | 1                      |                                  |                  | 1           |
| Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs   |                         |                   | 1                                   |                         |                    | 1                        |                               |                      | 1                      |                                  |                  | 1           |
| 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   | 1                       |                   |                                     |                         |                    |                          | 1                             |                      |                        |                                  |                  |             |
| Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content   |                         | 1                 |                                     | 1                       |                    |                          | 1                             | 1                    |                        |                                  |                  |             |
| 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 | 1                       | 1                 | 1                                   | 1                       | 1                  | 1                        | 1                             | 1                    | 1                      | 1                                | 1                | 1           |
| Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact  | 1                       | 1                 |                                     |                         |                    |                          |                               | 1                    | 1                      |                                  | 1                |             |