Stage 3

Computational Thinking

- **3CT.01** Follow, understand, edit and correct linear algorithms.
- **3CT.02** Understand that efficient algorithms are concise.
- **3CT.03** Identify steps that are repeated within everyday tasks.
- **3CT.04** Know that logical thinking is used in the creation of algorithms.
- **3CT.05** Predict the outcome of a change to an algorithm that is presented as a sequence of steps.
- **3CT.06** Know that many tasks can be divided into smaller sections to make them easier to follow and to edit.
- **3CT.07** Identify the inputs to algorithms.
- **3CT.08** Know how to develop linear algorithms to produce an output based on an input.

Programming

- **3P.01** Understand the benefit of editing programs to make them clear and concise, including removing unused commands or combining duplicated commands.
- **3P.02** Know how to develop programs that include code to reset objects to their original state (initialisation).
- **3P.03** Know how to create programs with more than one algorithm running at the same time.
- **3P.04** Know how to develop programs that contain more than one object, including a static object.
- **3P.05** Know how to make a change within a block of code to achieve desired outcomes in programs, such as changing the number of steps a sprite moves.
- **3P.06** Know how to create programs to produce an output from an input device.
- **3P.07** Outline the benefits of working with others when creating programs.
- **3P.08** Understand that programmers use their mistakes to inform the programs that they create.
- **3P.09** Know how to test and debug programs so that they run and produce the desired output.
- **3P.10** Know how to develop programs for a physical computing device to produce outputs.

Managing Data

- **3MD.01** Identify problems that can be solved through the collection and interpretation of data.
- **3MD.02** Identify and investigate different ways of representing discrete and categorical data, using a digital tool.
- **3MD.03** Know how to record discrete and categorical data, using computing devices.
- **3MD.04** Know that spreadsheets are comprised of rows and columns of cells and that data can be entered into the cells.
- **3MD.05** Know how to format cells according to their purpose, such as date, currency and text.
- **3MD.06** Demonstrate how to select data based upon their characteristics to solve problems.

Networks and Digital Communication

- **3DC.01** Identify networked hardware in a familiar environment, including the school and home.
- **3DC.02** Identify services that are available on familiar networks, including digital files, printed documents and the World Wide Web.
- **3DC.03** Understand the advantages and disadvantages of a network.
- **3DC.04** Know that ciphers are a way of making sure that information stays secret.
- **3DC.05** Know how to write and decode messages using very simple code, including converting letters to numbers (1 = a, 2 = b, etc.).

Computer Systems

- **3CS.01** Know that the hardware and software components of computing devices combine to form a working system.
- **3CS.02** Know the differences between hardware and software, and compare the different roles that they perform in computer systems.
- **3CS.03** Identify a range of manual and automatic input devices.
- **3CS.04** Know that different types of file can be stored on a computer's hard drive, including text, audio, image, video and games.
- **3CS.05** Know that computers can be programmed to control machines and other physical objects.
- **3CS.06** Identify common 'Internet of Things' devices in a familiar environment.
- **3CS.07** Explain the role of robots in manufacturing.