Stage 5

Computational Thinking

- **5CT.01** Follow, understand, edit and correct algorithms that contain selection.
- **5CT.02** Understand that different algorithms can be used to complete a task, with some algorithms being more efficient than others.
- **5CT.03** Predict the outcome of algorithms that contain a selection statement.
- **5CT.04** Understand and use variables in algorithms, including how to assign a variable to a specific value.
- **5CT.05** Know how to develop algorithms where two objects interrelate.
- **5CT.06** Understand and use selection in algorithms, limited to IF, THEN, ELSE.
- **5CT.07** Understand and use comparison (equal to) operators in algorithms.
- **5CT.08** Understand and use arithmetic (+, −) operators in algorithms.

Programming

- **5P.01** Understand the importance of creating a clear name for each variable.
- **5P.02** Know how to develop programs where two or more objects can interact.
- **5P.03** Know how to develop programs with a variable assigned to a specific value.
- **5P.04** Know how to develop programs with simple conditional, or selection, statements, including IF, THEN, ELSE, to produce different outputs.
- **5P.05** Know how to develop programs with 'equal to' comparison operators.
- **5P.06** Know how to develop programs with a variable modified using arithmetic operators.
- **5P.07** Know how to identify the purpose, events and expected outcomes to write an outline plan for a program.
- **5P.08** Know how to plan the instructions for objects within a program, including the identification of the outcomes of conditions and the data stored.
- **5P.09** Outline that the creation of a final program often requires input from people with a range of skills.
- **5P.10** Evaluate programs against given criteria.
- **5P.11** Know how to develop programs for a physical computing device with simple conditional statements, including IF, THEN, ELSE, to produce different outputs.

Managing Data

- **5MD.01** Know that a range of computing tools may be used during a statistical investigation, including data loggers, spreadsheets and databases, and document production tools.
- **5MD.02** Identify different ways of representing categorical, discrete, and continuous data, using computing devices.
- **5MD.03** Know how to modify representations of data to suit different criteria.
- **5MD.04** Know how to collect data for sets of related questions, limited to categorical and discrete data.
- **5MD.05** Know that cells can be restricted to accept only certain data types, limited to text, date and number.
- **5MD.06** Know how to use the arithmetic operators, including +, −, *, /, and simple functions, such as SUM and AVERAGE, in a spreadsheet.
- **5MD.07** Identify the impact of changes to individual data items.
- **5MD.08** Know how to identify data based on a single criterion, including data that matches a key word.

Networks and Digital Communication

- **5DC.01** Explain the role of switches, routers and wi-fi access points in a network.
- **5DC.02** Know that all devices on a network have an IP address which is used by data to identify its destination.
- **5DC.03** Explain how websites are stored on servers and accessed over the internet.
- **5DC.04** Explain the role of a cellular network when connecting mobile devices to the internet.
- **5DC.05** Know that data is divided into smaller pieces, transmitted as packets through multiple devices over networks and reassembled at the destination.
- **5DC.06** Know that packets can follow different routes across the internet before being reassembled.
- **5DC.07** Identify issues that may occur as a result of a failure of the internet.

Computer Systems

- **5CS.01** Describe the scale of the computing devices and mechanisms that are connected to the internet, either for data input or as actuators to make something happen, both in the home and globally.
- **5CS.02** Know that there are a range of storage devices that can be used within computer systems.
- **5CS.03** Know that computers represent data in binary (0,1).
- **5CS.04** Identify bits, bytes, kilobytes and megabytes, making links to memory size and storage.
- **5CS.05** Describe the input-process-output model and illustrate with examples relating to different devices, including control systems, printing and audio production.
- **5CS.06** Know that Artificial Intelligence (AI) is a simulation of human intelligence within computer systems.
- **5CS.07** Know that AI is used within common productivity software, limited to predictive text or speech to text.