



Computing Skills Progression Grid

KEY SKILLS	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algorithms	To respond to instructions, order things, sequence things, work out different ways to do things, break problems down into steps	To begin to work with algorithms and understand what they are.	To understand how algorithms are implemented as programs on digital devices.	To use logical reasoning to explain how simple algorithms work.	To use logical reasoning to explain how simple algorithms work and detect errors.	To use logical reasoning to explain how simple algorithms work, detecting and correcting errors.	To use logical reasoning to explain how simple algorithms work, detecting and correcting errors in algorithms and programs.
Debug	To check things they have created and make them work. To order and sequence stories.	Create simple programs.	Create and debug simple programs.	To design and debug programs.	To design, write and debug programs.	To design, write and debug programs that accomplish goals.	To design, write and debug programs that accomplish specific goals
Digital Content	To begin to use technology purposefully to create, organise and store digital content.	To use technology purposefully to create, organise and store digital content.	To use technology content purposefully to manipulate and retrieve digital content.	To use search technologies effectively.	To use search technologies effectively, understanding how results are selected and ranked.	To use search technologies effectively, being discerning in evaluating digital content.	To use search technologies effectively, understanding how results are selected and ranked, being discerning in evaluating digital content.

Logical Reasoning	To use reasoning to anticipate and explain what might happen next in a range of situations, for instance, story-telling; exploring the real world; water play etc.	Use reasoning to predict simple programs.	To use logical reasoning to predict the behaviour of simple programs.	To use logical reasoning to explain the behaviour of simple programs.	To use logical reasoning to explain how simple algorithms work.	To use logical reasoning to explain how simple algorithms work and to detect and correct errors in algorithms.	To use logical reasoning to explain how simple algorithms work and to detect and correct errors in algorithms and programs.
Collect, Analyse, Evaluate and Present Data		N/A	N/A	To select and use a variety of software.	To select and use a variety of software to design and create a range of programs.	To select and use a variety of software to design and create a range of programs that accomplish given goals.	To select and use a variety of software to design and create a range of programs that accomplish given goals, including collecting, analysing, evaluation and presenting data and information.
Computer Networks		N/A	N/A	To understand computer networks such as the internet.	To understand computer networks such as the internet and how they provide us with multiple services.	To understand computer networks such as the internet and how they provide us with multiple services and the opportunities they offer for communication.	To understand computer networks such as the internet and how they provide us with multiple services and the opportunities they offer for communication and collaboration.

Controlling or Simulating Physical systems		N/A	N/A	To design and write programs that accomplish specific goals.	To design, write and debug programs that accomplish specific goals.	To design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems.	To design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems. Solving problems by decomposing them into smaller parts.
Sequence, Selection and Repetition		N/A	N/A	To sequence things into a particular order.	To sequence things into a particular order, understanding that it is important that one action is performed before another.	To use sequencing and selection, making a specific choice when a program can do more than one thing.	To use sequence, selection and repetition in programs to structure a piece of computer code of algorithm.
Software		N/A	N/A	To understand that different types of software are more suitable for different tasks.	To select different types of software are more suitable for different tasks.	To choose the best software for different tasks and combine software to complete a task properly.	To choose the best software for different tasks and combine software to complete tasks such as reports including graphs and spreadsheets.

Functions and Variables		N/A	N/A	To understand that variables may be numbers or text.	To work with variables within a given program.	To understand that a variable may be the input from a particular device or become the output.	To understand that a variable may be the input from a particular device or become the output., based on some code or calculation.
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