

An **algorithm** is a set of instructions that we complete in order to achieve a task. You could write an algorithm to complete mundane tasks such as making a cup of tea or to complete complex tasks such as calculating the odds that a team will win a football match. In computing an algorithm refers to the set of instructions that a computer follows in the order in which they are given.

Binary is the language computers use. It is a series of 1s and 0s and is also used in mathematics.

A **block** is often used in programs such as Scratch, a series of commands joined together to make a code.



Browser A computer program used to access the World Wide Web.

Coding is putting information and commands into a **program** using algorithms, making it possible for you to create software, apps and websites.

Computational logic is a term that describes the decision-making process used in programming and writing algorithms.

A **computer program** is a collection of instructions or algorithms designed to simplify processes, whether that be writing a Word document or connecting to a website. A computer program is written using a **programming language**, which allows a computer scientist to teach a computer how to achieve a result. Examples of programming languages are Scratch, Java, Python, C++ and Ruby. The following link offers a brief introduction to programming language in relation to Scratch:

<https://youtu.be/ywG6lv9mFLI>

Computers are very good at completing lots of mathematical functions in a short space of time, however they don't have the ability to think for themselves. **Programming languages** bridge this gap and allow us to teach a computer how to do things.

Data is Information.

Database a structured set of data held in a computer, especially one that is accessible in various ways.

Debugging is checking the code in a computer program to ensure it works, and changing it if it doesn't. When writing a computer program things will often go wrong. When writing a program you have to test and debug your program to ensure that it produces correct results.

Digital content is any media created, edited or viewed on a computer, such as text (including the hypertext of a web page), images, sound, video (including animation), or virtual environments, and combinations of these (i.e. multimedia).

Hardware is the physical part of a computer, which uses electrical signals to complete the calculations needed to make software run. Examples of hardware are the computer circuit board, memory, processor and/or other equipment related to a computer, such as printers, monitors and keyboards.

HTML Hyper Text Markup Language: the 'code' used to create and layout web pages.

Input Information that goes into the computer.

Internet A network of computers linked all over the world.

An **IP Address** is a numerical label assigned to each device on a computer network.

Logic When making any decision a certain amount of logic is involved; for example, when deciding what to wear in the morning, you make a logical decision based on the season, weather and any number of other factors. **Computational logic** is used to allow a program to decide what to do and when. For example you may write code that says: "When the user clicks this button, perform this calculation."

Manipulating digital content is likely to involve using one or more application programs, such as word-processors, presentation software, or image-, audio- or video-editing packages. The pupil makes changes to the digital content, which might include combining content from multiple sources. The skill here is not just using the software tools, but also knowing how best to change the content for the audience and purpose, and to take into account principles of good design.

Network Computers linked within a building or area.

Output Information that comes out of the computer.

A **procedure/function** is used in programming to break a complex task down into simple steps or sections.

Repetition Sometimes called iteration, when part of a program repeats itself. For example, in animation you may repeat the movements of a character to make it look like it's moving along.

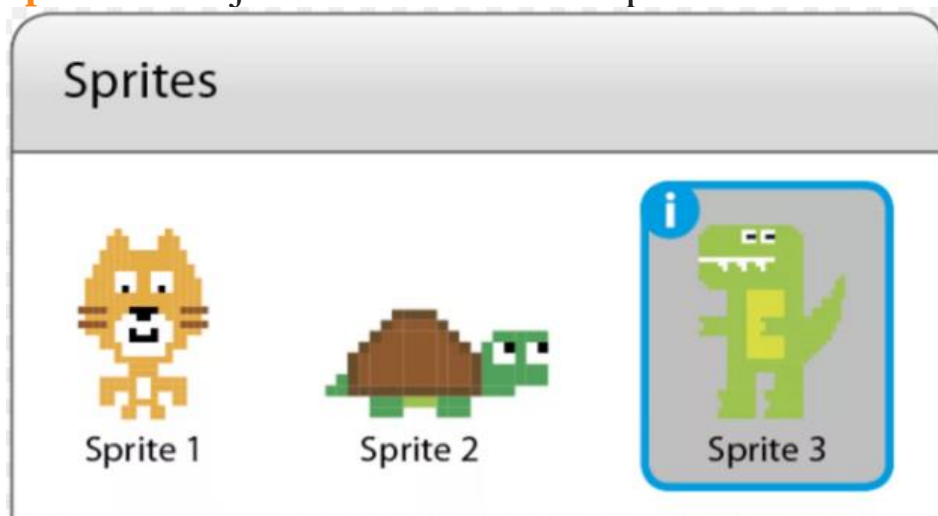
Selection When you choose part of something. For example, when you copy and paste text, the passage that you highlight to copy is called the selection.

Sequence When doing anything in life it is important to complete things in the correct order; you wouldn't pour water into a teacup before you had boiled the kettle, for example! In a program we have to control what happens and when in order to produce correct results. A **sequence** helps us to ensure that things happen in the correct order.

Simulation is using a computer to model the state and behaviour of real-world (or imaginary) systems, including physical and social systems; an integral part of most computer games.

Software is created using a **programming language** and is the non-physical part of a computer. Software can be written once and sold multiple times, for instance Microsoft doesn't have to rebuild Microsoft Word every time they have a new customer, they just make a copy of the files they already have.

Sprite An object in Scratch which performs functions controlled by scripts.



The **Operating System** sits between the software and hardware and acts as a translator. It tells the hardware when to run calculations and passes the answers back to the software so that it can decide what calculations to run next.

URL Uniform Resource Locator: a nickname (address) for a website.

A **variable** is a piece of information in a program that we want to store, but is able to change. We can compare it to a box in which we put information. This information could be a number, and during the program we might change the initial number (for example as part of the scoring system in a game).

World Wide Web This is like the Operating System for the internet. We use the web to help us communicate with and over the internet.

If there is any other language that you come across please feel welcome to ask a member of staff, who will be able to give you more information about Computing and relevant terminology.