



Computing Vocabulary at Stepgates Community School

Listed below are some of the terms that you may hear your child using when talking about their Computing learning at school.

For a unit specific vocabulary progression, please ask your child's class teacher who will be happy to help!

Abstraction

In computer science the term abstraction refers to hiding the complexity of tasks to suit the understanding of the user. For example, for you to use a calculator you only have to press buttons in order to receive the correct answer, however the person that built the calculator understands how it works underneath.

Algorithm

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

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

Coding

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

Communication technology

Equipment that we use to communicate with, such as a mobile phone or tablet.

Compile

When we program, we use human words in our codes and programs. However, a computer does not understand human words, so we have to compile the program - using a compiler - which converts the human words into binary.

Computational logic / thinking

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

Data

Data is Information.

Debug

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.

Decomposition

Decomposition is the process by which a large, difficult problem can be broken down into a series of smaller, simpler problems, thus making the overall problem easier to solve.

Hardware

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.

Information technology

A term used for all computer-related technology.

Input

Information that goes into the computer.

Internet

A network of computers linked all over the world.

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."

Network

Computers linked within a building or area.

Output

Information that comes out of the computer.

Procedure or function

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

Program

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.

Programming language

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.

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.

Software

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.

System (Operating System)

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.

Variable

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.