

Programming

Key Vocabulary

algorithm	An algorithm is a list of step-by-step instructions that a computer follows in order to get a task done.
bug	A mistake or error in a computer program .
code	A special digital language that helps information technology to run properly.
command	An instruction given to tell a computer what to do.
debug	To find, remove or correct errors in a computer program .
decomposition	To break things down into smaller parts.
predict	To guess what a possible outcome could be.
program	A set of instructions given to a computer so that it can function properly.
sequence	The order events must be performed in to complete a task.

What Is Programming?

Programming is the process of writing and testing instructions given to a computer in a computer **program**. A computer **program** is made up of **code**. This is special digital language that can be read and understood by computers. Writing in **code** lets you give **commands** to a computer. The **commands** written in **code** can link together to make an **algorithm**.

Programming Toys and Apps

There are lots of different ways that you can write and test **code** in a computer **program**.

Programmable toys, such as Bee-Bots, are robots that can be programmed to follow a set of instructions. They usually have buttons that can be pressed in a **sequence** to give a **command**.

Programming apps such as ScratchJr use blocks to write **code**. These blocks join together to create **algorithms** that can be used to **program** different characters.



Pupils will make up a dance routine and create the instructions (an algorithm) for a partner to follow.

Pupil objectives ■ I can follow instructions ■ I can create a sequence of instructions for people to follow (an algorithm) ■ I understand that the order of instructions is important

Pupils create hand clapping, hand tutting or hand jive sequences of movements. Pupils break the sequence of actions down into parts and in so doing are decomposing. Pupils link this idea to breaking problems down when creating computer programs such as animations or games.

Pupil objectives ■ I can break a sequence of moves down into its parts (KS1) ■ I can decompose a sequence (KS2) ■ I can say why this is useful (KS1) ■ I can say how decomposition is used when creating computer programs like animations or games (KS2 – optional)