

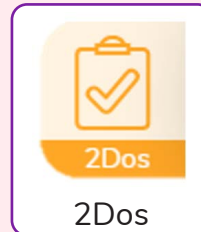
Unit: 1.7

Coding

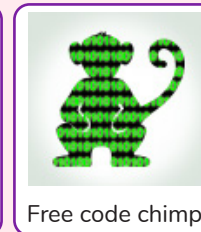
Key Learning

- To understand what instructions are and predict what might happen when they are followed.
- To use code to make a computer program.
- To understand what object and actions are.
- To understand what an event is.
- To use an event to control an object.
- To begin to understand how code executes when a program is run.
- To understand what backgrounds and objects are.
- To plan and make a computer program.

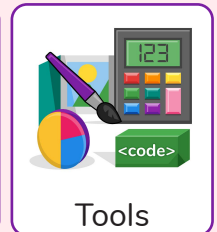
Key Resources



2Dos



Free code chimp



Tools

Key Vocabulary

Action

The way that objects change when programmed to do so. For example, move.

Algorithm

A precise, step-by-step set of instructions used to solve a problem or achieve an objective.

Background

In 2Code the background is an image in the design that does not change.

Code

Instructions that a programmer enters into a computer that cause the computer to perform a certain way.

Coding

Writing instructions that the computer can process (understand) to make programs (software).

Command

A single instruction in 2Code.

Debug/ Debugging

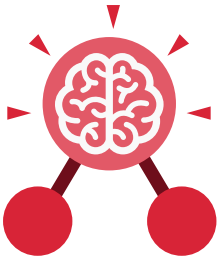
Fixing code that has errors so that the code will run the way it was designed.

Event

An occurrence that causes a block of code to be run. The event could be the result of user action such as the user pressing a key or clicking the screen.

Execute

This is the proper word for when you run the code. We say, 'the program (or code) executes.'



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Coding

Key Vocabulary

Instruction

Detailed information about how something should be done or operated.

Object

Items in a program that can be given instructions to move or change in some way (action).

Output

Information that comes out of the computer e.g. sound that comes out of the speakers.

Plan

When coding, a plan means including the objects and actions into a written document that shows what the program should look like (the design) and what the objects should do (the actions).

Programmer

A person who writes computer programs. Sometimes called a coder.

Properties

These determine the look and size of an object. Each object has properties such as the image, scale and position of the object.

Run

This is what you do when you click the Play button in 2Code: The program runs.

Key Questions

What is coding?

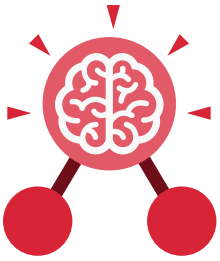
Writing instructions in a way that a computer can interpret them to make a program.

Why is it useful to design before coding?

It helps you to get a clear idea of what you want your program to do. You can use the design to decide which objects you need to add, what to call them and what actions they should perform.

How can you make characters move in a 2Code program?

In design mode, add a character. Change properties such as the name and scale. Exit from design mode and drag your character's code block into the coding window. From the properties menu, select right, left, up or down.



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Coding

Key Images



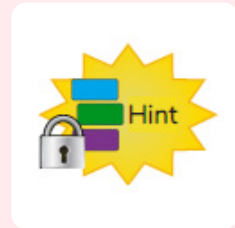
Open, close or share a file



Save your work



Watch the instruction video



Get a hint when you are stuck in 2Code



Open design mode in 2Code



Switch to code mode in 2Code



The background object



A 'when clicked' code block



An object property



Sound output block