



Year 2 – Algorithms and Programming (Coding)

Element 1 – Coding

Have you remembered what coding means? It is simply a set of instructions we use on a computer to make something happen. This could be making a character walk from one side of the screen to the other, or making a background change into different colours.

What is an algorithm?

When you are writing the set of instructions for coding, you need to use make an algorithm. This is a step-by-step set of instructions used to solve a problem or achieve an objective. Think about making some toast – the steps would include: getting the bread, plugging the toaster in, turning it on, putting the bread in the toaster, pressing the switch down etc. If this was in the wrong order, it would not work.

What KEY VOCABULARY do we use in coding?

In Year 2, you will use these key vocabulary terms below:

Action

Types of commands, which are run on an object. They could be used to move an object or change a property.

Character

A type of object in 2Code that can be programmed to change actions or properties.

Command

A single instruction in a computer program.

Algorithm

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

Code block

A group of commands that are joined together and are run when a specific condition is met or when an event occurs.

Collision Detection

Detecting when two characters on the screen touch each other.

Bug

A problem in a computer program that stops it working the way it was designed.

Debug/Debugging

Looking for any problems in the code, fixing and testing them.

Button

An object on the screen which can be clicked on.

Code Design

Design what your program will look like and what it will do.

Design Mode

Used to create the look of a 2Code computer program when it is run.



Event

Something that causes a block of code to be run.

Input

Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

Object

An element in a computer program that can be changed using actions or properties.

Output

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

Properties

All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.

Scale

The size of an object in 2Code.

Sequence

When a computer program runs commands in order.

Timer

Use this command to run a block of commands after a timed delay or at regular intervals.

When clicked/swiped


An event command. It makes code run when you click or swipe on something (or press/swipe your finger on a touchscreen).

When Key


An event command. It makes code run when you press the specified key on the keyboard.

Key images you will see when you code on Purple Mash:


Key Images




Open, close or share a file.




Save your work.




Watch the instruction video.




Open design mode in 2Code.



Switch to code mode in 2Code.



A timer code block.



An object property.

Element 1 – Closed Test

- 1) What is coding?
- 2) How would you describe an algorithm to someone else?
- 3) What is a 'command' when you are coding?
- 4) What does this image represent on Purple Mash?





Element 2

Can you use one of the 'Free Code' options on Purple Mash, complete it and save it/hand it in for your teacher to check?

