



Year Two

Topic – Coding (Computer Science)

Term: Autumn 1

Key Learning

To understand what an algorithm is.

- To create a computer program using an algorithm.
- To create a program using a given design.
- To understand the collision detection event.
- To understand that algorithms follow a sequence.
- To design an algorithm that follows a timed sequence.
- To understand that different objects have different properties.
- To understand what different events do in code.
- To understand the function of buttons in a program.
- To understand and debug simple programs.

Key Vocabulary

Action - Types of commands, which are run on an object. They could be used to move an object or change a property.
Algorithm - A precise step by step set of instructions used to solve a problem or achieve an objective.
Bug - A problem in a computer program that stops it working the way it was designed.
Character - A type of object in 2Code that can be programmed to change actions or properties.
Code block - A group of commands that are joined together and are run when a specific condition is met or when an event occurs.
Code Design – Design what your program will look like and what it will do.
Command - A single instruction in a computer program.
Debug/Debugging - Looking for any problems in the code, fixing and testing them.
Design Mode - Used to create the look of a 2Code computer program when it is 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.
Properties – All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.
Repeat - This command can be used to make a block of commands run a set number of times or forever.
Scale - The size of an object in 2Code. Timer - Use this command to run a block of commands after a timed delay or at regular intervals.
When clicked - An event command. It makes code run when you click on something (or press your finger on a touchscreen).
When Key - An event command. It makes code run when you press the specified key on the keyboard.

Key Skills

Computer Science

- ▶ Use algorithms and know that they can be implemented as programs on devices.
- ▶ Know what debugging is and find errors in their programs.
- ▶ Understand that programs execute by following a precise set of instructions.

Digital Literacy

- ▶ Know their responsibilities from their school's acceptable use policy and how to report any concerns they have.
- ▶ Recognise situations using technology and the internet involving content and contact that are not safe and know where to go for help.

Learning Links

Unit 1.1 Coding • Introducing block coding • Objects and actions • Events (Click event, sound output) • Executing a program • Design view: Planning

Unit 3.1 Coding Flowcharts • Timers • Repeat • Code, test, debug process