Unit: 3.1 – Coding

Key Learning

To design algorithms using flowcharts.
To design an algorithm that represents a physical system and code this representation.
To use selection in coding with the 'if' command.
To understand and use variables in
2Code.

To deepen understanding of the different between timers and repeat commands.

Key Vocabulary

Event
Something that causes a block of code to be run.

If
A conditional command. This tests a statement. If the condition is true, then

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

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

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

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.

Computer Simulation
A program that models a real-life situation.

Selection
This is a conditional/ decision command. When selection is used, a program will choose a different

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

Variable
A named area in computer memory. A variable has a name and a value. The program can change this variable value.

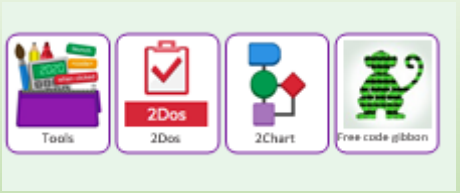
Sticky knowledge

The different objects have different properties. This makes then suitable for different type of programs.

- Buttons can only be clicked and have their colour and text changed.
- Vehicles have speed and angle.
- Characters have movement in 4 directions

Turtles have rotation, pen up and down.
Selection means code will contain commands that require a decision and the next code to run will depend upon the outcome of this decision. In 2Code we used the 'if' command for selection.

Key Resources



Previous learning

Know that an algorithm is used on digital devices and is a set of instructions.

Aspirations

- Programmer
- Designer
- Coder

Characteristics needed for this topic:

- Concentration
- Risk taking
- Improving