

Unit: 3.1 – Coding Knowledge Organiser

	Key Learning
Lesson 1: Y3 - CS1, Y3 - CS2 (KPI) , Y3 - CS3, Y3 - CS5, Y3 - CS6, Y3 - CS7	Using Flowcharts
Lesson 2: Y3 - CS1, Y3 - CS2 (KPI) , Y3 - CS3, Y3 - CS5, Y3 - CS6, Y3 - CS7	Using Timers
Lesson 3: Y3 - CS1, Y3 - CS2 (KPI) , Y3 - CS3, Y3 - CS5, Y3 - CS6, Y3 - CS7	Using Repeat
Lesson 4: Y3 - CS1, Y3 - CS2 (KPI) , Y3 - CS3, Y3 - CS5, Y3 - CS6, Y3 - CS7	Code, Test and Debug
Lesson 5 & 6: Y3 - CS1, Y3 - CS2 (KPI) , Y3 - CS3, Y3 - CS5, Y3 - CS6, Y3 - CS7	Code, Test and Debug

Action – The way that objects change when programmed to do so. For example, move or change a property.

Alert – This is a type of output. It shows a pop-up of text on the screen.

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.

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

Button - A type of object that responds to being clicked on.

Click Event - An event that is triggered when the user clicks on an object.

Code - Writing the code for a computer program.

Collision Detection Event - The event of two objects colliding.

Command - A single instruction in a computer program.

Debug/Debugging - Fixing code that has errors so that the code will run the way it was designed to.

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 (when Key) or clicking or swiping the screen (when Clicked, when Swiped). In 2Code, the event commands are used to create blocks of code that are run when events happen.

Flowchart - A diagram which represents an algorithm.

Implement - When a design is turned into a program using coding.

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

Interval - In a timer, this is the length of time between the timer code running and the next time it runs e.g. every 1 second.

Nesting - When coding commands are put inside other commands. These commands only run when the outer command runs.

Object - Items in a program that can be given instructions to move or change in some way (action). In 2Code Gibbon, these include character, turtle, button, vehicle, animal, food, shape, number, input and label.

Predict - Use your understanding of a situation to say what will happen in the future or will be a consequence of something.

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

Repeat - This command can be used to make a block of commands run a set number of times or forever.

Scene - In 2Code, this is the combination of the background and objects in a program.

Sequence - When a computer program runs commands in order.

Test - To run the code and observe what happens to identify where there might be bugs in the program.

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

Turtle Object - A type of object in 2Code that moves by coding angles of rotation and distance to move.

Key Images

Open, close or share a file



Save your work



Open design mode in 2code



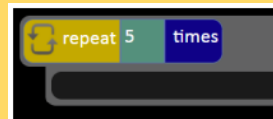
Switch to code mode in 2code



A timer code block



A repeat block



Key Questions

Why is it useful to use a flowchart to design a computer program?

Using a flowchart to design a computer program is helpful as you can see it in its simplest form as inputs and outputs. You can see where the program is going which will prevent mistakes when creating the code.

What does repeat mean in computer programming?

Using the repeat command will make a block of commands run for a set number of timers or forever. These saves rewriting the code many times.

What is the difference between 'timer after' and 'timer every'?

A 'timer after' means after a certain amount of seconds, the action will occur. 'Timer every' means that the action will re-occur every certain amount of seconds on a loop.