

Year 3 : Coding

Coding

The differences between the different object types in 2Code Gibbon level are that the different objects have different properties. This makes them suitable for different types 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. The 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. You could use a variable in 2Code by using a timer that counts every second and displays the value. You could also have a value that changes depending upon whether a switch is on or off.

What you will learn by the end of the unit:

To design algorithms using flowcharts.

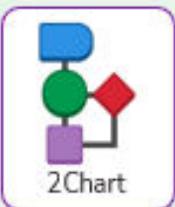
To design an algorithm that represents a physical system and code this representation.

To use selection in coding with the 'if' command.

To understand and use variables in 2Code.

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

Key Resources



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.
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. Coder—A person who writes computer code.
Command	A single instruction in a computer program
Control	These commands determine whether parts of the program will run, how often and sometimes, when.
Debug/ Debugging	Looking for any problems in the code, fixing and testing them.
Design mode	Used to create the look of a 2Code computer programme 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 for properties.
Properties	All objects have properties that can be changed in design or by writing code, eg 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	A command that stops a character moving.
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.

Year 3: Online Safety

Online Safety

The internet is a great place to find information but Just because something is on the Internet doesn't mean that it is true.
Some people create spoof websites that pretend to be something else such as a bank website or to provide misleading information.
Computer games, like films, are often not suitable for children. PEGI ratings will
A password is a secret word or phrase that allows a user to access a website. Passwords are like toothbrushes in that they should not be shared with anyone else.
show how old a person must be to play a game.

What you will learn by the end of the unit:

- To know what makes a safe password.
- Methods for keeping passwords safe.
- To understand how the Internet can be used in effective communication.
- To understand how a blog can be used to communicate with a wider audience.
- To consider the truth of the content of websites.
- To learn about the meaning of age restrictions symbols on digital media and devices.

Key Resources



2Publish



2Blog

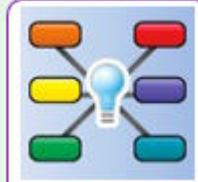


2Write



2Dos

2Dos



2Connect

Vocabulary

Password	A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as a website.
Internet	A way to send information from one computer to another anywhere in the world using technology such as phones, satellites and radio links.
Blog	A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.
Concept Map	A diagram that shows how different objects or ideas are related and connected.
Username	An identification used by a person with access to a computer, network, or online service.
Website	A set of related web pages located under a single name
Webpage	A page online that makes up one screen of a website.

Key Images

lillian@2simple.com

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Log in

Year 3 : Spreadsheets

Spreadsheets

Spreadsheets are a great tool for using when collecting data. Enter your data and then label one column 'Subject' and list the subjects in this column.

In the cells to the right put in the number of children who like this subject. Use the chart button to automatically create a chart. A pie chart would be a suitable choice.

Spreadsheets can also be used to make timestables machines. Put the spin tool in the left most cell of a row. Type 0 x 3 in the next three cells. Put an equals tool in the next cell in the row. When you spin the spin tool, the question will change. Enter the answer and the equals tool will tell you if it is correct.

Cells in advanced mode have rows labelled with numbers, and columns labelled with letters. So, each cell has a number and letter. For example, A1 or D7.

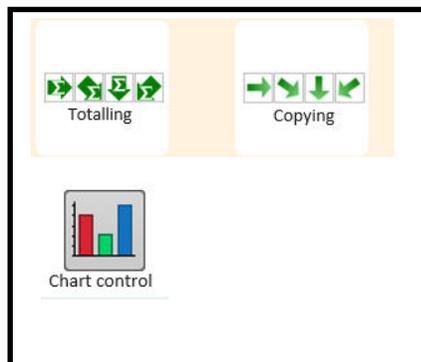
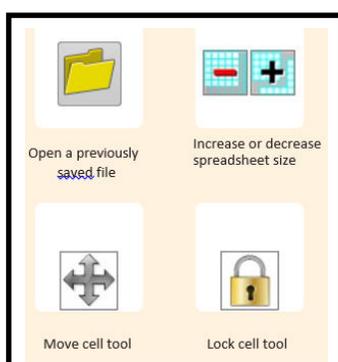
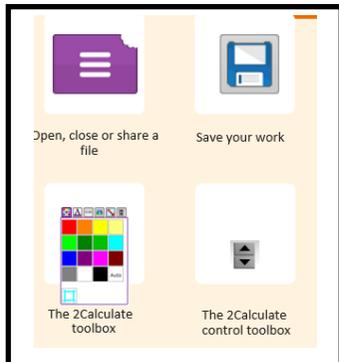
What you will learn by the end of the unit:

To use the symbols more than, less than and equal to, to compare values.

To use 2Calculate to collect data and produce a variety of graphs.

To use the advanced mode of 2Calculate to learn about cell references.

Key Images



Vocabulary

< > =	Symbols used to represent comparing two values. $a < b$ means 'a is less than b'. $a > b$ means 'a is greater than b'. $a = b$ means 'a is equal to b'. These can be combined, for example $a \leq b$ means 'a is equal to or less than b'.
Advance Mode	A mode of 2Calculate in which the cells have references and can include formulae
Copy and Paste	A way to copy information from the screen into the computer's memory and paste it elsewhere without re-typing.
Columns	Vertical reference points for the cells in a spreadsheet.
Cells	An individual section of a spreadsheet grid. It contains data or calculations.
Delete Key	Use this key to remove the contents of a cell.
Equals Tool	Tests whether the entered calculation in the cells to the left of the tool has the correct answer in the cell to the right of the tool.
Move cell tool	This tool makes a cell's contents moveable by drag-and-drop methods
Rows	Vertical reference points for the cells in a spreadsheet.
Spin Tool	Clicking on this in a cell will increase or decrease the value in a cell to the right by 1.
Spreadsheet	A computer program that represents information in a grid of rows and columns.