



Unit: Coding 6.1



Concept: Coding

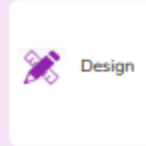


Subject: Computing

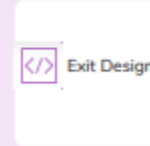
Key Learning

- To design a playable game with a timer and a score.
- To plan and use selection and variables.
- To understand how the launch command works.
- To use functions and understand why they are useful.
- To understand how functions are created and called.
- To use flowcharts to create and debug code.
- To create a simulation of a room in which devices can be controlled.
- To understand how user input can be used in a program.
- To understand how 2Code can be used to make a text-adventure game.

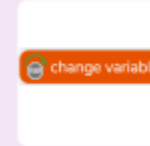
Key Images



Open design mode in 2Code.



Switch to code mode in 2Code.



A change variable block.



Example of combining variables and strings to print to the screen



Creating a variable in 2Code



Add a new Tab to your code or move code blocks between tabs



A function called 'square' that is called by clicking on a button called btnSquare.

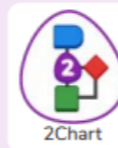
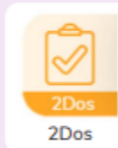
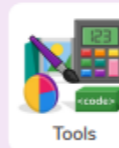
Sequence of lessons

Lesson	
1	<u>Designing and Making a more Complex Program</u> To design a playable game with a timer and a score.
2	<u>Designing and Making a more Complex Program</u> To plan and use selection and variables.
3	<u>Using Functions</u> To use functions and understand why they are useful.
4	<u>Flowcharts and Control Simulations</u> To use flowcharts to test and debug a program.
5	<u>User Input</u> To understand the different options of generating user input in 2Code.
6	<u>Using Text-based Adventures</u> To understand how 2Code can be used to make a text-based adventure game.

What? Key Vocabulary

Spelling	Definition/Sentence
Action	The way that objects change when programmed to do so. For example, move or change a property
Algorithm	A precise step by step set of instructions used to solve a problem or achieve an objective.
Command	A single instruction in a computer program
Execute/Run	Clicking the Play button to make the computer respond to the code. Execute is the technical word for when you run the code. We say, 'the program (or code) executes.'
Debug	Fixing code that has errors so that the code will run the way it was designed to
Flowchart	A diagram that uses specifically shaped, labelled boxes and arrows to represent an algorithm as a diagram.
Function	A block or sequence of code that you can access when you need it, so you don't have to rewrite the code repeatedly. Instead, you simply call the

Key Resources



What? Key Vocabulary

Spelling	Definition/Sentence
Object	Items in a program that can be given instructions to move or change in some way (action). In 2Code Gorilla, the object types are button, number, input, text, shape, turtle, character, object, vehicle, animal.
Input	Information going into the computer. This could be the user moving or clicking the mouse, or the user entering characters on the keyboard.
Simulation	A model that represents a real or imaginary situation. Simulations can be used to explore options and to test predictions.