

Espresso Coding 2.0 units and objectives for each year group

Level/year group	Unit	Learning Objectives
1	On the move	Learn that programs execute by following clear instructions. Understand that programs respond to inputs to do different things.
	Simple inputs	Learn to combine start up and input events to create more advanced apps and programs using precise instructions.
2	Refresher (level 1)	Recap the main learning from level 1.
	Different sorts of inputs	Learn that programs respond to different sorts of inputs, and that the keyboard can be used to control objects on screen, not just by clicking them directly.
	Buttons and instructions	Learn that one object can be used to control another object, e.g. writing code so clicking a button gives an instruction to make a lorry move.
3	Refresher (level 1 and 2)	Recap the main learning from levels 1 and 2.
	Sequence and animation	Learn to make things happen in a sequence, creating simple animations and simulations.
	Conditional events	Learn to code with 'if statements', which select different pieces of code to execute depending on what happens to other objects.
4	Refresher (levels 1 to 3)	Recap the main learning from levels 1 to 3.
	Introduction to variables	Learn how computers use variables to count things and keep track of what is going on, then create simple games which use a score variable.
	Repetition and loops	Learn how computers use repetition and loops to do things over and over again (and again!).
5	Refresher (levels 1 to 4)	Recap the main learning from levels 1 to 4.
	Speed, direction and coordinates	Learn how computers use numbers to represent things such as how fast things are moving, and where they are.
	Random numbers and simulations	Learn how computers can generate random numbers and how these can be used in simulations.
6	Refresher (levels 1 to 5)	Recap the main learning from levels 1 to 5.
	More complex variables	Learn to use variables in more complex ways, and to manipulate inputs to create useful outputs.
	Object properties	Learn more about how computers use property values and parameters to store information about objects.
Python	Introduction to Python	Learn the basics of Python.
	Python graphics	Learn how to use the turtle graphics module in Python.
	Random numbers and simulations	Learn how to use random numbers and create simulations with Python.
	Python functions	Learn how to handle input and outputs with reusable functions in Python.
HTML	Introduction to HTML	Learn the basics of HTML.
	HTML formatting and CSS	Learn how to format an HTML page using styles and CSS (Cascading Style Sheets). Use code to change the background colour of the page and the font size and colour.
	HTML links	Learn how to create hyperlinks to other web pages, including: other websites; ready-made pages and simple project pages, which are divided into linked sections.

HTML and Python: These are other forms of coding. In school, we focus on block coding, but older pupils may wish to also try these other coding languages. The recommended year groups for trying HTML and Python are from years 3 to 6. However, these lessons are most accessible for pupils in years 5 and 6, after completing the Block Coding lessons.