

How can we code Lego in different ways?



Key vocabulary

AND (&&) operator	This will run a code only if all conditions are true
conditionals	These tell a computer to run different codes depending on the conditions
debugging	Finding and fixing problems in a computer program or algorithm
motion sensor	A sensor that can detect objects within 15cm of it
function	A set of commands that you name and run together to group tasks automatically
operators	An operator is a symbol that tells the compiler to perform specific mathematical, relational or logical operation
OR () operator	This will run a code if at least one condition is true
NOT (!) operator	This operator changes a condition to use opposite
tilt sensor	A sensor that can detect multiple different types of orientation
variable	A value that can be changed or retrieved by your programming

Coding Y6

Key learning

- Understand the tilt switch and how it outputs a number when tilted in a certain direction
- Create a code for the tilt switch in Scratch using conditionals / operators
- Design and build a model and code that uses the tilt switch to control an on-screen programme



Empowered Learner:

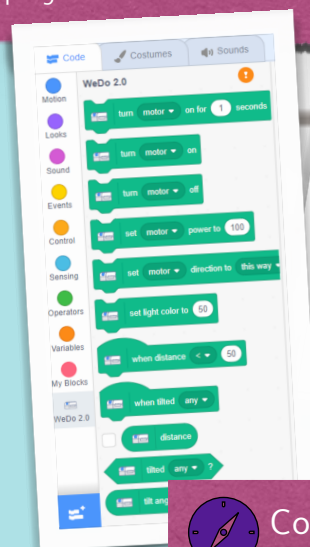
- Identify a range of different ways to troubleshoot and fix technology problems

Computational thinker:

- Collect and analyse data
- Use algorithms to solve problems
- Design solutions to problems that accomplish specific tasks
- Include debugging in the design process

Innovator:

- Develop creative solutions to problems
- Develop a range of different designs



Coding - Our Learning Journey

Year 1

- Using simple commands to move and change direction
- Editing characters and backgrounds

Year 2

- Using repeat and forever loops
- Put a range of codes together to make a sequence
- Debugging simple programmes

Year 3

- Use commands, for loops and conditionals
- Use different controls and conditionals including when and if
- Use sensors and code them to work in different ways

Year 4

- Create and edit functions
- Include functions in a game on Scratch
- Use logic for conditional commands, including 'else' command

Year 5

- Use comparison and logical operators in a range of programmes
- Create different variables for speed and proximity sensors in robots
- Code sensors for different purposes

Year 6

- Use variables to keep score in a created game
- Create a game using a range of functions, loops, operators and variables
- Begin to use Python to code Micro:Bits