

Should we trust self-driving cars?

Coding Y5

Key learning

- Use level 4 of Blockly to code Ozobots
- Create own functions for Ozobots to use
- Use logic for operators including AND and OR
- Program Ozobot to be a self-driving car including using sensors and surface colours
- Create own variables including speed and proximity threshold
- Create a testing simulation for Ozobot to be a self-driving car with a range of hazards



Empowered Learner:

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

Computational Thinking

- Collect data to help solve a problem
- Use a range of solutions to solve a problem
- Use a range of solutions to solve a problem
- Design a code to solve a problem
- Design a code to solve a problem

A logical operator is a type of an operator that you can use to make your conditional code more specific.

Each of these three operators changes conditions in its own specific way:

AND
OR
NOT

&&
||
!



Key vocabulary

AND (&&) operator	This will run a code only if all conditions are true
Comparison operator	A type of operator that compares variables and runs code dependent on their relationship
Conditionals	These tell a computer to run different codes depending on the conditions
Debugging	Finding and fixing problems in a computer program or algorithm
For loop	Grouping tasks together and giving them a number of times to run together
Function	A set of commands that you name and run together to group tasks automatically
Logical operator	A type of operator that you can use to make conditional code more specific
Message	A way to control the timing of events and communicate between Sprites and backgrounds
OR () operator	This will run a code if at least one condition is true
NOT (!) operator	This operator changes a condition to use opposite



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

