How can light sensors control real world objects?

Coding Y5

St. Peter's CE Primary Academy

Key learning

- Understand how to code a range of sensors in Lego Wedo for different purposes
- Create a code for a distance sensor in Scratch using conditionals, operators and loops
- Build and code a car park barrier that will lift when a car approaches and close again once the car has left
- Code the car park barrier to display a certain colour when an object is between a certain distance away using an operator and then open

Empowered Learner:

- Troubleshoot my own technology problems in different ways

Computational thinker:

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- D…
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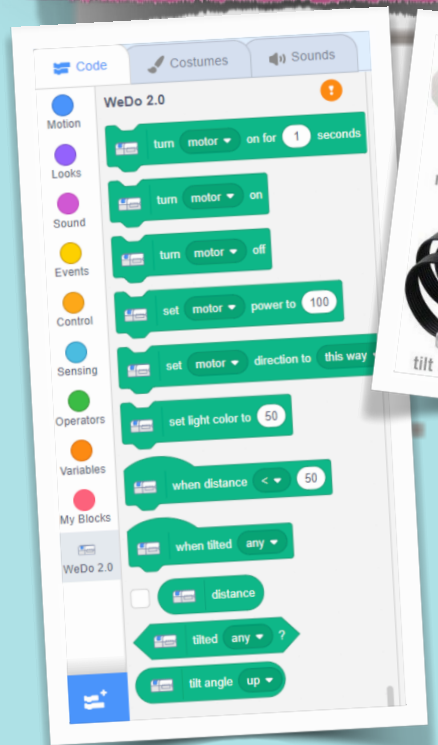
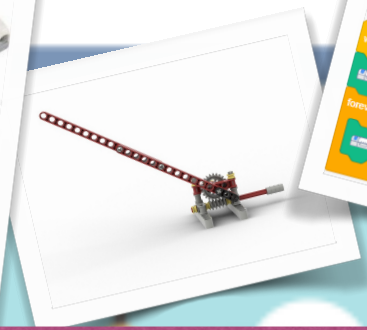
Inn…

- D…





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
distance sensor	A sensor that can tell how close something is to it by using light sensitivity.
function	A set of commands that you name and run together to group tasks automatically
message	A way to control the timing of events and communicate between Sprites and backgrounds
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

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