

How can coding improve our lives?

Coding Y6

Key learning

- Understand how python code works
- Be able to use python to code the Micro:bit to carry out simple commands
- Create a code in python and explain it
- Design own code and link to an invention using a Micro:bit



Computational



Empowered Learner:

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

Computational thinker:



- Collect and analyse data to help solve problems
- Use data to inform decisions
- Design, write and test algorithms that include loops and conditionals

Innovative

- Develop solutions to real-world problems requiring creative thinking



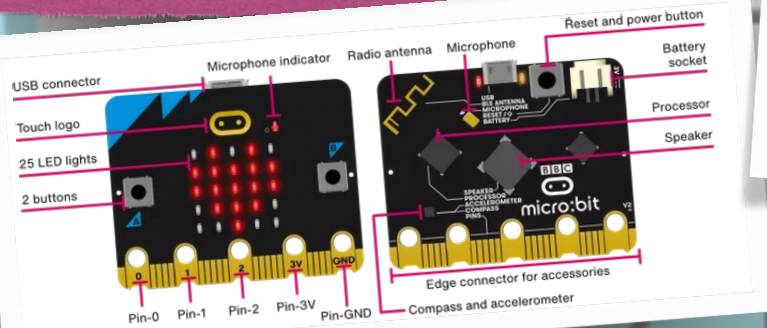
types

design



Key vocabulary

accelerometer	This detects movements and gestures on the Micro:bit
conditional	This tells a computer to run different codes depending on the conditions
function	A set of commands that you name and run together to group tasks automatically
logic	How computers control what happens in certain situations
loops	These repeat sections of code
input	The information we put into a computer to produce a desired result
operators	An operator builds different conditions for a code to run using AND, OR and NOT
output	The information a computer puts out e.g. a symbol on the LED display
radio	A way to send messages between Micro:bits
variable	A value that can be changed or retrieved by your programming



```

1 # Imports go at the top
2 from microbit import *
3
4
5 # Code in a 'while True:' loop repeats forever
6 while True:
7     display.show(Image.HEART)
8     sleep(1000)
9     display.scroll('Hello')
10
  
```



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

