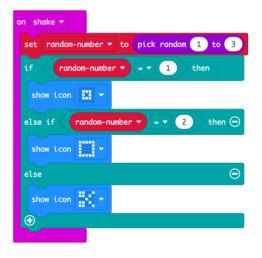| Computing Knowledge Organiser		
Year group: 6	Topic link:	Element of Computing: Coding
Key Question: How can I apply code to real world devices?		

UNPLUGGED
Abstract PICTORIAL CONCRETE

Key Vocabulary

Algorithms	A programming algorithm is a procedure or formula used for solving a problem. It is based on conducting a sequence of specified actions in which these actions describe how to do something, and your computer will do it exactly that way every time.
Sensors	A sensor is a device that detects the change in the environment and responds to some output on the other system.
Variables	A variable has a data type such as number, string (for text), date, and Boolean (for true or false).

Mediums and Resources

Scratch – either on IPads or Laptops

```
on shake
  set random-number to pick random 1 to 3
  if random-number = 1 then
    show icon
  else if random-number = 2 then
    show icon
  else
    show icon
```

My outcome will be

To apply code in a variety of ways to a physical device (microbit)

What key knowledge will I have by the end of this journey?

Confident understanding of how a sensor functions

Solid understanding of the purpose of variables in coding

Ability to apply a range of different coding blocks to a physical application

What key skills will I have by the end of this journey?

Improved ability to code by adding more coding blocks to my toolkit

Improved ability to debug my code by identifying errors in code and correcting them.

To create a functional device for a range of purposes.

Links to previous and future learning

In Year 3 Use inputs and sequences to make a simple game	In year 4 Use loops and sequences with repetition	In Year 5 Use procedures with conditions and conditional starts	In year 6 Develop an app/ game/ device using knowledge of coding