

Computing - Summer 2 - Year 5

This term's eSafety focus is children will learn the different ways that game developers ensure their games are successful and make money. Children will continue to develop their skills on the micro:bit using a wider range of code and inputs / outputs.

In this unit children will:

- understand that some features in online games and apps cost real money

micro:bit

- Use the light sensor, thermometer, **magnetometer** and **accelerometer** as an **input**
- Use the LEDs and sound as an **output**
- Use other equipment such as crocodile clips and headphones
- Write **algorithms** for specific outcomes
- Test, debug and improve algorithms

Prior Learning

Year 1 - Programming Toys

Year 1 & 2 - Scratch Jnr

Year 3 & 4 - Logo

Year 3 onwards - Spheros

Year 4, 5 & 6 - Scratch

Year 5 - micro:bit Part 1

Cross Curricular Links

Literacy - instructions

Key Vocabulary

Copyright - Copy

micro:bit - it is a pocket sized computer.

accelerometer - is a motion sensor that measures movement - it detects when you tilt it left to right, backwards and forwards and up and down.

magnetometer - a compass sensor

pedometer - step counter

variable - a measurement that changes

simulator - an area on the website to test the code.

crocodile clips - metal clips that can be used to link the micro:bit to something else.



Key Knowledge

Programming is completed in an online editor

<https://makecode.microbit.org/>

I know that the LEDs on the micro:bit can also work as an input device light sensor, measuring the amount of light falling on them.

I know that the 'if... else' statement shows the output (e.g. LED sun image) only if the light level is greater than (>) a certain level.

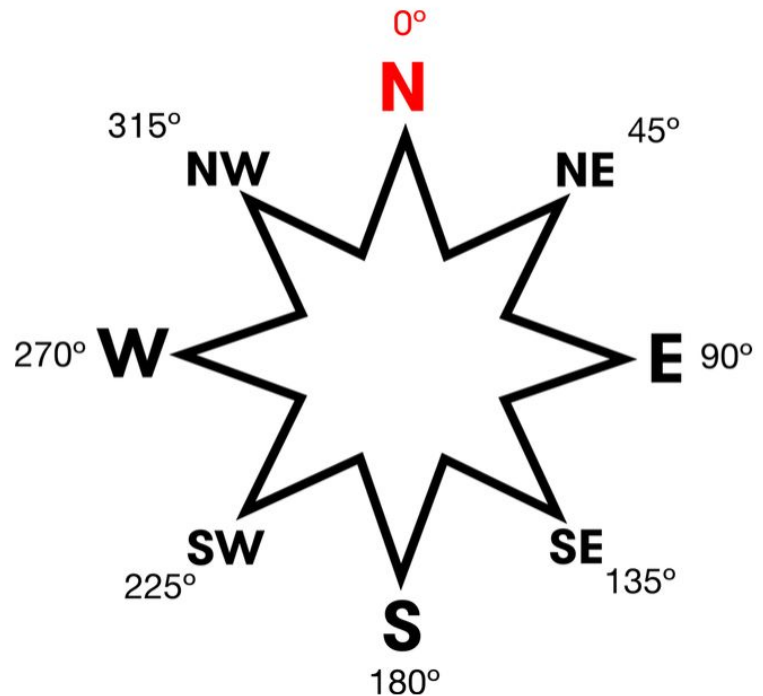
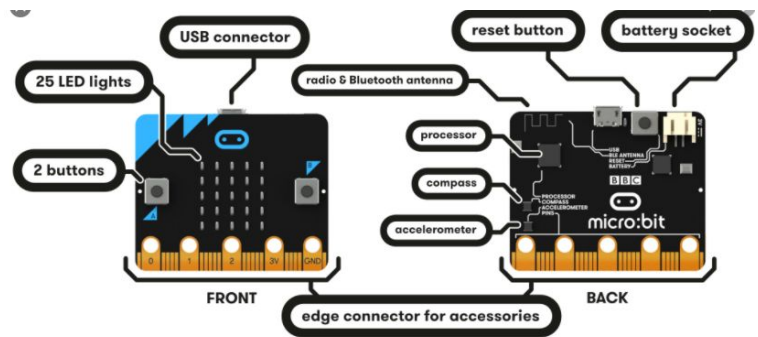
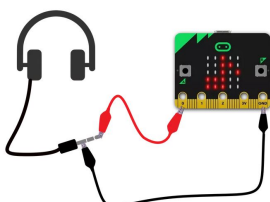
I know that the micro:bit uses the thermometer to read the temperature.

I know that the **accelerometer** counts how many times the micro:bit has been shaken. It stores this number in a **variable** called 'steps'.



I know that I can use the magnetometer to measure the Earth's magnetic field and use it as a compass.

I know that I can attach the micro:bit to headphones using crocodile clips.



Key Questions

Have you ever played a 'free' game - how do you think the creator makes money?

Can I change the tune played by the micro:bit? What about it's volume?

What happens if you connect pin 0 to the middle part of the headphone plug instead of the tip?

Can you make the micro:bit display letters or arrows to show if it's pointing North, South, East or West?