

# Y5/6 – Can you pass the Microbit challenge?

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

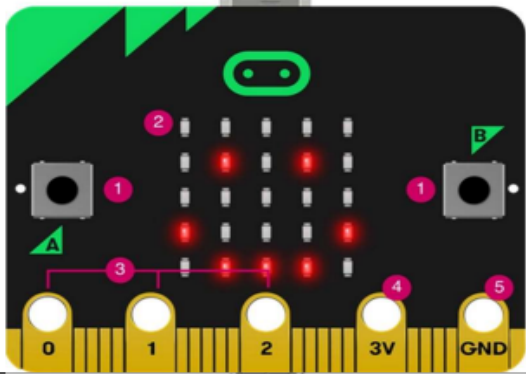
## Key features of the micro:bit

On-board motion detector or "accelerometer" that can detect movement and tell other devices you're on the go. Featured actions include shake, tilt and freefall.

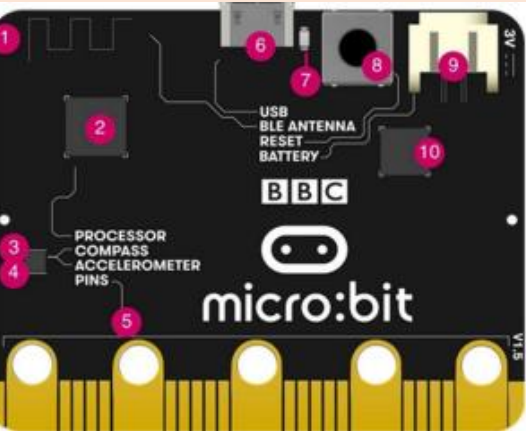
A built-in compass or "magnetometer" to sense which direction you're facing, your movement in degrees, and where you are.

Bluetooth Smart Technology to connect to the internet and interact with the world around you.

Five Input and Output (I/O) rings to connect the micro:bit to devices or sensors using crocodile clips or 4mm banana plugs.



1. Buttons
2. LED display & light sensor
3. Pins - GPIO
4. Pin - 3 volt power
5. Pin - Ground



1. Radio & Bluetooth antenna
2. Processor & temperature sensor
3. Compass
4. Accelerometer
5. Pins
6. Micro USB socket
7. Single LED
8. Reset button
9. Battery socket
10. USB interface chip

Key blocks			
<b>For</b> 	<b>Repeat</b> 	<b>While</b> 	<b>Forever</b> 
<b>On button pressed</b> 	<b>On Shake</b> 	<b>Show string</b> 	<b>Show LEDs</b> 
<b>IF</b> 	<b>IF - Else</b> 	<b>Show Number</b> 	<b>Boolean</b> 

<b>Algorithm</b>	A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.
<b>Microbit</b>	a pocket-sized computer that introduces you to how software and hardware work together.
<b>Emulator</b>	An emulator is a computer program or hardware that makes one kind of computer behave like a different one, so that it can use the same programs
<b>Conditional statement</b>	A conditional is an action that occurs if something specific happens. If then statements are used in programming to trigger a set of instructions
<b>Debug</b>	When something needs to be fixed in an algorithm.