

# Programming—Sensing movement

## Construction

### Prior Knowledge

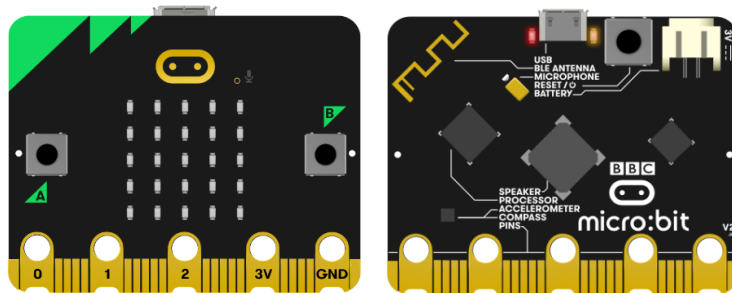
**Year 3**—You learnt to use programming to move a sprite in four directions using scratch.

**Year 4**—You learnt to use a text-based programming system (Logo) to move a screen turtle.

**Year 5**— You learnt to construct programs using scratch.

### Future knowledge

**KS3**—To understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. To analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. are responsible, competent, confident and creative users of information and communication technology.



### My Component Knowledge:

Lesson 1: I can apply knowledge of programming to a new environment.

Lesson 2: I can identify examples of conditions in the real world.

Lesson 3: I can use a condition to change a variable.

Lesson 4: I can explain the importance of the order of conditions in else, if statements.

Lesson 5: I can design the program flow for my project.

Lesson 6: I can test my program against my design and use a range of approaches to find and fix bugs.

### My Composite Knowledge:

I know what a micro:bit is and have been able to program one. I know that it can be used as an input, process, output device that can be programmed for many different reasons.

### My Powerful Knowledge:

I know that programming has many beneficial uses including in the scenario of using a micro:bit for everyday uses.

### Key Vocabulary

**Tier 1:** data, internet, repetition

**Tier 2:** bugs, input, output

**Tier 3:** algorithm, debugging, LEDs, program, micro:bit

- Basic
- Input
- Music
- Led
- Radio
- Loops
- Logic
- Variables
- Math
- Extensions

Advanced



What is a micro:bit?

How is a micro:bit programmed?

How can code be debugged?

