




# What I Need to Know: Y6 Computing: Programming B – Sensing Movement

*We nurture the curiosity to learn, the courage to lead and the compassion to care.*

In this unit, we will apply our programming knowledge to program a micro:bit. This unit brings together sequencing, repetition and variables to program a physical device.

|  |  |
|--|--|
|  <b>Create, Communicate &amp; Evaluate</b>  |  |
| Design and create a micro:bit based step counter   |  |
|  <b>Question, Reason, Discuss &amp; Explain</b>   |  |
| <ul style="list-style-type: none"><li>Explain that checking a variable doesn't change its value</li></ul>  |  |
| <ul style="list-style-type: none"><li>Explain the importance of the order of conditions in else, if statements</li></ul>   |  |
| <ul style="list-style-type: none"><li>Identify &amp; discuss examples of conditions in the real world</li></ul>  |  |
|  <b>Know &amp; Do</b>   |  |
| <ul style="list-style-type: none"><li>Use a conditional statement to compare a variable to a value</li></ul>   |  |
| <ul style="list-style-type: none"><li>Use a variable in an if, then, else statement to select the flow of a program</li></ul>  |  |
| <ul style="list-style-type: none"><li>Use a condition to change a variable &amp; experiment with different physical inputs</li></ul>   |  |
| <ul style="list-style-type: none"><li>Design a project that uses inputs and outputs on a controllable device</li></ul>   |  |
| <ul style="list-style-type: none"><li>Decide what variables to include &amp; design the program flow for my project</li></ul>  |  |
| <b>Vocabulary I need to know...</b>  |  |
| micro-bit, MakeCode, input, process, output, flashing, USB, selection, condition, if... then... else, variable, random, navigation, design, task, step counter, plan, create, code, test, debug, operand             |  |
| <b>Opportunities to support English and maths</b>  |  |
| <ul style="list-style-type: none"><li>Mathematics – KS2 (Y6)<br/>Recognise, describe and build simple number sentences and algorithms</li><li>English – Writing instructions -need to be done in set order</li></ul> |  |
| <b>Curriculum Links and Enrichment Activities</b>  |  |
| <ul style="list-style-type: none"><li>Design and technology – KS2<br/>Generate, develop, model and communicate their ideas through discussion, annotated sketches</li></ul>  |  |