What I Need to Know: Y5 Computing: Programming A – Selection in physical computing

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

In this unit we are exploring selection in programming using Micro:bits. We will learn how to connect and program output devices such as LEDs using sequences and loops.

Create, Communicate & Evaluate	
Design, create, program and evaluate a micro;bit night light.	
Question, Reason, Discuss & Explain	
Explain what an infinite loop does	
Explain that a condition is either true or false	
Run programs to identify bugs and debug where necessary	
Identify and discuss a real-world example of a condition starting an action	
Know & Do	
Create a simple circuit and connect it to a microcontroller	
Program a microcontroller to make an LED switch on	
Design sequences and use a count-controlled loop to control outputs	
Design a conditional loop	
Program a microcontroller to respond to an input	

Vocabulary I need to know…
micro:bit, microcontroller, controller, components, LED, crocodile clips, connect, battery, program, repetition, infinite loop, count-controlled loop, condition, true, false, input, action, selection, motor, switch, algorithm, debug, evaluate

Opportunities to support English and maths
True/False concepts

Curriculum Links and Enrichment Activities
• Science: Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches, and buzzers • DT: Generate, develop, model, and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces, and computer-aided design

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