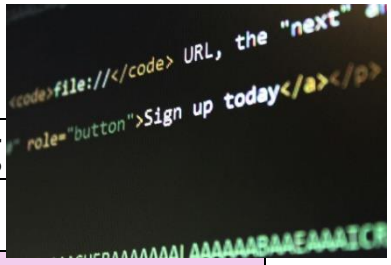
Year 5	3 Selection in Physical Computing



Key Learning:

To control a simple circuit connected to a computer

- I can create a simple circuit and connect it to a microcontroller
- I can program a microcontroller to make an LED switch on
- I can explain what an infinite loop does

To write a program that includes count-controlled loops

- I can connect more than one output component to a microcontroller
- I can use a count-controlled loop to control outputs
- I can design sequences that use count-controlled loops

To explain that a loop can stop when a condition is met

- I can explain that a condition is either true or false
- I can design a conditional loop
- I can program a microcontroller to respond to an input

To explain that a loop can repeatedly check if a condition has been met

- I can explain that a condition being met can start an action
- I can identify a condition and an action in my project
- I can use selection (an 'if…then…' statement) to direct the flow of a program

To design a physical project that includes selection

- I can identify a real-world example of a condition starting an action
- I can describe what my project will do
- I can create a detailed drawing of my project

To create a program that controls a physical computing project

- I can write an algorithm that describes what my model will do
- I can use selection to produce an intended outcome
- I can test and debug my project

Vocabulary:

microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer