Computing (Computer Science) – Year 5
How do alarms work?

Big Idea:
Electrical appliances are programmed to work by humans and can be started and stopped in different ways.

What should I already know?
- How to write and debug a program controlling physical systems.
- How to program an electrical circuit to turn on/off depending on the input.

What will I know by the end of this unit?
- How to adapt an algorithm depending on the type of input.

Primary Crumble:

Push Switch   Reed Switch   Toggle Switch

Micro Switch   Tilt Switch   Light-Dependant Resistor

Press the switch to turn on

```
program start
do forever
    turn all sparkles off
    wait until  A  is  HI
    set sparkle 0 to [red]
    wait 250 milliseconds
    turn sparkle 0 off
    set sparkle 1 to [blue]
    wait 250 milliseconds
    turn sparkle 1 off
loop
```

Press the switch to turn off

```
program start
do forever
    turn all sparkles off
    wait until  A  is  HI
    wait 250 milliseconds
    do until  A  is  HI
        set sparkle 0 to [red]
        wait 250 milliseconds
        turn sparkle 0 off
        set sparkle 1 to [blue]
        wait 250 milliseconds
        turn sparkle 1 off
    loop
loop
```

Key vocabulary:

Input	The action performed by a user on a device.
Output	The action performed by the device.
Commands	Instructions given to computer device.
Pattern	A sequence that reoccurs.
Hardware	The physical components of a machine/device.
Software	The programs and algorithms used to make a machine/device function.