

In DT we are learning about... **Electronics- Can you design, make and evaluate an alarm system to keep someone safe?**

Key vocabulary



Program - a sequence of instructions that can be used to control electrical components.

Microcontroller - a device that can be programmed to control how an electrical product operates.

Light emitting diode (LED) - an output device that glows when electricity is passed through it.

System - a set of related parts or components that together achieve a desired outcome.

Output devices - components that produce an outcome e.g. bulbs, motors and buzzers.

Input devices - components that are used to control an electrical circuit e.g. switches.

Process - how a computer program controls one or more output devices.

Characteristics needed for this topic:

- Curiosity
- Making Links
- Problem Solving



Sticky knowledge

Sticky knowledge



- Electricity can flow through circuits. A circuit is the path the electric current follows. It must have no breaks in it (a closed circuit) for electricity to flow.
- Switches can be used alongside control boxes, to set up timed systems (e.g. traffic lights) and monitoring systems (e.g. alarms).
- Burglar alarms are another example of a monitoring system. They generally work using micro-switch, LDR, laser, or video camera systems, and can be controlled to act in certain ways (e.g. sounding a buzzer) via a control box.

Links to previous learning



Year 3 and 4

To identify and name appliances that require electricity to function.

To construct a series circuit

To identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers).

To predict and test whether a lamp will light within a circuit.

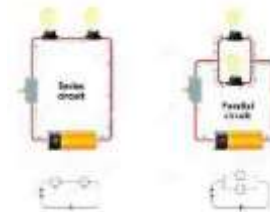
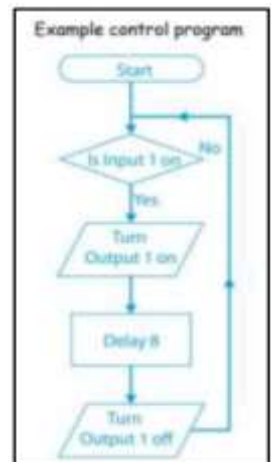
To know the function of a switch.

To know the difference between a conductor and an insulator; giving examples of each.



Key Designers

Edwin Holmes
Marie Van Brittan Brown
Mr William F Channing



Aspirations



- Electrician
- Security Systems Engineer
- Electrical designer
- Security Manager