



Mossfield Primary School Knowledge Organiser



Year 6 Spring- Programming Pioneers

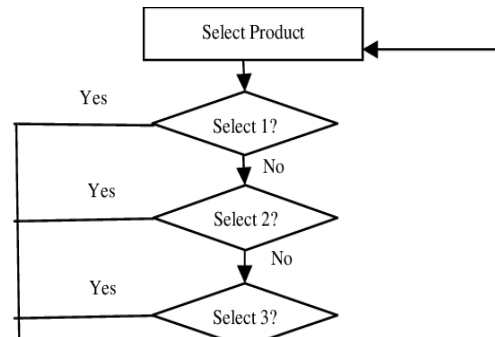
To look at products that contain computer programming in order to function. To use programming to explore and create algorithms to control functions of everyday objects.

Key Learning

I can explain how computers and computer programs are used in a variety of products.



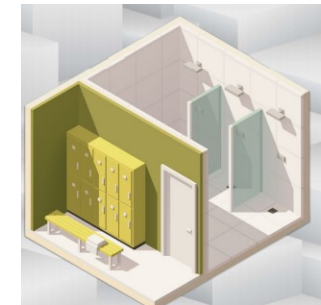
I can write an algorithm or flow chart to show how the embedded system in a vending machine might work.



I can program and control a Pelican crossing using Scratch programming.



I can develop, model and communicate ideas for an embedded system which monitors and controls a door, a room or both within a house.



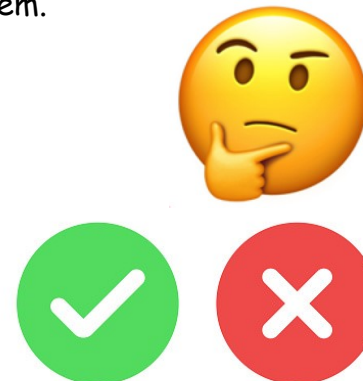
I can develop ideas for a product and understand the algorithms needed to monitor and control it (a buzzer alarm).



I can use CAD software to re-create a room containing a computer controlled system.



I can evaluate my CAD design and those of others for a room with a computer controlled system.



I can make changes to my design based on feedback and my own understanding of how it meets the success criteria.



Key Vocabulary

Quartz	An electronic component called a quartz oscillator is used to measure the passing of time in a circuit.
Microcontrollers	A small, inexpensive computer system on chips.
Algorithms	A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer
Debugging	Finding and fixing faults in a system.
Sensors	A device which detects or measures a physical property and records, indicates, or otherwise responds to it.
Resistor	A passive electrical component with two terminals that are used for either limiting or regulating the flow of electric current in electrical circuits
Prototype	A first or preliminary version of a device or vehicle from which other forms are developed.
Famous Programming Pioneers and computing engineers	<p>Alan Turing Charles Babbage</p> <p>Ada Lovelace Steve Jobs</p> <p>Steve Wozniak Konrad Zuse</p> <p>Grace Hopper</p>