

Building an Alarm

Topic: Computer Science; Programming and Control



Curriculum Objectives:

- To investigate the different triggers of a circuit
- Develop their understanding of circuits and their application in the real world

Timing:

Approx 45 Minutes

Resources and Planning:

- Steam littleBits Set
- iPad / Camera
- Cardboard box

Learning Structure:

Students will investigate how to create a alarm for a Storage Box.

The task is to create an alarm that will trigger when someone opens the door of their storage box.

Students need to work together to discuss what triggers they need to use in order for them to be able to complete this task. They will need to weigh up the pros and cons for each sensor so that they can choose the right sensor for the job.

Once they have decided on their sensor, they need to work out how they are going to raise the alarm so that people are aware of the intruder into their storage box.

After all the decisions have been made, the alarm circuit needs to be created and tested, making any alterations as they go along.

All evidence needs to be recorded along with any changes that are made, highlighting the reasons for these changes.

Students should use the symbols that they have learnt in order to create a diagrammatical representation of the circuit that they have just created.

Greater Depth Learning:

Students now need to apply their learning to the classroom with the different access points, making them aware of what is required to secure a building.

