Circuits - Different Types of Triggers

Topic: Computer Science; Programming and Control

Curriculum Objectives:
- Develop their understanding of the different types of triggers and how they are used

Timing:
Approx 45 Minutes

Resources and Planning:
- Steam littleBits Set
- Cloud Bit / Bluetooth Bits
- iPad / Camera
- IFTTT Login

Task:
To understand how systems can be automated using technology.

Learning Structure:
Students will further extend their knowledge of circuits and how they can work by developing their understanding of how the circuits can be triggered. They have already learnt how they can be modified using some proximity, light or heat sensors but we want to broaden their minds by examining how to control this differently.

Wireless and bluetooth technologies will need to be explained to the students along with their limitations so that they can understand which technology might be appropriate for which trigger.

Students can look at the bluetooth Bits and see the different alternatives for managing a simple light circuit that they need to build. They need to learn how to connect to the bluetooth Bit and then how to use it to their advantage.

When looking at wireless technologies such as Home on iOS devices, students need to understand how this is going to trigger their devices. The CloudBit allows students to use the IFTTT website to create wireless triggers for their circuits so that it runs when something happens such as every quarter of an hour or at a certain time each day.

This will allow students to start to imagine what might be possible in the future.

Greater Depth Learning:
Students need to investigate different technologies that are currently available that would be able to help solve some of the issue in their home ie picking up clothes or tidying bedrooms.