

Circuits - An Introduction to littleBits

Topic: Computer Science; Programming and Control



Lesson Objectives:

- Identify and understand the functional grouping of the the four colour-coded Bits: powers, inputs, outputs, wires
- Use logic to create basic circuits to create light.

Timing:

Approx 45 Minutes

Resources and Planning:

- Steam littleBits Set
- iPad / Camera

Learning Structure:

Students will learn how to create a circuit using the littleBits kits.

They will investigate what each Bit does in order to use them in future lessons.

Students should take an image of each of the Bits in the kit and write a brief synopsis of what they do and some examples of how they might use this.

Students should develop an understanding of what is needed to create a circuit such as power, switches and conductors as well as motors, sensors, triggers and lights.

Circuits require a battery and its associated bits to create a light that switches on when the button is pressed.

All evidence should be recorded as the students progress through creating the circuit using whatever method they feel appropriate.

Students should investigate the symbols that are used to create a diagrammatical representation of the circuit that they have created understanding how they differ slightly.

Greater Depth Learning:

Students need to investigate what the effect of adding more lights to the circuit might be on the overall effectiveness of the solution. Does the order of the circuit matter or will it work in any order?

