Lesson 4 – Engduino Components

The Engduino has a variety of sensors and components that can be used and manipulated to conduct several tasks.

In BlockCode, you can use the follow sensors and components:

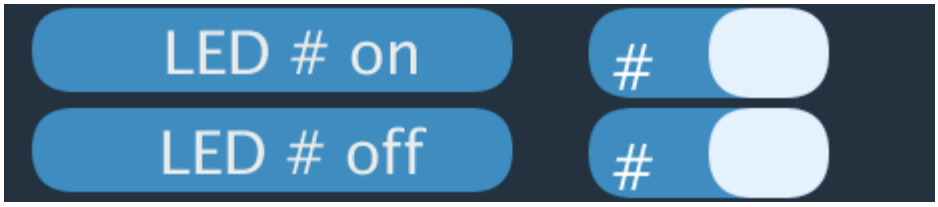
- LEDs
- Button
- Light sensor
- Temperature sensor
- Accelerometer

IN THIS LESSON, WE WILL LOOK AT THE ENGDUINO COMPONENTS

LEDs

The Engduino has 16 LEDs onboard and each of them have a unique pin number. This number is written next to them in white and they range from D0 to D15.

This allows you to set LEDs individually or all of them together by selecting their pin numbers.



In BlockCode, the buttons shown above can be used to switch on and off LEDs.

To use:

1. **Enter LED pin number into # text box (light blue colour)**
2. **Drag chosen LED button onto canvas**

See blink sketch in lesson 3 for example

BUTTON

The Engduino also contains a single-press button, which can be used to help control certain aspects or functions of the program.

The button above allows indented buttons below it to execute, if the button is clicked

To use:

1. **Enter either '1' or '0' for variable 'i' into textbox (light green colour)**
    a. *The value for 'i' can be used to determine the condition of the button*
    b. *(If button Click, i = 1). This means if button is clicked, execute indented buttons*
    c. *(If button Click, i = 0). This means if button is not clicked, execute indented buttons*
2. **Drag button onto canvas**
3. **Any buttons that need to execute if the button condition is satisfied, must be dragged on top of this button**

These components are regularly combined in sketches, as code can be written to trigger LEDs by the click of the button

NOW TRY WRITING A SKETCH THAT INCLUDE BOTH THESE ENGDUINO COMPONENTS ON BLOCKCODE

Summary

Lesson 4 teaches you about the different components onboard the Engduino. We will show how to use the components in BlockCode and why they are useful.