USING LIGHT BLOCKS

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LESSON OBJECTIVES

- Learn how program the LED lights on the Hub

- Learn how to turn on the lights of the Distance Sensor

- Learn how to display sensor values to the LED Matrix

LIGHT BLOCKS

- Light blocks can be found in purple Block Palette

- You can use these blocks for many fun applications including turning on the lights of the ultrasonic sensor, creating patterns using the 5X5 LED Matrix and even display scrolling text
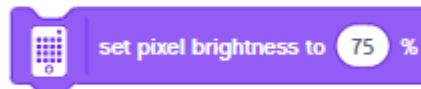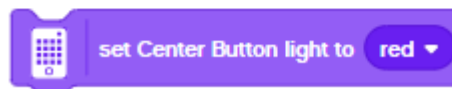
Light

turn on [matrix] for 2 seconds

turn on [matrix]
Customize the lights on the light matrix to any design

write Hello
Display scrolling text

turn off pixels

set pixel brightness to 75 %
Dim or brighten the lights

set pixel at 1 , 1 to 100 %

set Center Button light to red
Change the color of the center button
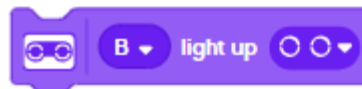
B light up [ultrasonic]
Light up the ultrasonic

CHALLENGE: LIGHT UP THE WORLD

■ Write "Hello World" using the light matrix

■ Then display a Smiley Face for 4 seconds

■ Light up all the lights around the Distance Sensor

■ Change the Center Button Light to a color of your choice
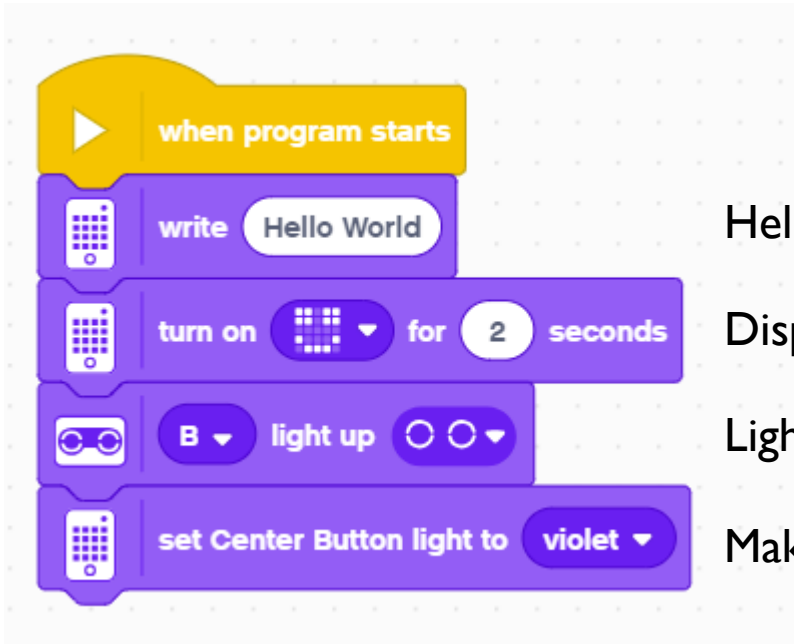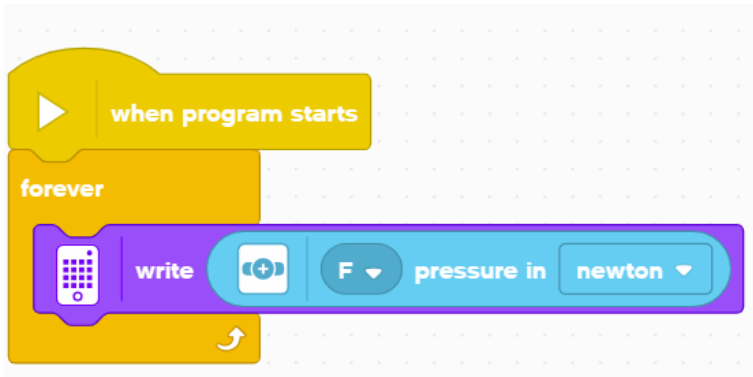

Hello World will scroll through the Light Matrix

Display a smiley face

Light up the Distance Sensor's "eye"

Make the center button violet

CHALLENGE: DISPLAYING SENSOR VALUES

- How hard am I pushing the Force Sensor?

- Create a program in a loop that lets you view the force applied to the Force Sensor on the LED Matrix

- Display the results in Newtons (0-10)

This program displays the value of the Force Sensor to the LED Matrix

The value of the Force sensor is written to the screen

CREDITS

- This lesson was created by Sanjay Seshan and Arvind Seshan for Prime Lessons

- More lessons are available at www.primelessons.org