

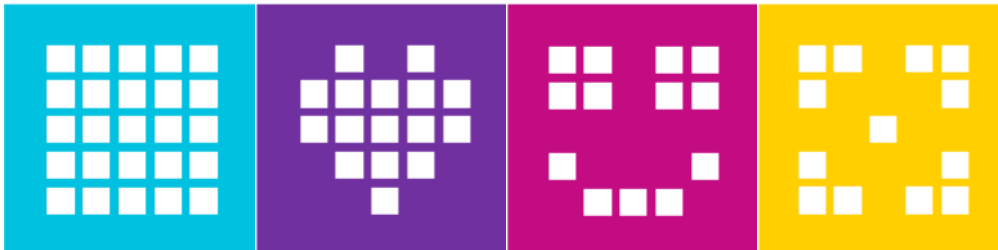
# SPIKE PRIME LESSONS

By the Creators of EV3Lessons



## USING LIGHT BLOCKS

BY SANJAY AND ARVIND SESHAN



# 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

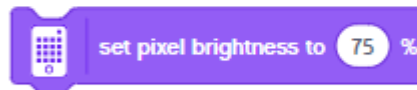
## Light



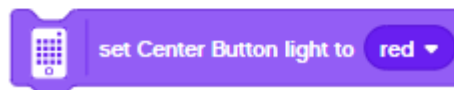
Customize the lights on the light matrix to any design



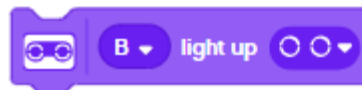
Display scrolling text



Dim or brighten the lights



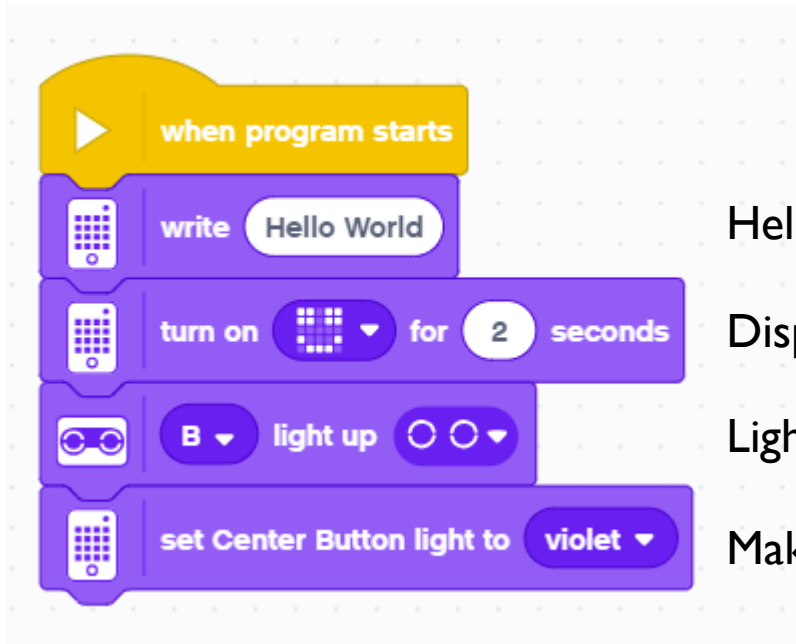
Change the color of the center button



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

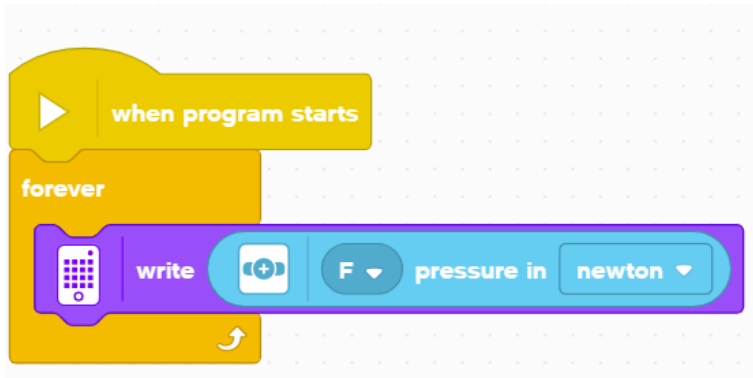
Display a smiley face

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 SPIKE Prime Lessons
- More lessons are available at [www.primelessons.org](http://www.primelessons.org)



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