

4 HOURS Project Based Learning SERIES

Activities With LEDs

Revision 1.1

Skip this activity if you already installed FlowLogic 6 into your PC

FlowLogic 6 Download

1. Go to

www.myflowlab.com

- 2. Click Download on Main Page
- 3. Click Download on Download Page – FlowLogic 6 Ver. 3.6
- 4. Click the Downloaded file to install FlowLogic 6 Version 3.6 into your computer

DOWNLOAD

FlowLogic 6, USB Driver & Guide



FlowLogic 6

Installing Arduino USB Driver

- 1. Launch FlowLogic 6 Version 3.6 fron your PC Desktop
- 2. From the menu, click 'Option'
- 3. Select Install Arduino USB Driver Select either 32 Bit or 64 Bit
- 4. The USB Driver Installation window Should appear as shown below, if
 - NOT, Exit FlowLogic 6 and Run it as Administrator.

Right click on FlowLogic 6 desktop Icon and Select "Run as Administrator from the pop-menu

6.36



Skip this activity if you already installed the driver to your PC

Activity #2 – Installing Arduino USB Driver



FlowLogic 6

Companion Firmware upload

- 1. Launch FlowLogic 6 Version 3.6
- 2. From the menu, click option
- 3. Select Firmware Loader
- 4. The Firmware Loader window Should appear as shown
 - *a.* Click Refresh button to connect the Arduino Board
 - b. Fill in your Name, email and valid Access Code that you have purchased and click Upload button

lowLogic 6 Companion Firmware Loa

Click Refresh bu

Activity #3 – Downloading FlowLogic 6 Version 3.6

Skip this activity if your Arduino is already activated for FlowLogic 6

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TESTING AND DEBUGGING ARDUINO UNO board

Use this tool to test your prototype to ensure connections and Components functionality are corrects before building algorithm/ Programming



Control Panel

Arduino & FlowLogic 6

Activity #4 – Single LED Blink



- 1. Construct the Single LED Circuit as shown
- 2. Test the circuit using Arduino Control panel
- 2. Build the above Algorithm/FlowProgram and Execute
- 3. Change the Delay for various Blinking type

Arduino & FlowLogic 6

Activity #5 – Police Car siren

start

PulseOUT(6, 1)

DELAY(1)S

PulseOUT(6, 1)

DELAY(1)S

PulseOUT(7, 1)

DELAY(1)S

PulseOUT(7, 1)

DELAY(1)S



- 3. Build the above Algorithm/FlowProgram and Execute
- 4. Change the Delays and PulseOUT timing to animate the LEDs to work like actual Police car siren
- 5. Add the Police Car siren media file
- 1. Construct the Double LED Circuit as shown
- 2. Test the circuit using Arduino Control panel



- 1. Construct the RGB LED Circuit as shown
- 2. Test the circuit using Arduino Control panel
- 3. Build the above Algorithm/FlowProgram and Execute
- 4. Complete the given Final Project creatively

Digital STEM Programs

Modules and Duration



