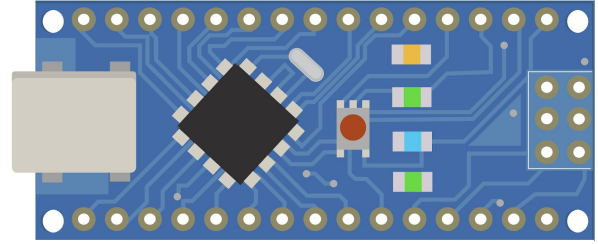


# Intro to Arduino

## Code Challenge - Blink Those Big Brown Eyes!



**Grades:** 5-7

**Time:** 10 Mins

**Subject:** Engineering, technology and application of science

**Topics:** Computer Science, Electronics

### Overview

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This activity introduces a simple look at existing computer code and challenges you to change it. No code experience? Have no fear! It's simple!

### Background

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Coding is the act of writing instructions in a language a computer understands so that it can execute work. Computers don't speak our language so we need to learn how to talk to them in languages they do understand. Just like learning a foreign language to converse with other people around the world, programming languages enable you to talk to computers! Examples of languages are Arduino, Python, and C++. In this activity you'll be challenged to change up some Arduino code and make it your own!

### Objectives

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Understand & Recognize:

- "Arduino" as a hardware and **software** platform for making projects.
- "Community" in the sense of people connected through a common interest such as making cool projects with Arduino.
- "Input" and "output" in both hardware and **software** based on looking at Arduino projects.

### What You'll Need

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- All you need for this project are an Internet connected device and an Internet browser, <https://databot.us.com/introarduino/> to view the **code** online, or
- Make available copies of [Arduino IDE Sketch - Intro to Arduino Sketch.pdf](#).

### Prep (5 mins)

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- Make available copies of [Arduino IDE Sketch - Intro to Arduino Sketch.pdf](#), or <https://databot.us.com/introarduino/> to view the **code** online.

## Code Challenge (25 mins)

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Remember the "Blink" program? Take another look at this Arduino sketch displayed here in the Arduino IDE. Now challenge yourself to modify Blink as follows:

- Have the LED alternate being on for 2 seconds and off for 2 seconds.
- Have the LED alternate being on for 1 second and off for a half a second.
- Have the LED alternate being on one for a half second and off for a full second.
- Look at the rest of the code. Do you see other things you understand and could modify?
- Who wrote this program?

*If you write changes to this program and share those back with the world would you like to see your name on the new code?*

*What is the output of this program?*

## Cool bananas – coding holds no fear for you!

## [Educator Resources](#)

### Notes

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This coding challenge is an extension of PDQ2, "A Peek Under the IDE Hood." Review the educator notes associated with PDQ 2 and the more extensive information provided in the Overview section if necessary.

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