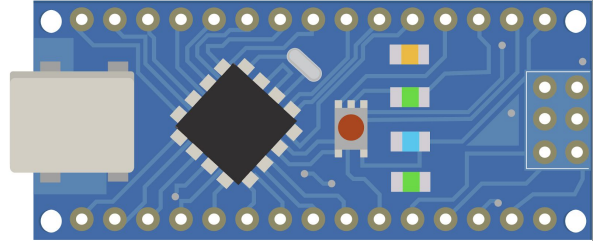


Intro to Arduino

Collaboration -Arduino Saves the World, Again!



Grades: 5-7

Time: 20-30 minutes

Subject: Engineering, technology and application of science

Topics: Computer Science, Electronics

Overview

In this activity you will follow up on the projects you brainstormed to help improve our world! Going through a design process that focuses on sharing information through the Open Source model, students think about people around the world and what kinds of inventions will improve people's lives.

Background

Arduino is both an Open Source hardware AND software platform that enables creators, inventors, students and just about anyone to learn basic electronics and coding to make projects. A very cool aspect of Open Source is it "shares" by design. If you create or invent something and then "Open Source" it to the world, it becomes freely available for everyone to use. People in the Open Source community "share" and "share alike" to create things that are mutually beneficial. In this activity, you combine collective ideas from the classroom to create collaborative projects, just like the open source community collaborates around the world!

Objectives

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

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

- If you have the Arduino IDE installed and an Arduino board handy, all the better! You can test your changes and do some real coding.

Prep (5 mins)

- Print out Intro to Arduino Sketch.pdf or open Arduino IDE on an internet connected device with internet browser.

Collaboration (25 mins)

**This group project can be done as a whole classroom together or in small groups.*

- *In your groups, review all the Arduino proposed project ideas that everyone created. Then, sort them and challenge yourselves to see if you can come up with ways to combine the ideas into a more complex project. Can some of these ideas work together? Do something AWESOME!*

**This classroom collaboration is an extension of the Experiment, "Arduino Saves the World!" Review the educator notes associated with the Experiment and the more extensive information provided in the Overview section if necessary.*

Great job! Now for a new kind of adventure, the next step is a Code Challenge. Learn how to take control through programming. Good luck!

Next Step, Code Challenge!

Educator Resources

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