Presented by LibraryLinkNJ, The New Jersey State Library, and the New Jersey Library Association : **Technology Speed Dating**
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Makerspaces : Funding, Setup and Programming

- **Funding**
  - **Sponsorships/Bequests**
    - Approach local businesses and corporate entities in your community about makerspace as a community partnership
    - Align values and goals of space with those of potential partners
    - Investigate charitable funding arms of organizations with local offices in your community
    - Develop relationships first, then ask for money (and be prepared for match)
  - **Grants**
    - Best Buy - http://www.bby.com/community-grants/
    - Cognizant Making the Future - http://www.cognizant.com/company-overview/educating-for-the-future
    - YALSA / Dollar General - http://www.ala.org/yalsa/awardsandgrants/dgsummerreading
    - NASA Summer of Innovation - http://www.soi-mini-awards.com/
    - Karma Foundation - http://www.karmafoundation.org
    - Hyde and Watson Foundation - http://fdnweb.org/hydeandwatson/application-procedures/
    - IEEE - https://www.ieee.org/organizations/foundation/grants.html#Dates
  - **Library**
    - Build project into your next technology plan
    - Build support by aligning goals of space to those of library mission statement, strategic plan, or other planning documents
    - Find support within your local school system to make your case
    - Be prepared to build compelling arguments for the benefits to the community and how the investment will achieve those benefits
    - Scale, scale, scale (develop a feasible project that works within your budget and space)
- **Setup**
  - Makerspace PlayBook - http://makerspace.com/wp-content/uploads/2012/04/makerspaceplaybook-201204.pdf
  - High School Makerspace Tools and Materials -http://makerspace.com/wp-content/uploads/2012/04/hsmakerspacetoolsmaterials-201204.pdf
  - Makerspace Director (see how others have done it, or just contact them) - http://makerspace.com/makerspace-directory
  - NY Hall of Science Maker Blueprint - http://dmp.nysci.org/system/files/filedepot/1/NYSCI_MAKER_BLUEPRINT.pdf

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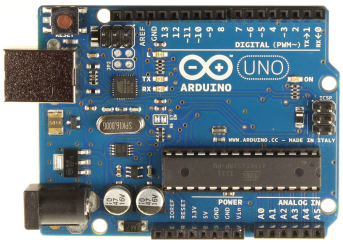
Arduino



Arduino is an open-source micro-controller board which can be given instructions to control lights, sensors, motors and other electronics. Micro-controllers are devices that can be programmed to control other devices. Programs, or sketches are written and sent to the Arduino “board” providing instructions for the controller. These sketches are created using the Arduino IDE (like a word processor for writing code), but also come preloaded with many basic programs with great liner notes. It is a powerful platform for creating electronics projects as well as experimenting with circuits.

A circuit is the result of electric power being conducted along a path from positive (+) to negative (-). Along that path many things can happen such as a light being turned on, or a motor being run. Circuits can be simple or complex based on what is placed in its path.

The Arduino Education Kits we have at the Piscataway Public Library at the Library will allow you to create and test circuits through a guided, hands-on process, that is fun but will also teach you much about how they work and how they can be utilized to control and measure our physical environment. The kits are a great way to get started because they provide detailed visual instruction for building the circuits, as well as already written programs you can load and test for each one. They really do much of the heavy lifting, but allow for experimentation and change.

Arduino kits are great for libraries, with or without makerspaces, as a way to provide a platform for tweens, teens and adults to learn about electricity, motors, circuits, and electronics in general through active building and testing. The kits are also a great starting platform for those interested in building more complex micro-controller projects such as robotics and guided control systems for other electronic devices.

Arduino Resources for Getting Started:

- Arduino website : http://arduino.cc
- Arduino Kits : https://www.sparkfun.com/products/11576 ***($99.00)***
    - You can also get similar kits from Adafruit, Amazon, Radio Shack and other vendors
- Arduino in a Nutshell (great comic introduction to the platform) - http://hci.rwth-aachen.de/tiki-download_wiki_attachment.php?attId=1685
- Learn Arduino from Sparkfun - https://learn.sparkfun.com/tutorials/what-is-an-arduino
- Arduino Short Course for Beginners - http://opensourcehardwaregroup.com/thearduinocourse/
- MIT Learn Arduino Video - http://video.mit.edu/watch/arduino-tutorial-1-10950/
- Sparkfun Ardunio Example Documents and Cheat Sheets - https://drive.google.com/a/piscatawaylibrary.org/folderview?id=0B54yDj7uEDKhU2FuOG9PTlo5YXM#

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