

# Hacking Electronics

[Indian Prairie Public Library](#)

Young Adult

## Hacking Electronics

Mar 19, 2015

**\$251-500**

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Byline

Natalie Williams, Head of Youth Services, Indian Prairie Public Library, Darien, Ill.

Hacking Electronics is a series of programs for teens that allows them to create and explore using different forms of technology.

### Advanced Planning

The Hacking Electronics series is planned by the senior youth librarian and the teen librarian. We have featured various types of technology, including:

- laser tripwires, which use a laser pointer and photoresistor to make a laser tripwire alarm

- DC motor fans controlled by temperature sensors, which turn a fan on or off based on the ambient temperature of the room
- mood lamps that use a RGB LED and a temperature sensor to respond to your touch
- pressure plates that we made using cardboard and aluminum foil
- LED matrix animations, simple animations to scroll across a LED matrix
- box alarms that we made using a flex sensor; the flex sensor triggers when someone opens the box without authorization
- light theremin that changed the pitch of a piezo buzzer using a photoresistor

We have found that weekends work best for these events.

## **Marketing**

The series is advertised in our seasonal newsletter, our library website, through posters displayed at the library and fliers placed on the tables in the teen section of the library. We also advertise programs through email. Once the newsletter is released to the public, we begin placing the fliers in the teen section and hanging the posters. As the program date approaches, the event is promoted in the "What's Happening" section of our library homepage.

## **Budgeting**

Money was spent on the equipment, like [Arduinos](#). Cost can be shared with partners (like the local schools) or you could possibly program share with another library.

## **Day-of-event Activity**

We hold the programs in our multipurpose room, which is separated from the rest of the library. Laptops and equipment need to be set up prior to the event.

## **Program Execution**

Teens show up for the program and find a work station. The presenter walks them through the processes of gadget use, like how to program, build, tear apart and rebuild. We usually have about 10 to 15 teens at each event. Participants' feedback has been positive..

## **Advice**

I would suggest starting with simple projects and seeking out skilled partners in the community to help.

## **Supporting Materials**

[Download this Program as a PDF](#)

- Feedback (Coming Soon!)
- [Programming Librarian Facebook Group](#)

## **More Programs**

Jul 14, 2011

Young Adult (17 - 20)+ |

[Image](#)



## [Cooking Programs for Teens](#)

### **Audiences:**

Audience

Young Adult (17 - 20)

Jul 16, 2014

Young Adult (17 - 20)+ |

[Image](#)



## [Donation Helps Public Library Open Tech Center](#)

### **Audiences:**

Audience

Young Adult (17 - 20)

Adults (21 and up)

Intergenerational

Mar 19, 2015

Young Adult (17 - 20)+ | \$\$

[Image](#)



## [Teen Art Show](#)

### **Audiences:**

Young Adult (17 - 20)

Mar 19, 2015

Children (9 and under)+ | \$

[Image](#)



## Open Mic

### **Audiences:**

Children (9 and under)

Young Adult (17 - 20)

Adults (21 and up)

Intergenerational