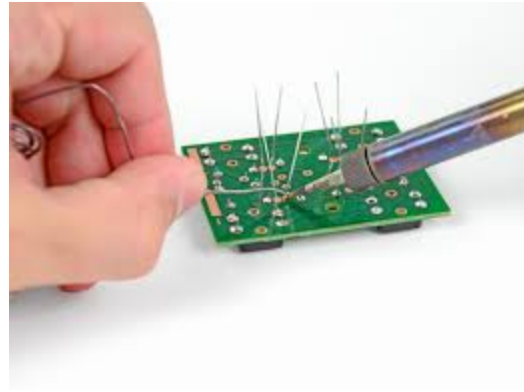


# Soldering –so empowering!!



## Best way to start?

- Inexpensive soldering irons with stands. You can get good irons with flimsy stands but you will worry every second they are using them. These two are both variable temp, which is great:
  - Weller WLC100 40-Watt Soldering Station--\$39.75 on Amazon
  - Stahl Tools SSVT Variable Temperature Soldering Station--\$27.66 on Amazon
- Kits, kits, kits!!
  - Maker Shed—search Electronics Kits—very fun and easy. <http://www.makershed.com/>
  - SparkFun—search soldering—also fun and easy. [www.sparkfun.com](http://www.sparkfun.com)
  - Chaney Electronics—has class packs—very fun and easy. <http://www.electronickitsbychaneyelectronics.com/>
  - Evil Mad Scientist—love the name! a little more expensive, but sometimes have very unusual things <http://shop.evilmadscientist.com/>
- Goggles—don't spend a fortune but make sure you have two sizes—the large ones to fit over glasses, and the smaller ones for kids with no glasses.

**Sales and Discounts:** Sign up with each of the kit web sites—they have sales all the time. Ask for an educator discount—Maker Shed and SparkFun each give me one.

**Learning:** Both Maker Shed and SparkFun have many many resources on their web sites about how to teach soldering and other electronics skills. Explore them. It is worth your time. Chaney has very good customer service—you can call them and ask for recommendations or help with purchasing.

## Pros:

- Very empowering. There is nothing like soldering something for the first time and having it work. Girls especially like this and rarely have done it before.
- Once you learn to solder, the sky is the limit for building on this skill.

## Cons:

- It is dangerous! Don't do it with kids unless you are sure you can control them with a voice command. There can be no goofing around with soldering irons.
- It smells. Be sure that you have good ventilation.
  - Clean-up takes a long time, as you must let the irons cool and then clean them for the next use, though of course kids should do that themselves....

### Lessons Learned:

- Have extra adults around. One adult to two beginning solderers is ideal. You will go nuts running from station to station if you are the only one there.
- Buy the irons with the coil holders. Don't mess with the flimsy little stands. You do not want to be the one who has to explain to little Johnny's mom why his career as a violinist is over due to a burn on his palm.
- Set up a soldering area and don't move the irons around the room.
- Be sure the plugs at your soldering station will take the current when 10-12 are plugged in at the same time. It is not fun trying to reset breakers in a school.
- Ask for community volunteers to come in and help if they are doing a big project. This will give you the extra eyes and hands, and the kids can learn from them.
- Save the instructions from the little soldering kits. And save any extra pieces. The kids can use them on other projects or just practice soldering. And the instructions assume that you have never soldered before, which make them excellent tools for other projects.