

Soldering, SkillsUSA

I am Amanda Ogryzek from Utica Center for Science and Industry's Mechatronics I Class. In our basic electronic course, one of our major lessons was on Soldering. I'd like to have my first job at AM General in the Electrical Lab, where a common task is to soldering items such as jumpers and motors. In the engineering field, soldering is necessary and elementary so it's important to learn it.



When soldering, you will need the following materials:

Soldering iron – the main tool

Solder – I use solder that is 60% tin 40% lead because it is most common.

Damp Sponge – to clean the tip of the soldering iron

Solder Sucker – in case you mess up it sucks up the solder from the area you place it at

Wire cutters- to cut off the ends of the component leads

Wire strippers – to strip the wires you are going to solder

Needle nose Pliers – to bend the component leads to put them in the board



Now, to start the soldering process, you have to plug your soldering iron in. It takes a few minutes for it to heat up to its normal operating temperature of 400 degrees Celsius or 752 degrees Fahrenheit.

While you're waiting, get a damp sponge ready to clean off the tip of the soldering iron when you're working. Make sure you get the excess water out of the sponge, because you don't want it to be soaking.

You can check if it is ready by trying to melt a little solder on the tip.

Then wipe the tip on the sponge to clean it.

After it is ready, you put a little solder on the tip. This is called tinning. It helps the heat flow from the tip to the joint.

Wipe the tip on the damp sponge again.

Now we are ready to start the job.

Take the component you will be using, in this case an LED, and put the leads into your board.

Bend both leads of the component against the board to be sure that it stays in place while you're soldering on the other side.

Take the solder iron in one hand in the solder in the other. Hold the soldering iron like a pencil.

Put the solder at the spot where the joint is to be made. Bring the tip of the iron over to it and hold it there for a second for the solder to melt. It should create a volcano shape.

Take the tools away from the joint and let the solder cool.

(say something here)

Cut off the leads of the components that are sticking out.

Other things I need to do like connect the head to the body.