Soldering

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Alana Lafferty

What is Soldering?

- Creating electrically conductive connections between electronic components
- Melting a lead-based metal called solder

Soldering

- Safety
- Temperature
- Stripping and Tinning
- Useful Soldering Tips

Safety

- **Never** leave a soldering iron plugged in when you are not using it
- **Always** place soldering iron back in its holder after use
- To avoid burning: **Never** place the iron near other objects
- **Never** pick up the iron by the tip; it's hot!
- **Never** touch newly soldered joints, they are also hot

Temperature

- The iron must be hot enough to heat the contacts, so they melt the solder

- Do not use the iron to melt the solder directly

- Use the iron to heat both contacts, and apply the solder to the heated joint

- Do not heat the joint for too long; heat can damage components

Temperature

- One of the biggest problems with soldering is cold solder joints

- This occurs when an air bubble or impurity enters the joint during cooling

- The solder does not flow properly into the joint; thus it does not make a good electrical connection

Good   Bad

Stripping and Tinning

- Always use stranded wire for making sensor leads

- Strip the wire about ¼ inch from the end without cutting any of the strands

- Touch the tip of the iron to the wire and hold the solder in contact with the wire in order to "tin" or coat the wire

Soldering Tips

- Make sure the tip of your soldering iron is shiny

- Do not paint with the iron

- Do not use big gobs of solder

- Use a damp sponge to clean off the tip