

Objectives:

To learn basic soldering techniques from other resources to aid with following the Smart Rock assembly guide

What You'll Need:

Soldering iron, assembled cradle, damp sponge



Safety Glasses



Spool of rosin core solder



Solder sucker



Resources:

Collin's Lab Guide to Soldering:

https://www.youtube.com/watch?time_continue=4&v=QKbJxytERvg&feature=emb_title

Adafruit Guide to Soldering:

<https://learn.adafruit.com/adafruit-guide-excellent-soldering/>

Potential Hazards

Ingestion / Inhalation of Lead Solder or Flux/Rosin Solder – Surface contamination of lead solder can result in ingestion of lead, a known neurotoxin. Over-exposure of lead fume inhalation can give rise to chronic health effects. Reduced ventilation when using a Flux/Rosin Solder can result in respiratory irritation and/or eye irritation. The separate spool of solder provided separate from the soldering kit is lead-free.

Burns / Fire – Heated parts from the iron will be extremely hot and can easily burn through skin contact or could cause a fire if placed on flammable materials.

Electrical – Frayed electrical cords could be a fire and/or shock hazard

General Safety Precautions

Whenever possible, use lead-free solder. Be sure to conduct soldering work in a well-ventilated space.

Soldering Iron Safety

- Never touch the element, or tip, of the soldering iron.
- Ensure that tweezers, pliers or clamps are available to hold wires that are to be heated to avoid potentially receiving burns from objects that are heated.
- Always return the soldering iron to its stand when not in use. Never lay it directly on your workbench.
- Turn off or unplug the soldering iron when it is not in use.

Fire Prevention

- Conduct work on a nonflammable surface that is not easily ignited.
- Wear non-flammable clothing that covers your arms and legs.

Housekeeping

- Always wash your hands with soap and water BEFORE and AFTER soldering.
- Wipe off tables where the soldering occurred with water or cleaning solvents after soldering is complete.
- Do not eat and solder.
- Do not solder and drive