1. **Protective Clothing** – Wear nonflammable or 100% cotton long sleeve shirts and pants. Wear closed-toe shoes. Heat resistant gloves may also be needed.

2. **Eye Protection** – Solder can “spit.” Safety glasses, goggles, or face shields with ANSI/ISEA Z87.1 markings should be used when soldering and clipping wires. Hold leads so when cutting, they do not fly away.

3. Do not solder live circuits. All power sources should be unplugged and all batteries should be removed prior to soldering.

4. Food and drink are not allowed in the work area since certain solders can be toxic.

5. Conduct work in a well-ventilated area.

6. Avoid breathing fumes/smoke by keeping your head to the side of, not above your work.

7. Examine equipment for frayed or cracked cords or a missing ground prong before each use. Do not use equipment with faulty cords.

8. Prevent damage to electrical cords by keeping them away from heated tips. Grasp the plug, not the cord, when unplugging the soldering iron.

9. Never touch melted solder or the element/tip of the soldering iron until cool.

10. Hold wires with tweezers, pliers, or clamps to avoid receiving burns.

11. If burned, immediately cool the affected area under clean, cold water and seek treatment from the school health provider.

12. Conduct soldering on a solid, level, and fireproof/nonflammable surface. Always return the soldering iron securely to the stand when not in use. Never put it down on your workbench.

13. Keep the cleaning sponge wet during use.

14. Use lead free solder.

15. Keep cleaning solvents in dispensing bottles to reduce inhalation hazards.

16. Turn the unit off or unplug the soldering iron when not in use.

17. When finished soldering, wipe off the work surface using water or cleaning solvents.

18. Always wash your hands with soap and water after soldering.

*Adapted from Carnegie Mellon University, Environmental Health Safety Division (2016)*