Tool Safety Policy

and Acknowledgment

Effective Date: January 1, 2026

1. Purpose

Tennessee Robotics Center ("TRC") is committed to providing a safe learning environment for all students, staff, and visitors. This Tool Safety Policy establishes rules and guidelines for the safe use of tools and equipment in our facility. All participants must read, understand, and acknowledge this policy before using any tools or equipment at TRC.

2. Scope

This policy applies to all tools and equipment at TRC, including but not limited to: hand tools (screwdrivers, pliers, wrenches, hammers, cutters), power tools (drills, saws, grinders, soldering irons), 3D printers and laser cutters, electronics and soldering equipment, robotics components and batteries, and any other equipment designated by TRC staff.

3. General Safety Rules

1. **Always follow instructor directions.** Do not use any tool or equipment until you have received proper instruction and permission from TRC staff.
2. **Wear appropriate personal protective equipment (PPE).** Safety glasses are required when using any power tools, cutting tools, or soldering equipment. Additional PPE may be required for specific tasks.
3. **Inspect tools before use.** Check for damage, loose parts, or defects. Report any damaged equipment to TRC staff immediately. Do not use damaged tools.
4. **Use tools only for their intended purpose.** Do not modify tools or use them in ways they were not designed for.
5. **Keep your work area clean and organized.** A cluttered workspace leads to accidents. Return tools to their proper location after use.
6. **Never leave power tools unattended while running.** Turn off and unplug tools when not in use.
7. **No horseplay or distractions.** Focus on your work. Do not distract others who are using tools.
8. **Secure loose clothing, hair, and jewelry.** Long hair must be tied back. Remove dangling jewelry, scarves, and loose sleeves before using rotating or moving equipment.
9. **Report all injuries immediately.** No matter how minor, report any injury to TRC staff right away.
10. **Know emergency procedures.** Know the location of first aid kits, fire extinguishers, emergency exits, and how to shut off equipment in an emergency.

4. Power Tool Safety

- Power tools may only be used by students who have completed tool training and received authorization from TRC staff
- Always ensure guards and safety devices are in place before operating
- Wait for rotating parts to come to a complete stop before setting down or adjusting
- Keep hands and fingers away from cutting edges and moving parts
- Secure workpieces with clamps or a vise when appropriate
- Disconnect power before changing bits, blades, or making adjustments

5. Soldering and Electronics Safety

- Always use a soldering iron stand and never leave a hot iron unattended
- Work in a well-ventilated area and avoid breathing solder fumes
- Allow soldered joints to cool before handling
- Never touch the tip of a soldering iron—it can exceed 700°F
- Wash hands after soldering to remove any lead residue
- Disconnect batteries and power sources before working on circuits

6. Battery Safety

- Handle batteries with care—do not drop, puncture, or crush
- Do not charge batteries unattended or overnight
- Use only approved chargers for each battery type
- Inspect batteries for swelling, damage, or leakage before use
- Report any damaged or swollen batteries to TRC staff immediately—do not use
- Store batteries in designated areas away from heat sources

7. 3D Printer and Laser Cutter Safety

- Only TRC-authorized users may operate 3D printers and laser cutters
- Never leave equipment running unattended
- Do not touch heated components—print beds and extruders can cause burns
- Allow printed parts to cool before removing from the print bed
- Use only approved materials—some materials release toxic fumes
- Ensure proper ventilation when operating

8. Age-Appropriate Tool Use

Tool access is determined by age, training, and demonstrated competency:

Grade Level	Permitted Tools (with training)
K-2	Basic hand tools (plastic tools, screwdrivers with supervision), LEGO components, snap circuits
3-5	Hand tools (screwdrivers, pliers, wrenches), wire strippers, basic electronics
6-8	All hand tools, soldering irons (with training), hand drills, 3D printers (supervised)

9-12	All tools with appropriate training, including power tools, laser cutters (supervised), advanced electronics

Nοте: All tool use requires prior training and staff authorization regardless of age. TRC staff may restrict tool access based on individual assessment of student readiness and safety awareness.

9. Consequences for Safety Violations

Safety is our top priority. Violations of this policy may result in verbal warning, temporary loss of tool privileges, removal from the current session without refund, or suspension from future TRC programs. Serious or repeated violations will be addressed according to the TRC Code of Conduct.

10. Emergency Procedures

- **Injury:** Alert TRC staff immediately. First aid kits are located at the front desk and in the lab area.
- **Fire:** Alert others, evacuate using the nearest exit, and call 911. Do not attempt to fight the fire unless trained and it is safe to do so.
- **Equipment malfunction:** Stop using the equipment immediately, turn it off if safe to do so, and report to TRC staff.
- **Chemical exposure or spill:** Alert TRC staff immediately. Evacuate the area if necessary.

11. Contact Information

TRC Education, LLC d/b/a Tennessee Robotics Center

Email: michael@trceducation.com

Phone: 615-796-4632

Website: TennesseeRoboticsCenter.com

Acknowledgment

Tool Safety Policy

By signing below, I acknowledge that:

11. I have read and understand the Tennessee Robotics Center Tool Safety Policy.

12. I agree to follow all safety rules and guidelines outlined in this policy.
13. I understand that failure to follow safety rules may result in loss of tool privileges or removal from TRC programs.
14. I will ask questions if I do not understand how to safely use any tool or equipment.
15. I will report any unsafe conditions, damaged equipment, or injuries to TRC staff immediately.
16. I understand that working with tools involves inherent risks, and I accept responsibility for following all safety procedures.

STUDENT

Student Name (Print): _____

Student Signature: _____

Date: _____

PARENT/GUARDIAN (required for students under 18)

As the parent or legal guardian of the student named above, I have reviewed this Tool Safety Policy with my child and confirm that they understand the safety rules and guidelines.

Parent/Guardian Name (Print): _____

Parent/Guardian Signature: _____

Date: _____

FOR TRC USE ONLY

Received by: _____ Date: _____

Tool Training Completed: □ Hand Tools □ Power Tools □ Soldering □ 3D Printing □ Laser Cutter

Notes: _____