



WELDING VOLUNTEER GUIDE

At the Welding station, you will introduce students to welding, which is the process of joining two pieces of metal together using extreme heat, similar to a super-strong, very hot glue. This activity helps students explore careers in skilled trades and understand how welding is used to build strong, durable structures and products.

Before the session begins, **please review:**

- **Welding Volunteer Guide**
- **Welding PowerPoint**
- **Device Preparation**

Device Preparation

Before students arrive:

- Turn on phone by pressing the black button on the side of the phone.
- Turn welding torch on.
- Click Mobile Arc icon.
- Tap and press and hold trigger (black box on the bottom left).

Instructions to Read Aloud (Bolded Sections)

Welcome to Welding! What do you think welding is? Welding is the process of joining metal together. You may have seen sparks flying on a construction site or in a shop!

What are some metal items you see every day? (Cars, buildings, bridges, playgrounds, buses.)
Welders help build and keep all these strong and safe. Even roller coasters and rockets rely on welding!

Because welding is so important, safety matters. Strong welds protect everyone who uses these structures. Welders also protect themselves by wearing gear like gloves, safety glasses, helmets, flame-resistant clothing, and steel-toed boots.

If you're interested in welding, the path usually includes completing trade school training and earning certifications like the Certified Welder (CW), which shows you can perform real welds.

If you enjoy hands-on work and seeing results, welding could be a great fit. No four-year degree required!

Student Activity: Practice Welding Types (Bolded Sections)

Now, let's try three types of welds: butt joint, T-joint, and lap joint!

1. Tap on the three welding options on the screen in order:
 - a. **Butt Joint**
 - b. **T-Joint**
 - c. **Lap Point**
2. Pull and hold trigger to start the simulation.
3. Locate weld plate.
 - a. Set up plates according to welding choice.
 - b. Example: single panel with the groove for **Butt Joint**
4. Hold over groove until you see the yellow dotted line.
 - a. All indicators on the screen should be green before welding and keep pace with the (2) blue arrows.
 - b. It will still work without doing these things, but the outcome will not be as good.
5. If the phone restarts, just wait for it to come back.
6. When finished, tap on results.
7. (X) out and reset trigger.
8. Repeat steps for all (3) types of welding.

Wrap-Up Discussion:

- What surprised you most about welding today?
- Do you think welding is more physical, more technical, or both?
 - How do skill and strength work together in this trade?
- Why do you think attention to detail matters in trade jobs?
- What do you think would happen if no one knew how to do this trade?
- Could you see yourself exploring this trade in the future?
 - What made you more interested in welding?