



Instructor Guide

Electrical Safety

Topic overview (why the topic is important to the students)

In woodworking shops, electrical hazards such as frayed electrical cords are particularly dangerous because of the high risk of fire or explosion. Serious accidents can also happen when equipment becomes 'live' due to electrical faults, lack of maintenance, or short circuits. Electric shock and electrocution happen when a person becomes part of an electrical circuit and the current flows through their body.

Demonstration and Discussion Topics

- **Discuss** electrical hazards in the shop, including power tools and cords. Topics to cover include:
 - Dangers of shock from frayed electrical cords.
 - High risk of fire or explosion due to ignition of sawdust, wood, solvents, paint or adhesives.
 - Burns from hot components.
- **Tour the shop** with the students, pointing out electrical hazards.
- **Show** the students where the main breaker is located and how to turn it off.
- **Distribute** the student handout.
- **Review** the safety tips.
- **Remind** students that they are required to wear appropriate rubber-soled footwear.
- **Make it real.** Tell two stories of electrical injuries from your experience, or use the following examples:
 - Three workers received serious burns when sparks from a frayed electrical cord ignited sawdust that had accumulated under a work station, causing a fire that rapidly grew out of control.
 - A young worker contacted electrical energy when he kneeled to plug a power screwdriver into a 100-120 V/20 amp floor outlet. The victim was found convulsing on the damp floor, with one hand on the plug and the other on the receptacle box. The supervisor went to the electrical panel, but was unable to locate the appropriate circuit breaker for approximately 5 minutes. Paramedics attempted resuscitation but the worker was declared dead at the scene.
 - **Discuss** the attitude that "it won't happen to me". Remind them that an injury can and will happen if they take shortcuts or are careless.



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- ☐ **Instruct** the students to identify and report any safety concerns about electrical hazards.
- ☐ **Answer** any questions or concerns they might have.
- ☐ **Set a good example** by working safely at all times.

Resources

- ☐ Working Safely Around Electricity
http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/electricity.pdf