

Electrical Safety

- Why Should We Know About Electrical Safety
- What can happen?
- Electrical Boxes and Circuit Breakers
- Fuses
- Grounding and Static Discharge
- Wall Outlets (Receptacles)
- GFCI
- Call Before You Dig
- Dangling Electrical Lines
- Safety Tips



SAMPLE FILE

Thank you for your interest in my lesson.

The following slides will give you a good idea of how this lesson is structured although, much of the information has been removed.

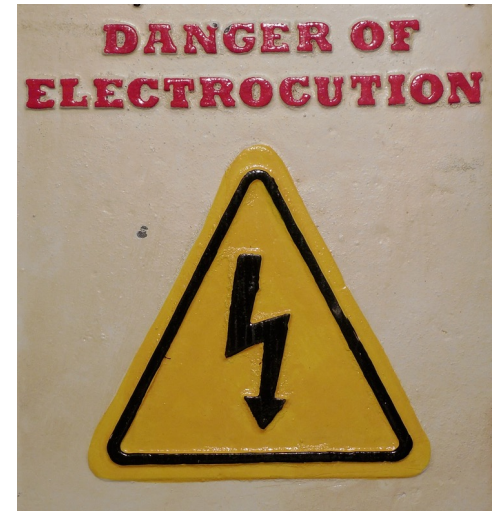
For instance, when you see, that represent text that has been removed.

Note: This sample was created from the student version of the PowerPoint therefore, you will see _____ which are placeholders for the teacher version text which your students will fill in. Furthermore, the videos have also been removed.

If you have any questions, please send me an email – devon@teachwithfergy.com

Why Should We Know About Electrical Safety?

- The available electrical current in regular businesses and homes has enough power to cause death by electrocution
- _____



The Stats are Shocking

- 30,000 = Number of non-fatal shock accidents each year that occur at home
- 325 = Average number of electrocutions each year
- 2,555 = Number of children that are treated each year due to wall outlet shock accidents
- 70% = Percentage of child-related electrical accidents that occur at home under adult supervision
- 60 = Number of electrocutions each year associated with consumer appliances
- Electrical hazards cause more than 300 deaths and 4,000 injuries each year among the U.S. workforce.
- Electrocution is sixth among causes of workplace deaths in America.

What can happen?

- When electrical current travels through our bodies, it can interfere with the normal electrical signals



- _____

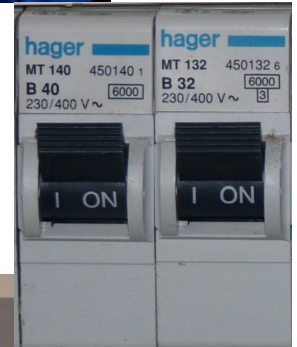


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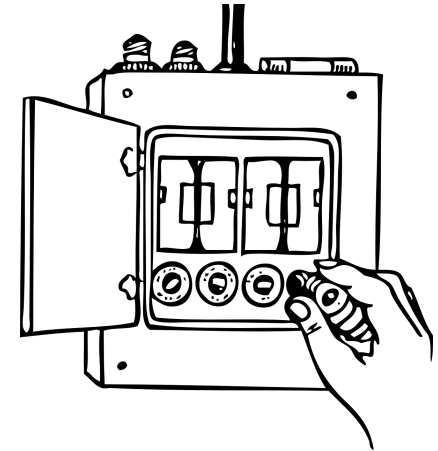
Electrical Boxes and Circuit Breakers

- All buildings have distribution panels made up of circuit breakers or fuses to control the flow of electricity
 - Each circuit in your house runs through the circuit breaker
- _____
- _____
- They can be easily reset if tripped by flipping them like a switch



Fuses

- _____
- If too much current is running through them, a component inside melts, immediately shutting down the flow of electricity
- They are similar to circuit breakers in that they control the flow of current but



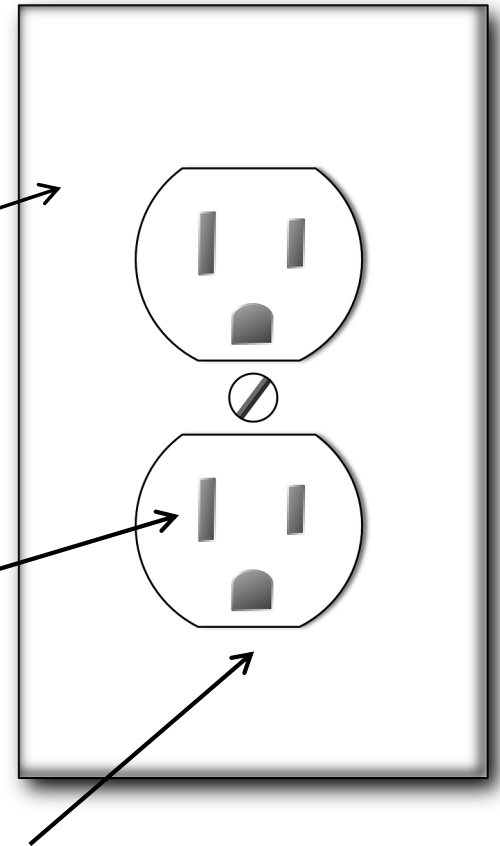
Grounding and Static Discharge

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- Excess electrons can sometimes build on electrical boxes and on machines and can be dangerous
- To prevent electrical hazards, always make sure equipment is properly grounded

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Wall Outlets (Receptacles)

- Where we obtain electricity for things such as televisions, lamps, etc.
- Safety features of a wall outlet
 1. _____
 2. Polarized plugs (one slot is bigger than the other) Therefore, plug needs to go in the proper way
 3. Most have a third round hole.



GFCI (Ground Fault Circuit Interrupt)

- Sometimes
- A GFCI monitors the amount of current flowing within the outlet
- _____



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GFCI

- An example of this is if you are using an appliance near a water supply
- If the water supply comes in contact with the current (either because the appliance falls into the water, ...)



GFCI

- The current will go into you and the water instead of back into the outlet so there will be a loss. The GFCI will recognize this difference and cut the flow of electricity
- _____



GFCI

GFCI wall outlets should be installed anywhere there is water present

- Bathrooms, kitchens, outside, etc.

- _____



- Portable plug-in GFCIs can be plugged into wall outlets where appliances will be use
- Note: One GFCI can be wired in series to multiple rooms so you may have a bathroom without one but if the circuit is interrupted, the GFCI will still trip in the other room and cut power where you are



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Safety Tips

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 - If you're not 100% sure you've turned off the correct breaker, turn them all off using the master switch
- Inspect portable cord-and-plug connected equipment, extension cords, power bars, and electrical fittings for damage or wear before each use
- Be aware that unusually warm or hot outlets may be a sign that unsafe wiring conditions exists. Unplug any cords or extension cords to these outlets immediately

Safety Tips

- _____
- Do not touch a person or electrical apparatus in the event of an electrical accident. Always disconnect the power source first. Watch out for nearby hazards (power lines, water or metal objects around the victim) that may be carrying current
- Do not plug high amperage equipment such as space heaters, portable air conditioners and other power