

STUDY GUIDE

BASIC ELECTRICAL SAFETY

NAME: _____
 CLASS OR PERIOD: _____
 DATE OF INSTRUCTION: _____

1. All electric power tools and equipment must be grounded (3 wires) or double insulated. Don't use *any* electrical equipment that isn't double insulated or grounded.
2. Electric tools and equipment must be in good condition. Check the cord to make sure the insulation isn't frayed, cracked, cut or damaged in any way. Also be sure the cord is dry and clean.
3. Make sure the plug on the power tool is in good condition.
4. Check switches on power tools. The switches must be clean, dry and free of oil, grease or moisture, and they must be in good working condition.
5. Electric motors must be kept dry, clean and free of dust or particles.
6. If there's anything wrong with a plug, cord, switch or motor on a power tool, don't use it! Tell your instructor about any broken, damaged or defective equipment.
7. Check the condition of extension cords. Be sure both plugs are in good condition. Be sure the insulation isn't worn, frayed, cracked or damaged in any way. Be sure the cord is dry and clean.
8. Keep cords out of the way where no one will trip over them. And keep cords away from wet, oily or greasy floors. Keep electrical cords and wires away from moisture of any kind.
9. Don't overload power tools. Both the tool and the electrical circuit can be damaged by overloading the tool.
10. Don't overload a circuit by using equipment that draws more current than the circuit is designed for. You'll know the circuit is overloaded if a) the equipment doesn't work efficiently or, b) the circuit breaker opens and disconnects the circuit.
11. If a circuit breaker opens because of an overload or because of a short, don't reset it again until the condition has been corrected.
12. The amount of voltage in a current may have less to do with the severity of an electric shock than other factors such as being "grounded". As much as possible avoid grounding yourself when you work with electricity.
13. Wear hard shoes or boots with soles and heels made of non-slip, *insulating* material. This will help insulate you from the ground. If you can avoid being "grounded", you can reduce the risk of severe shock.
14. Always be sure you're on a dry floor when you work with electricity or electric tools and equipment. Damp, wet, oily or greasy floors are an excellent grounding contact; moisture is a conductor of electricity. Avoid being grounded.
15. Keep your hands dry. Never work around electricity if your hands are damp or wet.
16. Remove rings, jewelry, bracelets, necklaces, before you work with electricity. For one thing, they may be conductors and add to the risk of shock. Also, if you are exposed to a current, they can become hot enough to burn you.
17. Don't touch anything to see if it's "hot", to see if it has an electrical charge or current running through it. Use the proper circuit tester to determine the condition of a circuit.
18. Disconnect equipment before you work on it. Disconnect the equipment by pulling the plug or by switching it off at the circuit breaker panel.



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19. When you disconnect equipment by disengaging the circuit breaker, attach a sign to the circuit breaker to warn others not to switch it on.
20. Don't use any electrical equipment near volatile or explosive materials. Don't use electrical equipment near volatile liquids such as gasoline, solvents or paints. Don't use electricity when there are explosive gases or fumes in the atmosphere. Don't touch any switches when gases or fumes are present.
21. Don't touch an exposed, uninsulated wire until you've made sure it isn't "hot"; that is, isn't connected to an electrical circuit.
22. Know where the switches, master controls and circuit breakers are located. Don't set anything in front of them. Always keep switches, controls and circuit breaker panels clear so they can be reached in an emergency.
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