

West Islip Schools
Engineering Technology Department

10 Safety Precautions Electricians and Home Owners Need To Take When Working With Electricity

It's vitally important to take safety precautions when working with electricity. Safety must not be compromised and some ground rules need to be followed first. The basic guidelines regarding safe handling of electricity documented below will help you while working with electricity.

- 1. Avoid water** at all times when working with electricity. Never touch or try repairing any electrical equipment or circuits with wet hands. It increases the conductivity of electric current.
- 2. Never use equipment with frayed cords**, damaged insulation or broken plugs.
- 3. If you are working on any receptacle at your home then always turn off the main panel breaker or circuit breaker.** It is also a good idea to put up a sign on the service panel so that nobody turns the main switch ON by accident.
- 4. Always use insulated tools while working.**
- 5. Never try repairing energized equipment.** Always check that it is de-energized first by using a tester. When an electric tester touches a live or hot wire, the bulb inside the tester lights up showing that an electrical current is flowing through the respective wire. Check all the wires, the outer

metallic covering of the service panel and any other hanging wires with an electrical tester before proceeding with your work.

6. Never use an aluminum or steel ladder if you are working near overhead electrical lines. Use a bamboo, wooden or a fiberglass ladder instead.

7. Always check all your GFCI's once a month. A GFCI (Ground Fault Circuit Interrupter) is a RCD (Residual Current Device). They have become very common in modern homes, especially damp areas like the bathroom and kitchen, as they help avoid electrical shock hazards. It is designed to disconnect quickly enough to avoid any injury caused by over current or short circuit faults.

8. Always use a circuit breaker or fuse with the appropriate current rating. Circuit breakers and fuses are protection devices that automatically disconnect the live wire when a condition of short circuit or over current occurs.

9. Working outside with underground cabling can be dangerous. The damp soil around the cable is a good conductor of electricity and ground faults are quite common in the case of underground cabling. Using a spade to dig at the cable can damage the wiring easily so it is better to dig at the cable by hand while wearing insulated gloves.

10. Always take care while soldering your circuit boards. Wear goggles and keep yourself away from the fumes. Keep the solder iron in its stand when not in use; it can get extremely hot and can easily cause burns.