

# Electricity



**Electricity travels long distances through transmission lines.**

**Electricity is the flow of  
electrons through wires.**

# Electricity

## TEACHER

**Electricity** is a mysterious force. We cannot see it like we see the sun. We cannot hold it like we hold coal. We know when it is working, but it is hard to know exactly what it is. Electricity is simply moving **electrons**.

Electricity has been around forever. Lightning is electricity. It is electrons moving from one cloud to another or jumping to the ground.

Power plants use many fuels to make electricity. Most of our electricity comes from burning coal. Uranium, natural gas, wind, hydropower, biomass, and oil are also used to make electricity.

From a power plant, electricity flows through **transmission lines** held up by **power towers**. The transmission lines carry large amounts of electricity to **electric poles** in cities and towns. **Distribution lines** carry small amounts of electricity from the electric poles to houses and businesses.

Electricity does a lot of work for us. We use it many times each day. It lights, warms, and cools our homes. It runs our TVs, DVDs, video games, computers, and refrigerators. It cooks our food and washes the dishes. It mows our lawns and charges our cell phones. It can even run our cars. We use more electricity every year.

Electricity can be dangerous though. It can cause fires and injuries, even death. Here are some rules for using electricity safely:

1. Do not insert anything into an outlet except a plug.
2. Do not pull on the cord to unplug an appliance, hold the plug and pull.
3. Dry your hands before you plug in or unplug a cord.
4. If a plug is broken or a cord is cut or worn, do not use it.
5. Do not plug too many cords into one outlet.
6. Keep appliances away from water. Do not use a hair dryer if there's water in any nearby sink.
7. If there is a big storm, turn off the TV and computer.
8. Do not touch any power lines outside.
9. Some power lines are buried underground. Dial 811 before you dig. If you are digging and find a wire, do not touch it.
10. Do not fly a kite or climb a tree near a power line.



**TV**



**Clothes Washer**



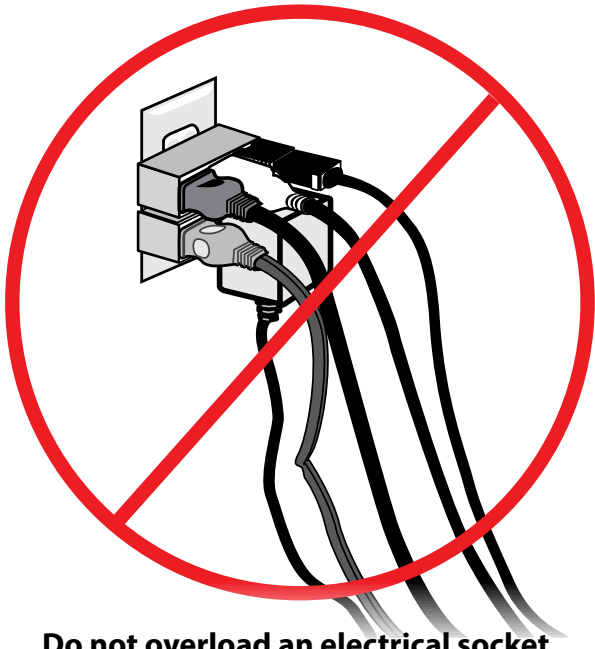
**Light  
Emitting  
Diode (LED)  
Light Bulb**



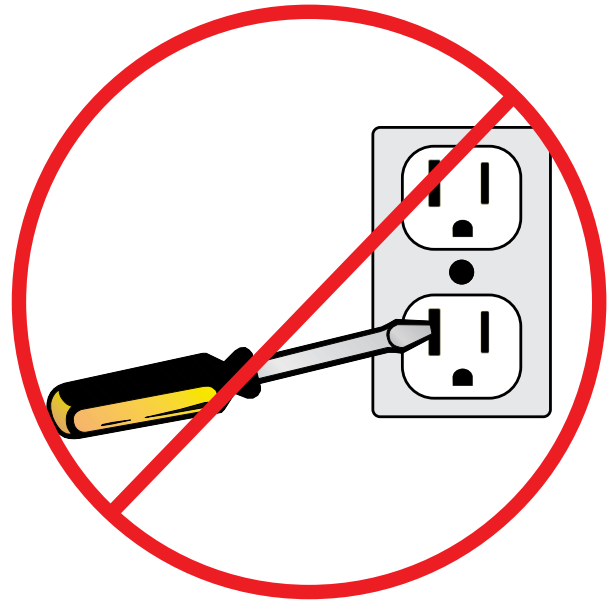
**Computer**

**We use electricity many  
times every day.**

# Electrical Safety



**Do not overload an electrical socket.  
Use a power strip if you need to plug  
in more than two items.**



**Do not put fingers or objects  
into an electrical outlet.**



**Do not play or climb trees near power lines.  
Do not touch a fallen power line.**

## Electricity can be dangerous.