

Electrical Safety Presentation

Have you ever watched a thunderstorm and saw flashes of bright light? Those are called lightning bolts. Lightning bolts are electricity in nature that you see during a storm. Electricity is the power all different types of things need to work. We have gathered this natural electricity and found ways of creating it on our own to power everything from cell phones, air conditioners and now even to cars. Can you name something else that requires electricity?

Today we're going to talk about where to find electricity in your home and safety tips to be mindful of when you're around electricity.

Let's start in the kitchen- can anyone tell me what in the kitchen needs electricity to work? (Electric stove, microwave, lights, toaster, blender, coffee pot) Now that we know what uses electricity in the kitchen we also need to know how to use it safely.

Rules for Kitchen Safety:

- Silverware never goes in the microwave or toaster- metal conducts electricity. This means if your fork touches the inside of the toaster, the electricity will go through the fork and touch you too! You will be shocked or burned and we never want that to happen.
- Now this is extremely important for all areas of your house- electricity and water do not mix! Just like the fork, electricity will go right through the water and shock you. You always want a protective barrier between you and electricity like rubber. Metal and water will not protect you so the toaster should not be near the sink.
- When we are done using things like the toaster we should really try and remember to unplug them from the outlet. This way it stops electricity from going to the toaster when it's not being used. This can prevent fires or injury.
- Paper burns so we never want to stick paper plates or napkins in the oven, they will burn and cause a fire. However they are not metal so they can go in the microwave if you need to heat something up.

There are special types of outlets for rooms like kitchens and bathrooms called GFCIs. GFCI stands for ground fault circuit interrupter, simply, when this type of outlet is connected to a circuit it will detect different currents coming back to it as compared to the circuit it gives off. If a weaker current comes back to the GFCI than what's sent out, the GFCI will stop the current. This is a safety feature to prevent electric shock and electrocution. We especially use these outlets in bathrooms and kitchens where water is prominent, again to prevent electric shock. There are rules associated with electrical devices like these GFCIs. The codes are laws for electrical safety in your house but also the hospital, school and offices. When the codes gets changed, people in charge of these facilities may have to order new outlets, switches or other equipment.

Now let's talk about electrical safety in the bathroom

- What comes out of your bathtub and sink? (water) There is a lot of water in your bathroom for washing your hands, taking a bath and flushing the toilet. But remember what we said, electricity and water don't mix! Items like a hair drier or radios use electricity. We never ever want to use the hair drier in the bathtub or put the radio next to the sink when we brush our teeth. Remember, water won't protect us from electricity.

Outside

- Where can we find electricity outside? There are sometimes outlets on the outside of our house in the backyard. Just like the outlets inside our house, we do not want to touch or play with them. How about power lines? The long black wires above your house take electricity to our house and all your neighbors' houses. Even though they are high in the sky we don't want to play too close to them. We don't want to fly kites or play basketball near them.
- Who here likes to go in the pool in the summer? Pools are filled with water and we all remember now that water and electricity don't mix! We don't want to play with radios, cell phones or other electrical devices near the pool. Also very important, if it is stormy outside and you hear thunder you must get out of the pool immediately. Remember when we talked about lightening? Those lightning bolts can touch down and hit your pool, if you're in the pool when that happens you will be very badly hurt.

Everywhere else in the house

- Loose wires should always be shortened or out of reach. We wouldn't want them to get cut because then the electricity inside them becomes free and this could start a fire.
- Electrical outlets are also known as receptacles and provide a place in a wiring system where current can be taken to run electrical devices. Plugs are devices usually on a cord used to make an electrical connection by putting it into another part of the electrical system (the electrical outlet/receptacle). A plug is the only thing that should be inserted into an electrical outlet/receptacle. When there are too many plugs in an outlet it can be dangerous. We don't want to overload an outlet it can cause a fire. If there are babies or young children in your house, open outlets should be covered when not in use so they cannot stick their fingers, or anything else, in the outlet.
- Again, water and electricity are not friends, you don't want to mix them. Make sure your hands are dry before touching light switches or other electrical devices.
- At Leviton we manufacture tamper resistant outlets, including GFCI versions. This prevents anything from being inserted into the outlet and prevents the risk of electric shock or burn. These products are especially helpful in houses with children or babies that love to touch common household objects.

I hope everyone has a better understanding of what electricity is, where it comes from and how it's used at home. Does anyone have any questions? When you go home you can look around your house for things that take electricity. Think about what we went over today and if you see anything unsafe tell an adult immediately. You will receive a special safety checklist for the holidays and winter and another list for hurricanes and storms that you and your parents can go over together to be prepared.