

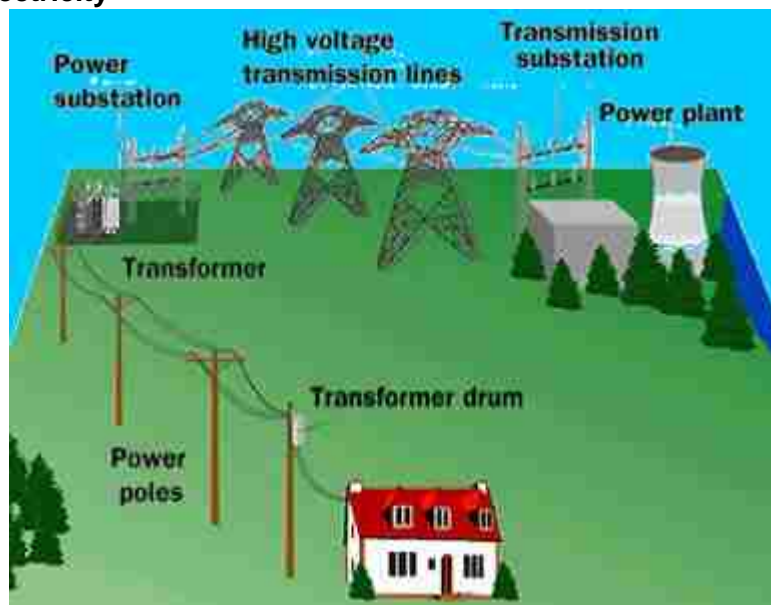
PARENT / TEACHER FACT SHEETS

Everyday Hazards Around Electricity Equipment

Every year, hundreds of people are injured or killed from having contact with electricity. Some of those injured are children. We believe the more they know about how electricity works, the better they can keep themselves, their friends and families safe.

These fact sheets contain information about how electricity is made, the journey it makes from the power station to the home, key situations where children may come into contact with electricity equipment and what steps to take in case of an emergency.

The journey of electricity



Electricity travels in a circuit that begins at a power station. A thick coil of wire spins inside giant magnets at the station, moving the electrons in the wire and making electricity flow. The electricity then travels from the power station through a grid of power lines. Large transmission wires on tall pylons carry electricity to substations in different parts of Northern Ireland. These substations contain equipment that reduces electricity's voltage so it can travel on smaller power lines that branch out down streets, either on overhead power lines or underground cables.

Overhead power lines and underground cables carry electricity to transformers on poles or under the ground where the voltage of electricity is reduced again so people in homes and businesses can use it safely. Transformers and substations contain equipment that is very dangerous to touch, that is why they have yellow 'Danger of Death' warning signs on them.

From transformers, electricity travels into homes, schools and hospitals through wires called service cables. These connect to a meter box which measures how much electricity is being used and electricity is distributed throughout the building, powering lights, computers and appliances.

KEY SAFETY ISSUES

OVERHEAD ELECTRICITY LINES

- Never carry long objects, such as fishing rods, where they can touch or go near overhead electricity lines. The electricity can travel down them and through you to the ground. This could cause serious burns and electric shocks which can kill you. Electricity can even jump gaps so don't go anywhere near the wires.
- Birds can sit on overhead electricity lines because they are not touching any other wires and the electricity cannot go through them to the ground. However, if they touched another wire or something touching the ground they would get an electric shock which would kill them.
- Do not fly kites or model aeroplanes near overhead electricity lines. If the control aerial or kite string get caught up in the wires the electricity can travel down them and through you to the ground. This could cause serious burns and an electric shock which can kill you. If your kite settles in trees close to electricity lines do not climb or use a long stick to get it down.

IN THE GARDEN

- Do not play near adults when they are using electric garden tools, and never try to use the tools yourself. Remember, water and electricity do not mix so if your parents have left electric tools outside and it starts to rain, or water from a hosepipe makes the tools wet, tell them. Do not touch the tools - you could get an electric shock.
- You must always be careful climbing trees in case you fall and hurt yourself. Sometimes, trees can grow near overhead electric cables and branches can come into contact with the overhead lines. Remember electricity can jump gaps and through you to the ground. Even getting close to a cable could be dangerous.

PLAYING NEAR ELECTRICITY EQUIPMENT

- Playing football is great fun but do not play too close to electricity substations because there is electrical equipment inside which is dangerous to go near. If your ball goes into a substation, ask an adult to call Northern Ireland Electricity using the number on the white information sign on the side of the substation gate. You will not get into trouble and NIE will get the ball out safely. Do not try to get your ball back even if it looks close to the fence and you think you can reach it. Remember, electricity can jump gaps.
- Road works have barriers around them to stop people falling down holes in the road or footpath. Be careful not to knock the barriers over because someone could get hurt or fall into the hole and make contact with the exposed underground cable. Also keep outside the barriers; they are there to keep you safe.
- Mini pillars are small grey boxes which sit on the pavement or pathways. Never sit on them, never try to open the door or poke things inside the mini pillar - the equipment contained within is live and you could get an electric shock.

IN CASE OF EMERGENCY

If someone has been shocked, there is a chance they may still be in contact with the source of the electricity.

- Do not touch the person or anything he or she is touching.
- Call for help on 999 or 112 and tell them it is an electrical accident.
- When the victim is not in contact with the source of electricity and you're sure there is no danger, tell an adult to give first aid for electrical injury. This may include CPR. Don't touch burns, break blisters, or remove burned clothing. Electrical shock may cause burns inside the body, so be sure the person is taken to a doctor.