



Electrical Safety

Curriculum Links:

- **Science** Energy and Forces
- **Geography** Human Environments
- **SPHE** Myself and the Wider World

Lesson Objectives:

To learn about the potential dangers from electricity in our environment and the precautions necessary for safety.

Teacher Guidelines

It is suggested that the teacher ensures that pupils are familiar with the vocabulary and the concepts introduced in the previous module before starting this lesson.

Key Words and Concepts Introduced in Previous Modules

warning signs electric fences red light overhead power lines

Electricity has many uses in the home and on the farm. There are warning signs to look out for that give danger warning signs for the presence of electricity such as overhead power lines

Key Words for this lesson:

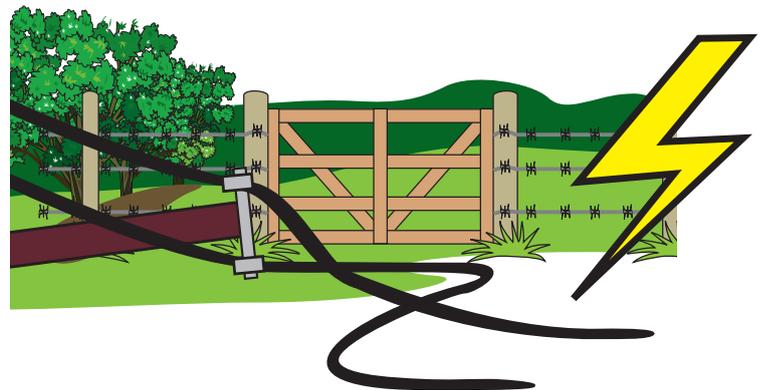
pylons poles volts sub-stations wires flow Minipillars

Stay Safe around Electricity Pylons and Sub-Stations

Do not climb or play near **pylons**. Do not climb up electricity **poles**. Electricity is measured in **volts**. Poles and pylons carry thousands of volts. You risk a fatal shock by going near them. Even if you do not touch the power lines, the electricity could jump through the air and electrocute you. Electricity **sub-stations** contain dangerous equipment and should never be entered. Tell an adult if something belonging to you falls through the fence.

Watch out for overhead power lines

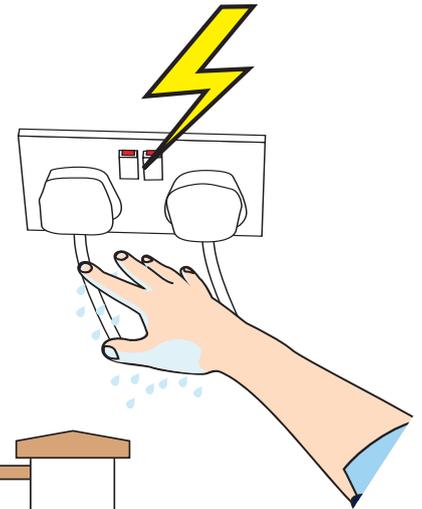
In stormy weather, electrical **wires** may fall in the farmyard or in the fields. Fallen wires can be very dangerous – do not touch or go near them. Tell an adult or call ESB Networks on the emergency line 1850-372-999 straight away. Touching or coming close to electric wires can kill. Farmers and builders take care when driving high machinery like tractors with loaders or tipping trailers or diggers. Farmers are always on the lookout for overhead power lines.



Do not fly kites or toy planes under overhead power lines. Go to large open spaces, where you are free from trees and overhead power lines. Do not attempt to get any objects which may have become stuck on power lines or any other electrical equipment. If you go fishing check that there are no overhead power lines nearby before you begin, as a rod or fishing line that hits a power line could kill you. Never climb a tree that is near an overhead power line or you could be electrocuted.

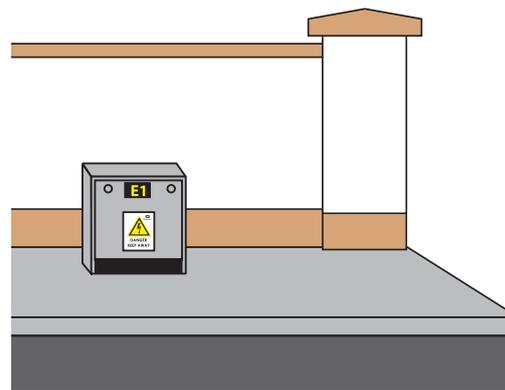
Electricity and Water, Beware!

Keep electrical appliances and tools away from water. Never touch any electrical appliances or tools with wet hands or while standing in water. Electricity flows easily through water and can **flow** from an appliance through your wet hands and into your body, which can be very dangerous and can cause serious injury. Never bring electrical appliances into the bathroom. Some electrical appliances such as electrical kettles and washing machines are made especially for using water, but you should always be careful.



Stay Safe around Electricity Distribution Boxes (Minipillars)

In towns and villages and housing estates, electricity is often brought into the houses on underground cables. These cables are connected to the main power supply at metal boxes that are often positioned on the footpath or beside garden walls. These are called **Minipillars** and have a Danger Warning Sign on the door. Never interfere with these boxes or poke anything into them as you could get seriously injured or killed



Suggested Activities:

- Photocopy Activity sheet page 44.
- Examine how appliances have changed and evolved through the years
- Use a battery to make a light bulb light up in science class
- Discuss what you should do if someone is injured by electricity
- Bend some water. Turn a tap on. Use a comb to create static energy and hold it near the water. Watch the water bend
- Log onto www.esb.ie/ampville (or use DVD) to learn fun facts about electricity

Learning Outcomes:

At the end of this lesson children should know what electricity pylons, overhead power lines and minipillars are and that they are dangerous. They should also know the dangers associated with water and electricity.

Additional Resources:

- Use Ampville DVD or www.esb.ie/ampville.ie

Developed with:

 **ESB Networks**
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