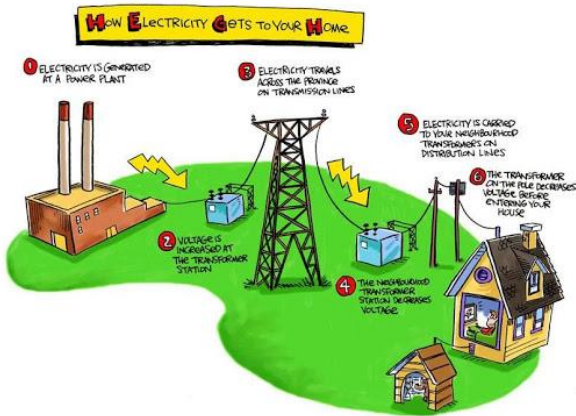


By the end of the unit, pupils will be able to answer...

- Which appliances need electricity to work?
- What does a circuit need to work?
- Which materials conduct/insulate electricity?

Vocabulary	Definition
battery	a device that makes electricity by using chemical reactions
circuit	the closed path followed by an electric current
complete circuit	a working circuit
conductor	anything that allows the passage of electricity
electrical appliance	a device used for a particular purpose, requiring electricity to work
electricity	energy caused by the movements of electrons through matter
insulator	anything that does not allow the passage of electricity
mains electricity	the electricity supply provided by power stations to households or businesses
switch	a device that opens and closes an electrical circuit
wire	a thread of metal used to conduct electricity



5 Electrical Conductors



5 Electrical Insulators



ELECTRICAL SAFETY TIPS FOR KIDS

Electricity is helpful. It provides energy that we use to light our homes and operate lots of other things. But electricity can also be dangerous. Lots of people are hurt each year in electrical accidents. We could avoid the accidents by following these simple safety tips...

NEVER stick fingers, toys or other objects into an electrical outlet. You might get hurt by electricity.

NEVER place a hair-dryer, radio or other electronics near the bathtub or shower. Electricity and water are dangerous partners!

NEVER pull a plug from an outlet by its cord. Electricity could jump from the cord and give you a nasty zap.

NEVER place your drinks on top of your video games or other electronics. They could easily spill, and get you zapped by electricity.

NEVER climb trees near power lines. You might touch one by mistake and get zapped.

STAY AWAY from places marked with warning signs. These places are very dangerous, even for adults!

Anytime you need to use something that needs electricity, **ask an adult for help!** Remember, you can never be too safe!

simple circuits

Here is a simple electric circuit. It has a cell, a lamp and a switch.

To make the circuit, these components are connected together with metal connecting wires.



Investigate!

- Construct a range of circuits
 - Carefully explore which materials can be used instead of wires to make a circuit
 - Classify the materials that were suitable/not suitable for wires
 - Explore how to connect a range of different switches and investigate how they function in different ways
- Choose switches to add to circuits to solve particular problems, such as a pressure switch for a burglar alarm
 - Apply their knowledge of conductors and insulators to design and make different types of switch
 - Make circuits that can be controlled as a part of a DT project