



# Homes and schools work on electricity

Almost everything that works in a home or school runs on **BATTERIES** or uses mains supplies.

Look around your classroom or your home and you will discover that electricity is being used everywhere (Picture 1).

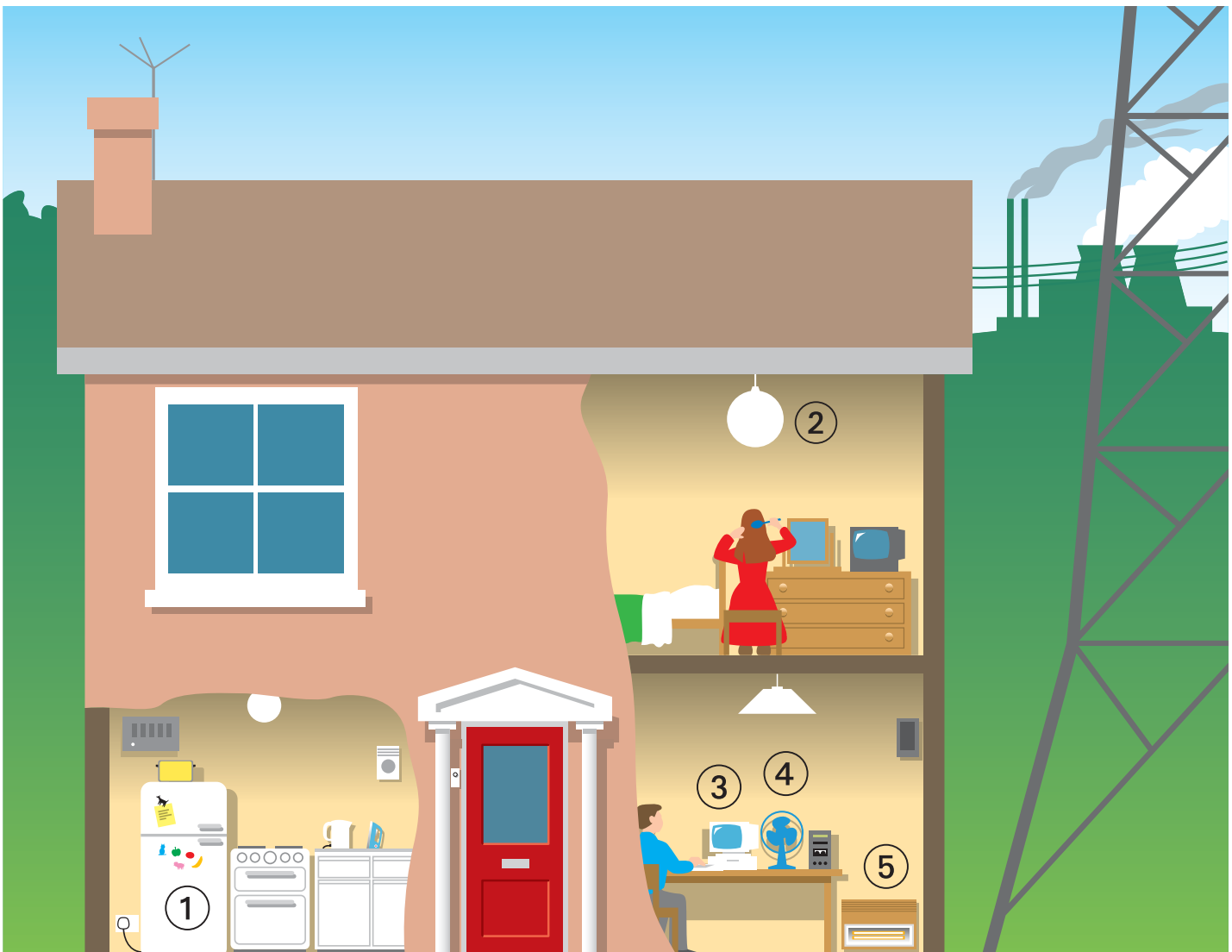
Electricity is an easy and controllable way of making things work. It is a source of **ENERGY**.

## How electricity is used

In the home shown in Picture 1 you can see just a few of the things that are connected to mains electricity:

- ① fridge/freezer; ② ceiling lights;
- ③ computer; ④ desk fan; ⑤ room heaters.

▼ (Picture 1) Every room in our home has things that work with electricity.



There are, of course, many other things in a home that use electricity – electric cooker, toaster, kettle, iron, television, radio... the list is almost endless.

There are also things that use batteries for their electricity. They include: mobile phone; torch; pocket radio; portable CD player; TV remote control; smoke alarm; door bell.

## Sources of electricity

As you will have noticed from the lists, there are two quite different ways we can get electricity for use.

One way is to use batteries. The other way is to use the electricity that comes from wall sockets. This is called **MAINS ELECTRICITY**.

▼ (Picture 2) The electricity we use at home or at school may come from a power station tens, or even hundreds, of kilometres away. It is carried through cables suspended on large towers (pylons) that carry it across the countryside. In cities, the cables are buried under the streets. Despite the huge size of a power station, the job it does is the same as a giant battery.

## Comparing mains and batteries

Things that work on the mains and things that run on batteries both use electricity.

Batteries are portable supplies and they are good for things that need to be carried around, but that do not need much electricity.

A mains supply is a shared supply of electricity. It delivers electricity equal to billions of batteries. It comes from a **POWER STATION** and is brought through **CABLES** to our homes (Picture 2). We then connect **APPLIANCES** to it by using plugs that we push into sockets in our walls.

### Summary

- Batteries are used for small, portable pieces of equipment.
- Mains electricity is used for equipment needing a lot of power.
- Mains power comes from power stations.



Never touch mains sockets or bare wires connected to the mains.

