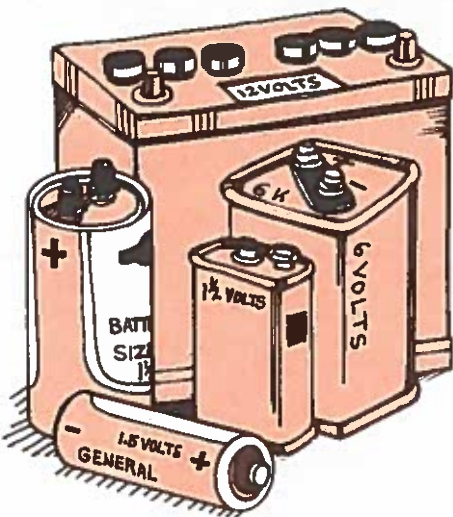
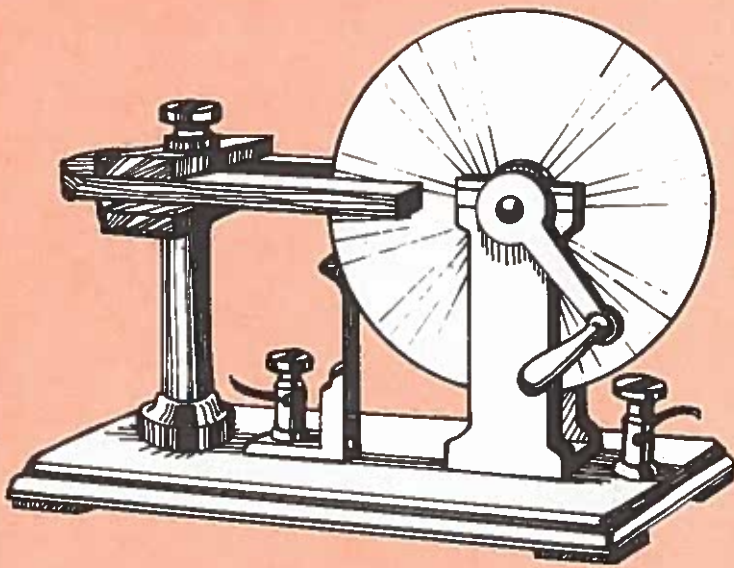


WHAT IS CURRENT ELECTRICITY?

2



circuit: a path that ends at the same point where it starts

generator: machine that makes electricity

AIM | What is current electricity?

2

Think of all the ways you use electricity each day. You awake to an alarm clock or radio, turn on an electric light, use an electric toothbrush, or make toast. You watch television, listen to records, use air conditioners. Just think about lights. Almost every place you go you find electrical lighting.

About one hundred years ago, there was no electricity in homes, schools, factories, and offices. Try to imagine your life without electricity!

The electricity that works all your electrical appliances is called *current electricity*. A current is a flow of water. Current electricity is a flow of *electrons* [i LECK tronz]. Electrons are the parts of the atom that have a negative charge. There is another part of the atom that has a positive charge.

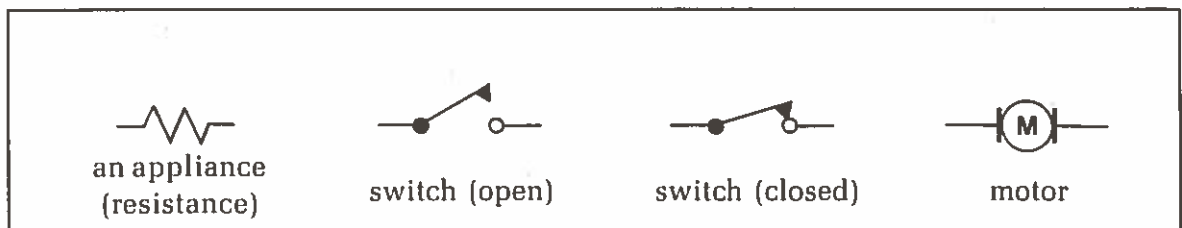
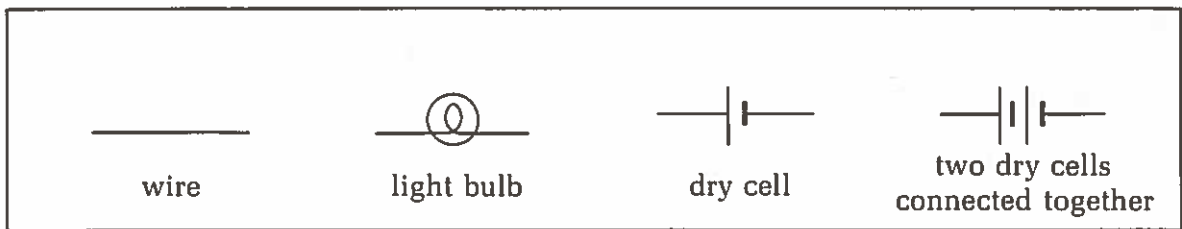
Electrons move along a path called a *circuit* [SIR cut]. While the electrons are moving, the circuit is *complete*. If the electrons stop moving, the circuit is *incomplete* and the electricity stops.

Some of our electricity comes from batteries. Small batteries like those used for flashlights are called *dry cells*. Most of our electricity comes from machines called *generators* [JEN uh ray terz].

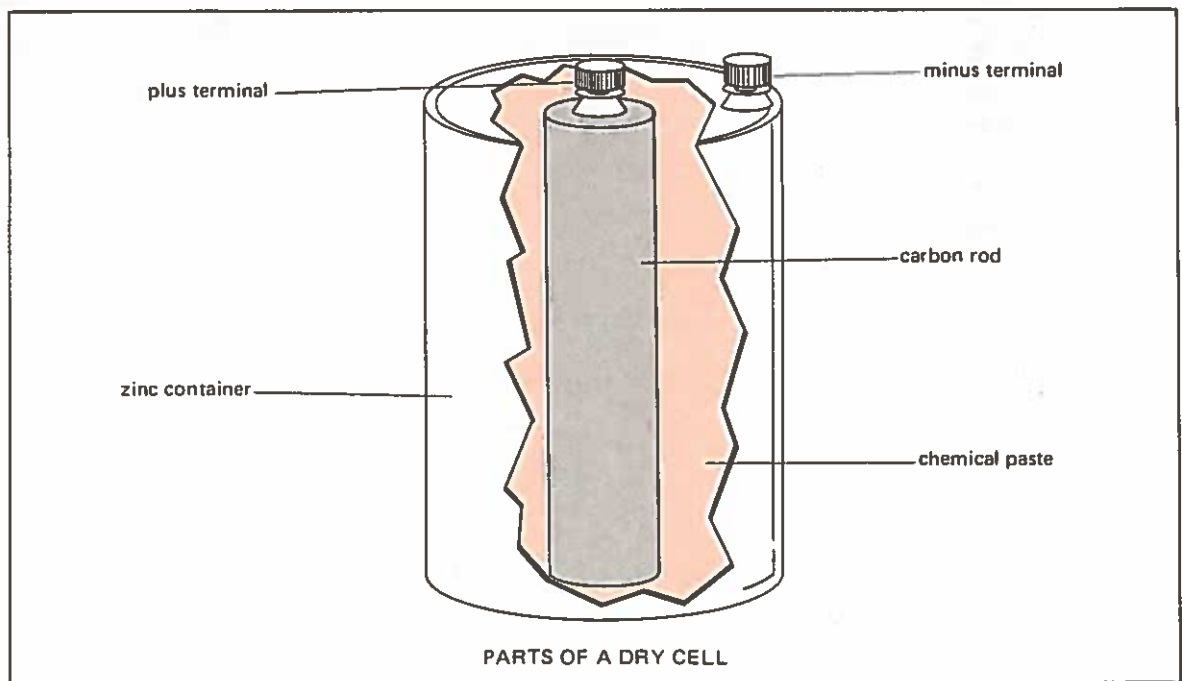
Each year, the world uses more and more electricity. More and more generators are needed.

SOME COMMON ELECTRICAL SYMBOLS

A.



B.



PARTS OF A DRY CELL

A dry cell changes chemical energy to electric energy.

Dry cells come in many different sizes and strengths.

WHAT DO THE PICTURES SHOW?

Look at each picture. Then answer the questions.

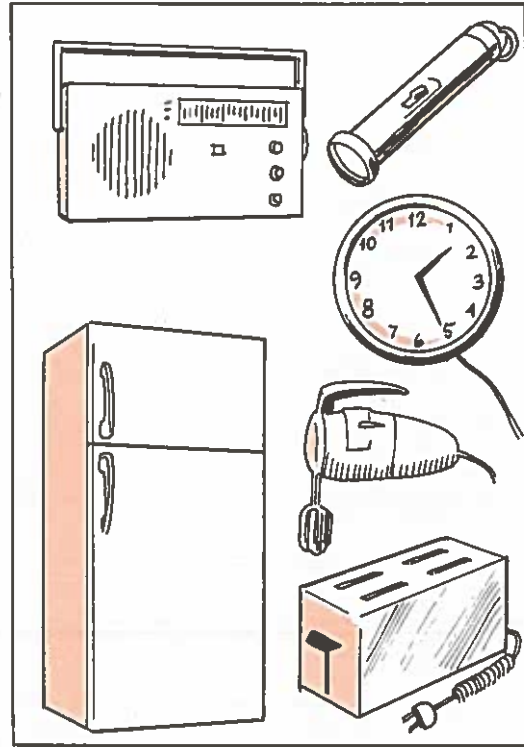
Anything that works with electricity is called an electrical device.

We call some electrical devices, appliances. Electricians call them loads.

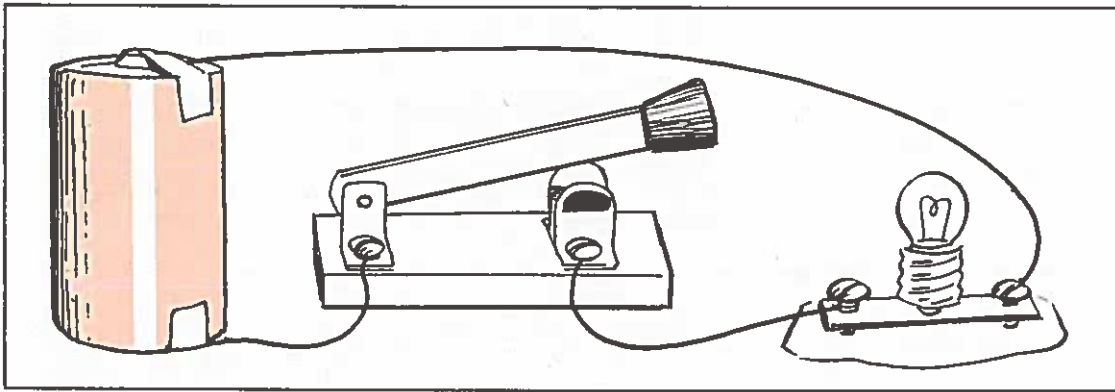
1. Figure C shows some electrical devices. How many can you name?

2. How many other electrical devices can you name?

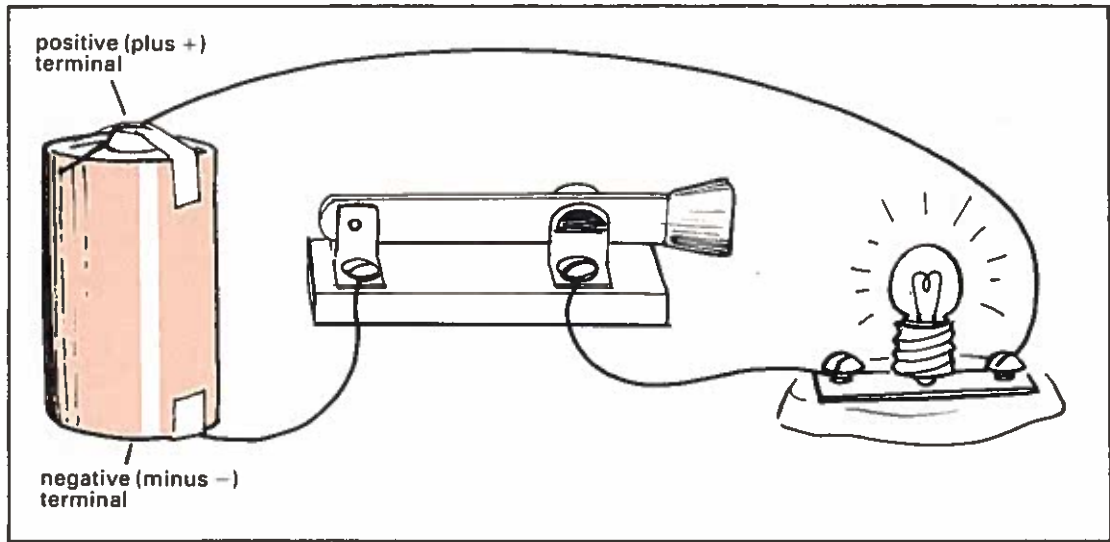
C.



D.



1. Is this circuit complete or incomplete? _____
2. Are electrons moving? _____
3. Does the bulb light up? _____



E.

4. Is this circuit complete or incomplete? _____
5. Are electrons moving? _____
6. Does the bulb light up? _____
7. Electricity flows from *minus to plus*. Draw arrows near the wires, the switch, and battery to show this path.

COMPLETING SENTENCES Complete the sentences with the choices below.

complete	minus	plus
generators	move along a path	circuit
incomplete	toaster	do not move along a path

1. In *static* electricity, electrons _____.
2. In *current* electricity, electrons _____.
3. The path along which electrons move is called a _____.
4. Electrons do *not* move in an _____ circuit.
5. Electrons *do* flow in a _____ circuit.
6. Electrons leave a dry cell through the _____ terminal.
7. Electrons return to a dry cell through the _____ terminal.
8. Large amounts of electricity are made by _____.
9. An example of an electrical appliance is a _____.

CAN YOU IDENTIFY THESE ELECTRICAL SYMBOLS?



NOW LET'S DRAW!

Draw these electrical symbols. [But first cover the top of this page.]

1. one dry cell	
2. two dry cells connected together	
3. wire	
4. light bulb	
5. motor	
6. open switch	
7. closed switch	
8. an appliance (resistance)	

MATCHING Match the two lists. Write the correct letter on the line next to each number.

- | | | |
|----------|-------------------|-----------------------------|
| 1. _____ | flow of electrons | a) where electrons leave |
| 2. _____ | circuit | b) path for moving electron |
| 3. _____ | minus terminal | c) an electrical device |
| 4. _____ | plus terminal | d) current electricity |
| 5. _____ | light bulb | e) where electrons return |

TRUE OR FALSE Write T on the line next to the number if the sentence is true. Write F if the sentence is false.

1. _____ Current electricity comes from a flow of electrons.
2. _____ Static electricity lights our homes.
3. _____ Most of our electricity comes from generators.
4. _____ The path that current electricity follows is called a circus.
5. _____ Electrons leave a battery from the plus terminal.
6. _____ Electrons return to a battery through the plus terminal.
7. _____ The inside of a battery is filled with zinc.
8. _____ Batteries give static electricity.
9. _____ Generators make current electricity.
10. _____ Electrons stop moving in an incomplete circuit.

THROW ONE OUT In each of the following sets of terms, one of the terms does not belong. Circle that term.

1. current electricity moving electrons static electricity
2. static electricity current electricity electrons not moving
3. complete circuit incomplete circuit bulb lights up
4. complete circuit incomplete circuit bulb does not light up
5. bicycle flashlight electrical device

**WORD
SCRAMBLE**

Unscramble each of the following to form a word or term that you have read in this Aim.

1. NUTRECR

2. TIRCCUI

3. TARBETY

4. REMLATIN

5. CELOTERN

**REACHING
OUT**

Why don't we get most of our electricity from batteries?

