Section 8-3

Electric Current and Magnetic Fields

Electric Current

SCIENCE EXPLORER

Work your group. List five electrical appliances in your home.

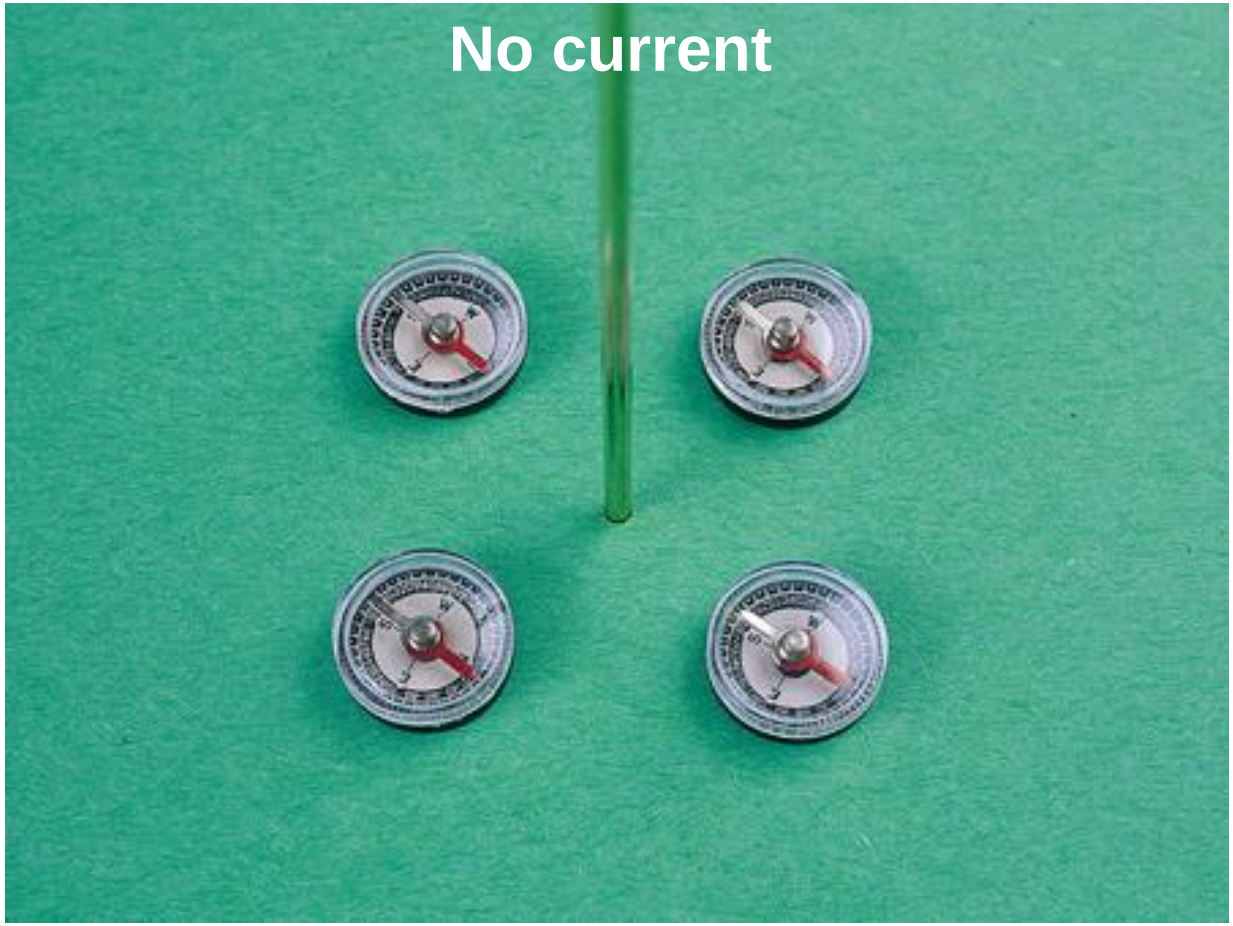
What are the common factors among the appliances on your list?

What are the two things you must do to use any electrical appliance on your list?

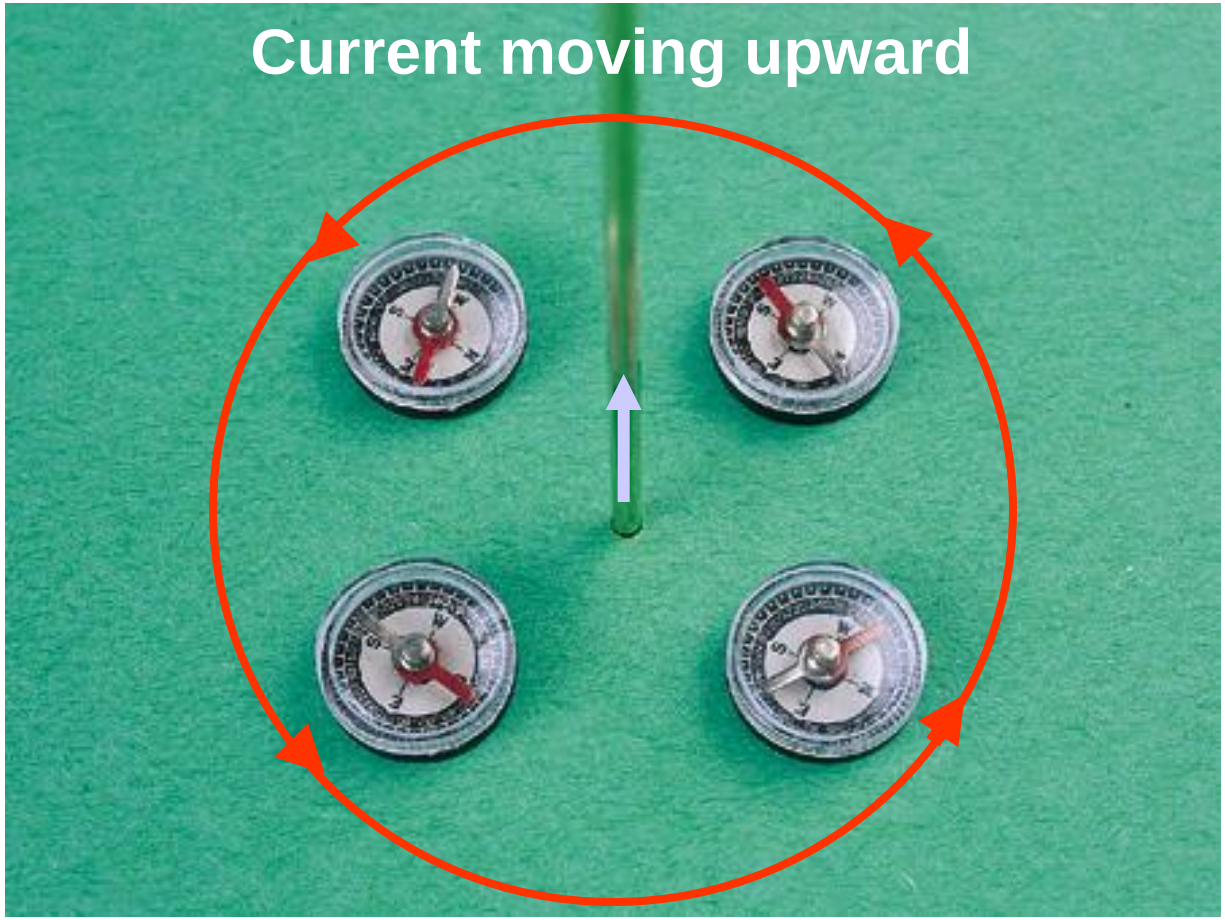
Answer: plug it in and switch it on

When you plug in an electrical appliance and then turn it on, electricity flows from the socket, through the wire, and to the appliance.

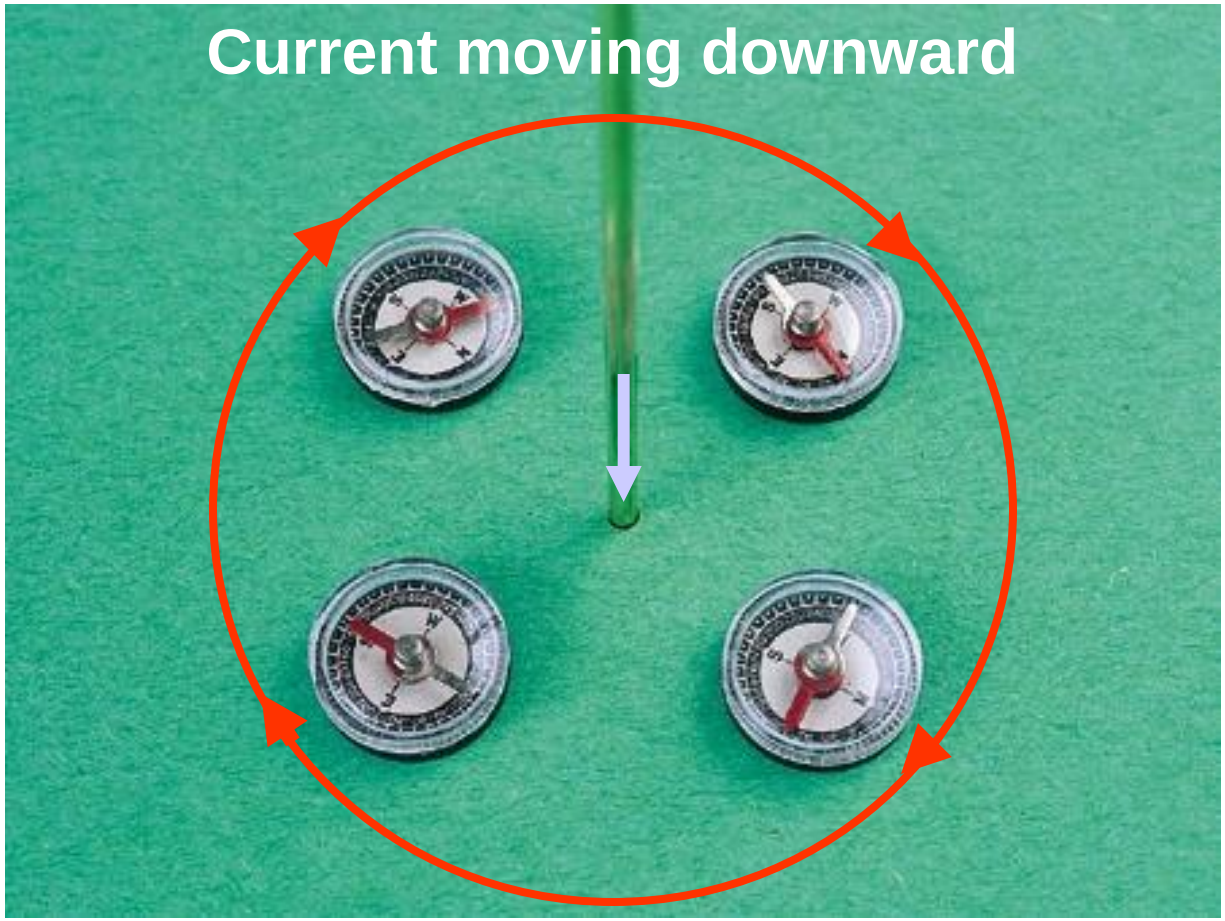
Electric Current



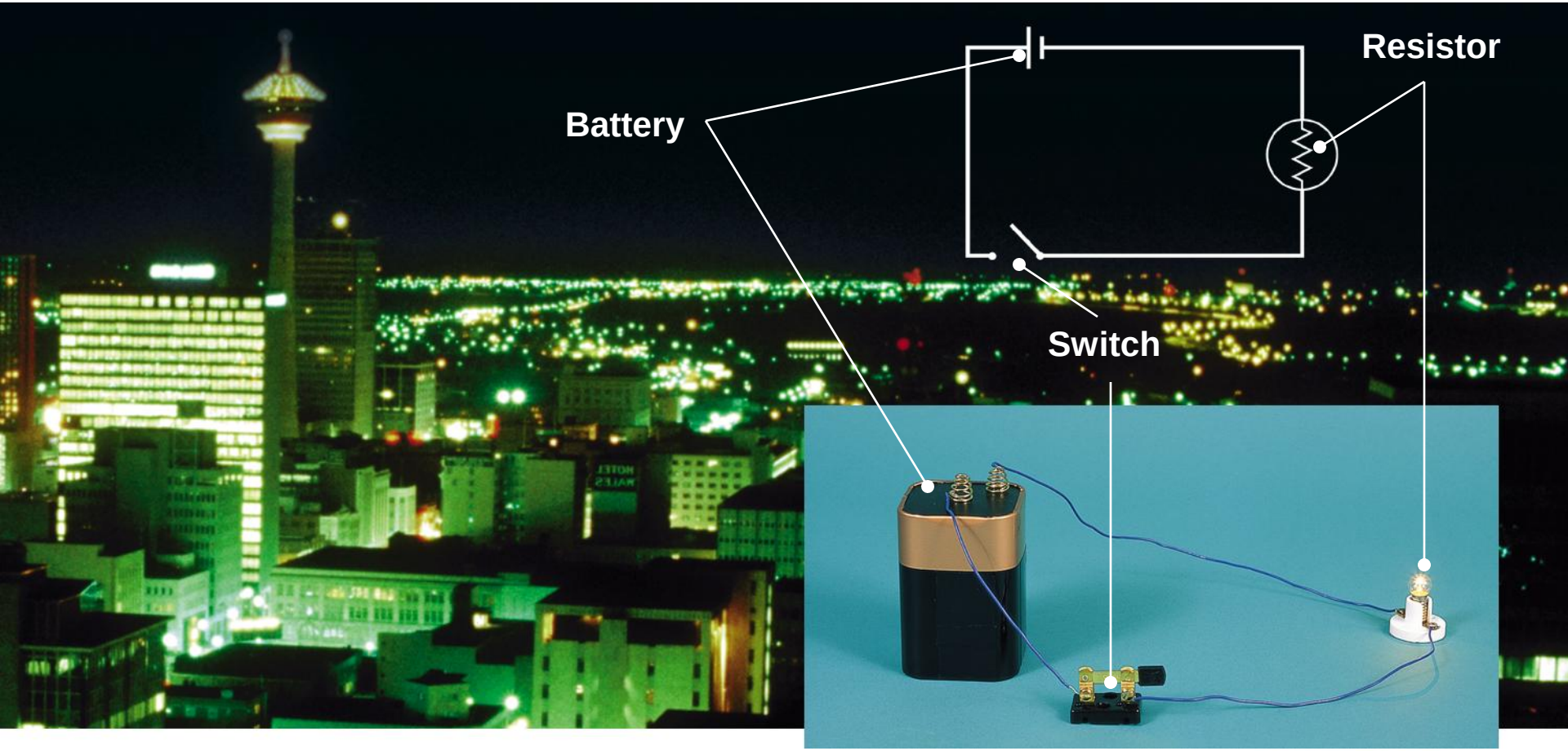
Electric Current



Electric Current



Electric Current



Electric Current

SCIENCE EXPLORER

Conductor:

material that allow electric currents to move freely through them

Insulator:

material through which charges are not able to move freely

Resistor:

uses electrical energy as it interferes with the flow of charges

Resistance:

the opposition to the flow of electrical charges

Superconductor:

a material that has no electrical resistance

Electric Current