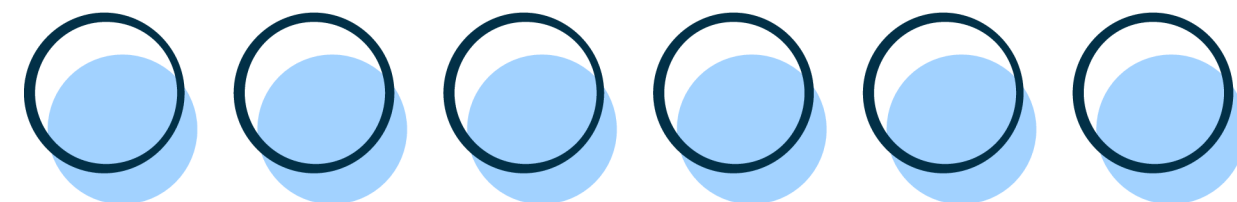


PRESENTATION

By *Dehab Mohamed johar*



PROJECT TITLE : WATER ELECTRIC CONDUCTIVITY

Question ,How or when does water conduct electricity

Hypothesis, I don't think water will conduct electricity. Pure water is a poor conductor of electricity. Electricity is a form of energy that is generated by the movement of charged particles such as electrons.



BACKGROUND RESEARCH

pure water is not a conductor of electricity because it doesn't have enough ions. The particles in pure water are always moving, but they are not charged.

But Water, conducts electricity when it contains dissolved substances that create ions. Ions are atoms or molecules that have gained or lost electrons allowing them to carry electrical charges.



PROJECT TITLE

WATER ELECTRIC CONDUCTIVITY

MATERIALS

1. Three cups of water
2. One tablespoon of sugar
3. One tablespoon of salt
4. One small light bulb.
5. Two metal electrodes (eg copper wire or metal rods)
6. Battery



PROCEDURE

Experiment 1

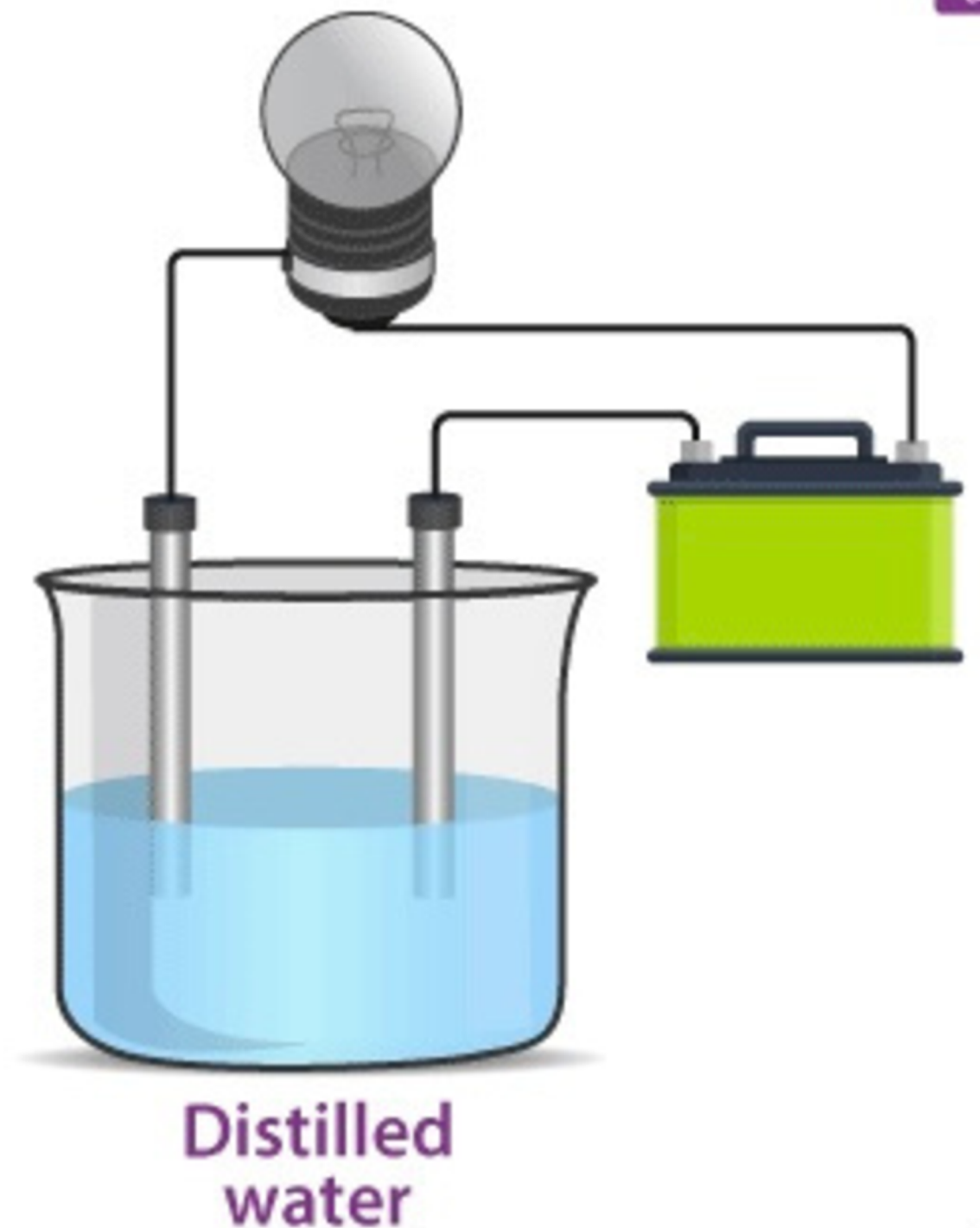
1 cup of pure water

1 small light bulb

2 metal electrodes (wires)batteries

instruction

- 1) Place the electrodes in to the pure water, making sure they don't touch each other .
- 2) Connect the electrodes to the light bulb and battery.
- 3) observe the light bulb is off.



Experiment 2

1 cup of water

1 table spoon sugar

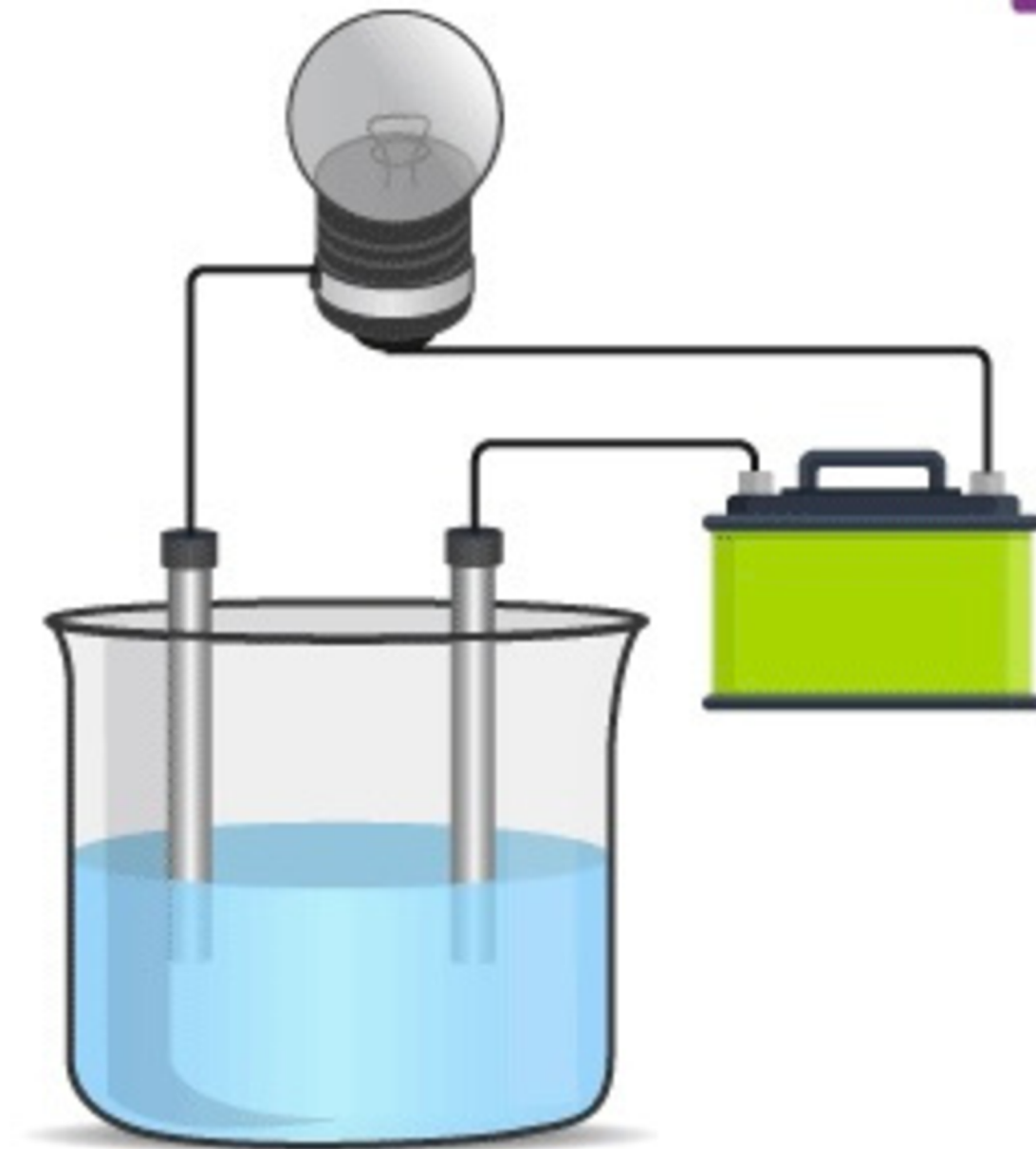
1 small light bulb

2 metal electrodes (wires)

Battery

Instruction

- 1) Mix the sugar in to the water until it is fully dissolved.
- 2) place the electrodes in the solution, making sure they don't touch each other.
- 3) connect the electrodes to the light bulb and battery.
- 4) observe the light bulb is off.



SUGAR SOLUTION



EXPERIMENT 3

1 cup of water

1 table spoon of salt

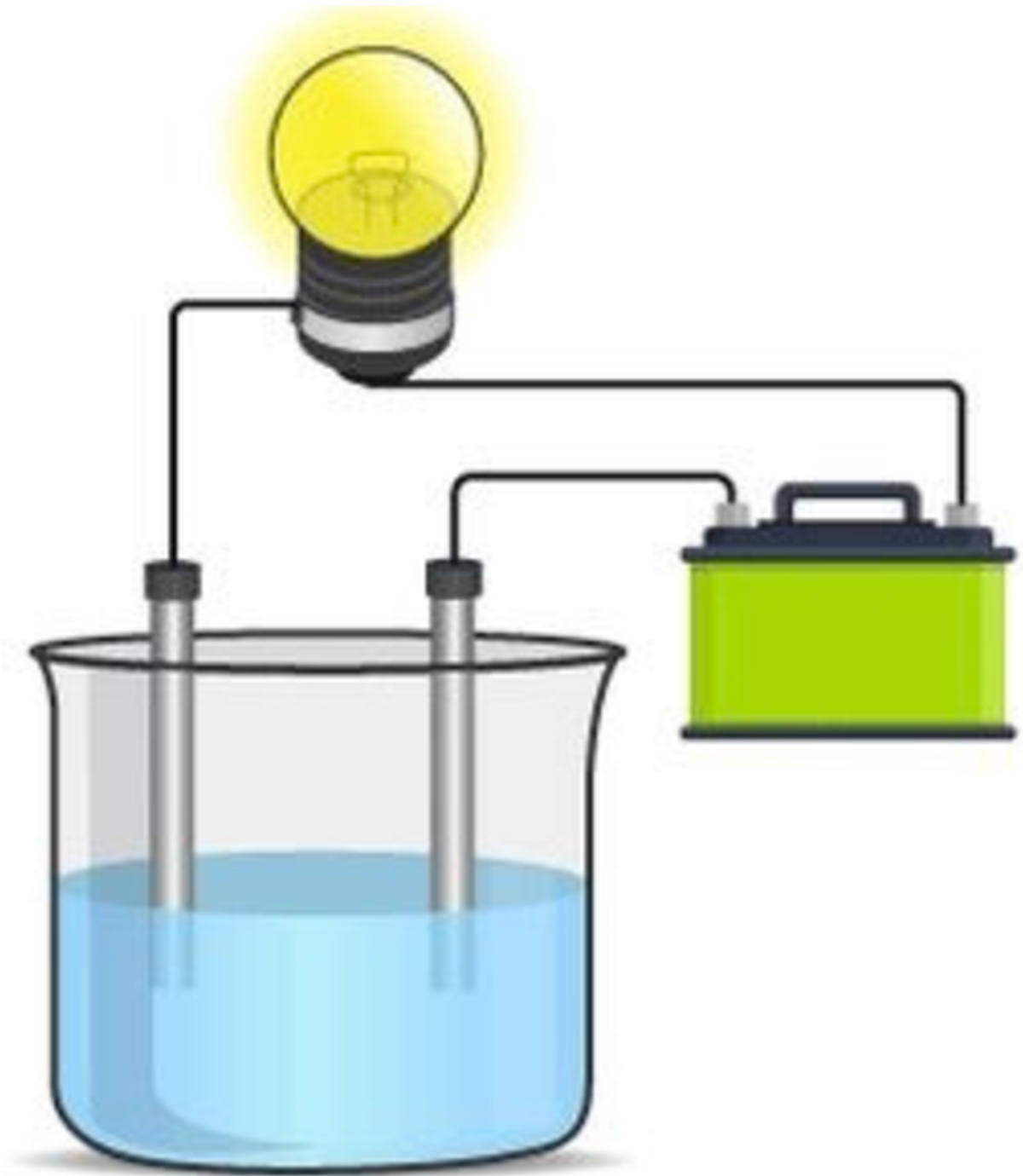
1 small light bulb

2 metal electrodes (wires)

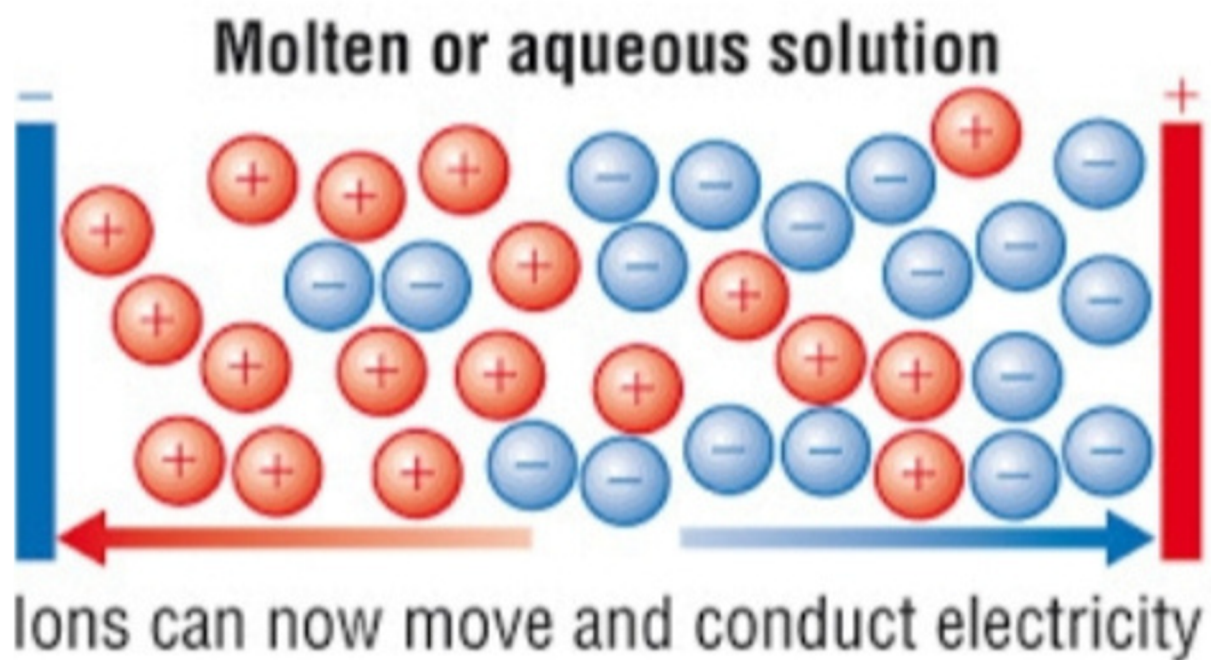
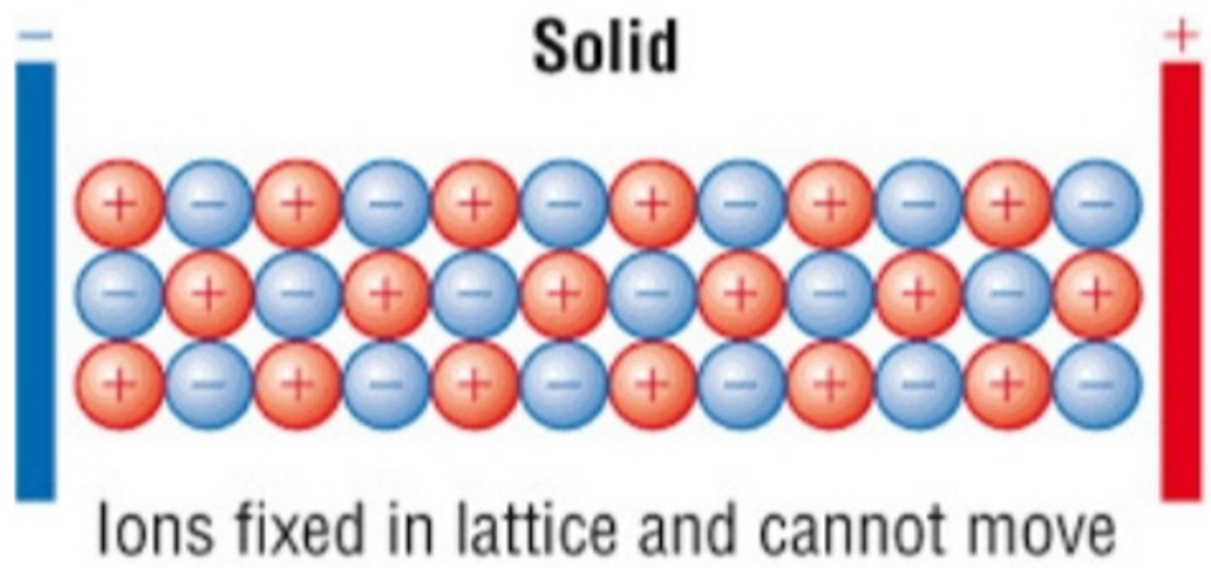
Battery

Instruction

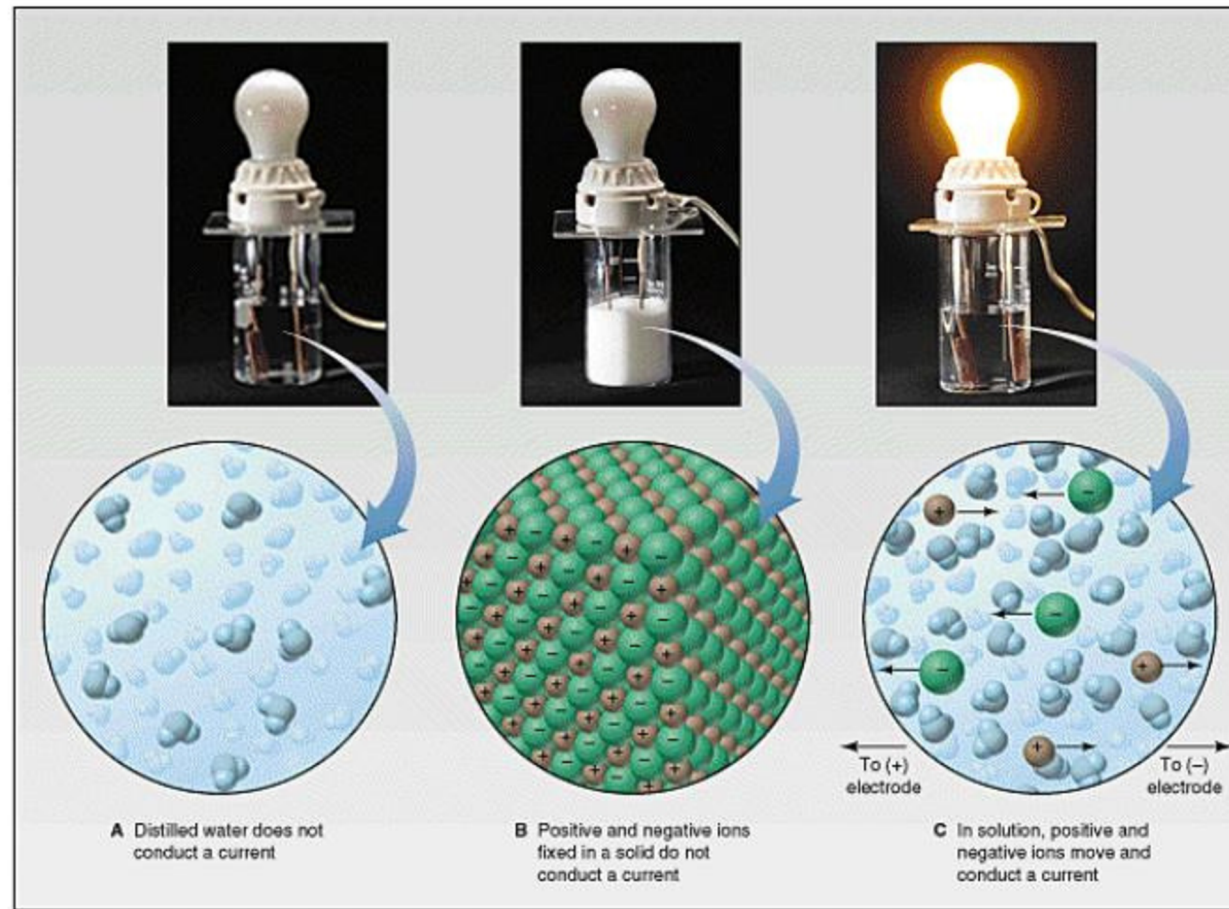
- 1) mix the salt in to the water until it is fully dissolved.
- 2) place the electrodes in the solution, making sure they don't touch each other.
- 3) connect the electrodes to the light bulb and battery.
- 4) observe the light bulb ,it is on.



SALTED WATER



+ ions move to negative terminal
- ions move to positive terminal



Conductivity

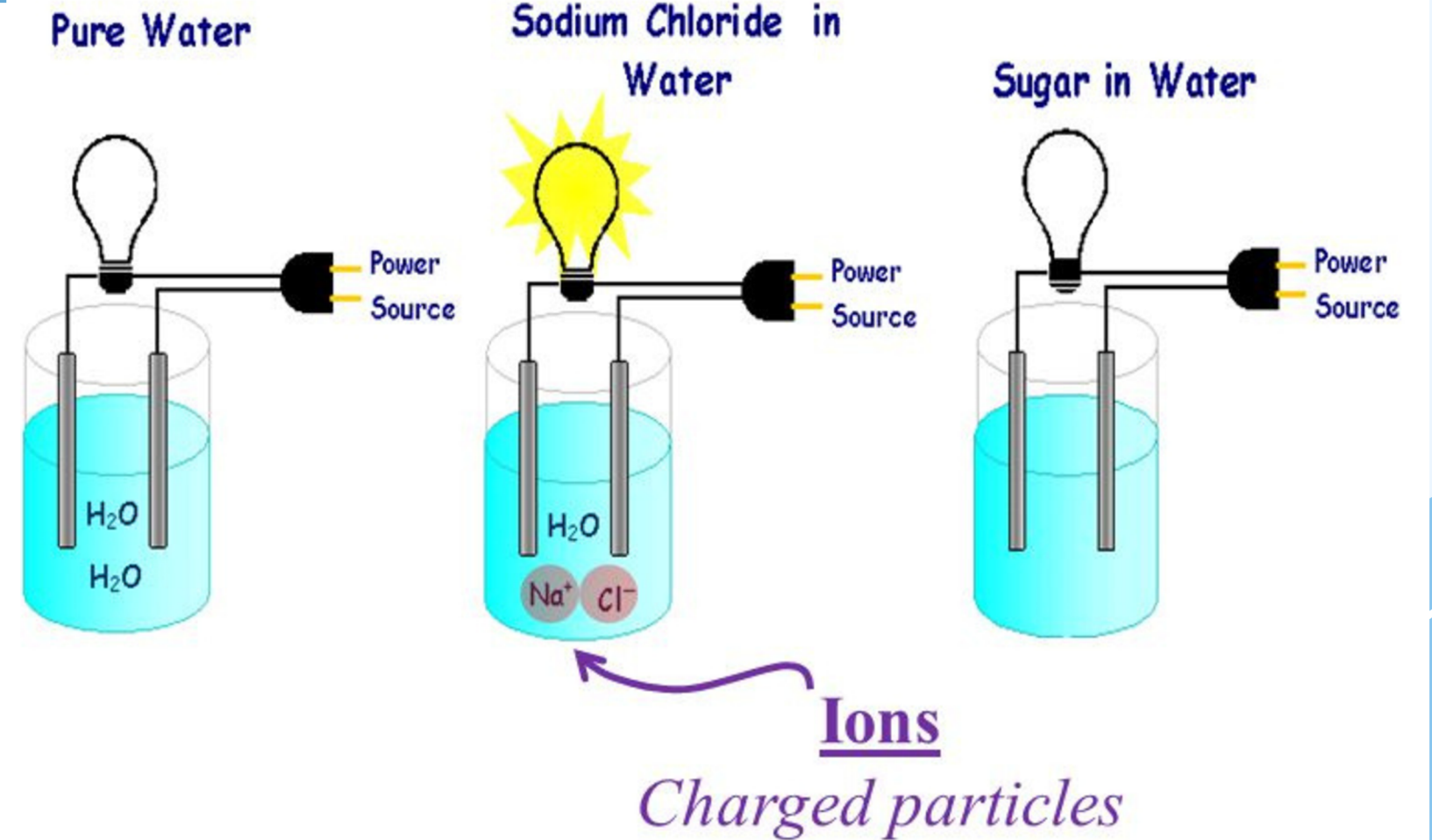
Ionic Compounds: Able to carry a charge when dissolved or melted (moving ions) **NOT IN A SOLID**
Molecular (water) Compounds: No moving ions so not conductive

RESULTS

During experiment 1, the light bulb is off

During experiment 2 the light bulb is off

During experiment 3 the light bulb is on



CONCLUSION

When salt is dissolved in water, the water molecules pull the salt apart into charged ions.

These ions are free to move and carry electricity through the water.

When a battery with positive and negative poles is placed in water, the positive ions are attracted to the negative pole and the negative ions are attracted to the positive pole this creates a closed circuit then the bulb is on.

**THANK
YOU**

