HELLO MELVIN

salty water

APPARATUS

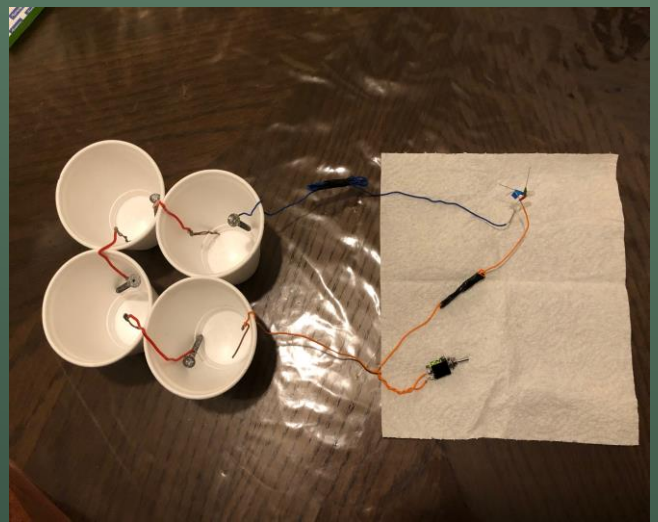
- cups (must be same size)
- table salt and tap water

- 4 zinc screws
- 4 5cm copper wires
- 5 wires 2 long wires: one red one blue
- 3 shorter red wires
- 1 LED light

- 1 switch (optional)

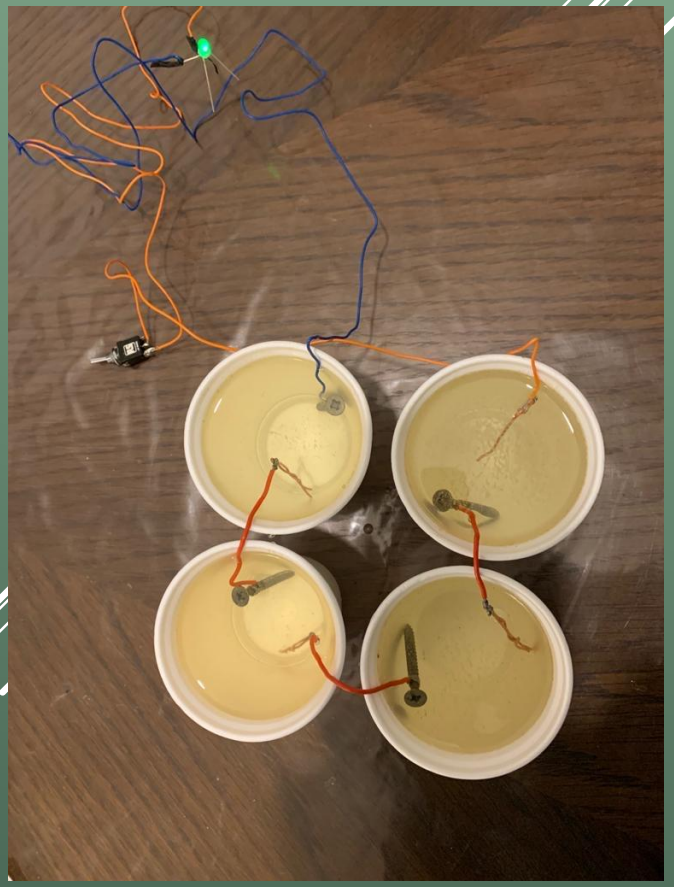
THE METHOD

1. Firstly, put 4 cups in a square formation.
2. Fill each one with tap water, add 2 teaspoons of salt and mix thoroughly.
3. Next, attach a zinc screw to one end of the red wire.
4. Then, attach a piece of copper wire to the other end of the red wire.
5. Repeat this step three times.
6. Then, connect all of the cups together by placing one screw and one piece of copper wire in each cup. One red wire must be connecting each cup at all times otherwise the experiment won't work.



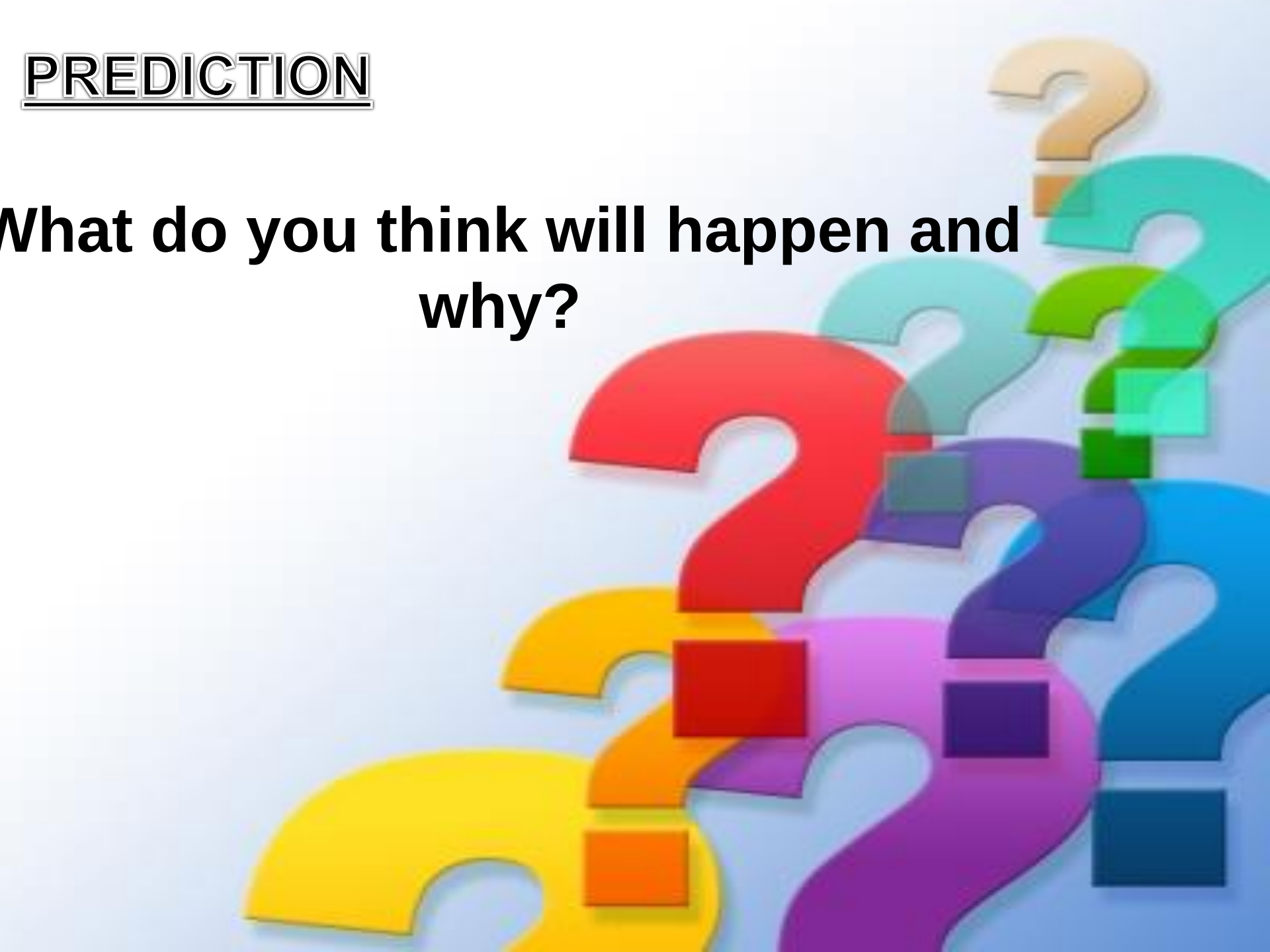
6. Finally, connect two wires to the LED.

The copper wire is connected to the positive terminal and the zinc screw is connected to the negative terminal of the LED.



PREDICTION

What do you think will happen and why?



What did you see?

Lighting LED with salt water

RESULTS

We found that if the cups are connected together by the wires, the bulb will light up.

If the cups are not connected by the wires, the experiment will not work and the bulb will not light up.

CONCLUSION

Electrodes are conductors.

They allow electricity to flow into or out of an object.

In this experiment, the zinc screws and copper wires act as electrodes.

The copper wire acts as a positive electrode.

The zinc screw acts as a negative electrode.

Salt molecules are made of sodium and chlorine.

When salt enters water, sodium ion and a chlorine ion are formed.

An ion is an atom that has an electrical charge, either positive or negative.

The sodium ion has a positive change.

The chlorine ion has a negative charge.

The positively-charged sodium ions are attracted to the negative electrode (zinc screw).

The negatively-charged chlorine ions are attracted to the positive electrode (copper wire).

These ions carry the electricity through water. It’s like an "invisible wire" is formed that allows electrons to move from ion to ion across the water.

THANK YOU FOR LISTENING

Remember to check out the school science page for ideas you can try at home with an adult:

- All the house captain presentations
- All the Year 6 science carousel activities
- Duckling web cam link
- Photos of the decorated classroom doors when they have been completed