

Water molecules are made up of one oxygen atom and two hydrogen atoms that are chemically bonded together. Using electricity, we can split water molecules apart into individual hydrogen and oxygen atoms.

Materials

• 2 pencils

- 2 Wires with Alligator Clips 9 Volt Battery

Salt •

Glass of Water

Procedure

- If it has not already been completed, remove the eraser end from each pencil with pliers and sharpen both ends of the pencil.
- Pour half a teaspoon of salt into the glass of water and mix it up.
- Attach alligator clips to each terminal of the battery and then to each pencil tip (black part).
- Place the other ends of the pencils into the glass of water and observe what happens.

Analysis

- What happened, once the pencils were placed into the water? •
- What do you think the gas bubbles are made of? _____

- Are equal amounts of gas bubbles forming around each pencil?
- Why do you think there are more gas bubbles around one of the pencils?
- Based upon this experiment, what do you think the 2 represents in the chemical formula for water, H₂O? _____