# The Water Molecule

**Directions**: Answer the following questions in COMPLETE sentences!

1. What is the chemical definition of polar?
2. Draw a water molecule and label the positive and negative sides.
3. In what type of liquid will a polar solute dissolve? In what type of liquid will a nonpolar solute dissolve? (hint: “like dissolves like”)

**PART 2: Follow the directions below to complete the table on the next page.**

1. Using a Crayon, color in the two squares in the Crayon column that are also in the “testing” rows
2. Using a washable marker, color in the two squares in the washable marker column that are also in the “testing” rows (the squares with the squiggly border).
3. Repeat the coloring using a permanent marker.
4. **Wait a few seconds until both the markers dry.**
5. Dip a Q-tip in water and then rub it over the first square. Record your observations in the “observation” square below.
6. Use another Q-tip (or the opposite end) and repeat for the other two “water testing” squares; record observations in the squares below.

Directions: Answer the question **using observations from your mini-experiment.**

1. Is crayon polar or nonpolar? How do you know?
2. Is washable marker ink polar or nonpolar? How do you know?
3. Is permanent marker ink polar or nonpolar? How do you know?
4. Suggest 2 other common substances to test with water to determine their polarity. Based on your knowledge of these substances, predict their polarity.

Homework: Research two common substances that are polar and two common substances that are nonpolar.