Name _____ Date _____

Properties of Water Lab

Goal: To investigate the various properties of water.

Vocabulary:

- Hydrophilic
- Adhesion
- Hydrophobic
- Capillary Action
- Cohesion
- Surface Tension

Task One: Paper Towel in Water

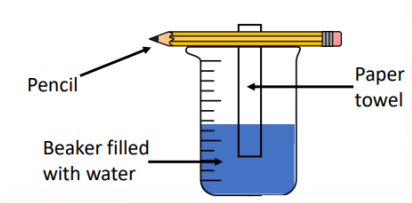
1. Fill a clear plastic cup with 25 mL of water.
2. Place 4 drops of food coloring into the cup and stir with a small wooden stick.
3. Tape a strip of paper towel to a pencil.
4. Balance the pencil on top of the cup of colored water and let the paper towel strip hang down and touch the top of water.
5. Observe and record happens to the paper towel after a period of 3 minutes.
6. Throw away the paper towel and rinse out the plastic cup.

- What did you observe?

- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension



Task One

Task Two

Task Two: Salt and Water Mixture

1. Place 150 mL of water in a clear plastic cup.
2. Add a teaspoon of salt to the water and stir.
3. Observe and record what happens after you have stirred the water solution for 1 minute.
4. Rinse out the cup when you are finished.

- What did you observe?

- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension

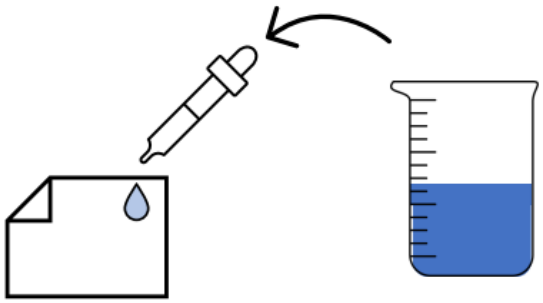
Task Three: Water Droplet on Wax Paper

1. Use an eyedropper to place a small drop of water onto a piece of wax paper.
2. Carefully tilt the wax paper back and forth.
3. Observe and record what happens to the water droplet.
4. Throw the piece of wax paper away, when you are finished.

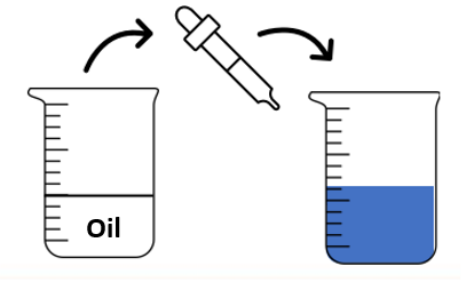
- What did you observe?
- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension



Task Three



Task Four

Task Four: Water and Oil

1. Fill a clear plastic cup with 200 mL of water.
2. Add 3 drops of food coloring into the water and use a stirring stick to fully dissolve the food coloring.
3. Use a plastic pipette to add 10 drops of vegetable oil to the colored water.
4. Stir the mixture with the wooden stick, then let the mixtures sit for 1 minute.
5. Observe and record what happens.
6. Throw away the paper cup, wooden stick, and plastic pipette.

- What did you observe?
- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension

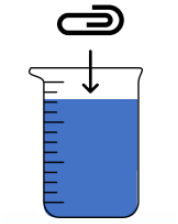
Task Five: Paperclip on Water

1. Fill a cup with water.
2. Carefully place a small paperclip on top of the water so that it floats on the water.
3. If you are unsuccessful, try again several times, altering your technique.
4. If you are still unsuccessful, after several attempts, reshape the paperclip and try again.
5. Carefully place the larger paperclip on top of the water so that it floats on the water.
6. Record your observations:

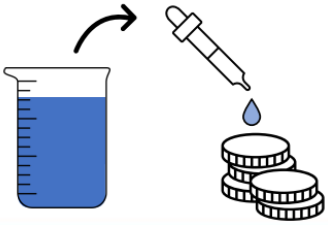
- Did you need to reshape your paperclip to get it to float?
- Why do you think the new shape was easier or more difficult to float?
- Which was easier to float, the smaller or larger paperclip? Why do you think this was?
- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension



Task Five



Task Six

Task Six: Drops of Water on a Penny

1. Guess how many drops of water and fit onto a penny? _____
2. Use the eyedropper to place drops of water onto a penny, counting each drop of water as you go.
3. Stop when the water flows over the edge of the penny.
4. Record the number of drops of water you successfully placed onto the penny.

- Number of drops of water placed on the penny: _____
- Which property or properties of water were displayed? Circle all that apply:

  Cohesion Adhesion Capillary Action Hydrophobic Hydrophilic

  Universal Solvent Surface Tension