

Investigating the

PROPERTIES OF WATER

Follow the directions at each lab station to observe the properties of water. Use the information sheet to answer the questions below.



Lab Station 1

1. What did you observe?

The blue water "climbed" the paper towel

2. What property of water was being displayed? **Capillary action (which is a type of adhesion)- also cohesion**

3. Why was water able to travel up the paper towel? **The water molecules attached themselves to the paper towel (adhesion) and pulled themselves up the towel (cohesion).**

Lab Station 2

1. What happened when you mixed the salt with water? **The salt dissolved into the water**

2. What property of water was being displayed? **Water is the universal solvent and can dissolve many substances**

3. Does this tell you anything about the properties of salt? **Salt is hydrophilic (water loving)**

Lab Station 3

1. Describe the behavior of water on the wax paper.

The water "beaded" up on the wax paper and the molecules bonded to themselves (via hydrogen bonds)

2. What property of water are you observing? **Cohesion, wax paper is hydrophobic**

3. Do you think the wax paper is hydrophilic or hydrophobic?
hydrophobic

Lab Station 4

1. What happened when you added substance A to the water?
Substance A was separated from the water.

2. Did it mix with water? **no**

3. Do you think substance A is hydrophilic or hydrophobic?
hydrophobic

Lab Station 5

1. What property of water allows the paperclip to sit on top of the water? **Surface tension- the paper clip is light enough to allow the water molecules to hold their hydrogen bonds.**

Lab Station 6

1. What happened when the balloon approach the stream of water? **The stream of water was pulled toward the balloon.**
2. Why do you think this would happen? (Hint: static electricity is caused by an imbalance of charges) **Water is polar- the charge from the water molecule attracted to the opposing charge of the balloon. (Remember: opposite charges attract)**

Lab Station 7

1. Predict how many drops you of water will fit on the penny:
answers will vary
2. Tally the amount of drops:
3. What property or properties of water make this possible?
Cohesion, adhesion, surface tension and polarity

Reflection

What was your favorite water demonstration?

Answers will vary

