Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_\_\_\_\_\_

Analyzing your Water Data

Answer thoroughly and with precision, as usual. Feel free to steal data from other lab groups and compare your results to other groups.

**Station One: Drops and Detergents**

1. Look at your data from the table in Question #4. Come up with an explanation of why the water behaved the way it did. Your explanation should reference both your data (either visual observations or numbers) and the molecular structure of water (see class notes from 9/13).
2. Did the data you collected for the table in Question #6 match your prediction in #5, or were you surprised? Explain why you made the prediction you did and how it related to the actual data you obtained.
3. On the molecular level, how do you think soap interacts with water? Clearly support your claim with evidence.

**Station Two: Heating it Up**

1. Describe one pattern that you see in your data from this station. You should specifically reference your data.
2. Is there any claim you can make about how water heats up compared to other liquids? If so, what is that claim? If not, why not?
3. How might the molecular structure of water help explain the data from this station?

**Station #3: Solutions**

1. Think about what you already know concerning the molecular structure of water and salt. Explain why the salt dissolved in water.
2. Given your answer to #1, what can you infer about the molecular structures of sugar and iodine? Explain your inferences.
3. Think about what you already know about oil and water. Why do you think that sugar and salt do not dissolve in oil?
4. Come up with a rule for how to determine whether a solid will dissolve in a given liquid.

**Station #4: Sticking Together**

1. Given your analysis of Station #1 and Station #3, how can you explain the behavior of water on wax paper?
2. What do you think is different about the structure of glass that made water behave so differently than it did on the wax paper? This is related to Stations #1 and #3.
3. What do you think would happen if you coated wax paper in soap and then dropped water on it? Why?
4. Explain why there is a meniscus when you measure water in a graduated cylinder.

**Other Thoughts:**Is there anything you thought of, noticed, wondered about, hypothesized about, etc. that didn’t come up in these analysis questions? Write it down here.