Chemistry Name

Surface Tension and Other Properties of Water

Introduction

Why does a raindrop stay together? Why does a drop of water stick to the side of a glass? Why can you float since you are so much heavier than water molecules? What's in the water you drink?

Water (H_2O) is one of the most amazing chemicals on our planet. Nowhere else in the solar system does water exist so abundantly. This is why we are the only planet with Life as we know it. Water occurs as a solid, liquid, and gas at the same time. Water is called the "universal solvent" because so many substances dissolve in it. Water in your cells and blood make possible the biochemical reactions that keep you alive.

In this investigation, we will begin to study selected properties of water. We will begin with "surface tension."

Procedure

1. What is the definition for "surface tension"?

2. How many drops of water can you put onto a penny?

Before you begin, write your guess here: _____

Place a penny into a tray. With a dropper, count out how many drops you can place on it before the water slides off. Record your results in Table 1. Dry off your penny, repeat this two more times and record your results. Then try it with a second penny and record your results.

Table 1 Water Drops on a Penny

	1st trial	2nd trial	3rd trial	1st trial	2nd trial	3rd trial
1st penny						
2nd penny						

Q1. How accurate was your guess?

Q2. Calculate the **mean** (**average**) number of drops: _____

Q3. Give your **maximum _____, minimum _____ and range** _____.

Q4. How do your results compare with others at your table?

Share your results with the class by recording your mean on the board. When everyone has done this, record the class results in Table 2.

Table 2 Class Results for "Water Drops on a Penny"

0 – 9	10 – 19	20 – 29	30 – 39	40 – 49	50 - 59

Calculate the **class mean**: _____

What was the **maximum _____, minimum _____,**

and **range _____.**

Compare the class results with <u>your own</u> results:

3. Use your textbook or other resources to learn more about "surface tension." Then write a one-two paragraph summary of what you have learned. If you want to write more, attach it to this page.