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*Sticky Water: Intermolecular Attractions*

The molecules of a liquid experience intermolecular attractions. Molecules are pulling and pushing away from each other, similar to how magnets attract and repel each other. Surface tension affects the shape and motion of liquids. If tap water is combined with salt, soap, alcohol or olive oil and the surface tension is compared, then the surface tension of the water will increase or decrease based on the viscosity of the added chemical. If the molecules of a liquid are closer together then they must exert a stronger pull on each other.

Pour tap water into beaker. Use balance to measure surface tension of water in each beaker. Add additional chemicals to four beakers: Alcohol, olive oil, salt, and soap (one chemical per beaker). Measure surface tension of the newly combined liquids. Record results. Repeat above steps ten times.

The average measurement was 1.59 grams of force for water, 1.52 grams for alcohol, 1.62 grams for olive oil, 1.77 grams for salt and 1.5 grams for soap. Each test group's results lingered around 1.5, 1.6, and 1.7 grams of force. Group three had the most consistent results. This group may have benefited from fewer human errors.

In some groups, the data was scattered and unpredictable while others were clustered. Based on the clusters of data, the observed results were deemed somewhat reliable. Additionally, the weights or droplets of water, varied in size. The highest measurement collected came from group 4 while the lowest came from group 5.