

Name: _____ Date: _____

Bubble Surface Tension Lab

To make an ideal soap bubble, you must find a way to balance the surface tension using a mixture of soap, water and other ingredients. In this lab, you will determine the “best” recipe for making soap bubbles.

Part 1: What makes a good soap bubble?

Before you begin your experiments, you and your partners must decide what determines a “good” soap bubble. Using the equipment provided by your teacher, choose one measurement to perform to test your soap bubble recipes. Explain how you will perform the measurement and why this is a measure of how “good” your soap bubble recipe is.

Part 2: Soap and Water Bubbles

When a surface-acting agent (surfactant) such as soap is added to water, it changes the surface tension. In this section you will determine the best mixture *containing only soap and water*.

Your teacher has provided you with liquid soap, water, paper cups, and measuring cups and spoons. What is the most efficient way to find the correct proportion of soap and water to use? Write a short procedure and record your results below. You may not need to fill in the entire table. Star the combination of soap and water that worked best.

Our procedure:

Amount Water	Amount Soap	Measurement #1	Measurement #2	Measurement #3

Part 3: Additional Additives

Other additives are sometimes added to soap bubbles to increase their longevity or strength. Choose one of the additives your teacher has provided, record the additive below, and repeat your procedure above, using your best soap and water mixture above, and varying amounts of the additive.

Our additive:

Amount Soap and Water	Amount Additive	Measurement #1	Measurement #2	Measurement #3

Part 4: Analysis and Reflection

1. What was your ideal soap bubble recipe?
2. Write a brief paragraph describing the pros and cons of the measurement you chose to determine a “good” bubble. Would you choose a different measurement if you were to repeat this experiment?
3. Write a brief paragraph describing the pros and cons of the procedures you used to determine your soap bubble recipe. How would you change your procedure if you were to repeat this experiment?