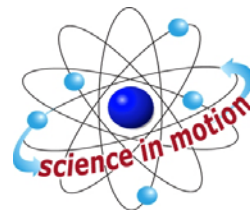


SECTION 3: THE CHEMISTRY OF BIGGER BUBBLES



Westminster College

LAB

INTRODUCTION

Why do some dishwashing liquids make bigger bubbles than others? Why does cream form bubbles when it is whipped, while milk does not? An enormous variety of natural substances form bubbles. Sea foam is formed by the agitation of phosphates (like those in soaps) released by decomposing kelp. Egg whites formed hundreds of tiny bubbles when beaten. In each case, the formation of bubbles depends on the chemical composition of the substance.

ASSESSMENT ANCHORS ADDRESSED

- S4.A.1.1** Identify and explain the pros and cons of applying scientific, environmental, or technological knowledge to possible solutions to problems.
- S4.A.2.2** Identify appropriate instruments for a specific task and describe the information the instrument can provide.
- S4.C.1.1** Describe observable physical properties of matter.

PURPOSE

This activity introduces your students to some of the properties of bubble-making substances. The students observe how soap affects the surface tension of water and investigate the role of evaporation in bubble formation, as they test the effects of different amounts of glycerin on the size of bubbles.

MATERIALS

For the class:

- | | |
|--------------------|------------------------|
| Masking tape | *Newspaper |
| Dishwashing liquid | Eyedropper |
| Glycerin | 1 one gallon container |
| 1 pie pan | *water |
| Vinegar | Squeegee |
| Paper towels | *Measuring cups |
| *Chalk | *Chalkboard |
| *Calculators | *yard stick |
| Straws | *1pint containers |
| *water pitcher | |

*Teacher provides items marked with **