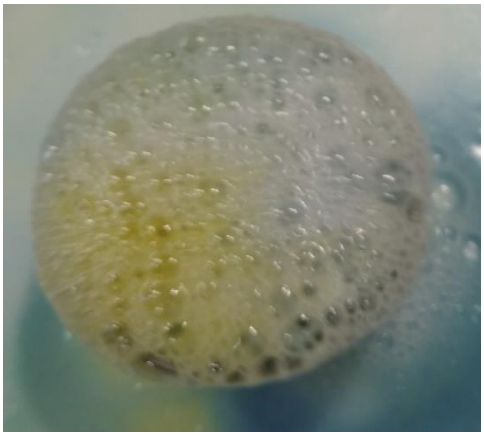
Anchoring phenomenon: Why do bath bombs fizz?



POGIL® Activities that support the anchoring phenomenon:

PSActivity 1 – Building Blocks of the Stuff Around Us
Particles explored in terms of atoms, molecules and crystals.

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PSActivity 2 – How Are Particles Arranged in Solids, Liquids, and Gases?
Particle spacing/movement explored in phase state changes.

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PSActivity 5 – What Kind of Change Is Happening Here?
Models and examples are used to explore physical and chemical changes in both large scale and particle models.

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OPTIONAL/ENRICHMENT
PSActivity 6 – How Much Matter Is Present After a Chemical Reaction?
Conservation of mass is explored using simple models.

POGIL® Activity	NGSS Performance Expectation	Learning Outcomes
PSActivity 1	**MS-PS1-1** Develop models to describe the atomic composition of simple molecules and extended structures.	Building Blocks of the Stuff Around Us 1. I can define the term "molecule." 2. I can draw particle models of simple molecules if I know their formulas. My models will contain the correct types of atoms and the correct number of each type of atom in the molecule. 3. I can extend a model of a simple crystal substance from a drawing of its structure. Note: We are not defining the term "ions" in this activity. You do not need to introduce the concept as part of the student learning. If students ask about the meaning of the word, you can just tell them that it is one kind of tiny particle that can combine to make larger particles.
PSActivity 2	**MS-PS1-4** Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	**How Are Particles Arranged in Solids, Liquids, and Gases?** 1. I can analyze a model to describe how the spacing and orderliness of water particles change when the water is in the solid, liquid, or gas state. 2. I can create models that accurately show how the spacing and orderliness of water particles change when the water is in the solid, liquid, or gas state.
PSActivity 5	**MS-PS1-2** Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	**What Kind of Change Is Happening Here?** 1. I can analyze and interpret before and after observations to determine whether a chemical change has occurred. 2. I can analyze and interpret before and

		after particle diagrams to determine whether a chemical change has occurred.
OPTIONAL PSActivity 6	**MS-PS1-5** Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	**How Much Matter Is Present After a Chemical Reaction?** 1. I can analyze data to describe how the mass of matter present before a chemical reaction compares to the mass of matter present after the chemical reaction. 2. I can analyze particle diagram models of chemical reactions to determine how the total number of atoms present before a chemical reaction compares to the total number of atoms present after the chemical reaction. 3. I can develop my own model to show the relationships I developed in LO 1 and LO 2.