Explore Lab Science

FROZEN BUBBLE MAGIC!

Phase changes happen when something—like a bubble—goes from one form to another because of how hot or cold it is! The main forms are a solid: like your favorite food, a liquid: like your favorite drink, or a gas: like the air you breathe everyday! In this experiment, you will see a liquid bubble turn into solid ice!

DON'T FORGET TO GET HELP FROM AN ADULT ON THIS ACTIVITY!

Materials Needed:

- Bubble solution (store-bought or homemade: water + dish soap)
- Bubble wand
- Cold day (20° F or below) or a freezer
- A plate or tray

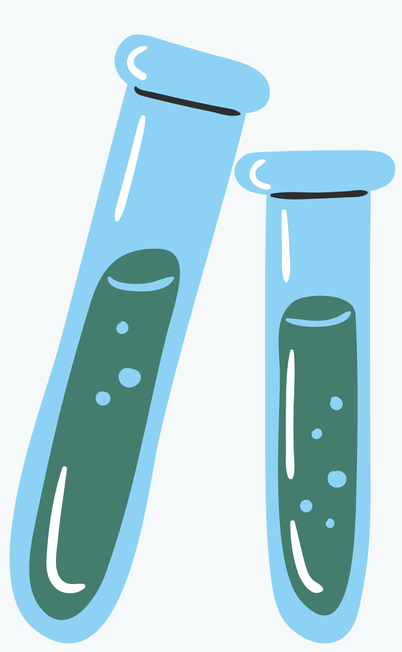
Directions:

1. Prepare the bubble solution by opening the store-bought container or mix together water and a few drops of dish soap.
2. Blow some bubbles using the bubble wand. If you are using a freezer: try to land the bubbles on a plate or tray. Then, put the bubbles in the freezer and leave the door open to observe.
3. Watch what happens! After a few moments, you should start to see some changes...

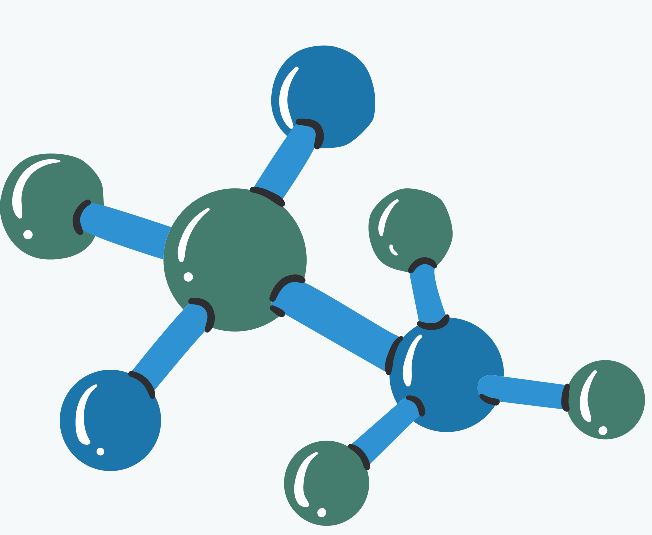
Questions:

1. What happened to the bubbles when they were in the cold?
2. What is different about this "frozen" bubble compared to a normal bubble?
3. Do you think you could do this in the summer heat? Why not?
4. Can you think of other times you've seen liquid freeze?

In this experiment, we saw the bubbles freeze into ice bubbles when they got very cold! The liquid bubbles turned into an icy solid. This same thing happens when a pond or lake freezes over when it gets cold outside!



Some scientists study how things change when it gets hot or cold. And sometimes, scientists need their own materials to be in different forms (solid, liquid, or gas) in order to do their experiments.



Phase changes are very important to the work that scientists do everyday!