

## Frozen Bubble Science

All you need for this activity is bubbles! Pair that with the right weather conditions, and you are sure to be amazed!

**Before getting started, ask yourself these questions:**

- If you blow bubbles in freezing temperatures, will they freeze?
- What happens when you blow bubbles outside in the winter?

Record your predictions and then head outside and blow some bubbles.



You will need to use a bubble solution for this experiment. Here are instructions to make a solution:

1. Pour  $\frac{1}{2}$  cup of dish soap into a cup.
2. Add  $1\frac{1}{2}$  cups of water to the dish soap in the cup.
3. Measure 2 teaspoons of sugar and add it to the water/soap mixture.
4. Gently stir your mixture.

Watch what happens as you blow the bubbles outside.

Did the bubbles freeze?

Did they land in perfect formation, or did they break when they hit the ground?

Or did they break before they hit the ground?

Did they form frosty patterns inside the bubble or were they smooth?

Just like snowflakes - no two bubbles will be alike.



### **Tips for blowing ice bubbles:**

Getting the bubbles to freeze before they pop can be a bit tricky; here are a few tips:

- Be patient! Not every bubble will freeze. Blow gently and keep trying! With a bit of practice, you will be blowing ice bubbles like a pro.
- It is best to do this activity in the shade & out of direct sunlight.
- The less wind the better. Look for an outdoor space that is sheltered from the elements.
- The colder the better for this activity!

