



SUPERCOOLING

Overview and objective:

Students will learn the process to attempt supercooling.

Supercooling, also known as undercooling, is the process of lowering the temperature of a liquid or a gas below its freezing point without it becoming a solid.

<https://en.wikipedia.org/wiki/Supercooling>

Presented by

BASF
We create chemistry

WHAT YOU WILL NEED:

- Bottled water (plan for multiple attempts) We used six to get it right!
- A clear glass
- Crushed ice



Procedure:

1. Take a few bottles of water and lay them flat and undisturbed in the freezer for 2 hours and 45 minutes. **
2. When the timer goes off, *carefully* remove the bottle and take off the cap.
3. Tilt the cup and SLOWLY pour the water into the glass.
4. Put your finger in the crush ice, making sure a piece sticks to your finger.
5. Touch the surface of the water and watch the frozen reaction!
6. One little ice chip can start a chain reaction and freeze the water instantly.

*** This experiment takes patience. The first time we tried it, ALL the water bottles were already frozen at 2:45! We attempted again, this time taking out water bottles in 5 minute increments, beginning at 2:15. Our supercooling success came at 2:25!*

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