LAVA TOFFEE

Explore how heat affects chemicals

What you'll need:

- 1¼ cups sugar
- 3 tbsp water
- ⅓ cup corn syrup
- 1 tbsp baking soda
- 1 tsp vanilla
- Butter or oil to grease your baking pan
- Parchment paper
- Stove or hotplate
- Large pot
- Deep baking pan
- Measuring cups and spoons
- Mixing spoon
- Whisk
- Spatula
- Small bowl or container
- Candy thermometer

1. Prepare:

Grease the baking pan and line it with parchment paper.

Measure the baking soda into a small bowl and set it aside.

2. Mix:

Mix the sugar, water, corn syrup and vanilla together in the pot.

Clip the candy thermometer onto the side of the pot.

3. Heat:

Turn the burner to medium-high and heat the mixture until it reaches 300°F (150°C).

Remove it from the heat and whisk in the baking soda.

4. Cool:

Pour the mixture into the prepared pan and let it harden for about an hour before breaking into pieces.

What happened when you added the baking soda? How does the candy look when you break it open? Why do you think it looks like that?

How does it work?

The mixture was so hot that the chemical components in the baking soda started to separate. This is called **thermal decomposition**. The baking soda broke down into different parts: water, sodium carbonate and carbon dioxide. The bubbles inside the finished candy are created by the carbon dioxide being released into the mixture. It cools so fast that the bubbles don't have time to pop, and the gas gets trapped inside the candy.

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