Explore Lab Science

HOT COCOA

CONCENTRATION CUPS

Concentration is a way to describe how much of something is in a mixture. When there is a lot of one thing in the mixture, we say the concentration is high. When there is only a little bit, the concentration is low. In this activity, you'll get to see how concentration changes when we mix different amounts of one thing into another!

Don’t forget to get help from an adult on this activity!

Materials Needed:

- 4 cups
- Measuring spoons (¼ tsp, ½ tsp, 1 tsp)
- Liquid measuring cup (½ cup)
- Warm milk (enough to fill each cup with ½ cup)
- Cocoa powder
- Spoon for stirring
- Labels or small paper slips (for numbering the cups)

1. Label the Cups:

Label the cups as 1, 2, 3, and 4.

2. Fill the Cups:

Pour ½ cup of warm milk into each cup.

3. Add Cocoa Powder:

- Cup 1: Add **¼** tsp of cocoa powder.
- Cup 2: Add **½** tsp of cocoa powder.
- Cup 3: Add **1** tsp of cocoa powder.
- Cup 4: Add **2** tsp of cocoa powder.

4. Mix:

Stir each cup with a spoon until the cocoa powder is completely mixed into the milk.

5. Compare:

Put how much cocoa there is in each of the cups, and then rate on a scale of 1-5 how well you can taste the cocoa!

Cup 1	Cup 2	Cup 3	Cup 4
How much cocoa is in this cup? _____ Tsp	How much cocoa is in this cup? _____ Tsp	How much cocoa is in this cup? _____ Tsp	How much cocoa is in this cup? _____ Tsp
How well can you taste the cocoa? ______	How well can you taste the cocoa? ______	How well can you taste the cocoa? ______	How well can you taste the cocoa? ______

Questions:

1. Which cup has the strongest cocoa flavor? The weakest?
2. Why do you think one cup has more flavor than the other?

By the end of this activity, you'll see that the more cocoa we add to a mixture, the stronger it becomes. <u>This is concentration in action!</u>

In science labs, concentration is very important because scientists need to know exactly how much of something they are using. Whether they're making medicine or studying plants, having the right concentration helps them get the right results and keep everything safe and accurate. Concentration helps scientists control experiments and discover new things!