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Intro to Thermal Energy Activity for Kids

Watch Video

Vibrating Molecules DIY

Duration: **15-20 min** Difficulty: **Easy** Cost: **$0 to $5**

Learn how to make a model that shows the way molecules move around!

Material List

- 1 Glass of WARM water
- 1 Glass of COLD water
- 1 Small tube of food coloring

Instructions

1. Make sure one glass of water is very cold and the other is warm.
2. Add 1 drop of food coloring into each glass (same color to each).
3. Observe how long it takes for the food coloring molecules to vibrate around and spread throughout the water.

How It Works

All atoms are constantly vibrating because they have thermal energy. Adding or removing thermal energy can change the state of matter. When you observe the food coloring in the two glasses, you'll notice that the dye colors the water much faster when it is warm. This is because molecules that have more thermal energy vibrate around faster.