

Air, It's Really There

Question to Investigate: How do heating and cooling affect a gas?

Key Concepts:

- In a gas, the particles have _____. They are able to move _____ with _____ between them.
- The particles of a gas are _____ and move _____ while compared to the particles of liquids and solids.
- Whether a substance is a solid, liquid, or gas at a certain temperature depends on _____ of the particles at that temperature and _____ their attractions are for one another.
- Heating a gas _____ the speed of its atoms or molecules.
- Cooling a gas _____ the speed of its atoms or molecules.

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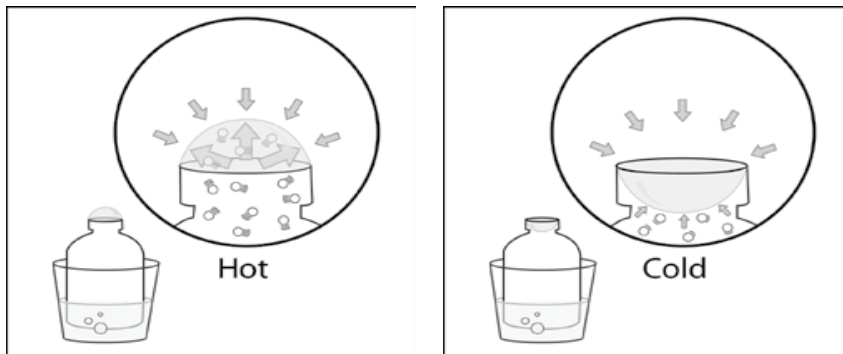
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Air, It's Really There.... processing

ANIMATION OF A BUBBLE AS ITS HEATED AND COOLED. As you watch the animation, use the picture below to help you answer the following questions.



What caused the bubble to form when you placed the bottle in hot water? (Be sure to write about the speed of the molecules inside the bottle and the pressure from the outside air).

Why did the bubble get smaller when you placed the bottle in cold water? (Be sure to write about the speed of the molecules inside the bottle and the pressure from the outside air).

You saw an animation about the molecules in solids, liquids and gases.

Draw circles to represent the molecules in a solid, liquid, and gas. Because all three different substances are all at the same temperature, draw the same number of motion lines near the circles for each substance. Under each box, write about the arrangement and motion of the molecules and the attractions the molecules have for one another.

<p style="text-align: center;">Solid</p>	<p style="text-align: center;">Liquid</p>	<p style="text-align: center;">Gas</p>
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