Na	me: Hot Air Rises—Cold Air Sinks
HC	OT RISES—COLD SINKS
	these two videos, Jared demonstrates the principle that hot air rises and ld air sinks.
oth exp	nen air is heated, its molecules gain energy, move faster, bump into each ner harder, and get pushed farther apart. In other words, the heated air pands. This makes hot air less dense (lighter) than cold air. So, it rises-up d floats on top of the denser (heavier) cold air.
	the first video, Jared demonstrates how <i>hot</i> air rises and <i>cold</i> air sinks by owing that hot-water rises and cold-water sinks.
<u>Ho</u>	t Rises/Cold Sinks: https://www.youtube.com/watch?v=bN7E6FCuMbY
For the purposes of Jared's demonstration, water and air behave similarly. Both are fluids—i.e. they aren't rigid like solids; they flow. Their molecules can move around and tumble about. Both air and water expand when heated and become less dense. Their molecules move closer together when cold and farther apart when hot.	
	more color closely cold hot loosely less
1.	In the demonstration, Jared uses water instead of air because he can the water so you could see what's going on.
2.	He drops a <i>blue</i> ice-cube and an open bottle of <i>red</i> hot-water into a tank
	of room-temperature water. The water floats on top of the
	room-temperature water, and the water sinks to the bottom
	of the tank.

3. The molecules of the *cold* water are \_\_\_\_\_ packed together,

4. The molecules of the hot water were more \_\_\_\_\_ packed,

forming a \_\_\_\_\_ dense layer of hot water at the top of the tank

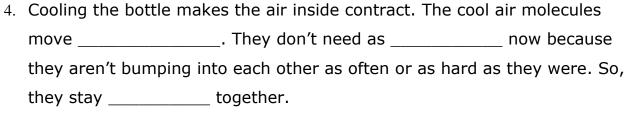
forming a \_\_\_\_\_ dense layer of *cold* water at the bottom of the tank.

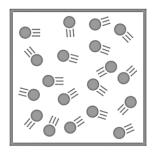
In the next video, Jared uses a balloon to demonstrate once more that hotair rises and cold-air sinks.

<u>Hot Air Rises</u>: <a href="https://www.youtube.com/watch?v=ZPErStqSSMk">https://www.youtube.com/watch?v=ZPErStqSSMk</a>

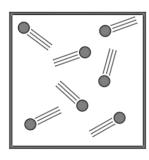
In this demonstration, Jared has a bottle with air in it. He's put a balloon of the top of the bottle to capture the hot air as it rises.

When Jared puts the bottle in a pot of hot water, some of the air in the bottle \_\_\_\_\_\_into the balloon on top.
When he then puts the bottle into a bowl of ice water, and the air in the balloon sinks down again into the bottle, and the balloon \_\_\_\_\_.
Heating the bottle makes the air inside expand. The heat causes the air molecules to move \_\_\_\_\_\_, bump into each other harder, and \_\_\_\_\_\_.









Hot Air