Date: March 20th/15 Name: Abby
Mr. Ewert

Heating and Cooling Fluids

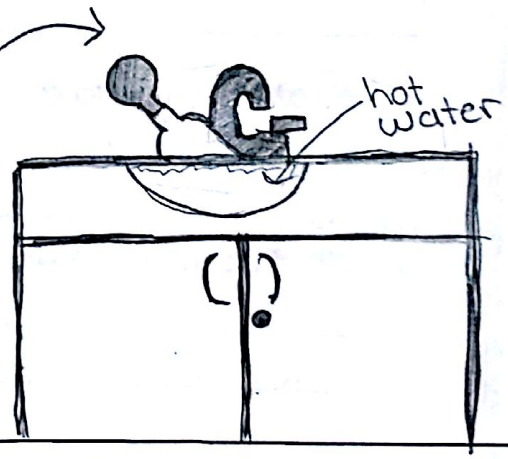
1. Place a balloon over the mouth of a pop bottle.

2. As a group, predict what will happen to the balloon when the bottle is placed in the container of hot water. We predicted that since the hot air rises, and that the molecules are moving faster, (and taking more space,) so this expands the ballon, and puts more pressure on the bottle.

3. Test your predictions. Place the bottle in the container of hot water. Draw a labelled diagram and record your observations.

When the molecules inside the bottle were taking up more space from the hot water, it seemed it needed more space, so it blew up the ballon.

(because hot air makes the molecules go faster, and it needs more space)



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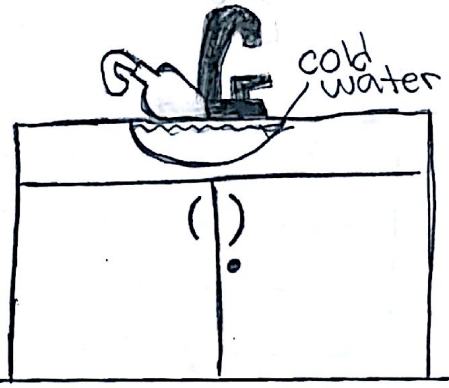
4. **Predict what will happen when the bottle is placed in the container of ice water.** We predicted that since cold water does not need more space, and that the molecules take up less space, the ballon will stay the same.

5. **Test your predictions. Place the bottle in the container of ice water. Draw a labelled diagram and record your observations.**

Since the cold air doesn't need much space, and it doesn't rise, it contracted, (did not expand) (and the molecules weren't taking up more space).



6. **What happens to air when it is heated?** The molecules are moving much faster, and are taking up more space. It also rises

7. **What happens to air when it is cooled?** The molecules are slower, and aren't taking up much space. (cold air does not rise.)

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