

Changing State – Evaporation Activity Sheet

Objective: _____

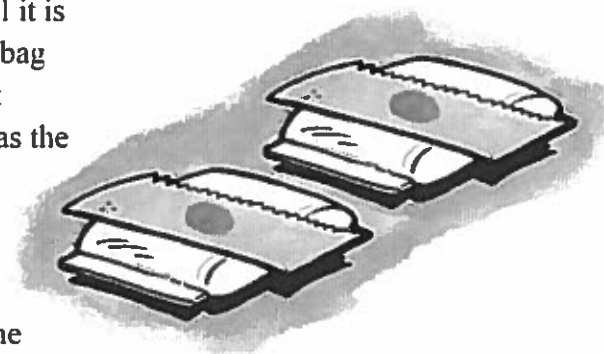
Materials for each group

- 2 quart size zip-closing plastic storage bags
- Hot water (about 50 °C)
- Room-temperature water
- 2 squares of brown paper towel
- 2 droppers
- beaker



Procedure

1. Add room-temperature water to a zip-closing plastic bag until it is about 1/4- filled. Get as much air out as possible, and seal the bag securely. Lay the bag down flat.
2. Add hot tap water to a different zip-closing plastic bag until it is about 1/4-filled. Get as much air out as possible, and seal the bag securely. Lay the bag down flat. This bag will serve as a heat source. The bag with the room-temperature water will serve as the control.
3. Place 2 pieces of paper towel on your table. You and your partner should each use a dropper to place 1 drop of room-temperature water in the center of each paper towel at the same time.
4. Allow the drops to spread for about seconds until they don't seem to be spreading any more.
5. At the same time, place one paper towel on each bag.
6. Observe every few minutes. Compare the amount of water on each paper towel.



While waiting for evaporation, discuss with your partner the design of this experiment:

- a. How did we control variables?
- b. Why did we use the same type of paper towel for each sample?
- c. Why did we put the same amount of water on each piece of paper towel?
- d. Both drops of water on the paper towel were originally the same temperature. Was this a good idea?
- e. Why did we put drops on the paper towel at the same time and in the same area?
- f. Why did we place one paper towel on a bag filled with room-temperature water?

Conclusions:

1. Does adding energy increase the rate of evaporation? How do you know? _____

2. Knowing what you know about energy and molecular motion, why do you think the water that was heated evaporated faster? _____
