

Daily Routine

- ▶ Walk into the classroom with positive thoughts
- ▶ Walk to your seat quietly, and sit down at your assigned seat
- ▶ Take out your agenda and write down your homework
- ▶ Sharpen any pencils before class begins
- ▶ All electronic devices should be silenced and put away
- ▶ Put away any food that you have out

Changes State – Evaporation

Changes in the Phases of Matter

Objective

- ▶ Identify and control variables to design a test to see if heating water affects the rate of evaporation.
- ▶ Explain, on the molecular level, why adding energy (heat) increases the rate of evaporation.

Question to investigate:

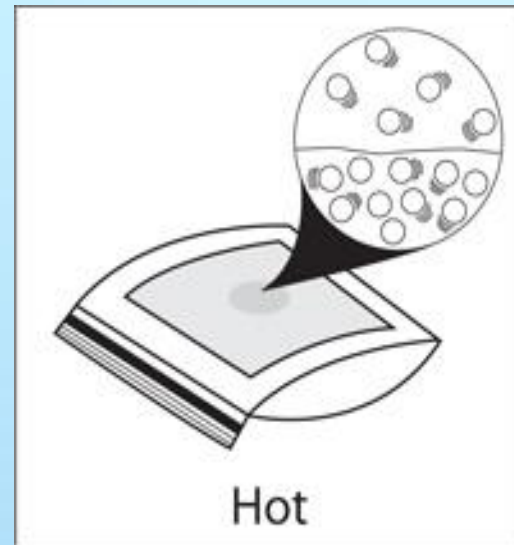
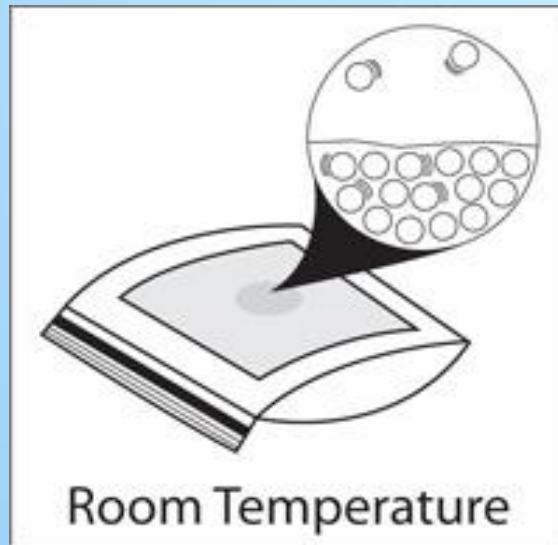
- ▶ Does adding energy increase the rate of evaporation?

Do the Activity on your Lab Activity Sheet: (15 minutes)

- * Record all data in tables.
- * Answer all questions.

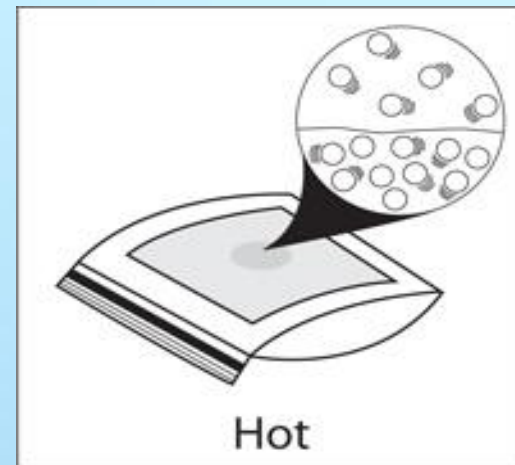
Processing

- ▶ Use the pictures below to compare the number of motion lines and the spacing of the water molecules in the water on each paper towel.

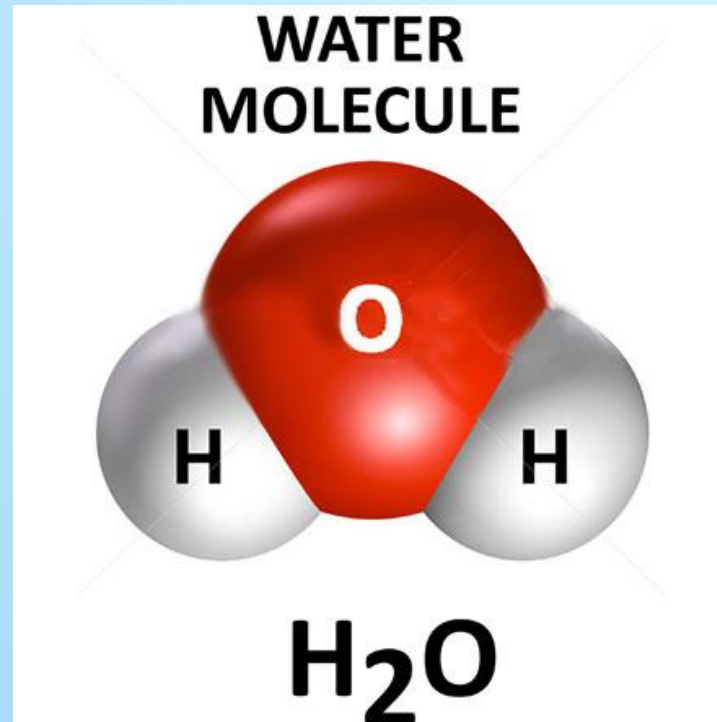


Processing

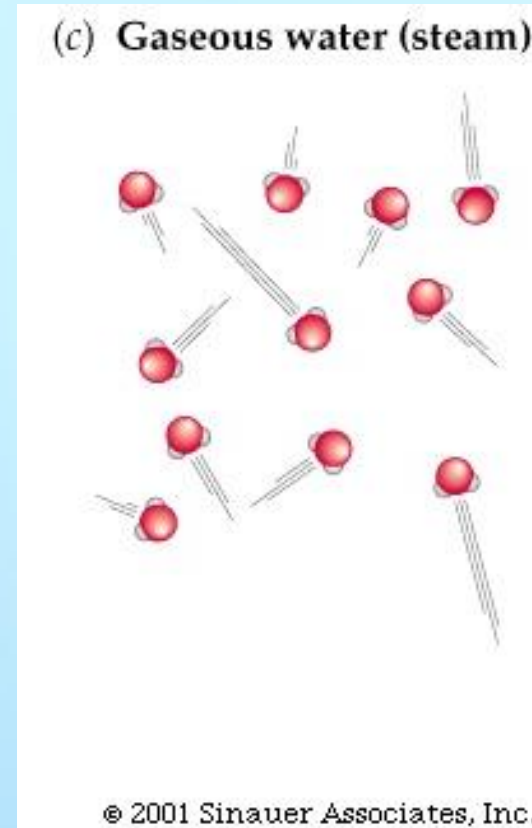
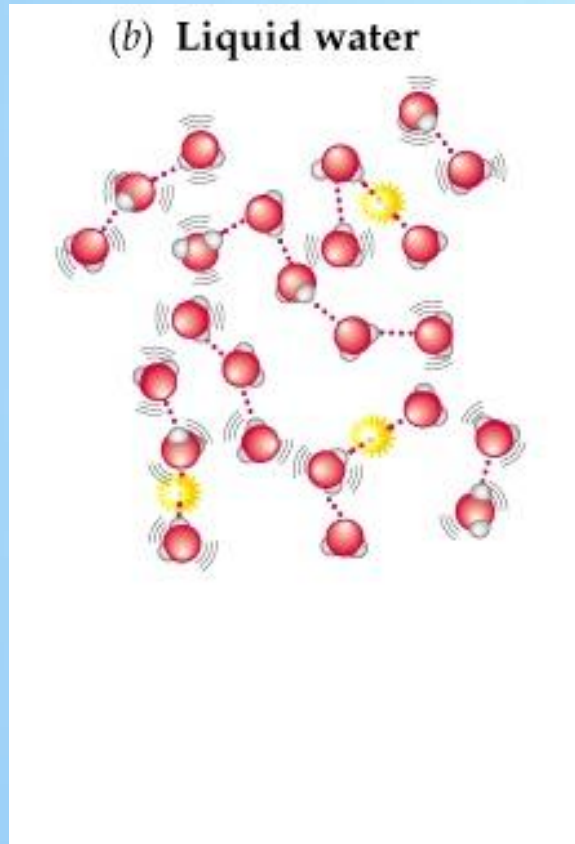
- ▶ Why does the hot water results in more evaporation compared to the room temperature water. Make mention the motion lines in your explanation.



Processing - Shape of Water Molecule



Processing – Movement + Attraction of Water Molecules



Liquid

Gas

Key Concepts

- ▶ **Evaporation** occurs when molecules in a liquid **gain enough energy** that they **overcome attractions** from other molecules and **break away** to become a gas.
- ▶ **Adding energy increases** the rate of evaporation.
- ▶ To conduct a valid experiment, variables need to be **identified and controlled**.