

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

The background features a dark blue gradient with a subtle pattern of white dots. On the left side, there are several circular diagrams. A prominent one is a large circle with a scale around its perimeter, ranging from 140 to 260 in increments of 10. Inside this circle are smaller concentric circles and arrows indicating a clockwise direction. Other similar but smaller diagrams are scattered across the left and bottom-left areas. The text 'CHANGE OF STATE-CONDENSATION' is positioned on the right side of the image.

CHANGE OF STATE- CONDENSATION

OBJECTIVES:

- 1. To describe how cooling water vapor causes condensation.
- To describe the roles evaporation and condensation play in the water cycle.

DEMONSTRATION:



Which cup has the most moisture on the outside of it?

Why do you think the cup that is exposed to more air has more water on the outside of it?

Some people think that the moisture that appears on the outside of a cold cup is water that has leaked through the cup. How does this demonstration prove this idea is not true?

ACTIVITY



- You will do the first activity listed on your lab activity sheet (10 minutes)
- Answer the questions as you observe.

ANIMATION OF CONDENSATION

Condensation Animation

HOW COULD WE SET UP AN EXPERIMENT TO SEE IF MAKING WATER VAPOR EVEN COLDER AFFECTS THE RATE OF CONDENSATION?

- How can we get the water vapor we need for this experiment?
- Will we need more than one sample of water vapor? Should we cool one sample of water vapor, but not the other?
- How will we cool the water vapor?
- How will you know which sample of water vapor condensed faster?

ACTIVITY-

- Do the second activity to determine if making water vapor colder affects the rate of condensation.



KEY CONCEPTS:

- **Condensation** is the process in which molecules of a **gas slow down**, come together, and form a liquid.
- When gas molecules **transfer their energy** to something cooler, they slow down and their **attractions** cause them to **bond** to become a liquid.
- Making water vapor colder **increases** the rate of condensation.
- Increasing the **concentration of water vapor** in the air **increases** the rate of condensation.