

Lab: Warm Air Rises

Background: In this lab, we will be conducting an experiment to determine which atmospheric conditions are necessary to make clouds form.

Pre-Lab Questions:

1. How do clouds form?
2. What is the relationship between air and cloud formation?
3. How does the temperature of air influence its ability to hold water?
4. What happens to the temperature of air as it expands?
5. Why does warm air rise?

Procedures:

Ms. Williams will fill one of your plastic bottles with hot water (be careful!). Follow the procedures below to complete this lab:

1. Position the empty cold container (from the refrigerator) upside down on top of the second container filled with hot water. Be sure the containers are positioned so no air can escape.
2. Observe carefully and record what you see happening.

Key Questions:

1. What did you observe taking place? How did it happen?
2. What can you say about the relationship among water, air temperature, and clouds?

Results and Application:

3. After studying your results, what conclusions can you draw? Do your results support your hypothesis? Explain your reasoning.