

Chapter 18 Moisture, Clouds, and Precipitation

Section 18.1 Water in the Atmosphere

This section describes how water changes from one state to another. It also explains humidity and relative humidity.

Reading Strategy

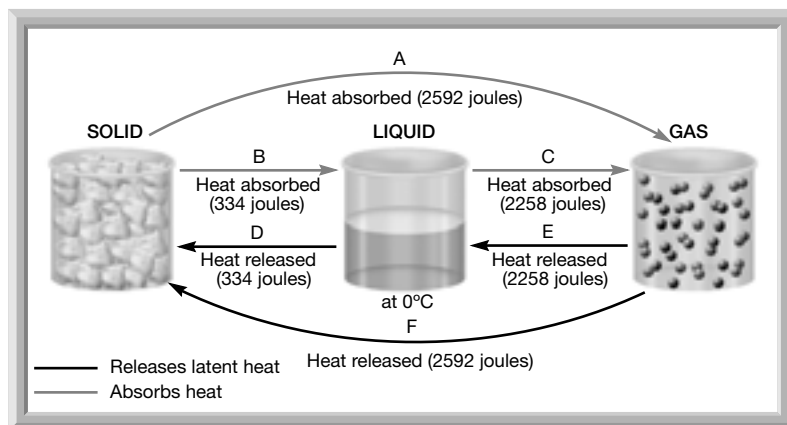
In the table below, list what you know about water in the atmosphere and what you would like to learn. After you read, list what you have learned. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

What I Know	What I Would Like to Learn	What I Have Learned
a.	b.	c.
d.	e.	f.

- Circle the letter of the most important gas in atmospheric processes.
 - a. oxygen
 - b. nitrogen
 - c. water vapor
 - d. carbon dioxide

Water's Changes of State

- Select the appropriate letter in the figure that identifies each of the following changes of state.
 - _____ sublimation
 - _____ deposition
 - _____ condensation
 - _____ freezing
 - _____ evaporation
 - _____ melting



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3. For each change of state, write the opposite change of state.
 - a. condensation: _____
 - b. freezing: _____
 - c. deposition: _____
4. The heat absorbed or released during a change of state is called _____.

Humidity

5. Is the following sentence true or false? Saturated warm air contains more water vapor than saturated cold air.

6. What is the difference between humidity and relative humidity?

Match each situation to its change in relative humidity.

Situation	Change in Relative Humidity
_____ 7. Water vapor is added.	a. increases
_____ 8. Air temperature decreases.	b. no change
_____ 9. Water vapor is removed.	c. decreases
_____ 10. Air temperature increases.	
11. When a parcel of air is cooled to the temperature at which it is saturated, it has reached its _____.	
12. Circle the letter of the factor that a hygrometer is used to measure. <ol style="list-style-type: none"> a. humidity b. relative humidity c. temperature d. latent heat 	
13. A sling psychrometer works because the amount of cooling that occurs in the wet bulb is directly proportional to the _____ of the air.	
14. What happens when air that has reached its dew point is cooled further? _____ _____ _____	