

CH 18 STUDY GUIDE

Vocabulary

precipitation, evaporation, condensation, sublimation, deposition, humidity, saturated, hygrometer, cirrus, cumulus, stratus, supercooled water

Understanding Concepts

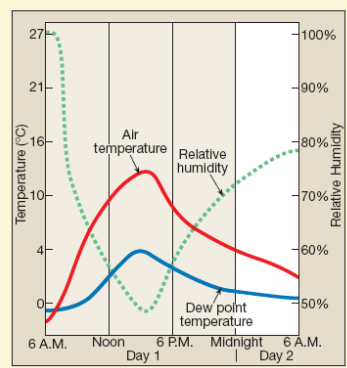
- Which gas is most important for understanding the processes that take place in the atmosphere?
- The classification of clouds is based on their
- What types of clouds have the highest height?
- The precipitation that forms in a cumulonimbus cloud when small ice pellets fall through it and grow by collecting supercooled water is
- What happens when air rises?
- As you drink an ice-cold beverage on a hot day, the outside of the glass becomes wet. Explain why this happens.
- What is the difference between condensation and precipitation?
- Why does air cool when it rises through the atmosphere?
- Write a general statement relating air temperature and the amount of water vapor needed to saturate the air.
- Describe the difference between clouds and water vapor.

Graph Skills

Water Vapor Needed for Saturation		
Temperature		Mass of water vapor per kg of air (g/kg)
°C	(°F)	
-40	(-40)	0.1
-30	(-22)	0.3
-20	(-4)	0.75
-10	(14)	2
0	(32)	3.5
5	(41)	5
10	(50)	7
15	(59)	10

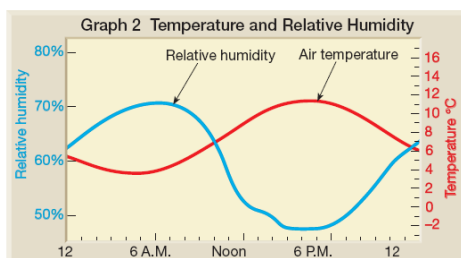
- According to the table, how much water vapor is required to saturate a kilogram of air at each of the following temperatures?
 - 15°C
 - 0°C
 - 10°C

Graph 1 Temperature and Relative Humidity



- The graph above depicts variations in temperature and relative humidity on a spring day. Which of the following statements is true?
 - When temperature increases, relative humidity increases.
 - When temperature decreases, relative humidity decreases.
 - When temperature increases, relative humidity decreases.
 - Temperature and relative humidity are not related.

Graph 2 Temperature and Relative Humidity



- According to this graph, when is relative humidity at its maximum?
- When does the lowest relative humidity occur?