

Lesson Outline**LESSON 1*****Describing Weather*****A. What is weather?**

1. The atmospheric conditions, along with short-term changes, make up the _____ of a certain place at a certain time.

B. Weather Variables

1. Scientists who study and predict weather are _____.
2. Air _____ is the measure of the average kinetic energy of molecules in the air. Molecules in warm air move _____ than molecules in cooler air.
3. _____ is the pressure that a column of air exerts on the air or surface below it.
 - a. Air pressure decreases as altitude _____.
 - b. A(n) _____ is an instrument used to measure air pressure.
4. _____ is caused by air moving from an area of high pressure to an area of low pressure.
 - a. In a south wind, the wind is coming from the _____.
 - b. The instrument used to measure wind speed is a(n) _____.
5. The amount of water vapor in the air is _____.
 - a. When air is _____, it holds the maximum amount of water vapor possible at that _____.
 - b. _____ is the amount of water vapor in the air compared to the maximum amount of water vapor the air can hold at that temperature.
 - c. Relative humidity is reported as a(n) _____.
6. When air near the ground becomes saturated, the water vapor condenses into a liquid and forms _____.
 - a. If the temperature is below 0°C, ice crystals, referred to as _____, form.
 - b. The temperature at which air becomes fully saturated because the temperature decreases while the amount of moisture stays constant is the _____.

Lesson Outline continued

7. As warm air rises in the atmosphere, it _____.
- When the air cools enough that the _____ is reached, small droplets of water form.
 - _____ are water droplets or ice crystals suspended in the atmosphere.
 - _____ is a cloud that forms near Earth's surface.
 - _____ clouds are flat, white, and layered.
 - _____ clouds are fluffy and are present at 2,000 to 6,000 m altitude.
 - _____ clouds are wispy and are present above 6,000 m altitude.
8. _____ is water, in liquid or solid form, that falls from the atmosphere.
- Precipitation that falls as liquid water is _____.
 - Precipitation that is solid crystals of ice is _____.
 - Precipitation that starts as snow and then melts and freezes again is called _____.
 - _____ is precipitation formed when ice pellets rise and fall within a cloud, adding new layers of ice during each cycle.
9. The _____ is the series of natural processes in which water continually moves among oceans, land, and the atmosphere.
- Water enters the atmosphere as water vapor when liquid water on Earth's surface _____.
 - As water vapor cools, it _____, forming liquid water.
 - Clouds produce _____, which is when liquid or frozen water falls to Earth's surface.