

Lesson Outline**LESSON 2****Weather Patterns****A. Pressure Systems**

1. A(n) _____ is a large body of circulating air that has low pressure at its center and higher pressure on the outside.
 - a. Air moves from _____ pressure to low pressure.
 - b. In a low-pressure system, air moves away from the _____ of the system.
 - c. Air in the center of the system _____, and the water vapor in it condenses and forms clouds.
2. A(n) _____ is a large body of circulating air that has high pressure at its center and lower pressure on the outside.
 - a. High-pressure air at the center _____ and moves toward low-pressure areas.
 - b. High-pressure systems bring _____ skies.

B. Air Masses

1. _____ are large bodies of air that have distinct temperature and moisture characteristics.
2. An air mass forms when a(n) _____ system lingers in one area for a few days.
 - a. Continental polar air masses are _____ and _____.
 - b. _____ air masses are warm and humid.
 - c. _____ air masses are very cold and dry. They form over _____ or arctic ice.

C. Fronts

1. A weather _____ is the boundary between two air masses.
2. A(n) _____ front forms when a colder air mass moves toward a warmer air mass. It often brings severe _____ and cooler temperatures.
3. A(n) _____ front forms when a warmer air mass moves toward a cooler air mass.
 - a. As the warm air rises, water vapor condenses, and _____ often occurs.

Lesson Outline continued

- b. A warm front brings _____ temperatures and shifting winds.
- 4. A(n) _____ front forms when the boundary between two air masses stalls. It brings _____ skies and light rain.

D. Severe Weather

- 1. A low-pressure system can provide the warm temperatures, moisture, and rising air needed for a(n) _____ to form.
 - a. The _____ stage of a thunderstorm starts with cloud formation and updrafts.
 - b. The _____ stage of a thunderstorm contains heavy winds, rain, and lightning.
 - c. During the _____ stage of a thunderstorm, wind and rain subside.
 - d. Lightning is caused by oppositely _____ particles in clouds and on the ground.
- 2. A violent, whirling column of air that contacts the ground is a(n) _____.
 - a. Tornadoes form when updrafts from thunderstorms begin to _____.
 - b. _____ is the name for the part of the United States that has the most tornadoes.
- 3. A(n) _____ is an intense tropical storm with winds exceeding 119 km per hour.
 - a. Hurricanes typically form in late summer over warm, tropical _____ and are the largest type of severe storm.
 - b. When a hurricane moves over land or _____ water, it loses energy.
- 4. A(n) _____ is a severe winter storm, characterized by freezing temperatures, strong winds, and blowing snow.
- 5. The U.S. National Weather Service issues a(n) _____ when severe weather is possible. It issues a(n) _____ when severe weather is already occurring.