

**Section 3 ■ Behavior of Gases**

Directions: Complete the paragraphs by using the words listed below to fill in the blanks.

force	increase	kinetic	pressure	volume
particles	Charles's	size	boiling	kilopascals
Boyle's	absolute	decrease	larger	temperature
constantly	liquids	pressure	decrease	increased

Gases in Earth's atmosphere exert 1. _____ on everything. According to the 2. _____ theory, the particles of a gas are 3. _____ moving. Every time gas particles hit something and bounce off, they exert a tiny force. Pressure is this amount of 4. _____ exerted per unit of area. Air pressure at sea level is 101.3 5. _____.

The amount of force exerted by a gas depends on the 6. _____ of its container. 7. _____ law states that if a sample of gas is kept at constant 8. _____, decreasing the volume will 9. _____ the pressure the gas exerts. If you increase the volume, the pressure will 10. _____. According to the kinetic theory, if you do not change the amount of gas or its temperature but 11. _____ the size of the container, the particles will strike the walls more often and the pressure will rise. When the size of the container is 12. _____, the pressure is smaller because the 13. _____ hit the walls less often.

According to 14. _____ law, if a sample of gas is kept at constant 15. _____, the volume increases if the temperature is 16. _____. Charles's measurements suggested that the 17. _____ of a gas would become zero at a temperature of -273°C . The temperature -273°C is called 18. _____ zero. All gases become 19. _____ when cooled to their 20. _____ points.