



UNIT 5: CHEMISTRY OF CLIMATE CHANGE

Workbook 5.1: Gas Laws

Lesson 7: Be the Molecule

GUIDING QUESTION – PAGE 21: DESCRIBE THE RELATIONSHIP BETWEEN PRESSURE, VOLUME, AND TEMPERATURE FOR GASES

- Do Now:

You fill a birthday balloon with 2.0 L of air at 1.0 atm. You take this balloon with you as you drive to a birthday party at Lake Tahoe, where the pressure is 0.8 atm.

- 1) Will the volume of the balloon increase or decrease?
- 2) Justify your answer to question 1 using a gas law.
(Solve the gas law)



NOTES – PAGE 21

- Temperature: The average speed molecules are moving.



NOTES – PAGE 21

- Volume: The amount of space occupied by a substance.

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- Pressure: Force applied over a specific area. Gas pressure is caused by molecules striking objects or the walls of a container
 - Increasing the number of collisions ↑P
 - Increasing the force of each collision ↑P

NOTES – PAGE 21

- Pressure and Volume have an indirect relationship.

↑P ↓V

↓P ↑V

NOTES – PAGE 21

- Temperature and Volume have a direct relationship

↑T ↑V

↓T ↓V

NOTES – PAGE 21

- Temperature and Pressure have a direct relationship

↑T ↑P

↓T ↓P

CLOSURE

- Answer Guiding Question on page 21:
 - Describe the relationship between pressure, volume, and temperature for gases.
- Homework #9 due Friday, 4/20.
- Achieve 3000: “No Idle Law” due Friday, 4/20.
- Gas Laws Project due Friday, 4/20.