Gases and Atmosphere Web Quest:
Look at the suggested web pages (and others you find) to learn about gases properties and behavior. Write out answers to each question using complete sentences, illustrating with diagrams or drawings whenever possible. Give the url for the web site you found most helpful for each question.

Gases and Their Properties
1. Explain the Kinetic Theory of Gases: what are its main ideas?
2. What is gas pressure? How do gases cause pressure? How many different units can you use to state what “normal” air pressure is?
3. How does a Mercury barometer work?
4. What is gas diffusion? How can it be explained at the molecular level?
5. What is the relation between gas pressure and volume?
6. What is the relation between gas temperature and volume?
7. What is the relation between gas pressure and temperature?
8. What is an “ideal gas” and how is it different from a real gas? Under what conditions are they most similar?
9. What is STP in gas chemistry? Why do we use STP?
10. What is the Kelvin or absolute temperature scale? How do we convert between Celsius and Kelvin?
11. What is Absolute Zero? What is its significance in gas chemistry?
12. Explain temperature on the molecular level, in terms of molecular motion and kinetic energy.
13. What is Avogadro’s Law?
14. What is the Ideal Gas Law? What does each letter stand for?
15. Use the ideal gas law to solve for the molar volume of any gas at STP.

www.chemistrycoach.com
http://dbhs.wvusd.k12.ca.us/ChemTeamIndex.html “ChemTeam”
http://www.chemtutor.com/
http://pc65.frontier.osrhe.edu/hs/science/ckinet.htm
http://chem.neopages.com/tutorials/gases.shtml
http://dir.yahoo.com/Science/Chemistry/Education/

Structure and Composition of the Atmosphere
17. How has life changed Earth’s atmosphere, and how have changes in the atmosphere affected conditions for life?
18. Describe the thermal structure and chemical composition of the atmosphere.
19. Explain how atmospheric gases absorb the Earth’s thermal radiation and the mechanism (how it works) and significance(importance) of the greenhouse effect.
20. Describe the location of the ozone layer in the upper atmosphere, its role in absorbing ultraviolet radiation, and the way in which this layer varies both naturally and in response to human activities.

EC: 21. How can the Ideal Gas Law and gas density be used to find the Molar Mass of a gas?