Name:

Subject: Chemistry

Lab Title: Gas Properties: Understanding gas model

Purpose: Describe a molecular model of gas pressure.

Hypothesis:

Procedures: Open ‘Gas Properties’ and then use the pump to put a little gas into the box.

a. Observe gas particles’ behavior.

b. Pump in some lighter particles and talk about the similarities and differences that you see between heavy and light particles.

c. Answer question 1

d. Use the simulation to see how changing the temperature affects the behavior of the gas particles.

e. Answer question 2.

Write a description for a gas based on your observations; include diagrams to help with your description.

f. Determine the size of the heavy particle using the simulation tools and then relate molecule size to something you are familiar with. A common way to relate two things is to say something like: 1000 particles of sand fit in the palm of your hand. Show your calculations with the units clearly labeled.

h. Write your conclusion.

i. Answer remaining lab questions.

Observations: Results: Analysis & Conclusion

Lab Questions:

1. How fast do you think the air particles in this room are moving compared to a car going 50 mph (about 22m/s)? Put your answer is in the form, 'a molecule travels ___ as fast as a car"

2. Describe image of gases using words and diagrams.

3. Describe how gases are distinguishable from a solid or liquid.

4. How does the particle mass and gas temperature affect the image?

5. How does the size and speed of gas molecules relate to everyday objects?

6. Write a paragraph that explains the differences and similarities between solid, liquid and gas particle motion; include drawings to help with your explanations.