# Gas Laws Simulation Lab Names:

1. Go the assignment on the Canvas for today called. **Gas Simulation Lab**
2. When you open the simulations, run on Google Chrome it will work better, and just hit “Run It”.
3. For a few minutes get familiar with the program by pumping particles into the chamber and experimenting with the simulation, trying out different things and getting familiar with the program. *(Try to move, click and manipulate everything on the screen)* **ONLY DO THIS FOR ABOUT 5 MINUTES**

## Task 1 12PTS DON’T FORGET TO RESET AFTER EACH SET

1. Reset the simulation
2. Pump some particles into the chamber.
3. Set gravity to the midpoint of the setting.
4. Keep all variables constant (don’t mix particles, change gravity, etc…)
5. Using the **“Constant Parameter”** section of the simulation, select one variable at a time to keep constant.
6. Then experiment with the particles by changing the heat, volume, and pressure then record what happens.

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| --- | --- | --- | --- |
| **Constant Variable** | **Changing Variable***(Increase temperature, add volume)* | **Observations***(What happened to particles and the chamber?)* | **Inference***(Why do you think that happened?)* |
| **Pressure** |  | **Volume** | **Temperature** | **Particles** |  |
|  | **Volume** | **Temperature** | **Particles** |  |
| **Volume** |  | **Pressure** | **Temperature** | **Particles** |  |
|  | **Pressure** | **Temperature** | **Particles** |  |
| **Temperature** |  | **Pressure** | **Volume** | **Particles** |  |
|  | **Pressure** | **Volume** | **Particles** |  |

1. Choose of your two observations and explain why they happened according to the properties and laws of Gases. 4pts

* 1.

1. According to the Gas Laws and what we understand of the properties of gases, why couldn’t you change some of the variables when another one was held constant? Give **one** example to help explain your answer. **3pts**

## EXTRA CREDIT

* Experiment with the “Measurement Tools”
* Change or use one of the measurement tools. Observe changes in the simulation and explain why it happened.