

Name(s): _____

Section: _____
Date: _____

Gas Particles in Motion Activity 2: Changing Temperature

<http://sunshine.chpc.utah.edu/javalabs/>

Getting Started : The Pickle Problem

Explain why the button pops up when you open a jar of pickles, and then never goes back down.

Lab Procedure

1. Select the size (volume) of the gas container.
2. Choose a temperature by clicking on the top of the mercury column in the thermometer, and move the column up or down.
3. Record your data when you are satisfied with your choice of temperature.
4. You should collect data for at least eight to ten different temperatures and pressures. Copy your data from the screen into your notebook before proceeding to a new volume.
5. After completing at least three different experiments (three different volumes) go to the analysis/application activities.

Table 3: Volume = _____ Liters

Temp. (Kelvin)	Pressure (mm Hg)	

Analysis Questions

1. Study the data you have just collected from your three trials. Describe the relationship between temperature and pressure. You might start your sentence like this: *As we increased the temperature of our gas, the pressure...*

2. Is the relationship "direct" or "inverse" (Read "Important Concept" below the lab, if you need help understanding "direct" or "inverse.")? **Give at least two examples from your data table to support your answer.**

3. Go back to page one of your lab packet, and reread your answer to the "Pickle Problem." Based on your lab data, decide if your explanation needs to change. If so, rewrite your new explanation below.

Historical Science

Use the ASPIRE biography to learn about Joseph Gay-Lussac, the scientist who discovered the gas law you just learned.

To find the biography, bring up the ASPIRE website - <http://sunshine.chpc.utah.edu/>
Go to *Interactive Labs*, and follow the path to *Gas Laws Activity Two*. In the *Student Lab*, scroll down until you reach the *History* section, then click on the link for *Joseph Gay-Lussac*.

Below list at least 4 ideas you found most interesting or important about Gay-Lussac.

1.

2.

3.

4.