

Behavior of gases essay



**ASSIGN
BUSTER**

Furthermore, this particular equation dictates that the product of the Initial volume and pressure is equal to the reduce of the volume and pressure after a change under constant temperature. On the other hand, Charles' law states that the volume of a given amount of gas held at a constant pressure is considered directly proportional to the Kelvin temperature. Equations: $V T$ or $V / T = C$. Therefore, as the volume rises, the temperature goes up, as well, and vice versa.

Meanwhile, temperature is the measurement of the kinetic energy of particles inside of a certain object. Thus, the object will increase in temperature if particles have a high amount of kinetic energy.

Meanwhile, the object will decrease in temperature if the particles have less kinetic energy. Nonetheless, an object with the lowest temperature tends to have particles that are not moving at all. Last but not least, this particular temperature depicts absolute zero, it is zero Kelvin (SI unit for temperature), and -273 °C.

Procedure: (Part I: Pressure and Volume) Place the piston of a plastic 20 ml syringe at 10 ml. Connect the following syringe to the valve of the Gas Pressure Sensor. Then, attach the Gas Pressure Sensor to LabQuest and choose the "New" option under the File menu. Next, prepare the data-collection mode (Change the mode to Events with Entry) (Enter Name (Volume) and Units (ml), then select K) Start data collection. When the pressure reading is steady, select Keep and enter in the volume in ml, then press K for the data pair to be stored.

Collect at least 10 data points by pressing the syringe (decreasing the volume) and pulling the syringe out (increasing the volume). After finishing the collecting of data, view a graph of pressure vs. Volume, and then record the results on the lab notebook. (Part II: Pressure and Temperature) Attach the Temperature Probe to Channel 2 of Labiats. Choose New under the File menu. Attach the parts of the apparatus, and then ensure all fittings are airtight.

Also, push hard on the rubber stopper for ensuring a tight fit. Prepare water baths in flasks/beakers, ranging from ice water to hot water. Immediately change the graph settings for the pressure vs.

. Temperature graph to be displayed. Record the data obtained in the notebook part III) Set up the Labiats as the instructions in the box says so (Connect the Temperature Probe to Channel 2) Set up cooling baths for the following experiments.