

Boyle's Law

Purpose: To study gas pressure and volume relationships.

Equipment: Computer, interface, pressure probe and syringe

Procedure:

- Open Logger Pro. Under the file menu navigate to the Boyle's Law experiment in the Chemistry with Computers folder.
- Set your syringe to 10.0 ml.
- Attach the syringe to the pressure sensor, release the pressure by turning the blue valve down toward the interface box. THEN TURN THE VALVE SO THAT IT IS PERPENDICULAR to the syringe handle.(After the lab begins, do not remove the syringe)
- Click on the green collect button, then click on KEEP when the pressure is stable. The "KEEP" button is the circle by the green button.
- RECORD the VOLUME
- Repeat at 3 ml intervals from 4 - 19 ml.
- Stop collecting
- Under the Analyze tab, use the automatic curve fit to determine the best fit scenario.

Write Up: Print your graph.
Explain what your graph tells you.
What was the equation for your best fit curve?
Was the best equation what you expected? Why or why not?
Make the appropriate changes to your graph to turn the curve into a straight line. Print the straight line graph.
How could you describe this new relationship?