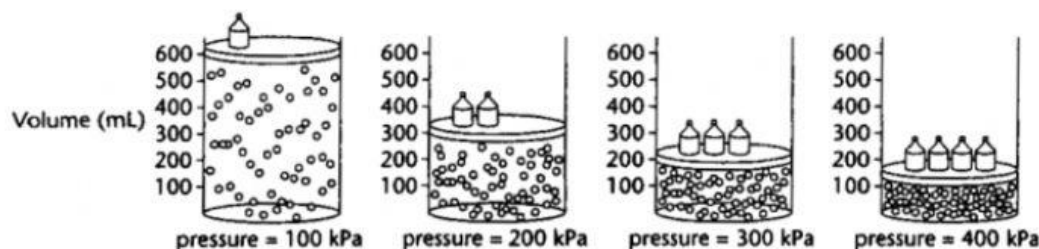


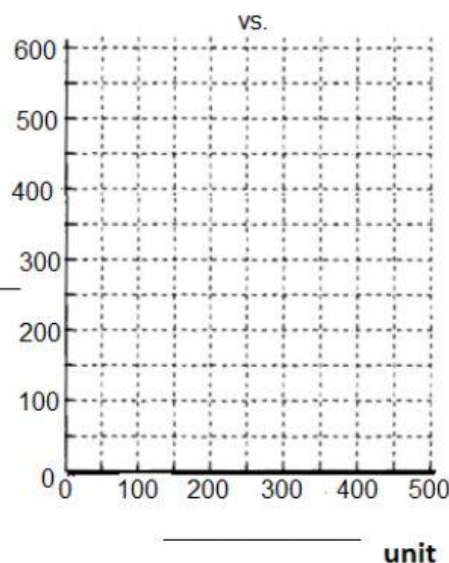
◆ Using Science Skills

The diagram below shows an experiment to measure the change in the volume of a gas as its pressure increases. The weights on the piston compress the gas in the cylinder. Study the diagram and answer the questions below.



21. Analyzing Data Complete the data chart for the experiment shown.

Pressure (kPa)	Volume (mL)



22. Graphing Graph the data above to show how the volume of a gas is related to its pressure.

On the graph label the X-axis and the Y-axis, put a title in the spaces provided.

Drag and drop the points and the units of measurement.

23. Predicting What will the volume be when the pressure is 500 kPa?

Drop the point for your prediction ●

24. Suppose you bought a helium filled balloon on a cold winter day.

Predict what will happen when you take the balloon out of the store and into the cold air.

When you leave the store and go outside the gas in the balloon will get **warmer cooler**. As the gas **warms cools** the particles will move **faster slower**. Because the particles are moving **faster slower** they will hit the sides of the balloon **harder softer** and push outward with **more less** force. Because they push outward with **more less** force the balloon will **expand contract**.

25. Describe the arrangement and speed of particles in a solid crystalline substance compared with those of particles of the same substance in a liquid state.

The particles in a **crystalline solid** are arranged in a regular repeating pattern, whereas in a **crystalline solid liquid** the particles are free to move.

Drag and drop the labels: **Crystalline solid** **Liquid**

