

MINISTRY OF EDUCATION, HERITAGE AND ARTS

YEAR 13 CHEMISTRY

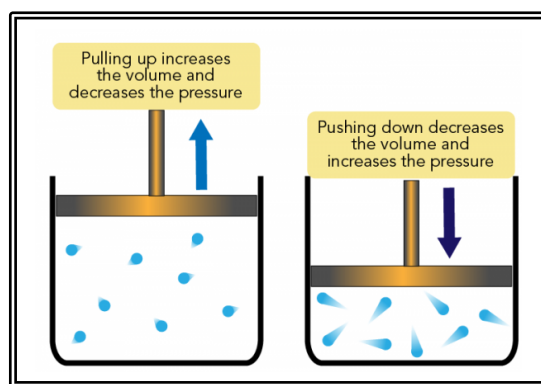
REVISION WORKSHEET 4

Write the answers to the following questions in your exercise/activity books.

Strand 2: Investigating Matter

Sub-strand: States of Matter

- Classify the following characteristics of gas under **ideal gas** or **real gas**.
 - Is a theoretical gas. (1 mark)
 - Intermolecular attraction force exists between their molecules. (1 mark)
 - Obeys all the postulates of the kinetic theory of gases. (1 mark)
- Use the diagram given below to answer the questions that follow.



Source: <https://letstalkscience>

- Name of the law demonstrated by the diagram given above. (1 mark)
 - Name an important factor that is kept constant in the above diagram. (1 mark)
- At 27 °C, a weather balloon containing helium gas, has a volume of 250 L and exerts a pressure of 102.0 kPa. The weather balloon is released, and at an altitude of 20,000 m, the new temperature is -27 °C and occupies a volume 1000 L.
Calculate the **pressure** the weather balloon exerts at an altitude of 20,000 m. (3 marks)
 - A small cylinder containing 0.40 moles of oxygen gas and 0.20 moles of hydrogen gas, exerts a pressure of 102.50 kPa.
Calculate the **partial pressure** of oxygen gas. (2 marks)

The End