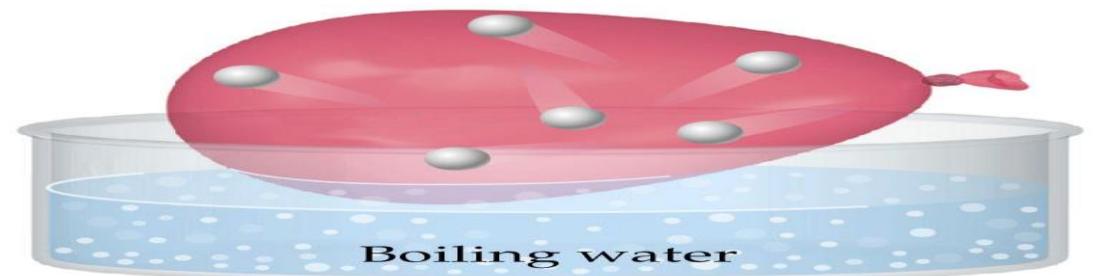
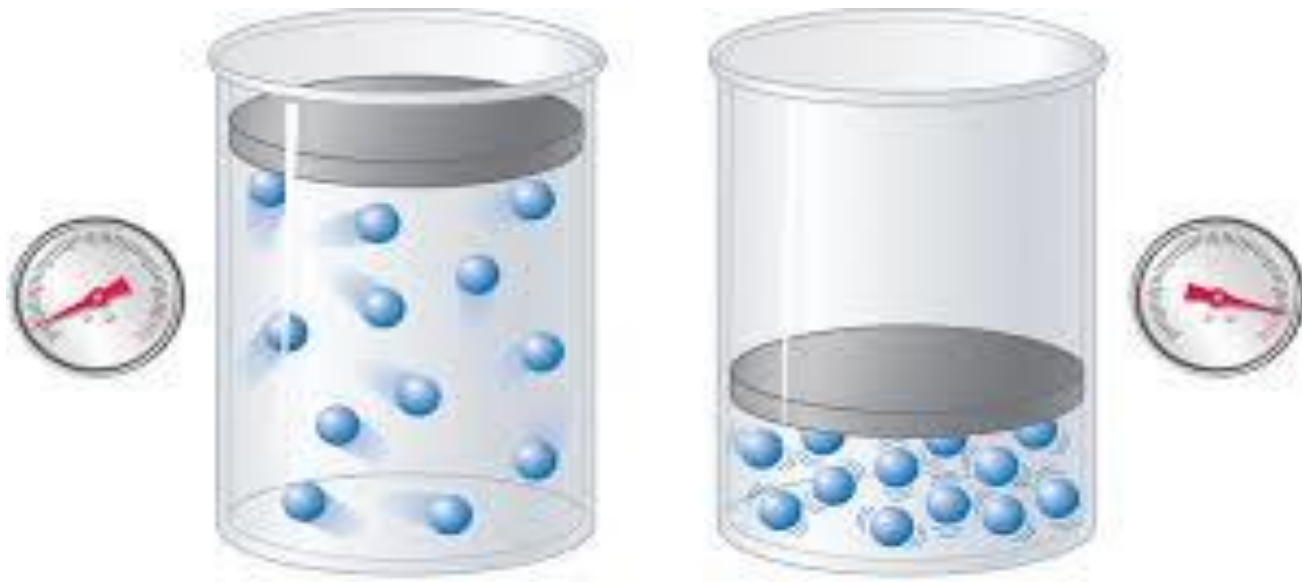


# PRESSURE in GASES

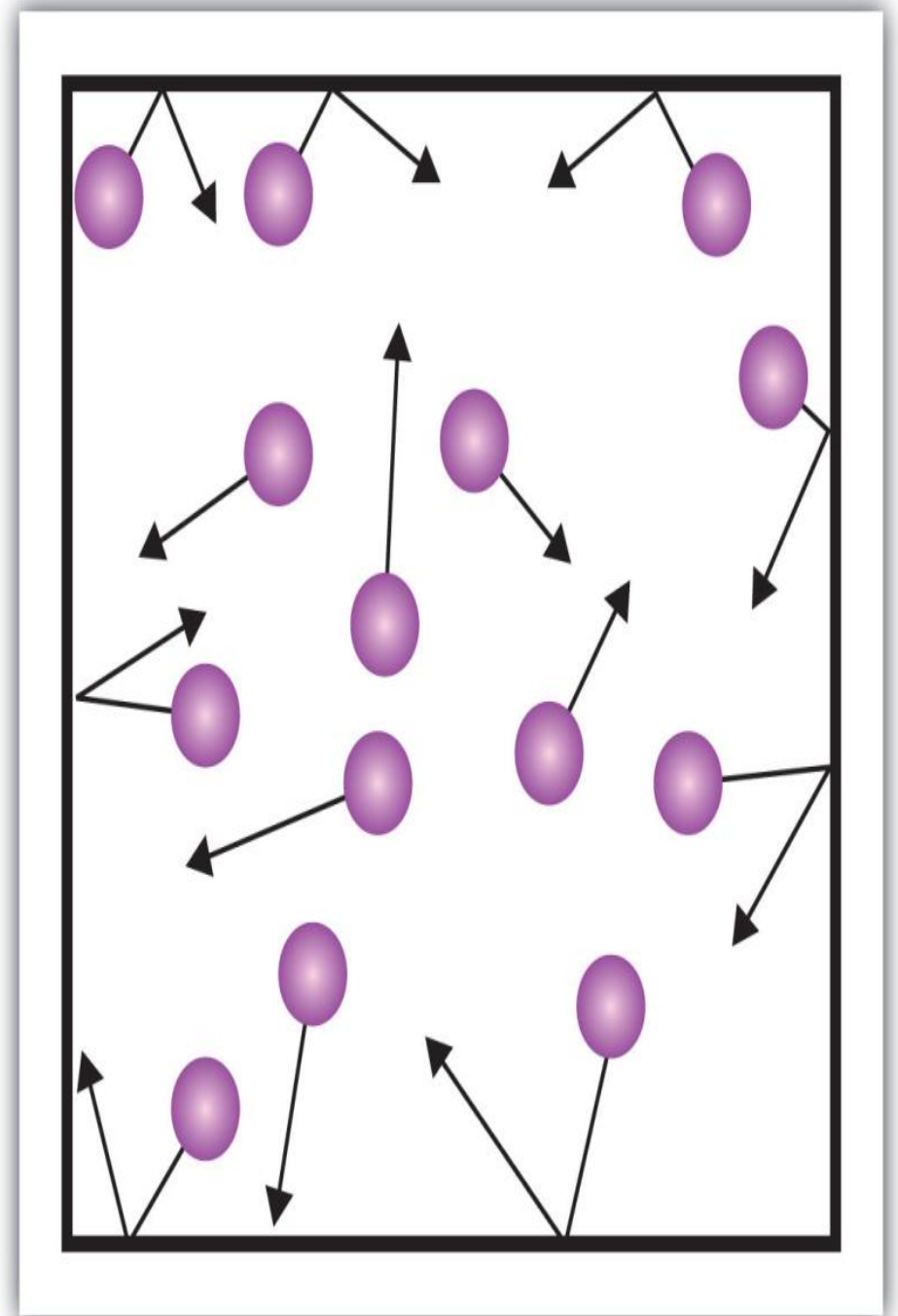
- Consider a balloon, or a car tyre. The more air you blow into it, the higher the pressure in it becomes.
- This is because you are forcing more and more particles into the balloon (or tyre), and are squashing that air into the spaces around themselves.
- They still have the same amount of energy as before, but have less space to move in, and so are putting more pressure on each other by being squeezed in.
- These particles also hit against the sides of the balloon, and so put pressure on its walls.
- Now if you **heat** the air, the particles **move even faster**, and so you increase that pressure even more.





**(a) Low pressure**

**(b) High pressure**



# QUESTIONS Pages 85-86

## Question 1

1. **Mass** of matter in a certain **volume**. [2]

2. Kind of matter (**MASS**), and spaces (energy) between them (= **VOLUME**).[2]

## Question 2

$$1. \quad D = \frac{M}{V} = \frac{100}{50} = 2 \text{ g/cm}^3 \quad [4]$$

$$2. \quad D = \frac{M}{V} = \frac{40,5}{15} = 2,7 \text{ g/cm}^3 \quad [4]$$

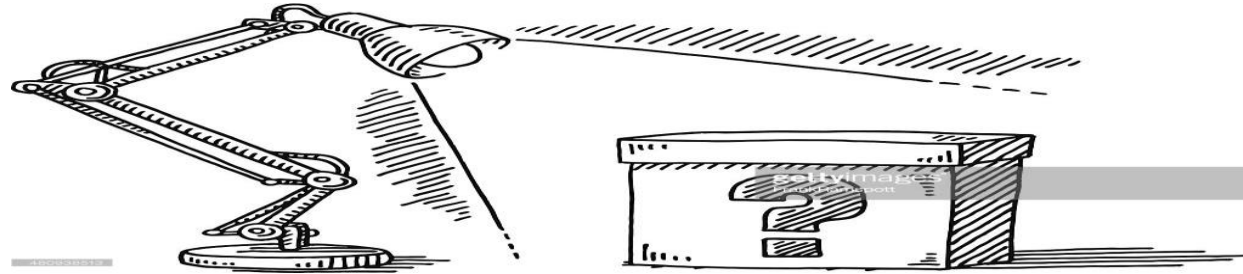
$$3. \quad D = \frac{M}{V} = \frac{13}{8} = 1,625 \text{ g/cm}^3 [4]$$

$$4. \quad D = \frac{M}{V} = \frac{44}{50} = 0,88 \text{ g/cm}^3 \quad [4]$$



### Question 3

1. Aluminium. Lead. Gold. Iron. [4]
2. Liquids that do not mix. Oil and water – oil is less dense, so floats on water. [4]



### Question 4

1. Railway lines expand in the warmer summer, so gaps are needed between them to stop them from bending out of shape. [4]
2. With energy. Gas particles bump into the side of the container, and this causes pressure. [3]