

IGCSE Chemistry

Name: _____ Score: _____

1. In a solid, the particles:

- ☐ are closely packed and only vibrate in place
- ☐ are far apart and move fast
- ☐ slide past each other
- ☐ do not exist

2. The change from solid to liquid is called:

- ☐ melting
- ☐ freezing
- ☐ condensing
- ☐ subliming

3. Gas pressure is caused by particles:

- ☐ colliding with the container walls
- ☐ melting
- ☐ staying still
- ☐ joining together

4. Diffusion is the movement of particles from a region of:

- ☐ high concentration to low concentration
- ☐ low concentration to high concentration
- ☐ high pressure to high temperature
- ☐ solid to liquid

5. A gas spreads to fill its container because its particles are:

- ☐ far apart and moving quickly in all directions
- ☐ fixed in place
- ☐ packed tightly
- ☐ not moving

6. A gas at pressure 200 and volume 4 is compressed to volume 2. What is the new pressure?

7. Ice, water and steam are made of the same particles.
- ☐ True ☐ False
8. During melting, the temperature stays constant until all the solid has melted.
- ☐ True ☐ False
9. At constant temperature, pressure $\times$ volume stays constant for a fixed mass of gas.
- ☐ True ☐ False
10. Diffusion is evidence that particles are in constant random motion.
- ☐ True ☐ False

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1. **are closely packed and only vibrate in place**

Solids have closely packed, vibrating particles.

2. **melting**

Solid $\rightarrow$ liquid is melting.

3. **colliding with the container walls**

Collisions with the walls create pressure.

4. **high concentration to low concentration**

Particles spread down the concentration gradient.

5. **far apart and moving quickly in all directions**

Fast, widely spaced particles fill the available space.

6. **400**

$200 \times 4 = p \times 2$, so $p = 800 \div 2 = 400$.

7. **True**

Only the arrangement and energy differ, not the substance.

8. **True**

The energy is used to separate particles, not raise temperature.

9. **True**

This is Boyle's law.

10. **True**

They mix without any outside force.