2.1.2 Particulate Nature of Matter.

The particle model of matter states that all matter is made up of tiny, moving particles with spaces between them. Matter is made of particles too small to be seen that move freely around in space. The inflation and shape of balloon indicates that it is filled with a small particle of gas such as helium, hydrogen, nitrous oxide, oxygen, or air.

On other hand, from the effect of wind blowing leaves or dust, it is possible to understand the particle matter is in continuous motion. The idea that matter is made up of tiny particles is called the Particulate nature of matter.

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1. According to the particle model of matter, what is true about all matter?

a) It is made up of large visible blocks

b) It is made of particles that do not move

c) It is made up of tiny, moving particles with spaces between them

d) It cannot be compressed

2. What does the shape and inflation of a balloon demonstrate?

a) Balloons are weightless

b) Balloons are made of liquid particles

c) Gases are made of tiny particles that take up space

d) Air cannot fill a space

3. What real-life example shows that particles of matter are always in motion?

a) Ice melting in sunlight

b) Wind blowing leaves or dust

c) Water freezing into ice

d) A rock lying still

4. What does the term "particulate nature of matter" mean?

a) Matter is made up of liquids only

b) Matter is made up of waves

c) Matter is made up of continuous blocks

d) Matter is made of tiny, invisible particles

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5. Why can't we see the particles that make up matter?

a) They are too far apart

b) They are made of gas

c) They are too small to be seen with the naked eye

d) They are only found in solids

6. What does the particulate nature of matter state?

a) Matter is made of waves

b) Matter is made up of invisible light

c) Matter is made up of tiny, discrete particles

d) Matter cannot change state

7. Which of the following best shows that gas is made up of particles?

a) A stone sinks in water

b) A balloon expands when filled with air

c) A piece of metal heats up

d) Water turns into ice

8. Which of the following is NOT a feature of the particle model of matter?

a) Particles are too small to be seen

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b) Particles are always in motion

c) Particles have spaces between them

d) Particles never interact with each other

9. Why do gases spread out to fill their container?

a) Gas particles are fixed in place

b) Gas particles are very heavy

c) Gas particles move freely and quickly in all directions

d) Gases are made of liquid

10. What happens to the particles of matter when heat is added?

a) They shrink

b) They slow down

c) They disappear

d) They move faster

11. Which example shows particles moving from high concentration to low concentration?

a) A hot pan heating up food

b) Perfume spreading in a room

c) A metal bar getting longer when heated

d) Ice melting into water

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12. What is true about particles in a solid?

a) They move freely in all directions

b) They slide past each other

c) They vibrate in fixed positions

d) They have no arrangement

13. Which state of matter has the most energy in its particles?

a) Solid b) Liquid c) Gas d) Plasma

14. What causes the spreading of smell from a cooking kitchen to other rooms?

a) Sound waves b) Air pressure

c) Particle movement through diffusion d) Light reflection

15. Why are the particles of a liquid able to flow?

a) They are in fixed positions

b) They have no mass

c) They are loosely packed and can slide over one another

d) They have no volume

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