

NAME : _____

CLASS : _____

DATE : _____

1. Hot-air balloons typically fly in the early morning or late afternoon. Briefly explain why.

2. The energy of motion is called _____ energy

3. What causes particles of a substance to move faster?

- | | |
|--|--|
| <input type="checkbox"/> A Drop in temperature | <input type="checkbox"/> B Adding kinetic energy |
| <input type="checkbox"/> C Rise in temperature | <input type="checkbox"/> D losing kinetic energy |

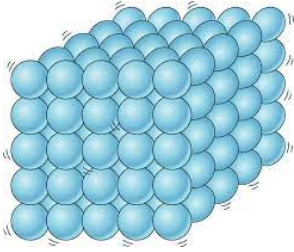
4. What causes particles of a substance to move faster?

- | | |
|--|--|
| <input type="checkbox"/> A Drop in temperature | <input type="checkbox"/> B Adding kinetic energy |
| <input type="checkbox"/> C Rise in temperature | <input type="checkbox"/> D losing kinetic energy |

5. A decrease in a material's volume when the temperature is decreased.

- | | |
|---|--|
| <input type="checkbox"/> A collision | <input type="checkbox"/> B thermal contraction |
| <input type="checkbox"/> C kinetic energy | <input type="checkbox"/> D thermal expansion |

6. These particles show a:



- | | |
|-----------------------------------|--|
| <input type="checkbox"/> A liquid | <input type="checkbox"/> B none of the above |
| <input type="checkbox"/> C solid | <input type="checkbox"/> D gas |

7. The greater the kinetic energy the _____ the temperature.

- | | |
|------------------------------------|----------------------------------|
| <input type="checkbox"/> A greater | <input type="checkbox"/> B lower |
|------------------------------------|----------------------------------|

8. When temperature increases, average _____ increases.

- | | |
|---|---|
| <input type="checkbox"/> A gravitational potential energy | <input type="checkbox"/> B potential energy |
| <input type="checkbox"/> C kinetic energy | <input type="checkbox"/> D chemical energy |

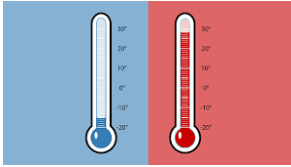
9. A large balloon is taken to a shady area and filled with cool air. The balloon is then taken to a bright, sunny location. After a short time, the balloon begins to expand. WHAT explanation does this investigation verify?

- | | |
|--|---|
| <input type="checkbox"/> A the sunlight had no effect on the balloon | <input type="checkbox"/> B A balloon filled with cool air will rise into the atmosphere |
| <input type="checkbox"/> C as particles gain energy the material takes up more space | |

10. The movement of substances from an area of high concentration to an area of low concentration.

- | | |
|--|---|
| <input type="checkbox"/> A diffusion | <input type="checkbox"/> B particles |
| <input type="checkbox"/> C temperature | <input type="checkbox"/> D kinetic energy |

11.



Temperature is a measure of _____.

☐ A

average kinetic energy

☐ B

the sum of kinetic & potential energy

☐ C

the difference of kinetic & potential energy

☐ D

average potential energy

12. A liquid thermometer works because liquid _____ when warmed.

☐ A

expands

☐ B

solidifies

☐ C

condenses

☐ D

contracts

13. Particles move in _____ with no pattern.

☐ A

a square

☐ B

random motion

☐ C

a circle

14. The faster the particles move, the less kinetic energy there is.

☐ A

False

☐ B

True

15. Particles make up all matter:

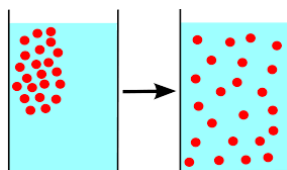
☐ A

false

☐ B

true

16.



The movement of particles from an area of higher concentration (more particles) to an area of lower concentration. The particles spread out.

☐ A

Density

☐ B

Thermal Expansion

☐ C

Diffusion

☐ D

Dissolving

17. When a substance is heated, the particles gain energy and move apart. The volume of the substance being heated _____.

☐ A stays the same

☐ B increases

☐ C decreases


18. As the kinetic energy of the particles increased, the _____ of the particles _____

☐ A space; decreased

☐ B speed; decreased

☐ C space; increased

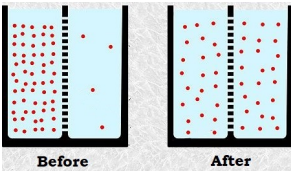
☐ D speed: increased

19.  As temperature increases, kinetic energy _____.

☐ A increases

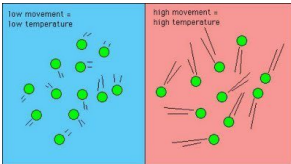
☐ B decreases

☐ C stays the same

20.  Diffusion الانتشار: the movement of particles from an area of

☐ A higher concentration to area of lower concentration.

☐ B lower concentration to area of higher concentration.

21.  which one will have more kinetic energy?

☐ A blue picture

☐ B pink picture

22. To come together with direct impact

☐ A collide

☐ B diffusion

☐ C contract

☐ D thermal

23. the movement of substances from an area of higher concentration to an area of lower concentration is called _____.

☐ A diffusion

☐ B temperature

☐ C kinetic energy

24.



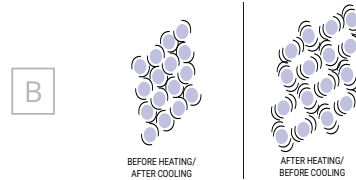
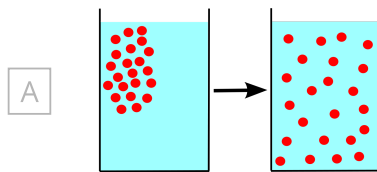
☐ A gas

☐ B solid

☐ C liquid

☐ D plasma

25. Which one is Diffusion?



26. In which glass the colour will diffuse faster?



27. an increase in a material's volume when the temperature is increased

☐ A thermal expansion

☐ B thermal contraction

28. Bars of different metals are all heated to 100°C to determine how their volume and length would be affected. Which statement describes the most likely outcome of this experiment?

☐ A All of the volumes change, but the lengths remain the same.

☐ B The volumes and lengths do not change

☐ C All of the volumes change and so do their lengths.

☐ D All of the volumes change the same amount and the lengths remain constant.

29. When particles move faster they bump into each other and need more space. This is called ____.

☐ A random motion

☐ B diffusion

☐ C thermal expansion

☐ D thermal contraction

30. what is Temperature:

☐ A the measure of the average kinetic energy

☐ B When temperature increase particles will collide more so the volume of a material will increase.

☐ C the measure of the potential energy

31. Temperature is a measure of ____ of the particles in an object.

☐ A the average potential energy

☐ B the sum of the potential energy and kinetic energy

☐ C the average kinetic energy

☐ D the difference between the potential energy and kinetic energy

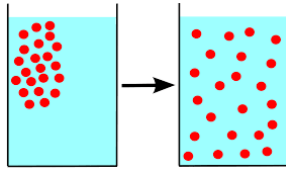
32. is the movement of particles from an area of higher concentration to an area of lower concentration

☐ A kinetic energy

☐ B diffusion

☐ C temprature

33.



The movement of particles from an area of higher concentration (more particles) to an area of lower concentration. The particles spread out.

☐ A

Diffusion

☐ B

Dissolving

☐ C

Thermal Expansion

☐ D

Density

34.

Temperature is a measure of _____ of the particles in an object.

☐ A

the average kinetic energy

☐ B

the average potential energy

☐ C

the difference between the potential energy and kinetic energy

☐ D

the sum of the potential energy and kinetic energy

35.



What can you add to this liquid particulate model to show *increased* energy?

☐ A

arrows

☐ B

more curved lines to each particle

☐ C

the energy cannot be increased

36.

_____ is the measure of the average kinetic energy of the particles in a material.

☐ A

Thermal expansion

☐ B

Temperature

☐ C

Thermodynamics

37.

movement in all directions and at different speed

☐ A

diffusion

☐ B

random motion

☐ C

thermal heated

38. which one have more total energy?

A



B



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39. Hot-air balloons typically fly in the early morning or late afternoon.
Briefly explain why.

A

The cool air is denser, which allows the balloon to rise more easily.

B

The cold air has no density, and the balloon is not allowed to rise

C

Cold air is more dense, and the balloon is not allowed to rise

D

The cool air is less dense, allowing the balloon to rise more easily.

40. Most highway bridges are built with expansion joints that can move back and forth. What is the reason for this?

A

to give and go during severe weather to keep the bridge stable

B

to allow the highway to expand or contract with temperature changes without damaging the bridge

C

to transfer the weight of the cars more evenly across the bridge