

Choose the correct answer.

Most matter _____ when heated.

- a. condenses
- b. contracts
- c. expands
- d. solidifies

The amount of energy needed to change a material from a solid to a liquid is called the heat of _____.

- a. Condensation
- b. Evaporation
- c. fusion
- d. vaporization

The amount of energy needed to change a material from a liquid to a gas is called the heat of _____.

- a. Condensation
- b. Evaporation
- c. fusion
- d. vaporization

A(n) _____ is **NOT** homogeneous.

- a. suspension
- b. element
- c. compound
- d. solution

The scattering of light by colloids is called _____.

- a. the Tyndall effect
- b. conservation
- c. air pollution
- d. Suspension

Three examples of physical changes are _____.

- a. freezing of water, evaporation of gasoline, and rusting of a nail
- b. boiling of water, bursting of a balloon, and melting of a candle
- c. sawing of wood, crushing of a can, and toasting a marshmallow
- d. burning of gasoline, rotting of an egg, and exploding of fireworks

Matter in which the particles are free to move in all directions until they have spread evenly throughout their container is a _____.

- a. solid** **b. liquid** **c. buoyant** **d. gas**

As a sample of matter is heated, its particles _____.

- a. stop moving** **c. move more quickly**
b. move more slowly **d. are unaffected**

When two or more substances are combined so that each substance maintains its own properties, the result is a(n) _____.

- a. chemical change** **c. compound**
b. element **d. mixture**

When gasoline is burned in an engine, _____.

- a. gasoline evaporates** **c. mass is lost**
b. new substances are formed **d. mass is gained**

When a log burns in a fire, _____.

- a. a physical change has occurred** **c. mass is lost**
b. mass is gained **d. new substances are formed**

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About _____ elements are found on Earth.

- a. 9** **b. 90** **c. 900** **d. 9,000**

A(n) _____ is a homogeneous mixture of particles so small they cannot be seen without microscopes and will never settle to the bottom of their container.

- a. solution** **b. element** **c. molecule** **d. plasma**

A(n) _____ is a mixture that does not scatter light.

- a. solution b. colloid c. suspension d. element

The most common state of matter in the universe is _____.

- a. solid b. liquid c. gas d. plasma

_____ is the term used to explain how hot or cold an object is.

- a. Mass b. Weight c. Temperature d. Volume

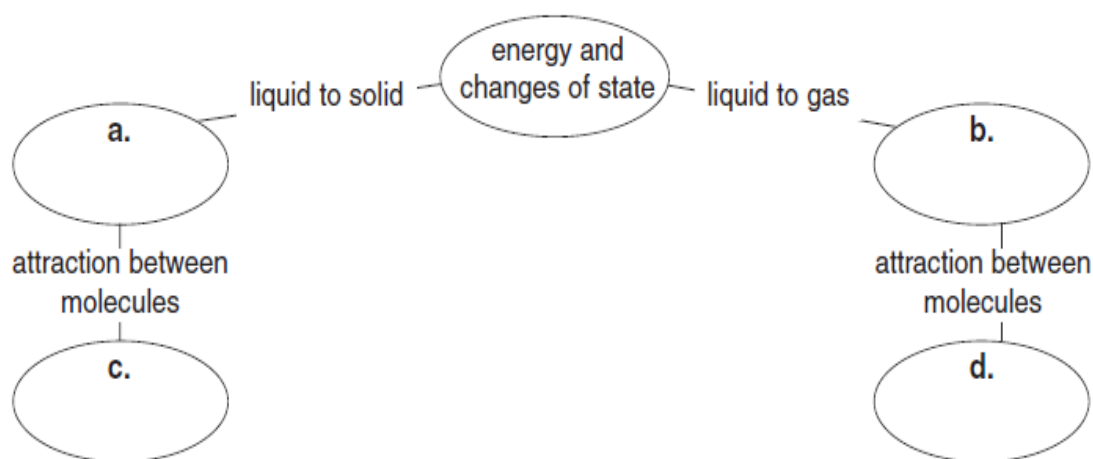
The temperature at which a solid begins to liquefy is its _____ point.

- a. freezing b. boiling c. melting d. mass

The kinetic energy of particles in a liquid is _____ the kinetic energy of particles in a solid.

- a. more than b. less than c. the same as d. none of these

Use the labels **heat of vaporization**, **heat of fusion**, **stronger**, and **broken** to complete the concept map about energy and changes the state.



Label each of the following as: physical property, physical change, chemical property, or chemical change.

1. sharpening a pencil -----
2. flammability of a substance -----
3. size of an object -----
4. inflating a tire-----
5. freezing point-----
6. drawing copper into wire -----
7. corrosion of bicycle frame -----
8. fragrance of a flower -----
9. formation of water when hydrogen burns -----
10. boiling water -----

Where you might find plasma?

Explain why do gases fill the container they are in, rather than staying in just one part of it?

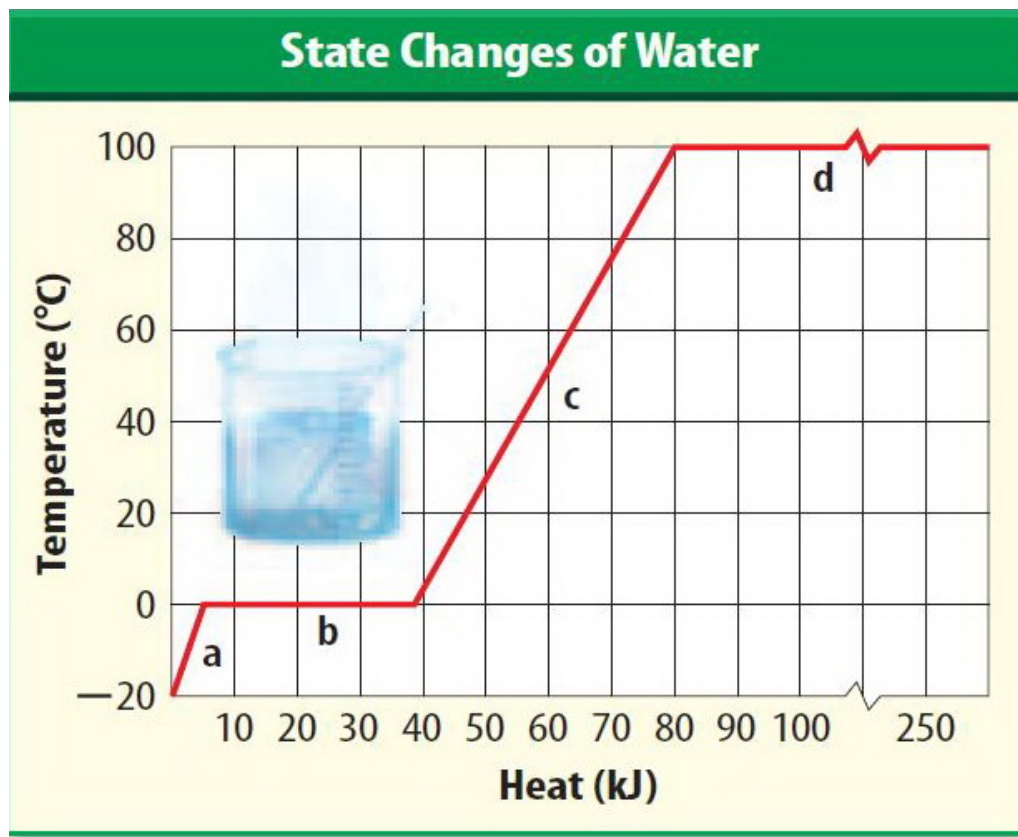
Why should you never leave spray cans near a heat source?

What are the three assumptions of the kinetic theory?

Define thermal energy?

How are kinetic energy and temperature related?

Using the below graph, describe the energy changes that are occurring when water goes from -20°C to 100°C .



Explain why diffusion in gases is faster than in liquids/ solids

Explain why amorphous solids melt over a temperature range

List some examples of amorphous solids.

Why flammability is a chemical property rather than a physical property?

State the law of conservation of mass.

In the following reaction $2\text{Bi} + 3\text{F}_2 \rightarrow 2\text{BiF}_3$

If 417.96g of Bi(Bismuth) react completely with 200g of F (Fluorine). How many grams of BiF_3 are formed?

What physical property could you use to separate a solution of two liquids?