DIFFUSION

Date:_____

Name:_____

Class:_____

1 Diffusion is the natural movement of molecules from:

A Areas of low concentration to areas of high concentration

B Areas of high concentration to areas of low concentration

C Cold to hot environments

D Gaseous to liquid environments

2 Which of the following describes molecules moving down a concentration gradient?

A Sugar settling at the bottom of a water glass

B A cell with lots of water in it absorbing even more water

C A bottle of soda in which bubbles of carbon dioxide are evenly distributed

D Warm air moving from a radiator to fill up a room

3 Which of the following describes a state of equilibrium?

A A group of molecules that have stopped moving completely

B A room whose temperature is consistent throughout

C Carbon dioxide bubbles escaping from a soda bottle when it's opened

D A tree's roots absorbing nutrients from the soil

4 When do molecules stop moving or vibrating?

A When equilibrium is reached

B Never

C When the temperature is below 0 degrees Celsius

D When the substance they are part of becomes a solid

5 What causes diffusion?

A The constant, random motion of molecules

B Magnetic attraction between atoms

C The nuclear forces that hold atoms together

D The tendency of atoms to form chemical bonds with one another

6 From fastest to slowest rate of diffusion, which of the following is in the correct sequence?

A Solids, liquids, gases

B Liquids, gases, solids

C Gases, liquids, solids

D Gases, solids, liquids

7 Which of the following will diffuse the fastest?

A A tablespoon of sugar in a glass of water

B Heat through a solid piece of steel

C A pinch of salt in a glass of water

D The smell of bacon cooking throughout a room

8 Why is diffusion so important in biology?

A It's the basic power source for most types of cells

B It allows substances to move across cell membranes

C It prevents toxins from entering our bodies

D Without diffusion, cell division could not take place

9 **What do the sun and a lightbulb have in common?**

A They both generate electricity

B They both emit thermal radiation

C Their molecules are both in a state of equilibrium

D They both absorb thermal energy

10 What causes an electric current to move through a wire?

A Electrons diffusing from the charged part of the wire to the uncharged part

B Positrons diffusing from the hot part of the wire to the cooler part

C Protons diffusing from the power source to the load

D Neutrons diffusing up a concentration gradient

© 1999-2015 BrainPOP. All rights reserved. Visit us at