Mix and Flow of Matter - Section 2.0 - Quiz
The properties of mixtures and fluids can be explained by the particle model of matter.
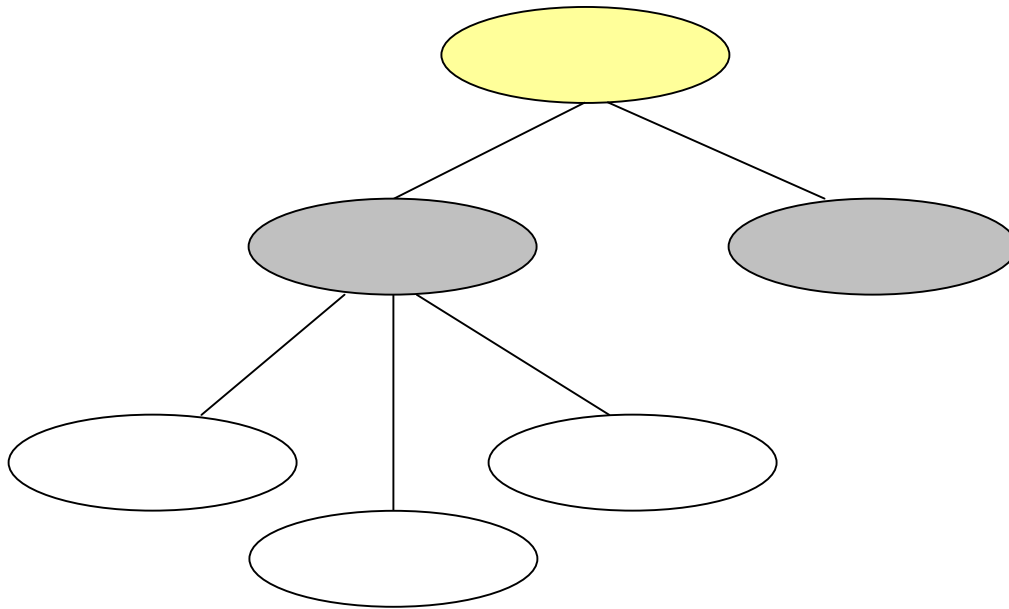
_____   _____
Student Name   Class

1. Use the following words to complete a visual organizer, showing the relationships between and among the words provided. Use each word only once.

Pure Substances,   Matter, Solutions, Mixtures,

Mechanical Mixtures, Suspensions and Colloids

2. Mixtures can be made with solids, liquids or gases. The kind of mixture or solution that is referred to as _**heterogeneous**_ is a mixture or solution which …
A. is clear
B. is cloudy
C. appears as a single substance
D. all the parts are visible

3. For some fluids, _**paper chromatography**_ is a test that determines whether a substance is a ...
A. mixture or a colloid
B. pure substance or a mixture
C. colloid or suspension
D. mixture or suspension

4. An insulating foam is sprayed into cracks to seal them. The gas and liquid together make a ...
A. colloid
B. suspension
C. mechanical mixture
D. solution

5. At school we use coffee filter paper to investigate the process of paper chromatography. The filter paper is called a ...
A. chromatogram
B. chromatograph
C. filtrate
D. pH indicator

4. When a substance, such as sugar, dissolves in water, the particles *intermingle*. This is possible because the particles of sugar ...
A. are pure

B. have strong attractions to each other

C. have spaces between them

D. are vaporized

8. In *concentrated* solutions, there are large amounts of ...
A. empty spaces
B. diluted particles
C. solvent in the solute
D. solute in the solvent

9. *Concentration* amounts can be stated in many different ways. 50g per 100ml is one common way. Another way is to express it as a *percent*, like they do in juice containers. If an apple juice Tetra Pak had 20 grams of apple juice per 100ml, the concentration would be …
A. 2%
B. 8%
C. 20%
D. 80%

10. When comparing concentrations of different solutions, it is necessary to compare the concentrations in the same volume. Which of the following solutions would have the *highest* concentration?
A. 5.6g per 10ml
B. 12g per 25ml
C. 25g per 50ml
D. 50%

11. The difference between a *saturated* and *unsaturated* solution is that an unsaturated solution can dissolve more …
A. solvent
B. solute
C. particles
D. spaces

12. Solubility is the maximum amount of solute that you can add to a fixed volume of solvent at a given …
A. depth
B. time
C. temperature
D. place

13. Solubility is affected by a number of *factors* including all of the following, EXCEPT ...
    A. temperature
    B. agitation
    C. type of solute
    D. type of solvent

14. Water is referred to as the *universal solvent*, because it can dissolve so many different substances. To identify a solution that contains water as the solvent, chemists use the term ...
    A. aqueous
    B. agitated
    C. watery
    D. evaporated

15. A common solution in which the solute is solid and the solvent is liquid is …
    A. antifreeze
    B. air
    C. rubber cement
    D. saltwater

16. For most common solid or liquid substances, solubility increases as temperature increases. This is NOT the case with ...
    A. alcohol
    B. gases
    C. ethanol
    D. water

17. *Diffusion* occurs when the particles of a solute ...
    A. are heated and cooled very quickly
    B. fill the spaces between the particles of the solvent
    C. are dissolved by a change of state
    D. attach to particles of the solvent

18. Dissolving occurs when a solute and a solvent are added together. The factors that affect the *rate* of dissolving are ...
    A. type of solute, type of solvent, temperature
    B. agitation, temperature, solubility
    C. temperature, size of pieces, agitation
    D. type of agitation, temperature, type of solvent