 7th Grade 10/29/15

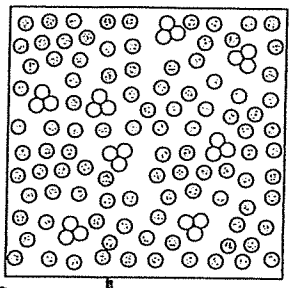
3rd Hour & 4th Hour

It's All Mixed Up

Complete this worksheet after you finish reading the section "Mixtures."

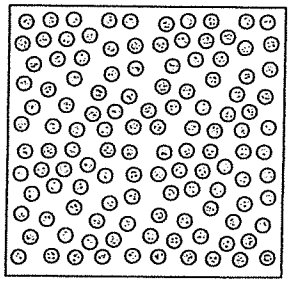
Label each figure below with the type of substance it BEST models: colloid, compound, element, solution, or suspension.

1.



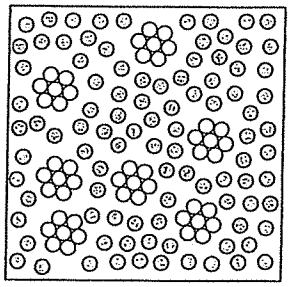
Colloid

2.



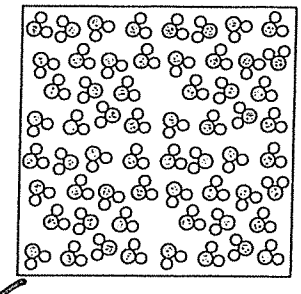
Compound

3.



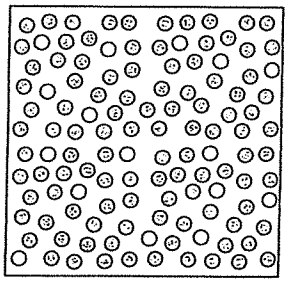
Element

4.



Suspension

5.



Solution

Name _____ Class _____ Date _____

Reinforcement *continued*

6. Why did you label the figures on the previous page as you did?

#3 - Particles identical - part of same substance
#2 - Particles identical BUT made of 2 different substances
#4 - Largest clumps of the solute
#1 - Second largest clumps
#5 - Most homogeneous mix

Because 2 different types of particles.

PROFESSOR JUMBLE'S CONFUSION

In her lab, Professor Jumble has four shelves labeled "Suspensions," "Solutions," "Compounds," and "Colloids," respectively. Last night, the professor set one beaker of clear liquid on each of the four shelves. When the professor walked into her lab this morning, all four beakers were on the same shelf, and she didn't know which was which. She tested each beaker, and the results are below.

7. Use the test results to help Professor Jumble unjumble the beakers, and write the identity of each liquid in the blanks.

Beaker A: Solution • Light passes right through. • Particles do not separate in a centrifuge or a filter. • Upon heating, the liquid evaporates, and a crystal powder remains.	Beaker C: Suspension • Liquid scatters light. • Liquid centrifuged into two different-colored layers. • Particles were left behind in the filter.
Beaker B: Compound • Light passes right through. • Particles do not separate in a centrifuge or a filter. • Upon heating, the liquid evaporates, but no residue remains. • The particles could not be separated by any other physical changes.	Beaker D: Colloid • Liquid scatters light. • Liquid passes through a filter without leaving a residue.

Name _____ Class _____ Date _____

Skills Worksheet

Critical Thinking

Jet Smart

You receive this letter from a top-secret airplane manufacturer:

Agent X:

We were impressed by your work on our flying saucer project. Your help is now needed in the design of our newest stealth airplane, the FX-2000. *We need your help with one simple but important matter—selecting the best metal for the plane's engines. Our team has narrowed the choices to two metals: titanium and platinum. Your mission is to gather facts about titanium and platinum, compare their properties, and recommend the better material. Report your answer within 24 hours.*

You immediately turn to your reference books and study the properties of the two metals.

Platinium

- a precious metal
- density: 21.4 g/cm^3
- resists corrosion
- melting point: 1,772°C
- weaker than steel

Titanium

- a metal
- density: 4.51 g/cm^3
- resists corrosion
- melting point: 1,675°C
- as strong as steel

USEFUL TERM

corrosion wearing away gradually by rusting or the action of chemicals

MAKING COMPARISONS

1. How are platinum and titanium similar? How are they different?