Chemistry Worksheet: Matter #1

1.	A mixture (is/is not) a chemical combining of substances.					
2.	In a compound the (atoms/molecules) are (chemically/physically) combined so that the elements that make up the compound (retain/lose their identities and (do/do not) take on a new set of properties.					
3.	The smallest identifiable unit of a compound is a(n), which is made up of which are chemically bonded.					
4.	True or False: A mixture is always made up of a combination of elements					
5.	In a mixture, the substances (lose/retain) their identities.					
6.	In a mixture the substances involved (can/cannot) be separated by a simple physical process. In a compound the elements involved (can/cannot) be separated by a simple physical process because the elements are (physically combined/chemically bonded).					
7.	True or False: An element can be broken down into a simpler substance.					
8.	The smallest identifiable unit of an element is a(n)					
silve wate oxyg		carbon dioxide hydrogen gold	bstances, circle the on wood alcohol carbon sugar magnesium	chromium nitrogen salt		
10.	Explain h water.	ow to separate the	sugar and water in a s	olution of sugar and		
11.	. How would you separate a mixture of alcohol and water?					
12.	How would you separate sand and water?					

13. Classify the following as pure substances or as mixtures:

air gasoline grain alcohol

water sugar gold

mercury oxygen salt water

14. Classify the following as heterogeneous or as homogeneous:

sand & salt mixture hydrogen iron

salt water unfiltered air iron with rust

pure water an apple nitric acid

tossed salad granite wood

15. Classify the following as an element, a compound, a solution, or a heterogeneous mixture:

aluminum raisin bread

carbon dioxide water

sugar and water sulfur

sulfuric acid mercury

an orange water & instant coffee

a pencil carbon particles & sugar

nitrogen air

gasoline grain alcohol

Elements, Compounds, and Mixtures

Classify each of the pictures below by placing the correct label in the blanks below:

A= Element

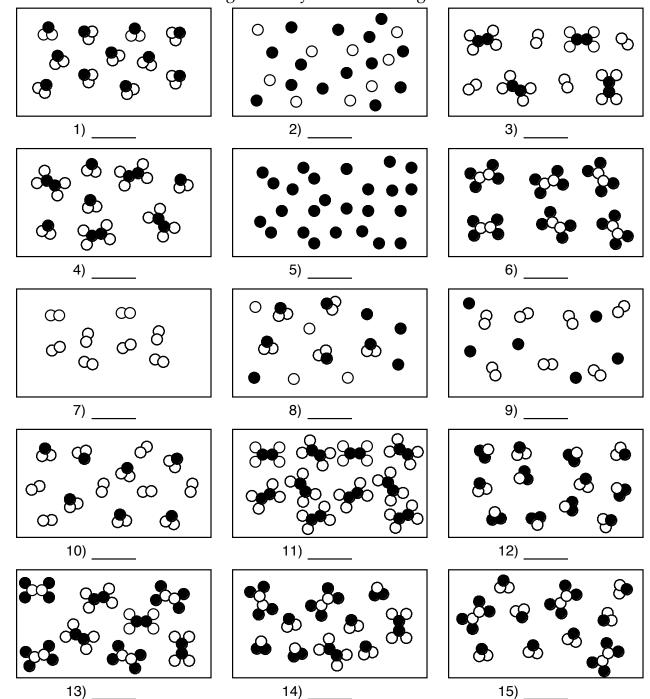
D= Mixture of compounds

B= Compound

E= Mixture of elements and compounds

C= Mixture of elements

Each circle represents an atom and each different color represents a different kind of atom. If two atoms are touching then they are bonded together.



Physical and Chemical Changes

Name:	
Date:	Hour:

Place a check in the appropriate column:

Change	Physical Change	Chemical Change
Salt dissolves in water.		
Hydrochloric acid reacts with magnesium to produce hydrogen gas.		
A piece of copper is cut in half.		
A sugar cube is ground up.		
Water is heated and changed to steam.		
Iron rusts.		
Ethyl alcohol evaporates.		
Ice melts.		
Milk sours (goes bad).		
Sugar dissolves in water.		
Sodium and potassium react violently with water.		
Pancakes cook on a griddle.		
Grass grows on a lawn.		
A tire is inflated with air.		
Food is digested in the stomach.		
Water is absorbed by a paper towel.		
Ethyl alcohol boils at 79°C.		
Paper burns.		
Water freezes at 0°C.		
Fireworks explode.		
Alka-Seltzer gives off carbon dioxide when added to water.		
Clouds form in the sky.		

NAME										

INSTRUCTIONS: Write E in the blank if the material is <i>heterogeneous</i> or O if it is <i>homogeneous</i> .					
1. Wood	6. Dirt				
2. Freshly-brewed black coffee	7. Sausage-and-mushroom pizza				
3. Water	8. Air				
4. Lucky Charms [®]	9. Milk				
5. Salt	10. Gold				
INSTRUCTIONS: Classify each of the following as an <i>element</i> [E], a <i>compound</i> [C], or a <i>mixture</i> [M].					
11. Gold	16. Air				
12. Water	17. Carbon dioxide				
13. Seawater	18. Silver				
14. Sugar	19. Ice				
15. A chocolate sundae	20. A Big Mac [®]				
INSTRUCTIONS: Classify each of the following properties of matter as <i>physical</i> [P] or <i>chemical</i> [C].					
21. Color	26. Reacts violently with chlorine				
22. Density	27. Good conductor of heat				
23. Burns easily (flammable)	28. Dissolves readily in water				
24. Not affected by acids	29. Melts at 145 °C				
25. Boils at 450 °C	30. Malleable				
INSTRUCTIONS: Classify each of the following changes in matter as <i>physical</i> [P] or <i>chemical</i> [C].					
31. Grinding chalk into powder	36. Burning gasoline				
32. Dissolving salt in water	37. Hammering gold into foil				
33. Dissolving zinc in acid	38. Melting ice				
34. Tearing a piece of paper	39. Digesting food				
35. Stretching copper into wire	40. Making hydrogen from water				
INSTRUCTIONS: Classify each of the following as an <i>intensive property</i> [I] or an <i>extensive property</i> [E].					
41. Mass	46. Color				
42. Density	47. Volume				
43. Melting point	48. Lenath				

Getting To Know the Periodic Table

Write the symbol of each element that is a liquid at ordinary condition in Write the symbol of each element that is a man-made element as an Place the atomic number for each element above the symbol. purple yellow 10. Place the atomic number for each element above 1. 11. Use the following chart to color the periodic table. red Alkaline earth metals Alkali metals outline. Example: Pm Noble gases Halogen 6 ∞: Write the name of each of the following groups above the number: Draw a heavy black line between the metals and nonmetals. (collectively) transition metals Noble gases Group 2 alkaline earth metal chalcogens halogens Group 1 alkali metals Number the periods Number the groups. Group 3-12 Group 16 Group 18 Group 17 1 2 8 4

12. Outline the symbol's box in dark green if it is RADIOACTIVE in its most

orange light blue

green brown

Transition elements

Write the names of the two rows at the bottom of the chart: lanthanides

Write the symbol of each element that is a solid at ordinary conditions in

Write the symbol of each element that exists as a gas at ordinary

conditions in RED.

۲.

and actinides

6.

Ŀ.

Chalcogens Lanthanides

Actinides

common form.

