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)								
9. From the silver water oxygen air		carbon dioxide hydrogen	substances, circle the o wood alcohol carbon sugar magnesium	ones that are elements: chromium nitrogen salt nickel					
10.	Explain h water.	ow to separate th	ne sugar and water in a	solution of sugar and					
11.	How wou	ld you separate a	mixture of alcohol and	d water?					
12.	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

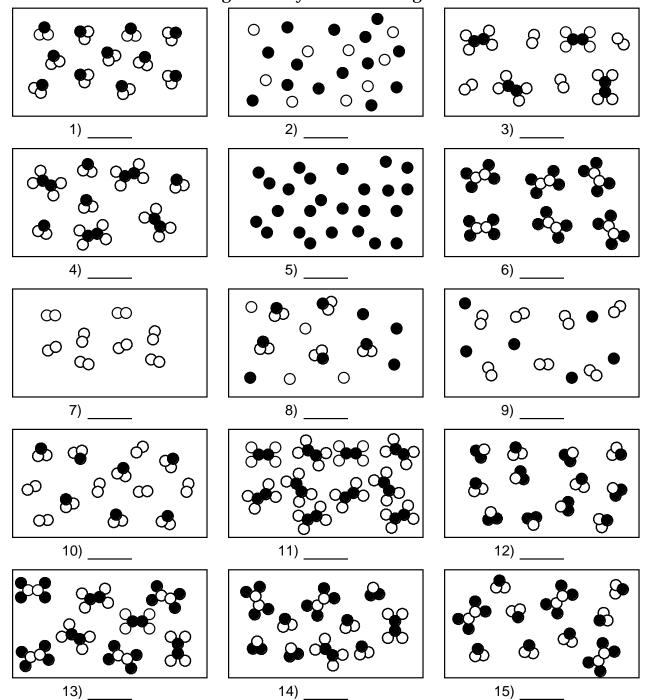
D= Mixture of compounds

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		Chemistry I Worksheet Classification of Matter and Chai					
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.					
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 intensive property [I] or an extensive property [E].							
41. Mass		46.	Color				

47. Volume

48. Length

42. Density

43. Melting point

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 light blue Actinides common form. Write the symbol of each element that is a solid at ordinary conditions in conditions in RED.

orange

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 exists as a gas at ordinary

and actinides

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Chalcogens Lanthanides

