

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

A. Look at the chemical formula provided in each row. Then, fill in the table by answering the following:

Substance	How many atoms per particle	How many kinds of atoms per particle	Element or Compound
Sugar ( $C_{12}H_{22}O_{11}$ )	$12 + 22 + 11 = 45$ atoms	3 kinds: C, H, O	Compound
Magnesium (Mg)	1	1 kind: Mg	Element
Iron filings (Fe)			
Limestone ( $CaCO_3$ )			
Acetylene ( $C_2H_2$ )			
Benzene ( $C_6H_6$ )			
Aluminum (Al)			
Water ( $H_2O$ )			
Table Salt (NaCl)			
Oxygen gas ( $O_2$ )			
Carbon Dioxide ( $CO_2$ )			
Ammonia ( $NH_3$ )			
Hydrochloric Acid (HCl)			
Nitrogen gas ( $N_2$ )			
Methane ( $CH_4$ )			

B. Read each mixture or solution description carefully. Then, in the spaces provided, **identify the solute and the solvent**.

- The **solute** is the substance that gets dissolved.
- The **solvent** is the substance that does the dissolving (usually the one in greater amount).

No.	Mixture/Solution Description	Solute	Solvent
1	Salt dissolved in water (Saltwater)	Salt	Water
2	Sugar dissolved in water (Sugar solution)		
3	Vinegar (acetic acid dissolved in water)		
4	Soda (carbon dioxide dissolved in water)		
5	Lemonade (lemon juice and sugar mixed in water)		
6	Air (oxygen, carbon dioxide, etc. mixed in nitrogen)		
7	Bronze (tin mixed into copper)		
8	Alcohol and water (more water than alcohol)		
9	Tea (flavor and sugar particles mixed in hot water)		
10	Coffee with milk and sugar		

**Domain: 4.7**  
describes observed properties of substances using scientific models and theories

20. On your Periodic Table:

- \* colour in the elements which are gases;
- \* colour in the elements which are liquids.

Include a suitable key e.g.



21. Complete the following table by finding the information on your Periodic Table:

Element	Atomic Number	Symbol	State (s, l or g)	Element	Atomic Number	Symbol	State (s, l or g)
Hydrogen	1			Argon	18		
Helium	2			Potassium	19		
Lithium	3			Calcium	20		
Beryllium	4			Iron	26		
Boron	5			Copper	29		
Carbon	6			Zinc	30		
Nitrogen	7			Bromine	35		
Oxygen	8			Silver	47		
Fluorine	9			Tin	50		
Neon	10			Iodine	53		
Sodium	11			Barium	56		
Magnesium	12			Platinum	78		
Aluminium	13			Gold	79		
Silicon	14			Mercury	80		
Phosphorus	15			Lead	82		
Sulfur	16			Uranium	92		
Chlorine	17						