

Name: _____

Block: _____

Directions: In your own words, define the following terms. After defining each term, draw an example. Once you are finished with this page, complete the Elements, Compounds, and Mixtures worksheet.

Element	Heterogeneous mixture
Compound	Coefficient
Homogeneous mixture	Subscript

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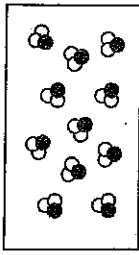
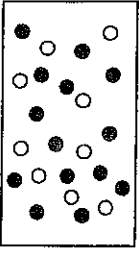
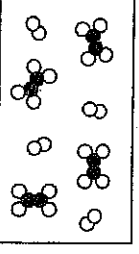
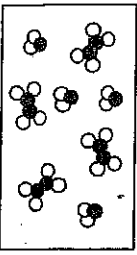
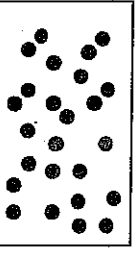
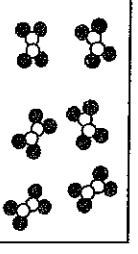
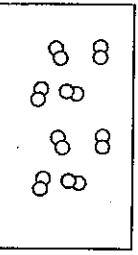
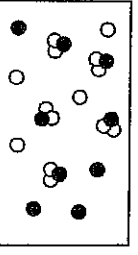
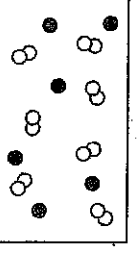
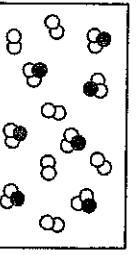
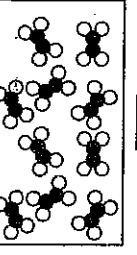

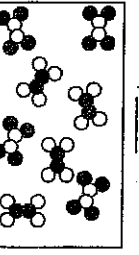


Elements, Compounds, and Mixtures

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

- A = Element
- B = Compound
- C = Mixture of elements

- D = Mixture of compounds
- E = Mixture of elements and compounds
- f = mixture of molecules and compounds
- g = molecule
- h = mixture of molecules and element

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.

 1) _____	 2) _____	 3) _____
 4) _____	 5) _____	 6) _____
 7) _____	 8) _____	 9) _____
 10) _____	 11) _____	 12) _____
 13) _____	 14) _____	 15) _____

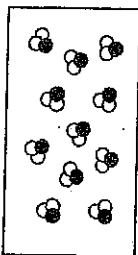
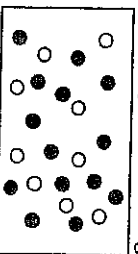
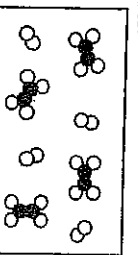
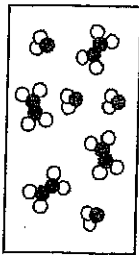
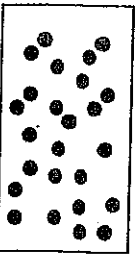

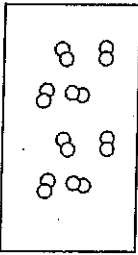
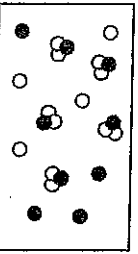
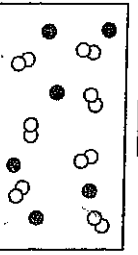
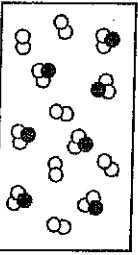
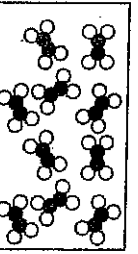

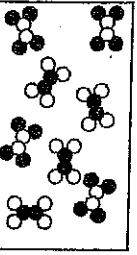
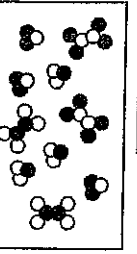

Elements, Compounds, and Mixtures

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

- A = Element
- B = Compound
- C = Mixture of elements

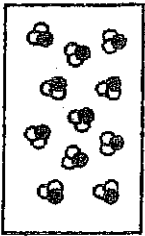
- D = Mixture of compounds
- E = Mixture of elements and compounds
- f = mixture of molecules and compounds
- g = molecule
- h = mixture of molecules and element

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.

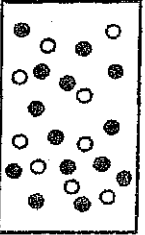
 1) _____	 2) _____	 3) _____
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Name: _____

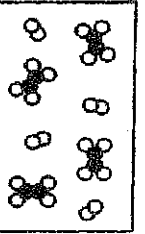
With the same examples below, assume the black circles are carbon atoms & the white circles are hydrogen atoms. Use coefficients & subscripts to identify the contents in each box. The first 2 have been done for you. Finish the rest. Good luck!



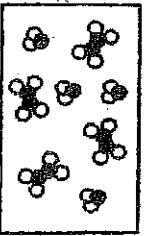
1) 11CH_4



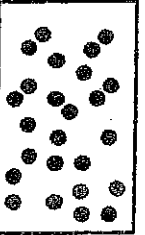
2) $12 \text{C} + 9 \text{H}$



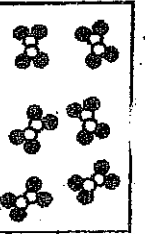
3)



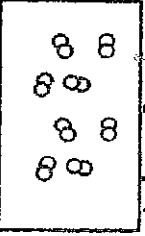
4)



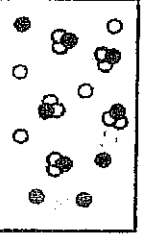
5)



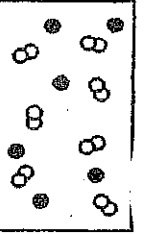
6)



7)



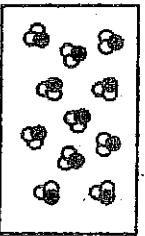
8)



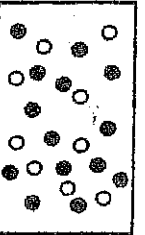
9)

Name: _____

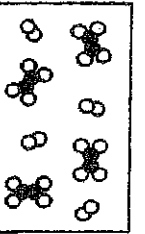
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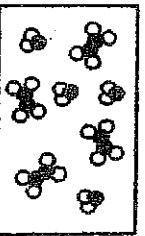
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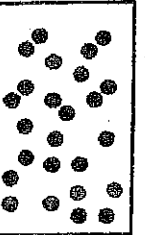
2) $12 \text{C} + 9 \text{H}$



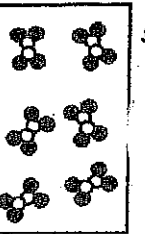
3)



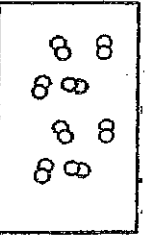
4)



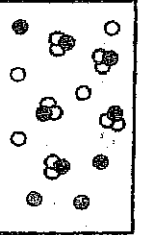
5)



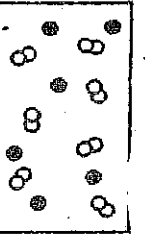
6)



7)



8)



9)

Worksheet: Classification of Matter

Classify each of the following as an element, compound, homogeneous solution or heterogeneous mixture.

1. Table Salt
2. Apple
3. Plutonium
4. Water
5. Calcium
6. Raisin Bran
7. Gasoline
8. Calcium Bromide
9. Iced Tea (no ice)
10. Silver
11. Chocolate Camp Cookie
12. Carbon Dioxide
13. Kaol-Aid
14. Mud
15. Vegetable Soup
16. Pure Air
17. Bronze
18. Neon
19. Ammonium Nitrate
20. Spaghetti and meatballs
21. Ethanol (ethyl alcohol) and water will form a solution. Both are liquids at room temperature. How is it determined which one is the solvent?
22. Sugar is dissolved in a cup of hot coffee. Is the sugar a solute or solvent? How do you know?
23. State a difference between a compound and a solution.
24. State a difference between a compound and an element.
25. State a difference between a solution and a heterogeneous mixture.

Name: _____ KEY

Date: _____

CLASSIFICATION OF MATTER WORKSHEET

Period: _____

HOMOGENEOUS VS. HETEROGENEOUS MATTER

Classify the following types of matter as either homogeneous or heterogeneous.

- | | |
|---------------------------------------|----------------------------|
| 1. carbonated soft drink (w/ bubbles) | 9. air (with smog) |
| 2. chocolate chip ice cream | 10. paint |
| 3. Italian salad dressing | 11. rubbing alcohol |
| 4. corn syrup | 12. full fat milk |
| 5. soil | 13. beach sand |
| 6. aluminum foil | 14. pure air |
| 7. black coffee | 15. chunky spaghetti sauce |
| 8. sugar water | |

PURE SUBSTANCES VS. MIXTURES

Classify the following as pure substances (element or compound) or mixtures.

- | | |
|-------------------------|------------------------------|
| 1. sodium | 11. iron |
| 2. water | 12. salt water |
| 3. soil | 13. chocolate chip ice cream |
| 4. coffee | 14. nitrogen |
| 5. oxygen | 15. Eggs |
| 6. isopropyl alcohol | 16. Blood |
| 7. carbon dioxide | 17. table salt |
| 8. cake batter | 18. nail polish |
| 9. air | 19. milk |
| 10. chicken noodle soup | 20. Soda |