

Chemistry Chapter 1 Worksheet

Name: _____

Provide a short and specific definition in YOUR OWN WORDS. Do not use the definition from the book

Additional Notes:

Atom _____

Change of State _____

Chemical _____

Chemical Change _____

Chemical Property _____

Chemical Reaction _____

Chemistry _____

Compound _____

Element _____

Extensive Property _____

Family _____

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Gas _____

Group _____

Heterogeneous Mixture _____

Homogeneous Mixture _____

Intensive Property _____

Liquid _____

Mass _____

Matter _____

Metal _____

Metalloid _____

Mixture _____

Nonmetal _____

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Period _____

Physical Change _____

Physical Property _____

Plasma _____

Product _____

Pure Substance _____

Reactant _____

Solid _____

Chemistry Chapter 1 Worksheet

Section 1.1

1. List and define the 6 major branches of chemistry.

Branch of Chemistry	Definition (in your own words)

2. Explain (in your own words) what chemistry is.
3. Compare and contrast basic research and applied research.
4. Name something that is not made of a chemical.
5. Name 2 instruments that may be used in chemistry.
- a. _____
- b. _____
6. Chemistry is usually classified as
- a. a social science.
 - b. a biological science
 - c. a physical science
 - d. a computer science.

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Section 1.2

7. Classify each of the following as a homogeneous mixture or a homogeneous substance.
- _____ A chunk of granite
 - _____ A can of Dt. Mountain Dew
 - _____ A tank of Oxygen
 - _____ A box of Gravel
 - _____ A jar of red and green marbles
 - _____ A glass of pure water
8. Compare and contrast weight and mass.
9. Classify each of the following as a physical or chemical change.
- _____ Water boiling
 - _____ Metal rusting
 - _____ Paper burning
 - _____ Folding paper
10. Compare and contrast physical changes and chemical changes.
11. Compare and contrast homogeneous mixtures and heterogeneous mixtures.
12. Compare and contrast an element and a compd.
13. Compare and contrast and extensive property and an intensive property.

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14. Classify each of the following as an extensive property or an intensive property.

- a. _____ Red
- b. _____ Boils at 100 °C
- c. _____ A mass of 37 grams
- d. _____ Round
- e. _____ Density of 1.3 g/mL
- f. _____ A solid turning into a liquid

15. Explain how an atom and an element are related.

16. List the four states of matter and give 2 examples of each.

State of matter	Examples

17. Is your mass larger or smaller on the moon? Explain.

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365

MrG

Mr. Gunkelman

18. List the 4 states of matter (from least NRG to most NRG) and indicate if they have a definite shape or not and if they have a definite volume or not.

State of matter	Definite shape	Definite volume

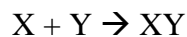
19. Compare and contrast physical changes and physical properties.

20. Compare and contrast chemical changes and chemical properties.

21. Classify each of the following as a physical or chemical property.

- a. _____ Bendable
- b. _____ Fizzing
- c. _____ Burning
- d. _____ Boiling point

22. CIRCLE the product(s) and put a RECTANGLE around the reactant(s).



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365

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23. List the 4 things that indicate a chemical rxn has taken place.

a. _____

b. _____

c. _____

d. _____

24. What is the difference between a mixture and a pure substance?

25. Can a mixture BE a pure substance?

Chemistry Chapter 1 Worksheet

Section 1.3

26. Identify a Group (G), Family (F), Nobel Gasses (N), and Period (P) on the Periodic Table below. Also, use a red pencil to outline the metals, a green pencil to outline the nonmetals, and a purple pencil to outline the metalloids.

BLANK PERIODIC TABLE

The diagram shows a blank periodic table grid. The grid is composed of several rows and columns. A thick black zig-zag line is drawn across the grid to separate the metals (to the left) from the nonmetals (to the right). The zig-zag line starts at the top of the first column on the right side, moves left to the second column, then down to the third column, then right to the fourth column, then down to the fifth column, then right to the sixth column, then down to the seventh column, then right to the eighth column, then down to the ninth column, then right to the tenth column, then down to the eleventh column, then right to the twelfth column, then down to the thirteenth column, then right to the fourteenth column, then down to the fifteenth column, then right to the sixteenth column, then down to the seventeenth column, then right to the eighteenth column, then down to the nineteenth column, then right to the twentieth column, then down to the twenty-first column, then right to the twenty-second column, then down to the twenty-third column, then right to the twenty-fourth column, then down to the twenty-fifth column, then right to the twenty-sixth column, then down to the twenty-seventh column, then right to the twenty-eighth column, then down to the twenty-ninth column, then right to the thirtieth column, then down to the thirty-first column, then right to the thirty-second column, then down to the thirty-third column, then right to the thirty-fourth column, then down to the thirty-fifth column, then right to the thirty-sixth column, then down to the thirty-seventh column, then right to the thirty-eighth column, then down to the thirty-ninth column, then right to the fortieth column, then down to the forty-first column, then right to the forty-second column, then down to the forty-third column, then right to the forty-fourth column, then down to the forty-fifth column, then right to the forty-sixth column, then down to the forty-seventh column, then right to the forty-eighth column, then down to the forty-ninth column, then right to the fiftieth column, then down to the fifty-first column, then right to the fifty-second column, then down to the fifty-third column, then right to the fifty-fourth column, then down to the fifty-fifth column, then right to the fifty-sixth column, then down to the fifty-seventh column, then right to the fifty-eighth column, then down to the fifty-ninth column, then right to the sixtieth column, then down to the sixty-first column, then right to the sixty-second column, then down to the sixty-third column, then right to the sixty-fourth column, then down to the sixty-fifth column, then right to the sixty-sixth column, then down to the sixty-seventh column, then right to the sixty-eighth column, then down to the sixty-ninth column, then right to the seventieth column, then down to the seventy-first column, then right to the seventy-second column, then down to the seventy-third column, then right to the seventy-fourth column, then down to the seventy-fifth column, then right to the seventy-sixth column, then down to the seventy-seventh column, then right to the seventy-eighth column, then down to the seventy-ninth column, then right to the eightieth column, then down to the eighty-first column, then right to the eighty-second column, then down to the eighty-third column, then right to the eighty-fourth column, then down to the eighty-fifth column, then right to the eighty-sixth column, then down to the eighty-seventh column, then right to the eighty-eighth column, then down to the eighty-ninth column, then right to the ninetieth column, then down to the ninety-first column, then right to the ninety-second column, then down to the ninety-third column, then right to the ninety-fourth column, then down to the ninety-fifth column, then right to the ninety-sixth column, then down to the ninety-seventh column, then right to the ninety-eighth column, then down to the ninety-ninth column, then right to the one hundredth column.

27. List 3 properties and 3 examples of metals.

- a. _____
- b. _____
- c. _____
- d. _____

Chemistry Chapter 1 Worksheet

28. List 3 properties and 3 examples of nonmetals.

- a. _____
- b. _____
- c. _____
- d. _____

29. List 3 properties and 3 examples of metalloids.

- a. _____
- b. _____
- c. _____
- d. _____

30. Think about the elements in the same period of the periodic table, how do the properties of elements close to each other compare with the properties of elements far from each other?

31. Correctly spell the name of the element for the following chemical symbols

- a. Fe _____
- b. Au _____
- c. Hg _____
- d. Ca _____
- e. N _____
- f. Pb _____
- g. Ag _____

Chemistry Chapter 1 Worksheet

32. Correctly spell the name of the element for the following chemical symbols (cont.)

- a. H _____
- b. O _____
- c. Sn _____

33. Correctly identify the chemical symbol for the following elements.

- a. Mercury _____
- b. Iron _____
- c. Silver _____
- d. Helium _____
- e. Lithium _____
- f. Beryllium _____
- g. Sodium _____
- h. Potassium _____