Name Date Class

SECTION 1 Reinforcement

Atoms

Each element is made of just one kind of atom. The number of protons in the atoms of an element is unique to that element. The number of protons in an atom is called the **atomic number.** The mass of an atom depends on the number of its protons and neutrons. The **mass number** is the sum of the protons and neutrons in the nucleus. The mass of an electron is so small that it is usually omitted in mass determinations.

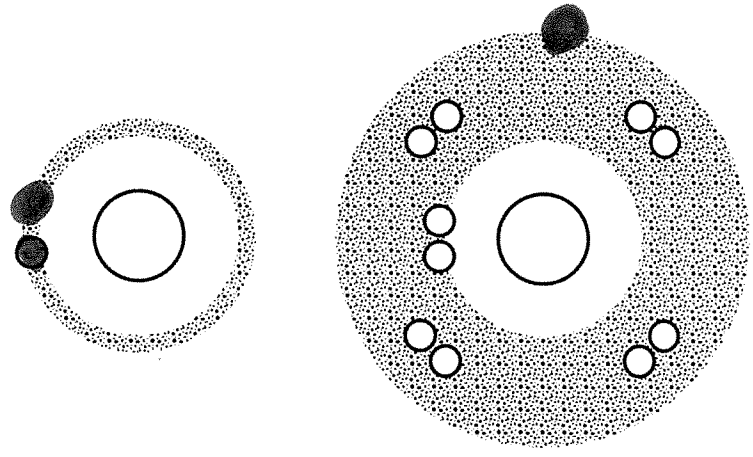
Directions: *Use the definitions of atomic number and mass number to help you fill in the blanks in the table below.*

Element	Symbol	Number of protons	Number of neutrons	Number of electrons	Atomic number	Mass number
1. Oxygen	O	8	8	8	8	16
2. Silicon	Si	14	14	14	14	28
3. Aluminum	Al	13	14	13	13	27
4. Iron	Fe	26	30	26	26	56
5. Calcium	Ca	20	20	20	20	40
6. Sodium	Na	11	12	11	11	23
7. Copper	Cu	29	35	29	29	64
8. Magnesium	Mg	12	12	12	12	24
9. Gold	Au	79	118	79	79	197
10. Silver	Ag	47	61	47	47	108

Directions: *Add electrons to complete the atomic models of helium and sodium.*

11. Helium
Atomic number 2
Mass number 4

12. **Sodium**
Atomic number 11
Mass number 23



Meeting Individual Needs

Name Date Class

SECTION 2 Reinforcement

Combinations of Atoms

Directions: *Define the following terms.*

1. compound 2 or More Combined Elements - different Chemical Properties
2. mixture Made of Components - Keep their Idividual Chemical Properties

Directions: *Identify each of the following as a* **mixture** *or a* **compound.**

3. NaCl Compound
4. solution Mixture
5. water Compound
6. $NaCl + H_2O$ Mixture
7. salt Compound
8. H_2O Compound
9. air Mixture
10. salt water Mixture
11. vinegar and oil Mixture

Directions: *Complete the following sentences using the correct terms.*

12. Sweetened tea is a type of mixture called a(n) Solution.
13. A water molecule is made up of two atoms of Hydrogen and one atom of Oxygen
14. The substances in a(n) Mixture can be physically separated from one another.
15. Table salt is made up of one ion of Sodium and one ion of Chlorine.
16. A(n) Compound cannot be separated into its individual elements by physical means.

Meeting Individual Needs

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SECTION 3 Reinforcement

Properties of Matter

Directions: *Complete the concept map using the terms in the list below. Pay particular attention to the linking words or statements between boxes. The completed diagram will help you organize the relationships between physical states of matter on Earth.*

liquid **definite size and shape** **gas**

freely moving and independent **takes the shape of its container** **water**