

SECTION 1

Study Guide

Atoms

Chapter

2

Directions: Use the word banks provided to complete the following section summary.

atoms
matter

building blocks
minerals

elements
model

isotopes
native elements

Anything that has mass and takes up space is called (1)_____. Matter is made up of tiny particles called (2)_____. The structure of atoms and how they join together determine all the properties of matter. Atoms sometimes are called (3)_____ of matter. Substances that are made of only one type of atom are called (4)_____. They may combine to make up (5)_____, found in Earth's crust. Some minerals are made up of only one element and are called (6)_____.

atomic number
neutrons
negative

atoms
isotopes
number

electron cloud
mass number
protons

electrons
negative
three

A Greek philosopher first proposed that matter was made up of small particles which he called (7)_____. The current model of the atom is made up of (8)_____ basic parts. Particles with a positive charge are (9)_____. Particles with no charge are (10)_____. Both neutrons and protons are located in the nucleus. Particles with a negative charge that exist outside the nucleus are called (11)_____. Electrons have specific amounts of energy and move around in a(n) in a(n) (12)_____, similar to bees in a beehive.

All atoms of the same element have the same (13)_____ of protons, shown as the (14)_____. Atoms can lose or gain electrons, making the overall charge positive or (15)_____. The number of protons plus the number of neutrons is the (16)_____. Atoms of the same element that have different numbers of neutrons are called (17)_____.

SECTION
2**Study Guide****Combinations of Atoms****Chapter****2**

Directions: *Define the following terms.*

1. compound _____

2. mixture _____

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

3. NaCl _____
4. solution _____
5. water _____
6. NaCl + H₂O _____
7. salt _____
8. H₂O _____
9. air _____
10. salt water _____
11. vinegar and oil _____

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

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