

Vocabulary and Section Summary B

Electrons and Chemical Bonding

VOCABULARY

After you finish reading the section, try this puzzle! Use the definitions below to unscramble the vocabulary words.

1. an interaction that holds atoms or ions together: HACLIEMC DNOB

chemical bond

2. the number of protons in an atom: CAMTOI RBMUEN

atomic number

3. an electron that is found in the outermost shell of an atom:

ENLACVE EENTRLOC

valence electron

4. Atoms of elements in Groups 1 and 2 of this have the same number of electrons as their group number: ICPDROIE BALET

periodic table

5. the combining of atoms to form molecules or ionic compounds:

CLCHAMEI GONNBDI

chemical bonding

SECTION SUMMARY

Read the following section summary.

- Chemical bonds form when atoms join to form new substances. A chemical bond is an interaction that holds two atoms together.
- A valence electron is an electron in the outermost energy level of an atom.
- Most atoms form bonds by gaining, losing, or sharing electrons until they have eight valence electrons. Atoms of some elements need only two electrons to fill their outermost level.

Skills Worksheet

Vocabulary and Section Summary B

Ionic Bonds

VOCABULARY

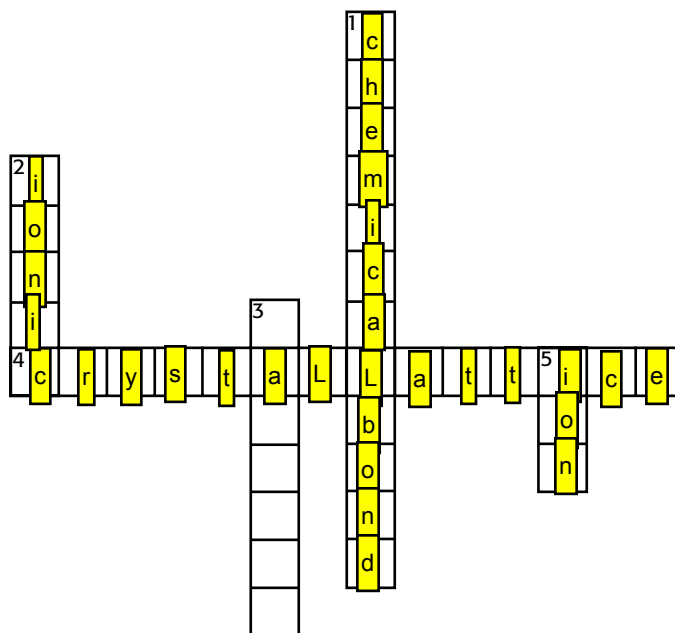
After you finish reading the section, try puzzle! Use the clues below to solve the crossword puzzle.

ACROSS

4. A crystal is arranged in a regular pattern called a(n) _____.
(2 words). crystal lattice

DOWN

1. The interaction that holds atoms or ions together is a(n) _____. chemical bond
(2 words).
2. A(n) _____ bond forms when electrons are transferred from one atom to another, resulting in a positive ion and a negative ion. ionic
3. A(n) _____ electron is found in the outermost shell of an atom. valence
5. A charged particle that forms when an atom or group of atoms gains or loses one or more electrons is called a(n) _____. ion



Vocabulary and Section Summary B

Covalent and Metallic Bonds

VOCABULARY

After you finish reading the section, try this puzzle! Fill in the blanks with the correct terms. Then, use the words to complete the word search puzzle on the next page. Words may appear horizontally, vertically, diagonally, or backward.

1. An element composed of molecules consisting of two atoms of that element is a(n) diatomic molecule element, for example, O₂ oxygen.
2. A bond formed when atoms share one or more pairs of electrons is called a(n) covalent bond.
3. The smallest unit of substance that keeps all the physical and chemical properties of that substance is called a(n) atom.
4. The attraction between positively charged metal ions and the electrons in a metal is called a(n) metallic bond.
5. The ability of a metal to be drawn into wires is called ductility.
6. The ability of a metal to be hammered into sheets is called malleability.