

IONIC COVALENT BONDING WEBQUEST

IONIC BONDING

WEBSITE 1: <http://visionlearning.com/en/library/Chemistry/1/Chemical-Bonding/55>

1. Approximately how many elements are represented on the periodic table?

2. How do the properties of sodium chloride differ from its parent elements of sodium and chlorine?
3. What accounts for the fact that there are far more substances than are listed on the periodic table?
4. Briefly describe each of the scientists and what their ideas about chemical elements and/or chemical bonds prior to G.N. Lewis's work.
5. Complete the Lewis dot structures for the first 2 periods of elements. What do each of the dots represent?

6. Complete the comprehension checkpoint: Write the correct answer below.

7. Who is Linus Pauling, what was his role in helping scientists understand chemical bonding?

8. What are the two types of chemical bonds?

9. Where does the term "covalence" come from?

10. Describe the behavior of electrons in covalent bonding.
11. How many electrons are shared in a single bond, a double bond, a triple bond?
12. Complete the comprehension check, write the correct answer below.
13. Explain the behavior of electrons in ionic bonding.
14. What are cations? What are anions?
15. Complete the comprehension check, write the correct answer below.
16. When will two elements form an ionic bond? When will they form a covalent bond?
17. In terms of metals and nonmetals, what kinds of elements make up an ionic bond, a covalent bond?
18. Complete the comprehension check, write the correct answer below.
19. Summarize your understanding of ionic and covalent bonds. Minimum of 5 sentences.

WEBSITE 2: <http://www.ewart.org.uk/science/structures/str13.htm>

1. When atoms lose or gain electrons they are called _____. If an atom gains an _____ it is called an anion. When an atom loses an electron, it is called a _____. A sodium atom has eleven _____ and a _____ atom has seventeen electrons.
2. "Answer these questions"
 - a. Select the best answer for numbers 1-10.
 - b. Record your score here:

WEBSITE 2: <http://www.ewart.org.uk/science/structures/str14.htm>

1. Ionic bonding occurs when atoms gain or lose _____. Most atoms want _____ electrons in their outside shells, but a hydrogen atom wants only _____ electrons. Carbon is an atom with a total of _____ electrons. This means that it has _____ electrons in its outside shell.
2. "Answer these questions"
 1. Select the best answer for numbers 1-10
 2. Record your score here: _____