Directions: Use the provided websites as resources to conduct research on chemical bonding. You may explore the activity-related websites ONLY. You must <u>write and answer</u> each question <u>on your own paper</u>.

Websit	te 1: http://www.visionlearning.com/library/module_viewer.php?mid=55
•	Approximately how many elements are represented on the periodic table?
2.	What accounts for the fact that there are far more substances than are listed on the periodic table?
3.	"Formed when two or more chemically bond together, the resulting is unique
	both and from its
4.	What compound forms during the reaction between elemental sodium and elemental chlorine?
	Name: Formula:
5.	List five facts related to G. N. Lewis.
	1. 4.
	2. 5.
	3.
6.	Explain the behavior of electrons in ionic bonding.
7.	In the process of either or negatively charged, the reacting
	atoms form
8.	In the reaction between sodium and chlorine, which atom loses an electron? Which atom gains the
	electron?
9.	After transferring the electron, which ion is negatively charged? Why is the ion negatively charged?
	Write the symbol for the negative ion:
10	After transferring the electron, which ion is positively charged? Why is the ion positively charged?
10.	
	Write the symbol for the positive ion:
11.	How does the sodium atom contrast to the sodium ion? (charge, size)
12.	How does the chlorine atom contrast to the chlorine ion? (charge, size)

13.	List six features that are common to ionic compounds.
	1. 4.
	2. 5.
	3. 6.
14.	Summarize the explanation for the reason why ionic compounds are solids.
15.	What physical property results from ionic compounds forming crystals?
16.	Explain the behavior of electrons in covalent bonding.
17.	What causes covalent bonding to occur rather than ionic bonding?
18.	Among what type of elements does covalent bonding tend to occur?
19.	Explain one difference between ionic compounds and covalent molecules.
20.	Which type of bonding is greater: ionic or covalent? Why?
21.	How many electrons are necessary to form a single bond?
22.	How many electrons are present in a double bond? Triple bond?
23.	What purpose do Lewis dot structures serve?
24.	How are Lewis structures written? Explain.
25.	On the back of the last page, draw the Lewis structures for: H, He, Li, Be, C, N, O, F, Ne, Na, Mg, Al, Si P, S, Cl, Ar

CHEMICAL BONDING



	26	. Regarding covalent bond, what do "polar" and "non-polar" mean?
29. In your own words, define "dipole." 30. In a polar covalent molecule, the region containing more electrons has a partial char However, the other pole of the molecule, which has fewer electrons, has a partial ch B) "Questions & Quizzes" 1. Click on "Chemical Bonding Quiz." 2. Take the quiz. 3. 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 their outside shells, but a hydrogen atom wants only electrons. Carbon is an atom wants of electrons. This means that it has electrons in its outside shell. 2. "Answer these questions" a. Select the best answer for numbers 1-10	27	. List two examples of <u>non-polar covalent molecules</u> . Draw their Lewis structures.
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	2.	
b. Record your score here:		a. Select the best answer for numbers 1-10
		b. Record your score here: