**GPS – Lewis Dot Diagrams**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

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| ***Bellwork – complete quietly on your own!*** | |
| http://duch.sd57.bc.ca/~rmcleod/Chemists_Corner/Bohr_Carbon_Ion_files/Carbon.jpg | 1. What are valence electrons? 2. How can you figure out valence electrons? |
| 1. Each column is called a “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” 2. Each period represents an energy level within the atom. 3. Each element in a group has the same number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their outer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (the valence level). 4. Electrons in the outer shell are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | |
| ***Valence electrons*** | |
| 1. Valence electrons are the electrons in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occupied energy level of the atom. 2. Valence are the only electrons generally involved in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   *Bohr Atomic Structures*   1. The first energy level can contain \_\_\_\_\_\_\_\_\_ electrons. 2. The second and third levels can contain \_\_\_\_\_\_\_\_\_ electrons. | |

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| ***Lewis Dot Diagrams*** |
| 1. Lewis Dot diagrams are a notation showing the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ surrounding the atomic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 2. First, find out which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ your element is in. 3. This will tell you the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons your element has. 4. You will ONLY draw the valence electrons.   Let’s try carbon.   1. Write the element symbol. 2. Carbon is in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ group so it has 4 valence electrons. 3. Starting at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, draw 4 electrons (or dots), around the element symbol.   Draw it in the box.  Using your periodic table, try these elements in the spaces below.   1. H 2) P 3) Ca   4) Ar 5) Cl 6) Al |

***Now, move onto the activity on the next page!***