|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Topic** | **CB** | **PA** | **H** |
| M – Nov 10 | Bohr Model | 1-5, 6a-c | 1-5, 6a-d | 1-5, 6a-f |
| T – Nov 11 | NO SCHOOL |
| W – Nov 12 | Valence Electrons | 7-10, 11a-d | 7-10, 11-a-f | 7-11 |
| Th – Nov 13 | Report Card Pick-UP |
| F – Nov 14 | Introduction to Isotopes | 12, 13a, 14, 15 | 12,13a-b, 14-16 | 12-17 |

**Do not write your answers on this sheet. SHOW ALL WORK WHEN NECESSARY. Only answers written in your notebook will be graded.**

1. How many atoms are in 1.77mol Magnesium?
2. How many moles are in 182.5g of gold?
3. If you were in a lab and wanted 2.33x1025 atoms of sodium what mass of sodium would you have to measure in grams?
4. How many electrons can fit on:
   1. The first energy level of the Bohr Model
   2. The second energy level of the Bohr Model
   3. The third energy level of the Bohr Model
   4. The fourth energy level of the Bohr Model.
5. A student says that electrons orbit the nucleus of an atom much like the earth orbits the sun. Is this a correct analogy? Why or why not?
6. Draw the Bohr Model for:
   1. Carbon
   2. Neon
   3. Sodium
   4. Aluminum
   5. Phosphorus
   6. Calcium
7. Which subatomic particle determines what element an atom is?
8. How many protons, neutrons, and electrons are in:
   1. Mercury
   2. Tungsten
   3. Europium
   4. Arsenic
9. What are valence electrons, and why do we pay attention to them in chemistry?
10. How many valence electrons are in:
    1. Chlorine
    2. Rubidium
    3. Tin
    4. Bromine
    5. Strontium
    6. Selenium
    7. Bismuth
    8. Krypton
11. Draw the Lewis Dot Structure for:
    1. Lithium
    2. Sodium
    3. Carbon
    4. Oxygen
    5. Neon
    6. Phosphorus
    7. Lead
    8. Radon
12. In your own words, what is an isotope?
13. Draw the Bohr Model for each element’s two most naturally occurring isotopes:
    1. Carbon
    2. Neon
    3. Sodium
14. The element copper has naturally occurring isotopes with mass numbers of 63 and 65. The relative abundance and atomic masses are 69.2% for mass 63 amu and 30.8% for mass 65. Will the average atomic mass be closer to 63 amu or 65 amu? Explain.
15. Rubidium is a soft, silvery-white metal that has two common isotopes, 85Rb and 87Rb. If the abundance of 85Rb is 72.2% and the abundance of 87Rb is 27.8%, what is the average atomic mass of rubidium?
16. Titanium has five common isotopes: 46Ti (8.0%), 47Ti (7.8%), 49Ti (73.4%), 49Ti (5.5%), 50Ti (5.3%). What is the average atomic mass of titanium?
17. Naturally occurring chlorine that is put in pools is 75.53 percent 35Cl (exact mass = 34.969 amu) and 24.47 percent 37Cl (exact mass = 36.966 amu). Calculate the average atomic mass of Chlorine.