Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Homeroom: \_\_\_\_\_\_\_\_\_\_

**Elements Vs. Compounds Study Guide (SPI.9.3)**

**Part I: Elements**

1. What is the definition of an element?
2. What is used to abbreviate an element?
3. Where is a list of all of the elements in order of their atomic number found?
4. What subatomic particle determines which element an atom forms?

*Use the portion of the Periodic Table below to answer questions 5-12.*



1. What is the chemical symbol for the element cobalt?
2. What is the atomic number for cobalt?
3. How many protons would be in the nucleus of Cobalt?
4. How many electrons would be orbiting cobalt’s nucleus?
5. How many different types of atoms would be an element of cobalt?
6. Can cobalt be separated further by physical or chemical means?
7. Why or why not?
8. BEAST: How many neutrons would be in the nucleus of an atom of cobalt?

**Part II: Drawing a Bohr Model of an Atom.**

1. Draw a Bohr model for the element Be. (Be has 5 neutrons)
2. Draw a Bohr model for carbon. (Carbon has 6 neutrons)

**Part III: Compounds**

1. How are compounds combined?
2. What is used to abbreviate a compound?
3. What is the difference between a **molecule** and a **compound**?
4. Can compounds be made of *only the same element*?
5. Describe the properties of compounds compared to the elements that combine to make them up.

*Use the diagram of glucose (C6H12O6) below to answer questions 6-8.*



6. Is glucose an element or compound?

7. How many different elements is glucose made up of?

8. How many atoms of carbon are in glucose?

**Part III: Distinguishing Between Elements and Compounds**

*For all of the following formulas, indicate if they* ***best*** *represent an element, molecule, or compound. Note: all compounds are best described as compounds.*

1. F
2. NH3
3. N2O
4. C2
5. C3
6. HCN
7. C2H6
8. NO
9. Fe2O3
10. CaCO3

*Describe the following diagrams as elements, molecules, or compounds.*

2.

1.

 ** **

 ** **

4.

3.

**HARD WORK IS THE *ELEMENT* TO SUCCESS!! STUDY HARD!**