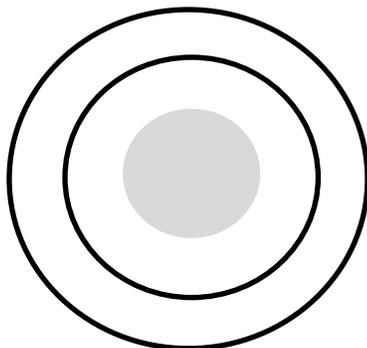


## Atomic Basics

1. Atoms are made up of three particles which have the following charges.

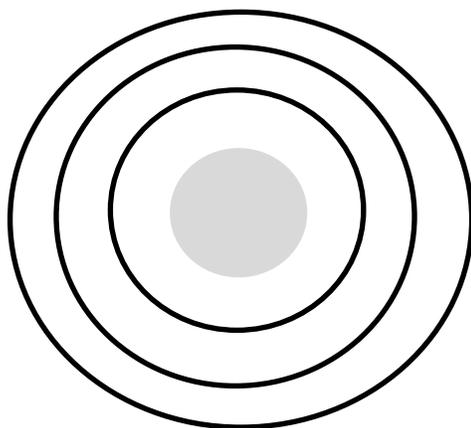
- a. \_\_\_\_\_ = Positive
- b. \_\_\_\_\_ = No charge
- c. \_\_\_\_\_ = Negative



- 2. Draw five protons in the nucleus of the atom. Label them with their charge.
- 3. Draw six neutrons in the nucleus of the atom.
- 4. Draw two electrons in the first energy level (inner shell) and label them with their charge.
- 5. Draw three electrons in the second energy level (outer shell) and label them with their charge.
- 6. BORON is the name of the element represented by this atomic diagram. Knowing that Boron has five protons, five electrons, and six neutrons.... Let's take a look at Boron's grid on the periodic table of elements. What do the atomic number and atomic weight tell us about Boron?

5	→	Atomic Number: _____
<b>B</b>	→	Element Symbol
Boron	→	Element Name
11	→	Atomic Weight: _____

- 7. In other words, the atomic number tells you the number of \_\_\_\_\_ in one atom of an element. It also tells you the number of \_\_\_\_\_ in a neutral atom of that element. The atomic number gives the "identity" of an element as well as its location on the periodic table. No two different elements will have the same atomic number!
- 8. The atomic weight of an element is the average mass of an element's naturally occurring atom. This number provide with you with total number of protons plus \_\_\_\_\_ found in the nucleus of an atom.



9. Draw eleven protons in the nucleus of the atom. Label them with their charge.
10. Draw twelve neutrons in the nucleus of the atom.
11. Draw two electrons in the first energy level (inner shell) and label them with their charge.
12. Draw eight electrons in the second energy level (middle shell) and label them with their charge.
13. Draw one electron in the third energy level (outer shell) and label it with its charge.
14. What element is represented by this atomic diagram? \_\_\_\_\_

Fill in the following information for the element represented above.

<b>Na</b>	→ Atomic Number: _____
	→ Element Symbol
	→ Element Name
	→ Atomic Weight: _____

15. Use the periodic table and your knowledge of atomic calculations to complete the following chart.

Element	Atomic Number	Atomic Mass	Protons	Neutrons	Electrons
<b>Li</b>	<b>3</b>	<b>7</b>			
<b>K</b>		<b>39</b>			<b>19</b>
<b>Cl</b>		<b>35</b>	<b>17</b>		
<b>Ag</b>	<b>47</b>			<b>61</b>	
<b>H</b>		<b>1</b>	<b>1</b>		
<b>W</b>			<b>74</b>	<b>110</b>	
<b>Ne</b>				<b>10</b>	<b>10</b>