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### Atoms and Molecules Worksheet

Using the Periodic Table located inside your text book, answer the following questions.

Analyzing Data: The information below is from part of the Periodic Table of Elements. Use this information to answer the questions that follow.

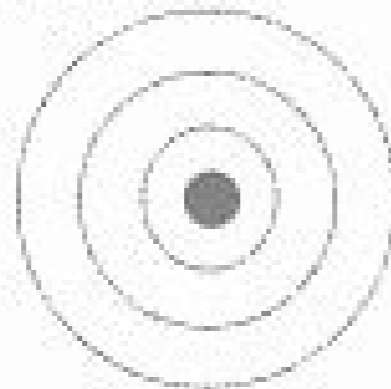
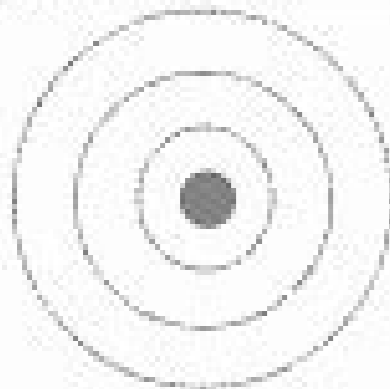
IA							VIIA	
1	2	3	4	5	6	7	8	9
H	He							
Li	Be	B	C	N	O	F	Ne	
Na	Mg	Al	Si	P	S	Cl	Ar	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Cu
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir
Fr	Ra	Ac	Rf	Mn	Pt	Au	Hg	Pt

- 1) How many protons, neutrons, and electrons are in each of the following atoms?
- |                      |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| Lithium (Li)         | Magnesium (Mg)       | Carbon (C)           | Oxygen (O)           | Chlorine (Cl)        |
| p <sup>+</sup> _____ | p <sup>+</sup> _____ | p <sup>+</sup> _____ | p <sup>+</sup> _____ | p <sup>+</sup> _____ |
| n <sup>0</sup> _____ | n <sup>0</sup> _____ | n <sup>0</sup> _____ | n <sup>0</sup> _____ | n <sup>0</sup> _____ |
| e <sup>-</sup> _____ | e <sup>-</sup> _____ | e <sup>-</sup> _____ | e <sup>-</sup> _____ | e <sup>-</sup> _____ |

2) Fill in the number of electrons in the correct energy levels below.

Number of Fluorine (F) electrons: \_\_\_\_\_

Number of Neon (Ne) electrons: \_\_\_\_\_



Is Fluorine Stable? \_\_\_\_\_  
Explain your answer: \_\_\_\_\_

Is Neon Stable? \_\_\_\_\_  
Explain your answer: \_\_\_\_\_

### Chemistry of Life Worksheet I

Complete the following Bohr Models and fill in the blanks.

<b>Hydrogen</b> Symbol: <u>H</u> No. of Electrons: <u>1</u> Atomic Number: <u>1</u> Atomic Mass: <u>1</u>		<b>Carbon</b> Symbol: <u>C</u> No. of Electrons: <u>6</u> Atomic Number: <u>6</u> Atomic Mass: <u>12</u>	
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<b>Phosphorus</b> Symbol: <u>P</u> No. of Electrons: <u>15</u> Atomic Number: <u>15</u> Atomic Mass: <u>31</u> Family: <u>Nitrogen Family</u>		<b>Chlorine</b> Symbol: <u>Cl</u> No. of Electrons: <u>17</u> Atomic Number: <u>17</u> Atomic Mass: <u>35</u> Family: <u>Halogens</u>	
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<b>Oxygen</b> Symbol: <u>O</u> No. of Electrons: <u>8</u> Atomic Number: <u>8</u> Atomic Mass: <u>16</u> Family: <u>Oxygen Family</u>		<b>Sodium</b> Symbol: <u>Na</u> No. of Electrons: <u>11</u> Atomic Number: <u>11</u> Atomic Mass: <u>23</u> Family: <u>Alkali Metals</u>	
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<b>Potassium</b> Symbol: <u>K</u> No. of Electrons: <u>19</u> Atomic Number: <u>19</u> Atomic Mass: <u>39</u> Family: <u>Alkali Metals</u>		<b>Nitrogen</b> Symbol: <u>N</u> No. of Electrons: <u>7</u> Atomic Number: <u>7</u> Atomic Mass: <u>14</u> Family: <u>Nitrogen Family</u>	
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**Top 20 Elements Bohr's Model Identification Game**

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San José State UNIVERSITY Teaching Presentation

### "Bohr Model of the Hydrogen Atom"

**OBJECTIVES**

- ✓ To present Bohr model as a semiclassical approach to atomic physics.
- ✓ To justify Bohr model by using the concept of matter waves and Heisenberg uncertainty principle.

Model of Hydrogen Atom

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