

**Transparency Worksheet**

Name \_\_\_\_\_

Class \_\_\_\_\_ Date \_\_\_\_\_

***Ion Formation***

1. (a) Which of the models have stable octets? \_\_\_\_\_  
(b) Explain how you know. \_\_\_\_\_
2. (a) Describe the charge on each ion and explain why it is either positive or negative. \_\_\_\_\_  
\_\_\_\_\_  
(b) Identify the *anion* and *cation*. \_\_\_\_\_
3. What are the properties of ionic compounds? \_\_\_\_\_  
\_\_\_\_\_
4. Describe how sodium and chlorine form an ionic bond. \_\_\_\_\_  
\_\_\_\_\_
5. Name and identify the physical and chemical properties of the family to which sodium belongs.  
\_\_\_\_\_
6. (a) Write the electron configuration for a sodium atom. \_\_\_\_\_  
(b) Write the electron configuration for a sodium ion. \_\_\_\_\_
7. Name and identify the physical and chemical properties of the family to which chlorine belongs.  
\_\_\_\_\_
8. (a) Write the electron configuration for a chlorine atom. \_\_\_\_\_  
(b) Write the electron configuration for a chlorine ion. \_\_\_\_\_

**Critical Thinking**

9. How would you explain the high melting point of NaCl? \_\_\_\_\_  
\_\_\_\_\_
10. Using electron dot symbols, show the formation of an ionic bond between the following elements: Na and Cl, Pb and I, Ca and O, Fe and S. Use the back of this worksheet for your drawing.