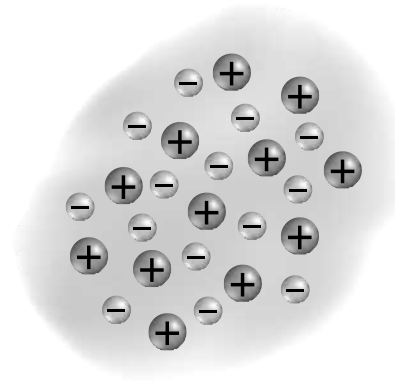


**CHAPTER 8 STUDY GUIDE FOR CONTENT MASTERY**

**Section 8.4 Metallic Bonds and Properties of Metals**

*In your textbook, read about metallic bonds.*

Use the diagram of metallic bonding to answer the following questions.



1. What is the name of the model of metallic bonding that is illustrated?

\_\_\_\_\_

2. Why are the electrons in a metallic solid described as delocalized?

\_\_\_\_\_

3. Which electrons from the metal make up the delocalized electrons?

\_\_\_\_\_

4. Are the metal atoms that are shown cations or anions? How can you tell?

\_\_\_\_\_

5. How do the metallic ions differ from the ions that exist in ionic solids?

\_\_\_\_\_

\_\_\_\_\_

6. Explain what holds the metal atoms together in the solid.

\_\_\_\_\_

*In your textbook, read about the properties of metals.*

**For each property, write *yes* if the property is characteristic of most metals, or *no* if it is not. If the property is a characteristic of metals, explain how metallic bonding accounts for the property.**

7. Malleable \_\_\_\_\_

\_\_\_\_\_

8. Brittle \_\_\_\_\_

9. Lustrous \_\_\_\_\_

10. High melting point \_\_\_\_\_

11. Low boiling point \_\_\_\_\_

12. Ductile \_\_\_\_\_

\_\_\_\_\_

13. Poor conduction of heat \_\_\_\_\_

14. Good conduction of electricity \_\_\_\_\_