

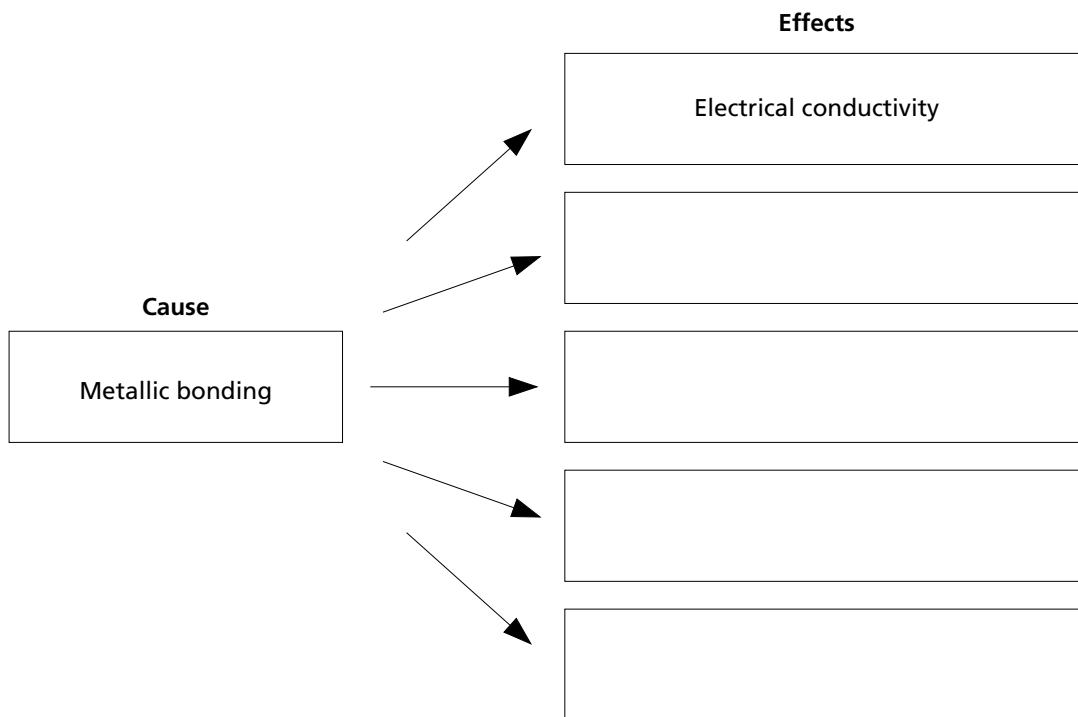
Atoms and Bonding ▪ *Guided Reading and Study*

Bonding in Metals

This section describes how atoms of solid metals form bonds. It also explains how metallic bonds give metals their useful properties.

Use Target Reading Skills

As you read, identify the properties of metals that result from metallic bonding. Write the information in the graphic organizer below.



Metallic Bonding

1. Circle the letter of each sentence that is true about metals and metallic bonding.
 - a. Atoms of most metals have one, two, or three valence electrons.
 - b. Metal atoms usually gain valence electrons when they combine chemically with other atoms.
 - c. In chemical reactions, metal atoms usually become positively charged ions.
 - d. Atoms of metals lose electrons easily.

2. What does a metal crystal consist of?

3. What is a metallic bond?

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Metallic Properties

4. A(n) _____ is a material made of two or more elements that has the properties of a metal.
5. List four properties of metals.

6. What explains the properties of metals?

7. Why do metals conduct electricity easily?

8. Complete the table about the ability of metals to change shape.

Type of Ability	Definition	Example
Ductility	a.	Wire
b.	Ability to be rolled into thin sheets	Aluminum foil

9. Is the following sentence true or false? A metal's luster is due to its valence electrons. _____

