

Name _____ Date _____ Section _____

Science 8 Chemistry Unit Directed Reading

Title: Ionic, Covalent, and Metallic Bonding

Challenge Question: How can atoms join together?

Background:

What do valence electrons do? What is the difference between an element and a compound?

Materials:

Matter and Energy book

Vocabulary: Define the following terms in your own words.

Term	Definition	Picture or Example
ion		
ionic bond		
covalent bond		
molecule		
metallic bond		

Procedures:

1. Read pages 192 - 199 in the *Matter and Energy* book.
2. Answer questions 1 and 5 - 12 from the reading.
3. Do Lesson Review on page 201, questions 1 - 12.
4. Create definitions for the Vocabulary. Answer Analysis Questions.

Data/Results: (Write your responses to the book questions in your Science Notebook.)

Analysis Questions:

1. How does an atom develop a charge? How does an atom develop a negative charge? How does an atom develop a positive charge?

2. What is a crystal lattice? What is meant by the term *electrical conductivity*?

3. What is the smallest particle of a covalently bonded compound? List three common materials that contain covalent bonds.

4. Why can metals conduct electric current?
