

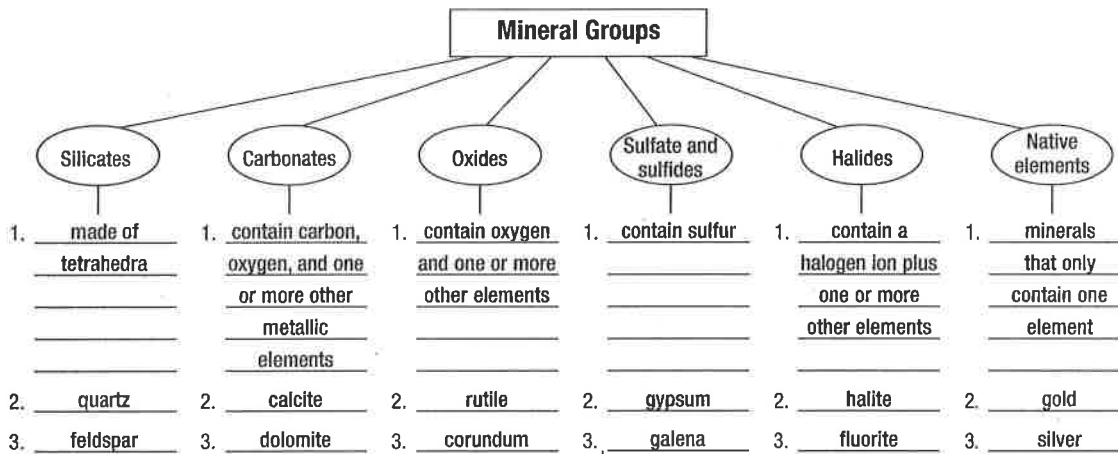
**Chapter 2 Minerals**

**Section 2.2 Minerals**

*This section explains what minerals are and how they are formed, classified, and grouped.*

**Reading Strategy**

**Previewing** Skim the material on mineral groups. Place each group name into one of the ovals in the organizer. As you read this section, complete the organizer with characteristics and examples of each major mineral group. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.



 Describe the five characteristics an Earth material must have to be called a mineral.





1. It must be naturally occurring, or formed by natural geologic processes.
2. It must be a solid.
3. It must have an orderly crystalline structure.
4. It must have a definite chemical composition.
5. It must be a generally inorganic substance.

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**Chapter 2 Minerals**

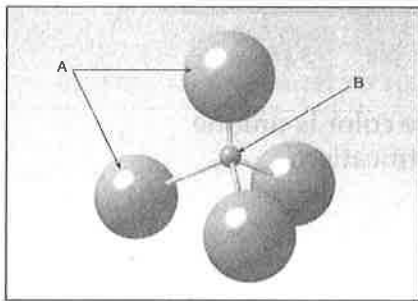
**How Minerals Form**




Match each description with its process of mineral formation.

Description	Process of Mineral Formation
<u>  d  </u> 6.  As molten rock cools, elements combine to form minerals.	a. hydrothermal solution
<u>  b  </u> 7.  Existing minerals recrystallize while still solid under pressure or form new minerals when temperature changes.	b. pressure and temperature changes
<u>  a  </u> 8.  Hot mixtures of water and dissolved substances react with existing minerals to form new minerals.	c. precipitation
<u>  c  </u> 9.  Substances dissolved in water react to form new minerals when the water evaporates.	d. crystallization from magma

**Mineral Groups**

10.  What property is used to classify minerals into groups such as silicates? composition
11.  What is the structure shown in the diagram? a silicon-oxygen tetrahedron



12. In the diagram, letter A identifies oxygen atoms.
13. In the diagram, letter B identifies a(n) silicon atom.
14.  Circle the letter of something common to all halides.  
 a. an oxygen ion                      b. the element sulfur  
 c. a metallic element                **(d.) a halogen ion**
15.  Circle the letter of the mineral group whose members only contain one element.  
**(a.) native elements**                      b. sulfates  
 c. carbonates                              d. oxides
16.  Is the following sentence true or false? Both carbonates and oxides are minerals that contain the element oxygen.  
true