

Directed Reading for  
Content Mastery

# Overview Minerals

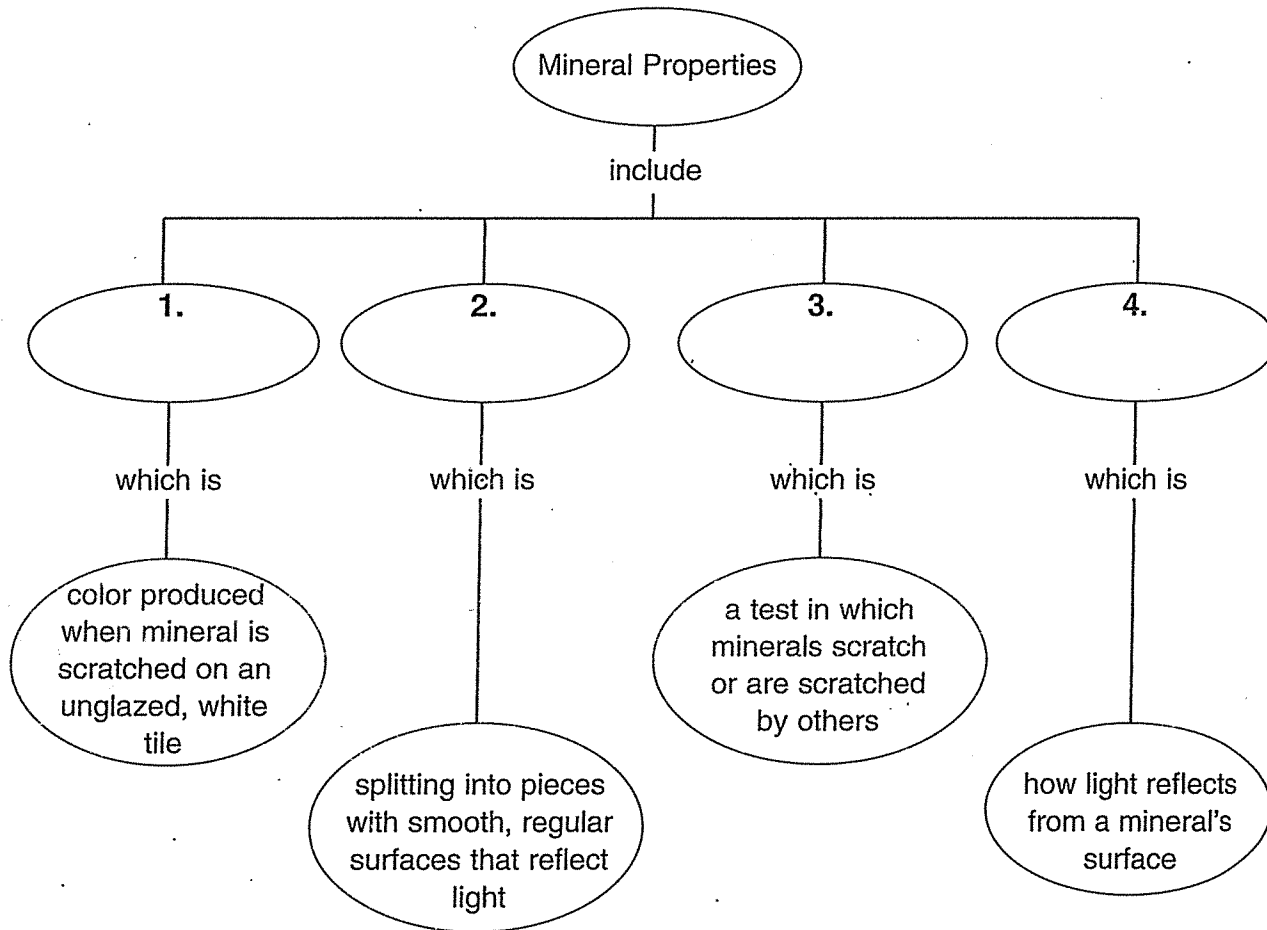
**Directions:** Use the following terms to complete the concept map below.

luster

streak

cleavage

hardness



Meeting Individual Needs

**Directions:** Insert the number of the word from the concept map that best matches each of the following sentences.

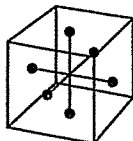
- \_\_\_\_\_ 5. Graphite shines like metal.
- \_\_\_\_\_ 6. Gold's is yellow, but pyrite's is greenish-black.
- \_\_\_\_\_ 7. A diamond is harder than quartz.
- \_\_\_\_\_ 8. Mica breaks along smooth, flat planes.



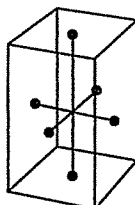
# Directed Reading for Content Mastery

## Section 1 ■ Minerals

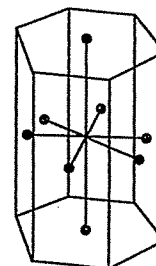
**Directions:** Label the crystal systems below as **triclinic, cubic, tetragonal, hexagonal, orthorhombic, or monoclinic**.



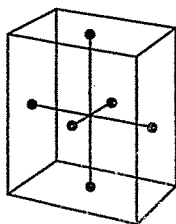
1. \_\_\_\_\_



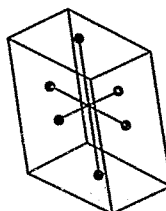
2. \_\_\_\_\_



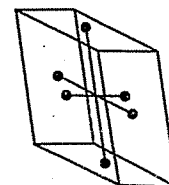
3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_

**Directions:** Circle the term in parentheses that correctly completes each sentence.

7. When magma cools slowly, the crystals formed are generally (large/small).
8. Crystals also form when minerals dissolve in a liquid that then (evaporates/melts).
9. Minerals that contain silicon, oxygen, and one or more elements are (silicates/halites).
10. Minerals are (organic/inorganic) crystalline solids.



**Directed Reading for  
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**Section 2 ■ Mineral  
Identification**  
**Section 3 ■ Uses of Minerals**

**Directions:** Use the chart to answer the questions below.

Mohs Hardness Scale		Hardness of common objects	
	soft		
Talc	1		
Gypsum	2	—	fingernail (2.5)
Calcite	3	—	piece of copper (2.5 to 3.0)
Fluorite	4	—	iron nail (4.5)
Apatite	5	—	glass (5.5)
Feldspar	6	—	steel file (6.5)
Quartz	7	—	streak plate (7.0)
Topaz	8		
Corundum	9		
Diamond	10		
	hard		

1. Name one mineral that you can scratch with your fingernail.

\_\_\_\_\_

2. Which mineral can scratch anything?

\_\_\_\_\_

3. Which object can scratch feldspar but not quartz?

\_\_\_\_\_

4. Which object can scratch apatite but not feldspar?

\_\_\_\_\_

**Directions:** Write **T** for true or **F** for false before each statement below.

\_\_\_\_\_ 5. A gem is a highly prized mineral that is rare and beautiful.

\_\_\_\_\_ 6. An ore is a mineral or rock that contains a useful substance that can be mined at a profit.

\_\_\_\_\_ 7. Vein minerals are metal deposits that occur in the cracks of rocks.

\_\_\_\_\_ 8. Ilmenite and rutile are iron ores.

**Directed Reading for  
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Minerals**

**Directions:** Use the following terms to complete the sentences below.

magma	crystal	cleavage	hardness
specific gravity	silicates	fracture	luster
streak	minerals	gem	ore

1. Halite, diamond, and graphite are examples of \_\_\_\_\_.
2. A(n) \_\_\_\_\_ is a solid in which the atoms are arranged in repeating patterns.
3. Minerals that contain silicon (Si) and oxygen (O) are called \_\_\_\_\_.
4. One of the properties of minerals is \_\_\_\_\_, which measures how easily a mineral can be scratched.
5. \_\_\_\_\_ refers to the color left behind when a mineral is rubbed across an unglazed porcelain plate.
6. \_\_\_\_\_ describes how light reflects from a mineral's surface.
7. Amethyst is the \_\_\_\_\_ form of quartz.
8. Minerals that break along smooth, flat surfaces have \_\_\_\_\_.
9. Some crystals are formed from hot melted rock called \_\_\_\_\_.
10. Minerals that break with an uneven, rough, or jagged surface have \_\_\_\_\_.
11. Gold's \_\_\_\_\_ is 17, meaning that it is 17 times heavier than an equal volume of water.
12. Iron is obtained from its \_\_\_\_\_, hematite.