

Chapter 9

Use with Section 2

ENRICHMENT

● Mineral Identification

Halides

Use the table below to help answer Questions 1–4.

The **halides** form a small group of minerals. Minerals in this group differ in many ways from each other, but are similar in composition. Halides are soft minerals, and most are water-soluble. The chart shows some properties of the two most common halides.

Characteristic	Halite	Fluorite	Any other halide
Composition	sodium and chlorine	calcium and fluorine	
Location	dried lakes, rock layers	rock layers	
Occurrence	worldwide in dry areas	common vein mineral	
Crystal	cubic	cubic	
Color	colorless or light	most colors	
Hardness	2.5	4.0	
Luster	glassy	glassy	
Other properties	brittle, transparent, sometimes flourescent, water soluble	brittle, transparent, often flourescent	
Less common halides and their composition include: sylvite (potassium and chlorine) calomel (mercury and chlorine) sal ammonica (aluminum and chlorine) atacamite (copper and chlorine) cerargyrite (silver and chlorine) cryolite (sodium, aluminum, and fluorine) bromyrite (silver and bromine)			

- Describe similarities in the physical properties of halite and fluorite. _____

- Most halides are water-soluble. Why do you think minerals that are highly water-soluble are difficult to find in large deposits or are found only in dry regions? _____

- The halides listed above include sodium, calcium, potassium, aluminum, mercury, silver, or copper in their composition. Tell how these compounds are alike. Then write a definition of halides based on the elements that make up their composition. _____

- Research a third halide. Add its characteristic to the chart.