

SLC MINERAL PRACTICE SET IDENTIFICATION CHART

LUSTER	HARDNESS	CLEAVAGE	STREAK	OTHER PROPERTIES	MINERAL NAME	
METALLIC	H > 5.5 Scratches glass. Not scratched by masonry nail.	Absent or poor.	Dark gray to black.	Strongly attracted to a magnet.	Magnetite	
				Shiny gold luster, "fool's gold." May form cubic crystals, but has no cleavage. May exhibit conchoidal fracture.	Pyrite	
	5 ≤ H ≤ 6 hard or soft.	Absent or poor.	Red to red-brown.	Glittery bright silver luster (specular) to dull reddish-silver or steel-gray color.		
				Hematite		
				Bright silver to dull gray color. Forms cubic crystals and exhibits cubic cleavage. Feels heavy due to a high specific gravity.		
H < 5.5 Does not scratch glass. Scratched by masonry nail.	Good to excellent.	Dark gray to black.	Galena			
			Absent or poor.	Dark gray to black.	Shiny or brassy gold luster that may contain iridescent blue-green or red colors. No cleavage, only fracture.	
Chalcopyrite						
DARK NON-METALLIC	H > 5.5 Scratches glass. Not scratched by masonry nail.	Good to excellent.	White to pale gray.	Dull to vitreous, dark green to black. Two cleavages at nearly right angles, ~93° and 87°. May break into blocky fragments.	Augite (pyroxene)	
				Vitreous dark gray to black. Two cleavages at ~124° and ~56°. May form long crystals that break into blade-like fragments or splinters.		Hornblende (amphibole)
		Absent or poor.	White.*	Gray, black, or colored (red, blue, brown). Forms hexagonal prisms with flat striated ends.		
				Corundum		
	H < 5.5 Does not scratch glass. Scratched by masonry nail.	Good to excellent.	Gray-brown to white.	Splits easily along one excellent cleavage plane into thin, transparent sheets.		
				Biotite		
		Absent or poor.	White.	Transparent to translucent green, brown, blue, or purple. Other colors exist. Forms hexagonal prisms and may exhibit conchoidal fracture.		
				Apatite		
				Red to red-brown.	Opaque and earthy brick red to dull red-gray.	
					Hematite	

SLC Practice Set Mineral Database is an adaptation from *Laboratory Manual in Physical Geology*, Busch & Tasa, American Geological Institute, 10th ed., 2015.

* Streak cannot be determined with a streak plate for minerals harder than 6.5. They scratch the streak plate.

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LIGHT NON-METALLIC	H > 5.5 Scratches glass. Not scratched by masonry nail.	Good to excellent.	White.	Often white, light beige, or gray colors. Other colors exist. Two cleavages at nearly right angles, 90°. May have striations along smooth cleavage surfaces.	Plagioclase Feldspar
			White.	Often pink to orange colors. Other colors exist. Two cleavages at nearly right angles, 90°. Often contains <i>exsolution lamellae</i> or <i>perthitic wisps</i> within the sample.	Potassium Feldspar
		Absent or poor.	White.*	Gray, white, or colored (red, blue, brown). Forms hexagonal prisms with flat striated ends.	Corundum
			White.*	Transparent or translucent olive-green to yellow-green color. Often forms as an aggregate of tiny crystals resembling granulated sugar or aquarium gravel. Large crystals may exhibit conchoidal fracture.	Olivine
			White.*	Many transparent or translucent color varieties: colorless, white, gray, orange, brown, pink, purple, etc. May form hexagonal prisms and pyramids, but has no cleavage. May exhibit conchoidal fracture.	Quartz
		H < 5.5 Does not scratch glass. Scratched by masonry nail.	Good to excellent.	White.	Often colorless, white, yellow, or beige. Other colors exist. Three good cleavages not at 90° that form rhombohedrons. Reacts with HCl.
	White.			Often colorless, white, gray, or beige. Three good cleavages that often form rhombohedrons. Reacts with HCl only if powdered.	Dolomite
	White.			Colorless, gray, yellow, purple, or green. Other colors exist. Forms octahedral crystals with four main cleavages at ~70° and 110°.	Fluorite
	White.			Transparent, colorless to white. Tabular crystal form. Splits along one good cleavage plane into thin layers. Easily scratched with your fingernail.	Gypsum
	White.			Colorless, white, or yellow. Other colors exist. Forms cubic crystals and has three good cleavages at 90° that break into cubes. Tastes salty.	Halite
	White.			Colorless, yellow, brown, or red-brown; Splits along one excellent cleavage into thin flexible transparent sheets.	Muscovite
	Absent or poor.		White.	Transparent to translucent pale green, brown, blue, or purple. Other colors exist. Forms hexagonal prisms. May exhibit conchoidal fracture.	Apatite
			White.	White, gray, or yellow. Massive earthy and fibrous forms. Easily scratched with your fingernail.	Gypsum
			Yellow-brown	Opaque rusty brown or yellow-brown. Massive and amorphous.	Limonite
		White.	Opaque white, gray, pink, brown, or green. Greasy or soapy feel. Easily scratched with your fingernail.	Talc	

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