

Mineral on-line review

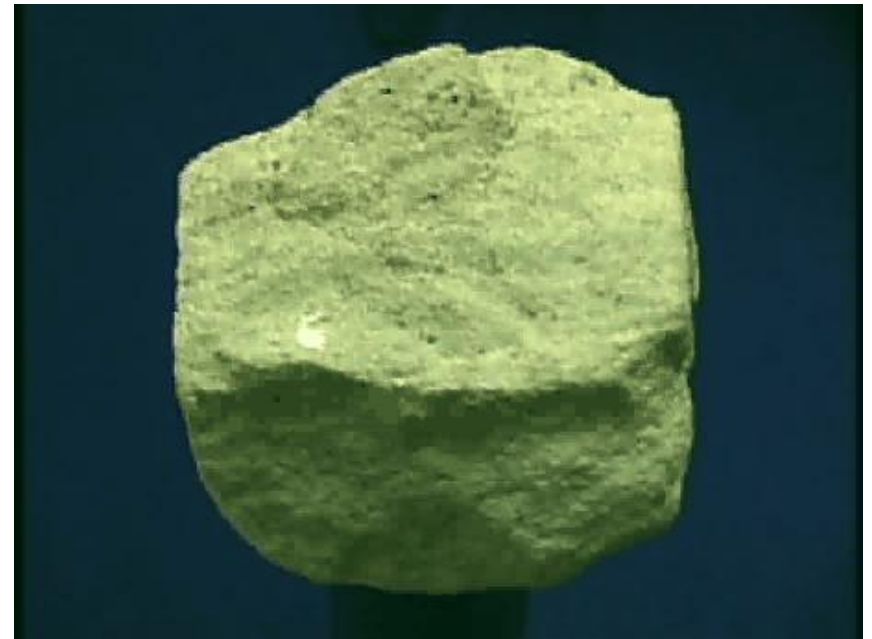
UNI Intro. to Geology

WARNING

- Learn the minerals by their physical properties!
- Learn the minerals by examining in person in the lab!
- Use this only to review when Latham Hall locked or under siege by ninjas.
- Minerals may be sneaky by appearing different but their properties will always be the same – You will be tested on mineral properties not what the mineral looks like.

Olivine

- L: Non metallic
- C: Olive green
- S: None
- H: 6.5 to 7
- B: Fracture or conchoidal fracture
- Fe, Mg, neosilicate



Pyroxene

- L: Non metallic
- C: Dark green
- S: None
- H: 6
- B: Cleavage = 2 @ 90
- Fe, Mg, neosilicate



Amphibole

- L: Non metallic
- C: Dark green
- S: None
- H: 6
- B: Cleavage = 2 @ 60/120
- Fe, Mg, neosilicate



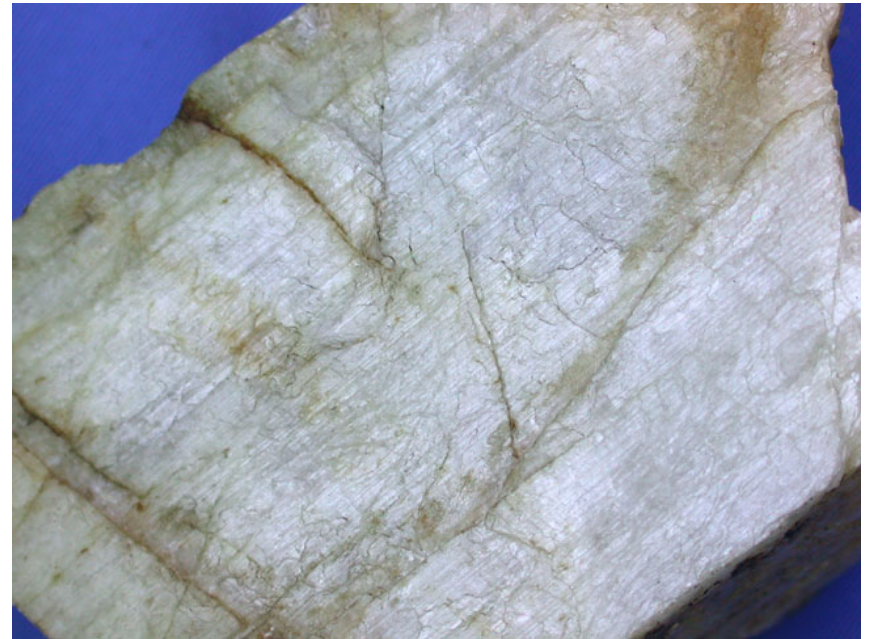
Biotite

- L: Non metallic
- C: Black to dark brown
- S: Greyish-black
- H: 2.5 to 3
- B: Cleavage = 1 perfect
- K, Fe, Mg, Al, phyllosilicate



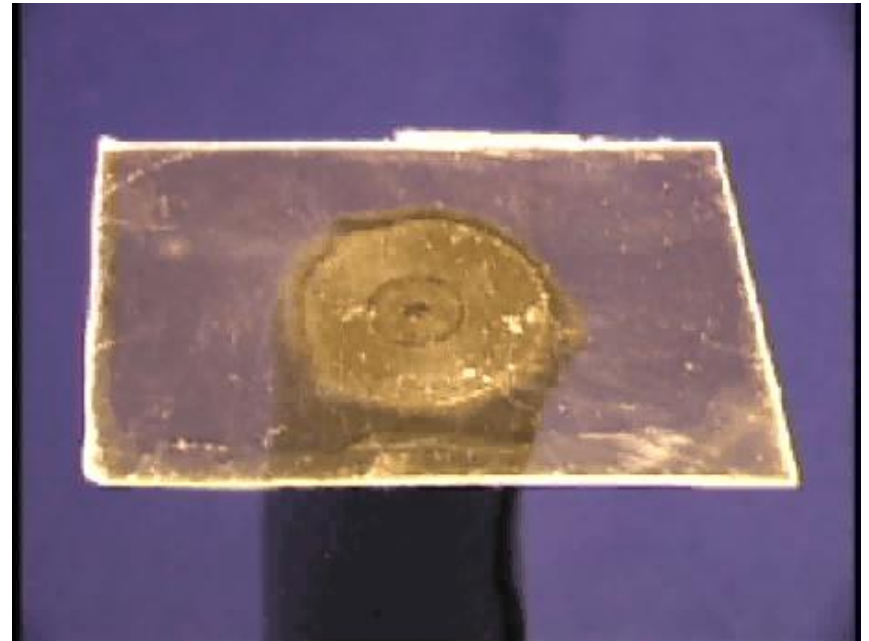
Plagioclase

- L: Non metallic
- C: White to blue-grey
- S: None
- H: 6
- B: Cleavage = 2 @ 90
- Na, Ca Feldspar



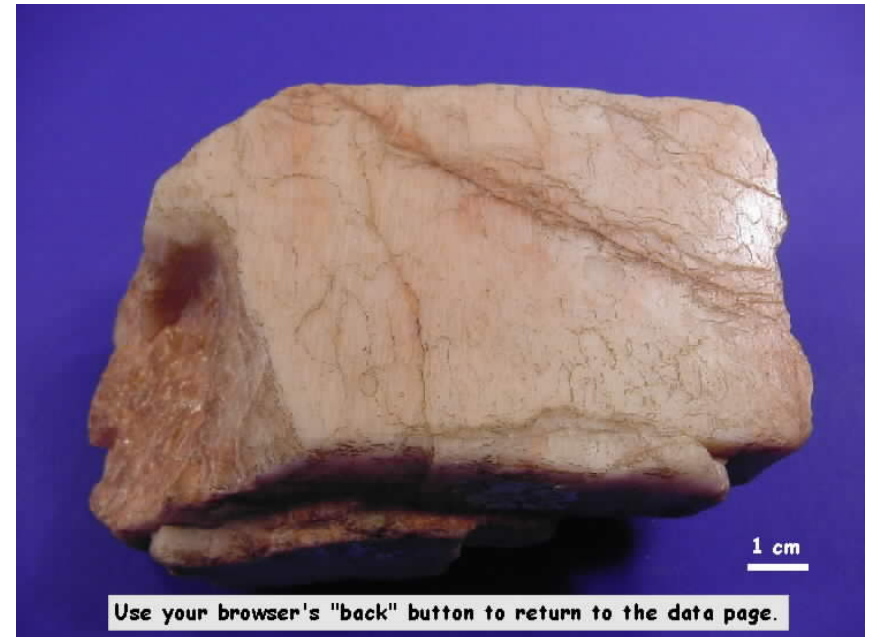
Muscovite

- L: Non metallic
- C: colorless to pale brown
- S: White
- H: 2.5 to 3
- B: Cleavage = 1 perfect
- K, Al, phyllosilicate



Orthoclase

- L: Non metallic
- C: Pink, White, Green
- S: None
- H: 6
- B: Cleavage = 2 @ 90
- K, Feldspar



Quartz

- L: Non metallic
- C: Milky, Rose, Clear, Smokey
- S: None
- H: 7
- B: Fracture, conchoidal
- SiO_2



Gypsum

- L: Non metallic
- C: White
- S: White
- H: 2
- B: 1 perfect 2 other poor
- $\text{CaSO}_4 \cdot \text{H}_2\text{O}$



Calcite

- L: Non metallic
- C: Colorless to off-White
- S: White
- H: 3
- B: Cleavage = 3 NOT @ 90
- CaCO_3



Garnet

- L: Non metallic
- C: Colorless, Ruby red, Green, Brown
- S: None
- H: 7.53856647551!
- B: Fracture, conchoidal
- Ca, Al, Fe, Mg, neosilicate



Fluorite

- L: Non metallic
- C: Colorless, Violet, Yellow, Green
- S: White
- H: 4
- B: Cleavage = 4 perfect
- CaF_2



limonite

- L: Non metallic
- C: Milky, Rose, Clear, Smokey
- S: None
- H: 7
- B: Fracture, conchoidal
- SiO_2



Galena

- L: Metallic
- C: Lead grey
- S: Grey-black
- H: 2.5
- B: Cleavage = 3 @ 90
- PbS
- Very dense = 7.6



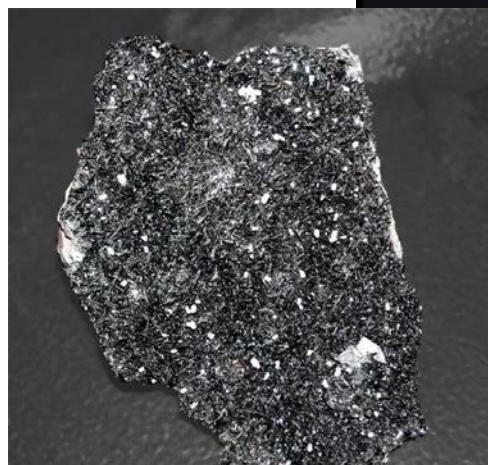
Sphalerite

- L: Non metallic
- C: Yellow to dark brown
- S: Yellow-brown
- H: 4
- B: Cleavage = perfect
- ZnS



Hematite

- L: Non metallic & Metallic
- C: Lead, reddish brown, black
- S: Reddish brown
- H: variable
- B: Fracture
- Fe_2O_3



Magnetite

- L: Metallic
- C: Black
- S: Black
- H: 6
- B: Fracture
- Fe_3O_4



Pyrite

- L: Metallic
- C: Brass yellow
- S: Black to greenish black
- H: 6
- B: Fracture
- FeS_2



Dolomite

- L: Non-metallic
- C: Grey to tan
- S: White to brown
- H: 3.5
- B: Cleavage = 3 NOT @ 90, can be massive too
- $\text{CaMg}(\text{CO}_3)_2$



Sulfur

- L: Non-metallic
- C: bright yellow
- S: yellow
- H: 2.5
- B: Fracture
- S
- Yellowstone stinks!



Corundum

- L: Non-metallic
- C: Variable
- S: None
- H: 9
- B: May exhibit weak cleavage
- Al_2O_3



Graphite

- L: Metallic
- C: Steel grey
- S: Black to grey
- H: 1 to 2
- B: Cleavage 1 perfect
- C polymorph



Halite

- L: Non-metallic
- C: colorless to white
- S: White
- H: 2.5
- B: Cleavage = 3 @ 90
- NaCl



credits

- Most of the pictures and movies used in this review were borrowed from the web
- Eg.
<http://www.mchenry.edu/depts/EAS/courses/eas170/Minerals/index.htm>