

Earth Science 11

Unit 3 – Minerals and Rocks

Day 2 – Properties of Minerals

Name: schaub

Date: _____

Block: _____

Properties of Minerals:

- 1) Color: Human perception of the visible light spectrum.

Poor indicator for mineral.

Both pictures are granite.



- 2) Luster: Reflection of light off of the mineral

Non-Metallic appear dull, pearly, waxy, earthy, vitreous

Metallic appear shiny

dull



pearly



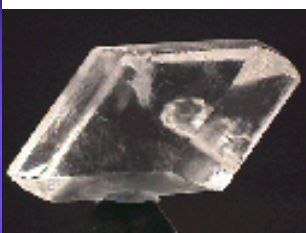
adamantine



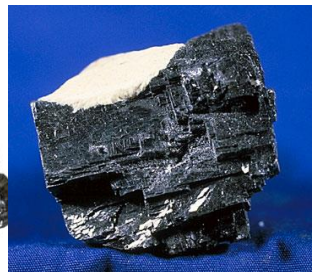
waxy



vitreous



earthy



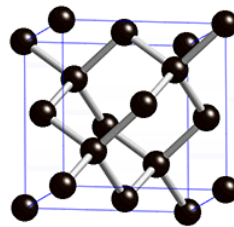
shiny... shiny everywhere



3) Streak: Color of a mineral in powder form



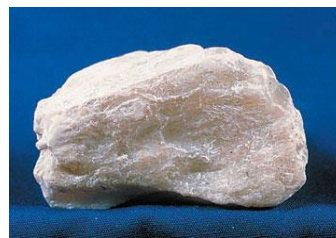
4) Crystal form: Visible expression of a mineral's internal arrangement of atoms.



5) Hardness: Measure of the resistance of a mineral to being scratched.

- fingernail (2.5)
- copper coin (3.5)
- window glass (5.5)
- pen knife / steel nail (6.5)

talc -> softest (1)



diamond -> hardest (10)



Cleavage: Tendency for a mineral to break along flat, even surfaces

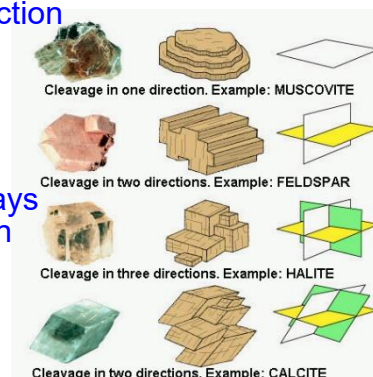
6)

Breaks along planes of weakness.

Mica has cleavage in 1 direction



salt always
breaks in
cubes



7) Fracture: Uneven breakage of a mineral. Conchoidal fracturing in Obsidian.

Random fracturing in Quartz.

fracture is random pattern breaking cleavage is along specific planes

obsidian



quartz



8) Density: Amount of mass per volume

31 lbs for 1 gold bar
Density = 19.3g/cc



Same size bar of pyrite
(fool's gold) would be
8 lbs. Density = 5.02g/cc



9) smell ... ex: sulfur

10) taste.... ex: salt

11) radiation.... example uraninite

12) fluorescent.... fluoresce under black light.... ex: fluorite

13) reacts with acid ex: any carbonate