

A CHECKLIST OF PHYSICAL PROPERTIES THAT MAY BE DETERMINED FOR MINERALS IN HAND SPECIMEN

- **color** - the most obvious physical property (may not be reliable)
- **habit** - The form of a crystal reflects an interaction of the structure of a mineral with the kinetics of the growth of that crystal. Individual crystals may be acicular, fibrous, bladed, prismatic, cubic, etc. Aggregates of crystals may be dendritic, radiating, drusy, columnar, bladed, fibrous, stellated, globular, botryoidal, granular, massive, etc.
- **cleavage** - the property of a mineral of breaking along planar surfaces which have the same orientation, relative to the crystal axes and structure, in every specimen of that mineral. A cleavage may be described as perfect, good, or poor. Some minerals break along planar surfaces only in certain specimens (generally depending on the history of the specimen). These minerals are said to have a **parting**.
- **association** - the whole assemblage of minerals. Many minerals commonly occur with other minerals or are restricted to certain rock types, bulk compositions, etc.

- **luster** - the way a mineral reflects light. All minerals have either a metallic or a nonmetallic luster. Some non-metallic minerals have a luster that may be further characterized as: adamantine, greasy, pearly, resinous, silky, or vitreous
- **fracture** - If there is no cleavage or parting, a mineral must fracture when it breaks. Most fractures are uneven or irregular, although some are conchoidal (e.g. quartz and pyrite). Other fractures may be fibrous, splintery, or hackly.

- **hardness** - a relative scale with the scratching pecking order:
- **specific gravity** - the density of a mineral relative to the density of water. Can approximate on the basis of heft.
- **streak** - color of the mineral in powdered form
- **magnetism**: magnetite and pyrrhotite only
- **reactivity** - does dilute HCl make it fizz:
- **taste**: halite (salty), sylvite (bitter)
- **play of colors**
- **tenacity** - brittle, malleable, sectile, ductile, flexible, elastic

10.	diamond
9.	corundum
8.	topaz
7.	quartz
6.5	steel file
6.	orthoclase
5.5	window glass
5.2	pocket knife
5.	apatite
4.	fluorite
3.	copper penny
3.	calcite
2.5	fingernail
2.	gypsum
1.	talc

- **fluorescence**
- **piezoelectricity**
- **radioactivity**