Physical Science 111
Materials of the Earth's Crust, including specific examples

I. Common Minerals

Examples	Description
Quartz	Pure silica, SiO_2
Silicates	Compounds which include the SiO_2 unit
Calcite	A naturally occurring form of $CaCO_3$
Micas	Complex silicates with characteristic physical properties.
Halite	Salt crystals. Formula NaCl.
Graphite*, diamond*	Two forms of carbon. Symbol is C.
Feldspars	Clay-forming minerals.
Sulfur*	Yellow solid. Symbol is S.
Gold*	Precious metal with unique yellow color. Symbol is Au.
Pyrite	An ionic compound with the formula FeS_2. Called "fool's gold" because it looks like gold; however, it is brittle, not malleable, as metals are; and is only about 1/3 as dense as gold.

* Native minerals (single elements). All others are compound minerals.

II. Common Igneous Rocks

Intrusive type		*Extrusive type*
Formed underground, usually at great depths.		Formed at or near the surface.
Coarse-grained, large crystals		Fine-grained small crystals
Granite (quartz, mica, feldspar)	Light	**Rhyolite** (composition same as granite)
Diorite (feldspar, ferromagnesian, quartz)		**Andesite** (composition same as diorite)
Gabbro (ferromagnesian, some feldspar)		**Basalt** (composition same as gabbro)

III. Common Sedimentary Rocks

Detrital type	Origin (unconsolidated sediment, etc.)
Conglomerate, breccia	gravel (pebbles, boulders)
Sandstone	Sand grains (quartz)
Siltstone	Silt
Shale	Clay
Chemical type	
Limestone	Limey mud, calcareous sand, shell fragments
Chert	Finely divided silica which may have been deposited in solution
Flint	
Coal	Plant remains

IV. Common Metamorphic Rocks

Metamorphic Rock	**Origin (igneous or sedimenatry rock)**
Granite Gneiss**	granite
Rhyolite schist**	rhyolite
Hornblende schist**	andesite
Biotite schist, Chloride shist**	basalt
Slate, mica schist**	shale
Marble	limestone
Quartzite	sandstone
Anthracite**	bituminous coal

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