

Review for Physical Geology Test 2

(Thursday March 5th)

Formation of Sediment and Sedimentary Rocks

terms - sediment, detrital sediment, nondetrital sediment, chemical precipitants, weathering, physical weathering, chemical weathering, erosion, diagenesis, frost wedging, abrasion, plant root pressure, Bowen's Chemical Stability Series, hydration, oxidation, acidation, deposition, sorting, Wentworth's Grade Scale, diagenesis, lithification, cementation, compaction, dehydration, gravel, sand, dirty sand, clean sand, silt, clay, conglomerate, breccia, sandstone, siltstone, shale, coquina, limestone, coal, detrital texture, nondetrital texture

- the different types of physical weathering
- the different types of chemical weathering
- Bowen's chemical stability series
- the role of water in physical and chemical weathering
- the mineralogy of detrital sediment
- the mineralogy of nondetrital and chemical sediment (precipitants)
- how chemical weathering is aided by physical weathering (and vice versa)
- the 4 steps in making a detrital sedimentary rock
- the role of sorting in creating different types of sediment
- how different sizes of sediment are lithified

Metamorphic Rocks

terms - regional metamorphism, contact metamorphism, slate, phyllite, schist, gneiss, kilobar, geothermal gradient, lithostatic pressure, phyllitic luster, crenulations, quartzite, hornfels, marble, skarn, metamorphic grade, index minerals, protolith, recrystallization, mineral rotation, mineral alignment, foliated texture, nonfoliated texture, metamorphism, volatiles, contact aureole

- the processes that metamorphose a rock
- the changes that occur in protoliths during regional metamorphism
- where regional and contact metamorphism occurs
- how contact metamorphism changes the protolith
- the index minerals that occur under different metamorphic grades

Geologic Time

terms - geologic time, relative geologic time, absolute geologic time, Principle of Superposition, Law of Cross-cutting Relationships, Law of Inclusions, geologic events, radiation, isotope, radioactive isotope, isotopic dating, radioactive decay curve, half-life, parent isotope, daughter isotope, age resetting, carbon dating, uranium-lead dating, geologic events, folds, faults, igneous intrusions, unconformities, index fossils

- how we apply the 3 laws of relative time to the study of geologic time
- how to use a 'generic' radioactive decay curve to date a rock
- what are some problems/errors involved in determining a radioactive age date?

Solar System and the Planets

terms: the Big Bang, supernova, Solar System, Sol, Planet, Dwarf Planet, small solar system bodies, Satellites, Oort Cloud, terrestrial planets, gas giant planets, asteroid belt, ice bodies, molecular cloud, nebula, solar nebula, proto-planetary ring, comets, Kuiper belt, meteoroid, meteorite, meteor, asteroid

- the basic chronology of the Big Bang
- what is the basic composition of the planets in our solar system?
- what is the solar nebula theory for the formation of our Solar System?