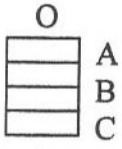
Desert & Poles vs. tropic
Iron sulfide of marsh and swamp
Hydrolysis- Weak acid Si02 Dissolved in h2o (H4Si04)

(Much more C02 in soil than air and in ocean also)
Hydrolysis of feldspars (orthoclase & plagioclase) 50% of earth's minerals
Clay and aluminum silicates - Bauxite
Kaolin, vermiculite, chlorite, montmonorillite

Weathering series of rocks- millions to less than 200 years.
Microbial, weathering, algae, fungi, Cyanobacteria to clean up chemical wastes.
Review soil horizons
O - A – B – C



Karst - solution topography
High rock solubility & porocity
Solution is weathering and erosion combined
Dolomite & gypsum salt increases
Tropics to Poles
Karstology & terminology
Hypogenic Caves (sulfuric acid)
CaCo3 epigenic / near surface
H20 + HC03 carbonic acid
Pressure, mixing, temp (different types of h2o)
Phytokarst of Grand Canyan - cyanobacteria
Guano – Chincha Islands – Rock Phosphate
Nauru and Ocean is in pacific
Cold Water vs. Warm Water
Cave use historically- Caves & bandits from Jesse James to V C to Julio 14 to Chetniks

Cause - deep flow paths below water table and in areas of water table fluctuation
Caves are horizontal & support
Speleotherms – Stalactites vs. Stalagmites
Cols and submerged Pools
Mass Wasting - Weathered Rock
Gravity, pressure, flowing h2o
Angle of Repose gp – gt
Gt greater than gp- Than rock moves down hill
Cohesion – from ground - (40-60%h2o)
Slope – 25 – 40 – movement – depends upon type
Description - Fall, rock, debris, earth, monolith fall