Earth Science Lecture - Review for Test 1

The Hydrologic Cycle

Terms: Hydrologic Cycle, hydrology, reservoirs, fluxes, infiltration, runoff, evaporation, precipitation, groundwater, oceans, glaciers, surface water, atmospheric water

- what are the reservoirs and the fluxes in the Hydrologic Cycle?
- know the specific fluxes that transfer water around the Hydrologic Cycle?
- describe the size of the fluxes associated with the Hydrologic Cycle in South Texas?

Rivers and Streams

Terms: stream source, stream mouth, tributaries, channel, banks, lowland streams, mountain streams, load, bed load, suspended load, dissolved load, downcutting, sidecutting, cut bank, meander, floodplain, oxbow lake, discharge, lag time, levee, ions, cations, anions, drainage basin, drainage divide, capacity, competence, back swamp, oxbow lake, stage, delta

- how does downcutting alter the shape of a river valley?
- how does sidecutting alter the shape of a river valley?
- what are the features associated with: a mountain stream, a lowland stream ?
- what are the different controls on the discharge within a drainage basin?
- what conditions increase (or decrease) lag time during flooding?
- how can stream stage vary with discharge during normal and flood events?

Groundwater

Terms: water table, perched water table, spring, zone of aeration, zone of saturation, permeability, porosity, artesian well, aquifer, aquitard, confined aquifer, unconfined aquifer, recharge area, karst, caves, sinkholes, sinkhole lakes, non-point source, point source, plume, land subsidence, salt water intrusion, recharge area

- how fast does water flow underground?
- how does a perched water table form?
- what are the problems associated with overuse or 'mining' groundwater?
- in what type of aquifer does an artesian well form?
- how do you make a cave?
- how does a karst landscape form?
- compare how aquifer contamination differs between gasoline and solvents
- what is a contamination plume?

Deserts and Dry Climates

Terms: desert, subtropical desert, rain shadow desert (also called mid-latitude desert), steppe, sand dunes, deflation, desert pavement, ventifacts, alluvial fans, playa lakes, bajada, blowouts, slip face, cross beds, inselberg, low latitudes, mid-latitudes, high latitudes, Basin and Range

- how does wind affect: silt and clay particles; sand particles; gravels?

- where are deserts (what latitudes) formed and what are the 3 types of deserts?
- what is the precise definition of a desert? Of a steppe?
- what are the atmospheric conditions associated with the development of deserts and dry lands?
- how does wind shape the land (topography) in a dry/desert environment ?
- how does water shape the land in a dry/desert environment ?
- how does sand move across a sand dune ?
- know how the landscape in the Basin and Range changes over millions of years ?
- Know the features present in the early and late stages of development of the Basin and Range

Shoreline Environment

Terms: crest, trough, wavelength, wave base, wave break, surf, wave refraction, headland, bay, longshore currents, beach, spit, baymouth bar, barrier island, sea stack, tides, high tide, low tide, spring tide, neap tide, lunar phases

- know the processes of how wave refraction shapes the shoreline
- know the features that wave refraction forms along bays; along headlands
- how to tell the direction of movement of longshore currents
- know the different features present on the shoreline both natural and human made
- know what causes daily tides
- know what causes monthly tides and how to recognize when they will occur