**Bio 10-13-11**

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Rr: part 3 of photographic essay

-essentially ch. 15 and..

from West to East of California

start with coast (ex. Morro Bay, 0ft)(about 25 in. rain/year) at sea level, then hit coastal range (goes up to 6k ft)(50/60 inch rain/year), then steep decline to valley floor (let's assume sea level, 0 ft), at base of mountains town (ex: Coalinga (why is it called Coalinga: first stop out of LA when on railroad for coal(ing station A)) (2-3 inch rain/year = rain shadow), go E find a river in the central valley (ex. King's River or San Juaquin), go E to Fresno (meaning ash tree (Riparian)) (source of fresh water) (always about agriculture) (still at sealevel, 0 ft) (11 inch rain/year), go E to Clovis and elevation starts increasing rather steadily, e to Sierra Nevada (Sierra means mountain range, Nevada essentially means snow covered)(assume peak at 1200 ft), again steep decline on E side, at floor on E side (ex. Leving) (4000ft)

-illustrating/drawing this concept is the diagram asked for in part 3 of photoessay

water comes off the Pacific

-2 characteristics: hot and moist

when hits land, if ground is cooler than air = fog (air moisture

as air rises = cools = can't hold as much water (as warm air)

-when it passes point of 100% relative humidity/moisture = water falls (rain, snow, hail, etc)

-as you get higher, more and more water falls

-then you see biomes forming according to those elevation/moisture bands on mountains

Cool/Saturated air mass at the top of the mountain

-as soon as starts to descend on other side of mountain = warms up

-holds more and more water w/o releasing it to ground

Warm air as moves across valley

-warmer and warmer, doesn't release moisture

-in fact can steal moisture from land

-luckily, some more water laden warm air sneaks in from the San Francisco bay (which helps bring in some water to the valley)

Reaches Fresno, air begins to climb

-begins to cool, ability to hold less and less water and starts releasing it back to ground

-so essentially the equivalent of what happened with the water climbing over the coastal range)

-and Levining is in a rain shadow (leads to desert)

Imp. when talking about Fresno Water:

-water campaigns: don’t use water on certain days, don't let water run unnecessarily

-problem: 20% of Fresno's water is used for personal use like that

-most for agriculture

-70% of California's water goes to agriculture

-though it's 9% of our economy

-most water is subsidized

-acre of water (acre of 1 ft water) = enough family of 4/yr

-farmer pays 5-8$/acrewater

-LA pay about 985$/acrewater

-California has 8th largest economy in the world

-fresno/kings/tulare = we feed more than 50% of the US, and we export more food outside the US than we even provide to the US

-we provide a huge percentage of the world's agriculture

-milk, cotton, grapes, nuts, stone fruit are examples of huge crops

MTBE: distilled oil by-product/toxic, octane booster and oil producers put it in the gas to get rid of it as toxic waste... became problem began eating through gas station tanks and sinking into the water table

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Shows Maximum Specific Humidity line graph (or 100% Relative Humidity)

-grams water/kilogram air (Y)

-Temperature (in centigrade) (X)

How to read graphs:

-1. Read title of graph

-to know what info it's supposed to tell you

-2. read the axes (X, Y)

-3. use how the axes work together to give you specific answers to q's re: title of graph