Journal Reading Review Questions **NAME_____**
Kelsey et al., 1996, Quaternary Deformation of Coastal Oregon

1. What are the types and ages of rocks that underlie the Oregon Coast Range?

2. Where are the zones / locations of maximum and minimum uplift of the Oregon Coast?

3. Describe the prominent tectonic plate setting and structural features associated with the Coastal Oregon?

4. Examine Figure 2, True or False, Coastal Oregon is associated with a distinct absence of active faults.

5. Draw a cross-sectional sketch of a flight of three wave-cut terraces, in relation to modern Sea Level. Describe how wave-cut terraces are formed on the Oregon Coast.

6. Examine Table 1. List the three dominant ages of Marine Terraces identified on the Central Oregon Coast. What is the average elevation of each terrace bench for the three respective age groups?

7. List and discuss the three primary soil properties that are used for relative age dating of marine terraces in Coastal Oregon. Describe how the age of the soils and soil properties change in relation to the height of the marine terrace above sea level. (do terraces become younger or older, the higher they rise above sea level over time?).

8. How many stages of soil development were identified for terraces in the Newport area? (Examine Table 4). How are each stage delineated?

9. How are soil data used to correlate marine terrace ages on the Oregon Coast? Provide examples that are discussed in the paper.

10. Examine the cross sectional profile in Figure 8. Compare Siletz Bay (north) to Waldport (south). Which areas are associated with the highest number of terraces? Which areas are associated with the highest terrace elevations? Based on the terrace distribution observed, which area is more tectonically active with respect to faulty and uplift… and why ?

11. Examine Table 8, and note the uplift rates that are estimated for the three coastal regions: (1) North of Cape Foulweather Fault, (2) Cape Foulweather to Yaquina Bay, and (3) south of Yaquina Bay. Using a calculator, determine the average rates of uplift for each of the three study regions (calculate in m / k.y. note: k.y. = "kiloans" = thousand years); convert the averages to mm / year and m / Ma; show all of your unit algebra. Fill in the table below.

	Avg. Uplift m/k.y.	Avg. Uplift mm/yr	Avg. Uplift m / Ma
1 North of Cape FW	_____	_____	_____
2 Cape FW to YB	_____	_____	_____
3 south of YB	_____	_____	_____

Which regions are associated with the highest average uplift? Which the lowest? How do they compare.

12. Examine Figure 10 showing uplift rates along the Oregon coast. How does the Newport reach generally compare to the areas to the north and south? How do the Yaquina Bay and Cape Foulweather faults influence local uplift rates of wave cut platforms?

13. Read the conclusion section: Summarize the 4 primary conclusions derived by the authors as part of this research.

14. True or False: The Oregon Coast is a very stable and static area, that has not been tectonically active in the latter part of the Quaternary.