ISCI 2001 – Review Questions (Due November 5)
Chapters 22-25
Plate Tectonics, Earthquakes, Rocks and Minerals and Surface Processes, Weather

Don't forget about the activities we did in class – you should remember what you learned in those!

1. What did the study of P- and S- waves tell us about the nature of the Earth's interior?
2. What is the "Moho"?
3. Name the two types of crust. How do geologists distinguish between them?
4. Describe the origin of the magnetic stripe patterns found in the rocks along an oceanic ridge.
5. Describe the three major types of plate boundaries and what happens along each one.
6. The country of Japan has a string of volcanic mountain. What is the Plate Tectonic situation there? What topographic feature would you expect to see offshore?
7. How do the contours of Africa and South America support the idea that the continents are mobile?
8. The San Andreas Fault separates the northwest-moving Pacific plate from the SE-moving North American plate. If the distance from San Francisco (North American plate) to Los Angeles (Pacific plate) is 600 km and the average rate of motion along the fault is 3.5 cm/year, how long will it take before the two cities are next to each other – assuming they survive the trip! (SHOW your work).
9. Which elements make up 98% of the Earth as a whole? Which two make up most of the Earth's crust?
10. Describe each of the three types of rocks and how they form.
11. Explain why most fossils are found in sedimentary rocks.
12. Describe the Rock Cycle in terms of the processes that convert one type of rock into another.
13. List and define the different types of mountains.
14. Where are most volcanoes on Earth located?
15. Describe the conditions that would lead to faulting as opposed to folding of rocks.
16. Describe the different types of folds and faults.
17. What percentage of the Earth is covered by ocean?
18. What are some common features of the ocean floor?
19. Compare the advantages and disadvantages of using a) groundwater, and b) surface water.
20. Could a stream erode the land lower than sea level? Explain.
21. In what form is most of the Earth's fresh water?
22. What is the water table? Is it really a "table"? Explain.
23. If the water table at location X is higher that the water table at location Y, will water flow from X to Y or Y to X? Explain your reasoning.
24. List and describe the fundamental properties of a stream. (p.738)
25. Give examples of "point" and "nonpoint" water pollution.
26. Why must most aquifers contain material that is both highly porous and highly permeable?
27. Compare features caused by wind, water and glacial erosion.
28. How do waves form? Why do waves "break" when they approach the shore?
29. What is a mass movement? Describe two different types. What force causes it?
30. Describe the two types of weathering.
31. Are weathering and erosion the same thing? Explain your answer.
32. A dam is built on a major river that flows into the ocean, reducing the flow of water into the ocean. Ten years after the dam is built, nearby beaches have noticeably less sand. Develop a hypothesis to explain what is happening at the beach.