

**Directions:** Read the three articles listed below, and answer the questions on another sheet of paper. Think in terms of the historical development of the environmental movement as outlined in chapter 2 of the Miller text. Keep in mind the how attitudes and values may changed over time in light of the development of the environmental movement.

**Questions for Muir: *Hetch Hetchy Valley***

1. How would you compare Muir's "university of the wilderness" education against a formal university education in terms of value?
2. Describe the basic ideas of the ecocentric versus the ethnocentric view of the world.
3. Describe the preservationist concept of "primitive areas".
4. How were Hetch Hetchy and Yosemite Valley formed?
5. Describe Muir's writing style when he describes the environment and features of Hetch Hetchy Valley.
6. What was the major purpose or desired goals for damming Hetch Hetchy Valley?
7. Do you think the changes in Hetch Hetchy Valley were more beneficial and supportive of our common interests as citizens requiring infrastructure, or do you think we all lost out when Hetch Hetchy was altered even though it was in the boundaries of the Yosemite National Park?
8. What is your interpretation of Muir's statement, "everybody needs beauty as well as bread".
9. What forces do you think eventually caused the development of the Hetch Hetchy area, when the permits to develop the area were denied by the Secretary of the Interior in 1903, and protected as part of the Yosemite National Park in 1890?
10. List 2 or 3 of Muir's more compelling arguments for the preservation of the Hetch Hetchy Valley.
11. If we could pay for a large portion of the national debt, or support a hurricane relief fund, or offset the California budget crisis by selling off parts of the Torrey Pines Reserve, would you be in favor of it? Why or why not?

**Questions for Leopold: *A Sand County Almanac: And Sketches Here and There***

1. Use your book to help you compare the conservationist to the preservationist perspective.
2. How does Leopold's phrase, "In those days we had never heard of passing up a chance to kill a wolf" make you feel? How does this phrase embody some of our historical ideologies regarding the value of wildlife?
3. What was the ecological paradox of killing wolves that Leopold realized later in his life?
4. What do you think Leopold's message or intent is when he says that the cowman "has not learned to think like a mountain"?
5. How can politics and economics demonstrate the ecological principal of symbiosis?

6. What parallels do you see between Hardin's *Tragedy or the Commons*, and Leopold's community concept?
7. In terms of modern society, do you think that citizens of the U.S. have indeed "outgrown" the land as he suggests? On an individual basis, do you feel like you have "outgrown" the land at times? Why or why not?
8. How did the scarce academic offerings in ecology symbolize some of the common attitudes and thinking regarding nature in Leopold's generation?
9. In Leopold's land ethic, he forwards the idea that development or land use should not solely be determined by economic forces, but by its "rightness". How do you interpret his idea of "rightness"?
10. How does Leopold view looking at ecological issues from only an emotional perspective?

### **Questions for Carson: *Silent Spring***

1. According to Carson, how are humans unique amongst other species in terms of their relationship to their physical environment?
2. Something like Strontium-90 or chemicals Carson describes demonstrate the idea of persistence. What dangers do you see from a chemical or pollutant persisting in the environment?
3. What parallels can you draw between the rapid introduction of pesticides, and the introduction of diseases to new areas of the world (like the introduction of smallpox to the new world)?
4. How does Darwin's theory of evolution via natural selection practically predict the development of insecticide resistant insects?
5. Why do you think a "flameback" event may occur after the application of insecticides?
6. What will the likely outcome be, if germ cell lines (sperm and eggs) are damaged by chemical mutagens, which can induce mutations in the DNA code?
7. Why do you think Carson predicts disaster at the end of a "deceptively easy" and "smooth superhighway on which we progress at great speed"?
8. Do you think government agencies, businesses, and researchers have supported your "right to know" about the effects of chemicals you may have or might be exposed to in your lifetime?
9. Carson advocates biological solutions as a possibility for pest management. What is required for implementation of sound biological pest control practices? What might be some of the dangers of using biologically based pest control techniques?
10. Why do you think the "control of nature theme" we as a society have historically used, so often seems to fail overall, while producing unforeseen problems?

