Name _____ Class _____ Date _____

Chapter 32 **Viewpoint Activity**

Since the 1960s, many concerned people have spoken out about the harm that modern living causes to the natural environment (textbook page 837). One of the earliest was marine biologist Rachel Carson, whose book *Silent Spring* made people aware of the dangers of pesticides. More recently, biologist E. O. Wilson has warned about the rapid extinction of animal and plant species. ◆ *As you read, think about the different concerns of each writer. Then, on a separate sheet of paper, answer the questions that follow.*

CHAPTER 32

Approaches to the Environment

Rachel Carson

The history of life on earth has been a history of interaction between living things and their surroundings. To a large extent, the physical form and the habits of the earth's vegetation and its animal life have been molded by the environment. Considering the whole span of earthly time, the opposite effect, in which life actually modifies its surroundings, has been relatively slight. Only within the moment of time represented by the present century has one species—man—acquired significant power to alter the nature of his world.

During the past quarter century this power has not only increased to one of disturbing magnitude but it has changed in character. The most alarming of all man's assaults upon the environment is the contamination of air, earth, rivers, and sea with dangerous and even lethal materials. This pollution is for the most part irrecoverable; the chain of evil it initiates not only in the world that must support life but in living tissues is for the most part irreversible. In this now universal contamination of the environment, chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world—the very nature of its life. Strontium 90, released through nuclear explosions into the air, comes to earth in rain or drifts down as fallout, lodges in soil, enters into the grass or corn of wheat grown there, and in time takes up its abode in the bones of a human being, there to remain until his death. Similarly, chemicals sprayed on croplands or forests or gardens life long in soil entering into living organisms, passing from one to another in a chain of poisoning and death.

E. O. Wilson

There is no way to measure the absolute amount of biological diversity vanishing year by year in rain forests around the world. . . . Nevertheless, . . . let me provide the most conservative estimate that can be reasonably based on our current knowledge of the extinction process. I will consider only species being lost by reduction in forest area. . . . I will assume a number of species living in the rain forests, 10 million (on the low side), and I will further suppose that many of the species enjoy wide geographical ranges. Even with these cautious parameters, selected. . . to draw a maximally optimistic conclusion, the number of species doomed each year is 27,000. Each day it is 74, and each hour 3. . . .

Human activity has increased extinction between 1,000 and 10,000 over this [normal] level in the rain forest by reduction in area alone. Clearly we are in the midst of one of the great extinction spasms of geological history.

Sources: (1) *Silent Spring,* by Rachel Carson (Houghton Mifflin, 1962); (2) *The Diversity of Life,* by Edward O. Wilson (Harvard University Press, 1992).

Questions to Discuss

1. What does Rachel Carson see as the "most alarming" environmental problem? What two main causes does she name?
2. What kinds of predictions does Wilson make about the extinction of rain forest species?
3. **Identifying Central Issues** Writing 30 years apart, both writers share similar concerns about the effect of humans on the environment. What are they? Has the passage of time changed the problems?