



# Environmental History



Earth Day: Every  
Day for Everybody



*Below is a brief listing of some of the major environmental events that have occurred in history this month. Each is capable of being researched further by your students, and there are some questions below the timeline to help you get started.*

1894 -- Dec. 24 -- Swedish chemist Svante August Arrhenius begins to wonder what increases of carbon dioxide in the atmosphere from fossil fuels will do to the climate. In 1908 Arrhenius argues that the greenhouse effect from coal and petroleum use is warming the globe. According to his calculations, doubling CO<sub>2</sub> would lead to average temperature increase of 5 to 6 degrees C. Rather than being alarmed, Arrhenius is pleased that people in the future would "live under a warmer sky and a less harsh environment than we were granted." In his book *World in the Making*, he says that with increased CO<sub>2</sub> "we may hope to enjoy ages with more equable and better climates, especially as regards the colder regions of the earth, ages when the Earth will bring forth much more abundant crops than at present for the benefit of rapidly propagating mankind."

1901 -- Dec. 3 -- President Teddy Roosevelt's first message to Congress includes strong recommendations for forest and water conservation and reclamation. (Roosevelt had been vice president until the assassination of William McKinley on September 14).

1914 -- Dec. 24 -- John Muir dies. America's most famous and influential conservationist, John Muir was the founder of the Sierra Club in 1892 and a major influence on conservation policy in the U.S. Partly due to his efforts, an act of Congress created Yosemite National Park. Muir was also involved in the creation of the Sequoia, Mount Rainier, Petrified Forest, and Grand Canyon national parks

1921 -- Dec. 9 -- General Motors researchers discover tetraethyl lead as an anti-knock gasoline additive. Despite strong private warnings about its danger, and a secret Public Health Service inquiry, the new gasoline goes on sale without safety tests 14 months after it was invented.

1947 -- Dec. 6 -- Everglades National Park established. Marjory Stoneman Douglas, author of *Everglades, River of Grass*, is honored by President Harry Truman at the park's opening.



1952 -- Dec. 4-8 -- Four thousand people die in the worst of the London "killer fogs." Vehicles use lamps in broad daylight, but smog is so thick that busses run only with a guide walking ahead. By Dec. 8 all transportation except the subway had come to a halt.

1970 -- December 2 -- Environmental Protection Agency signed into law. The EPA brings together key federal programs including the Health Education and Welfare National Air Pollution Control Administration (NAPCA) and the Department of Interior's Water Quality Administration (FWQA).

1970 -- Dec. 29 -- Occupational Health and Safety Administration (OSHA) bill signed into law. The agency is up within the Department of Labor. Responsibilities include setting standards for employee exposure to hazardous substances.

1973 -- Dec. 28 -- Endangered Species Act passed by US Congress.

1983 -- 10 December -- New UN Convention on the Law of the Sea is signed by 117 States

1984 -- Dec. 3 -- Bhopal disaster. Union Carbide Co. fertilizer plant leaks methyl isocyanide in the Indian town of Bhopal. 2000 dead, another 8,000 die of chronic effects. There are an estimated 100,000 injuries and significant damage to livestock and crops. The International Medical Commission on Bhopal estimates that as of 1994 upwards of 50,000 people remained partially or totally disabled

1988 -- Dec. 22 -- Assassination of Chico Mendez, leader of Brazil's rubber tappers (Taperos) movement to save the rain forest.

1997 -- Dec 11 -- Kyoto Protocol is adopted by the US and 121 other nations, but not ratified by the US Congress. American industry predicts "disaster" if CO<sub>2</sub> reductions are enforced, and environmentalists are dissatisfied with the weak goals of the treaty.

1998, December 14 -- Morris K. Udall, former congressman and defender of the environment, dies

#### *Questions for further discussion and research*

1. Svante August Arrhenius discussed the possibility of global warming in 1894, but was optimistic about its effects. When did people begin to be alarmed by the idea of global warming? Are Arrhenius' calculations correct when he suggests that doubling Carbon Dioxide in the atmosphere would raise the global temperature by 5 to 6 degrees, Celsius?
2. What is Teddy Roosevelt's legacy as a conservationist and an environmental president?
3. Do some research on the life of John Muir. What are some of his accomplishments not listed above?
4. Lead gasoline was engineered in 1921. When was it finally outlawed and why? What effects does it have on human health?



5. What are the responsibilities of the Environmental Protection Agency? What does it regulate? Who is the head of the EPA, what are his or her qualifications, and how did this person come into this position?
6. Do some research on the aftermath of the Bhopal disaster. What is the future of the area surrounding the Bhopal fertilizer plant?
7. Why didn't the US Congress ratify the Kyoto Protocol? What is required of the countries that did sign it? The protocol is aimed at slowing global warming by reducing greenhouse gas emissions. If every country adopted the Kyoto Protocol what sort of effect would it have on these emissions? Would the progress of global warming stop?

