

Arthur Carhart National Wilderness Training Center's
Wilderness Investigations
High School

Wilderness Applications/Lesson 2
Environmental Legislation: Protecting Wilderness and More

Goal: Students will understand the chronology of environmental legislation as it relates to the Wilderness Act of 1964.

Investigation Objectives

Audience: 9-12 grades.

- Students will know that numerous pieces of ground breaking environmental legislation have been enacted since 1960. Students will gain perspective on where the Wilderness Act fits into an environmental legislation timeline. (Behavior)
- Students will be given a summary of a piece of environmental legislation, guiding questions, poster board, and drawing supplies. (Condition)
- Students will create an informational poster, which will display the key points of a specific piece of environmental legislation. Students will display their posters in chronological order and present their piece of environmental legislation. Students in the audience will fill out a worksheet on the presentation of their peers. (Degree)

Common Core Standard Connections

NOTE: See Common Core Standards sections to see listed objectives for this and other lessons/activities.

Time Requirement: 50 minutes

Materials/Resources Needed and Pre-Investigation Tasks

- Poster board size paper
- Markers
- Print outs of environmental legislation summaries (one summary for each group of 2).
- Print out of Assessment Evaluation for students to use when assessing student presentations

Teacher Background

The year 1960 was chosen as a point of departure for this lesson as a significant number of environmental legislation began to be passed during this time. Here is a general overview:

1963: Clean Air Act
1964: Wilderness Act
1965: National Emissions Standards Act
1967: Air Quality Act
1969: National Environmental Policy Act (NEPA)
1970: Environmental Quality Improvement Act
1972 Federal Insecticide, Fungicide, and Rodenticide Act
1973: Endangered Species Act
1974: Safe Drinking Water Act
1976: Toxic Substances Control Act
1980: Fish and Wildlife Conservation Act
1982: Nuclear Waste Policy Act
1990: Oil Pollution Act
1996: Food Quality Protection Act
2005: Energy Policy Act
2007: Energy Independence and Security Act

-Teachers should be familiar with the attached sampling of environmental legislation from 1960-present. (See summaries—for distribution to students—near the end of this lesson.).

Step-by-Step Presentation Instructions

Activity #1: Environmental Timeline

- Students will work with a partners.
- Students will summarize the key points of a piece of environmental health policy.
- Students will make an informational poster-bulletin to display the key points of their designated environmental health policy.
 - Posters will include:
 - ✓ Name of act
 - ✓ Date act was passed
 - ✓ Key components of regulation
 - ✓ How is the environment protected by this act?
 - ✓ How is human health protected?
- Students will display their poster in chronological order in the classroom.
- Students will share their informational poster-bulletins in chronological order.

- As student presentations are occurring, students in the audience will be filling out this worksheet, which is based upon student presentations:

Assessment Evaluation: rubric

- Date of act (present/not present)
- Name of act (present/not present)

	Excellent	Good	Fair	Poor
Key Points	Described at least four key points in their own words.	Described at least two points in their own words. Recorded at least two points word for word.	Described at least one key point in their own words. Recorded at least three key points in their own words.	Described zero points in their own words. Recorded at least one key point word for word.
Environmental Improvements	Described several environmental improvements.	Described some environmental improvements.	Recorded some environmental improvements word for word.	Recorded zero environmental improvements.
Human Health Improvements	Described several human health improvements.	Described some human health improvements.	Recorded some human health improvements word for word.	Recorded zero human health improvements.
OTHER:				

Grade Scale: 14 total points

Present/not-present: Date of Act (1 point)
Present/not present: Name of Act (1 point)

	Excellent	Good	Fair	Poor
Key Points	4	3	2	1
Environmental	4	3	2	1
Human Health	4	3	2	1

Journal Prompt:

Can you think of any pieces of environmental legislation that do not exist, but that you think need to exist? Explain a new piece of environmental legislation. What problems would it address?

Extension Ideas

- Contact a local state or national member of Congress. Invite them or a staff member to present to your class on two themes:
 1. The *real story* of taking legislation from an idea to a vote in Congress.
 2. Their positions related to pending environmental legislation.

Environmental Legislation Summaries

1. The Clean Air Act:

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

One of the goals of the Act was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. The Act was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines.

Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source.

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine whether any residual risk exists for that

source category and, if necessary, revise the standards to address such risk.

Source: <http://www2.epa.gov/laws-regulations/summary-clean-air-act>

2. The Clean Water Act:

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972.

Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's [National Pollutant Discharge Elimination System \(NPDES\)](#) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters

Source: <http://www2.epa.gov/laws-regulations/summary-clean-water-act>

3. The Noise Control Act:

Inadequately controlled noise presents a growing danger to the health and welfare of the Nation's population, particularly in urban areas. The major sources of noise include transportation vehicles and equipment, machinery, appliances, and other products in commerce. The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for

effective coordination of Federal research and activities in noise control; (2) authorize the establishment of Federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products.

While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. EPA is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control.

Source: <http://www2.epa.gov/laws-regulations/summary-noise-control-act>

4. The Safe Drinking Water Act:

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids.

Source: <http://www2.epa.gov/laws-regulations/summary-safe-drinking-water-act>

5. The Oil Pollution Act:

The Oil Pollution Act (OPA) of 1990 streamlined and strengthened EPA's ability to prevent and respond to catastrophic oil spills. A trust fund

financed by a tax on oil is available to clean up spills when the responsible party is incapable or unwilling to do so. The OPA requires oil storage facilities and vessels to submit to the Federal government plans detailing how they will respond to large discharges. EPA has published regulations for aboveground storage facilities; the [Coast Guard](#) has done so for oil tankers. The OPA also requires the development of Area Contingency Plans to prepare and plan for oil spill response on a regional scale.

Source: <http://www2.epa.gov/laws-regulations/summary-oil-pollution-act>

6. Toxic Substance Control Act:

The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides.

TSCA addresses the production, importation, use, and disposal of specific chemicals including [polychlorinated biphenyls \(PCBs\)](#), [asbestos](#), radon and [lead-based paint](#).

Source: <http://www2.epa.gov/laws-regulations/summary-toxic-substances-control-act>

7. The National Environmental Policy Act:

The National Environmental Policy Act (NEPA) was one of the first laws ever written that establishes the broad national framework for protecting our environment. NEPA's basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment.

NEPA requirements are invoked when airports, buildings, military complexes, highways, parkland purchases, and other federal activities are proposed. Environmental Assessments (EAs) and Environmental Impact Statements (EISs), which are assessments of the likelihood of impacts from alternative courses of action, are required from all Federal agencies and are the most visible NEPA requirements.

8. The Endangered Species Act:

The Endangered Species Act (ESA) provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing ESA are [the U.S. Fish and Wildlife Service \(FWS\)](#) and the [U.S. National Oceanic and Atmospheric Administration \(NOAA\) Fisheries Service](#). The FWS maintains a [worldwide list of endangered species](#). Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.

The law requires federal agencies, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife. Likewise, import, export, interstate, and foreign commerce of listed species are all generally prohibited.

Source: <http://www2.epa.gov/laws-regulations/summary-endangered-species-act>

9. The Marine Protection, Research, and Sanctuaries Act:

Titles I and II of the Marine Protection, Research, and Sanctuaries Act (MPRSA), also referred to as the Ocean Dumping Act, generally prohibits (1) transportation of material from the United States for the purpose of ocean dumping; (2) transportation of material from anywhere for the purpose of ocean dumping by U.S. agencies or U.S.-flagged vessels; (3) dumping of material transported from outside the United States into the U.S. territorial sea. A permit is required to deviate from these prohibitions.

Under MPRSA, the standard for permit issuance is whether the dumping will "unreasonably degrade or endanger" human health, welfare, or the marine environment. EPA is charged with developing ocean dumping criteria to be used in evaluating permit applications. The MPRSA provisions administered by EPA are published in Title 33 of the U.S. Code.

The MPRSA provisions that address marine sanctuaries are administered by the National Oceanic and Atmospheric Administration and are published in Title 16 of the U.S. Code.

Source: <http://www2.epa.gov/laws-regulations/summary-marine-protection-research-and-sanctuaries-act>

10. The Energy Policy Act:

The Energy Policy Act (EPA) addresses energy production in the United States, including: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Tribal energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology. For example, the Act provides loan guarantees for entities that develop or use innovative technologies that avoid the by-production of greenhouse gases. Another provision of the Act increases the amount of biofuel that must be mixed with gasoline sold in the United States.

Source: <http://www2.epa.gov/laws-regulations/summary-energy-policy-act>