

Marianne DeMarco
EDPC 610 – Foundations II
Assignment Six

EPA & Environmental Laws Inclusive Lesson Plan

Instructional Goal:

Students will be able to discuss the EPA (the US Environmental Protection Agency,) created in 1970, how it sets environmental protection and enforcement standards and how it serves the entire country through its 10 regional offices. Students will write a paragraph bill proposal, using Microsoft Word.

Grade Level:

3rd Grade Inclusive Lesson Plan

Curriculum/Subject Matter Areas:

Science, Social Studies & English Language Arts

Learning Time:

Two 30-minutes sessions

State Standards:

Science Standard 4:

Students will: understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea: The Living Environment 7:

Human decisions and activities have had a profound impact on the physical and living environment.

Give examples of how inventions and innovations have changed the environment; describe benefits and burdens of those changes.

Performance Indicator: Identify ways in which humans have changed their environment and the effects of those changes.

Social Studies Standard 5: Civics, Citizenship, & Government

Students will use a variety of intellectual skills to demonstrate their

understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

Key Idea: The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance, and law.

Performance Indicator: Know the meaning of key terms and concepts related to government, including democracy, power, citizenship, nation-state, and justice

Key Idea: Central to civics and citizenship is an understanding of the roles of the citizen within American constitutional democracy and the scope of a citizen's rights and responsibilities.

Performance Indicator: Examine what it means to be a good citizen in the classroom, school, home, and community

MST Standard 5: Students will apply technological knowledge and skills to design construct, use and evaluate products and systems to satisfy human and environmental needs.

Key Idea: Tools, Resources, and Technological Processes 2: Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.

Explore and use materials, joining them with the use of adhesives and mechanical fasteners to make a cardboard marionette with moving parts. Explore materials and use forming processes to heat and bend plastic into a shape that can hold napkins. Explore energy sources by making a simple motor that uses electrical energy to produce continuous mechanical motion.

Develop skill with a variety of hand tools and use them to make or fix things. Process information electronically such as using a video system to advertise a product or service. Process

information graphically such as taking photos and developing and printing the pictures.

Performance Indicator: Use appropriate graphic and electronic tools and techniques to process information.

MST Standard 7: Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

Key Idea : Strategies 2:

Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results.

Use the newspaper index to find out about how solid waste is handled in their community, and interview the custodial staff to collect data about how much solid waste is generated in the school, and they make and use tables and graphs to look for patterns of change. Students work together to reach consensus on the need for recycling and on choosing a material to recycle—in this case, paper.

Investigate the types of paper that could be recycled, measure the amount (weight, volume) of this type of paper in their school during a one-week period, and calculate the cost. Students investigate the processes involved in changing used paper into a useable product and how and why those changes work as they do.

Using simple mixers, wire screens, and lint, leaves, rags, etc., students recycle used paper into useable sheets and evaluate the quality of the product. They present their results using charts, graphs, illustrations, and photographs to the principal and custodial staff.

Performance Indicator: Work effectively

Performance Indicator: Gather and process information

Performance Indicator: Generate and analyze ideas

Performance Indicator: Realize ideas

Performance Indicator: Present results

ELA Standard 3: Language for Critical Analysis & Evaluation

Students will listen, speak, read, and write for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information, and issues presented by others using a variety of established criteria. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to present, from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.

Key Idea : Speaking and Writing

Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.

Performance Indicator: Express opinions (in such forms as oral and written reviews, letters to the editor, essays, or persuasive speeches) about events, books, issues, and experiences, supporting their opinions with some evidence

Performance Indicator: Present arguments for certain views or actions with reference to specific criteria that support the argument (E.g., an argument to purchase a particular piece of playground equipment might be based on the criteria of safety, appeal to children, durability, and low cost.)

Performance Indicator: Monitor and adjust their own oral and written presentations to meet criteria for competent performance (E.g., in writing, the criteria might include development of position, organization, appropriate vocabulary, mechanics, and neatness. In speaking, the criteria might include good content, effective delivery, diction, posture, poise, and eye contact.)

Performance Indicator: Use effective vocabulary and follow the rules of grammar, usage, spelling, and punctuation in persuasive writing.

Objectives:

The student will be able to:

- ❖ Discuss the EPA (the US Environmental Protection Agency,) created in 1970, how it sets environmental protection and enforcement standards and how it serves the entire country through its 10 regional offices.

- ❖ Explain how the Bottle Bill law requires deposits on beverage containers and visit websites to review how a bill becomes a law
- ❖ Express how the Clean Air Act gave the Environmental Protection Agency the responsibility of setting air quality standards for each pollutant.
- ❖ Write a paragraph bill proposal, using Microsoft Word.

Objective Modifications: All students will be required to achieve these objectives. Students with special needs will use Assistive Technology in order to achieve these goals.

Student Learning Needs, Interest, Abilities:

In this unit on environmental Education, all students will be given an equal opportunity to achieve.

This lesson will take place in a general education classroom. This third grade class consists almost entirely of Caucasian students. The class of 22 students hosts 12 boys and 10 girls. Six of the students receive additional reading services, one student leaves the class to attend the Resource Room, one student has a learning disability and one student has a physical disability.

Student X is a 3rd grade student who is classified as having learning disabilities who is in general education classes. A special education teacher monitors Student X's progress and provides the regular classroom teacher with assistance by modifying some of Student X's assignments, giving oral test, helping to organize work, and re-teaching certain skills, as necessary. This student is having trouble keeping up with assignments. Student has inaccurate spelling, spells the same word three or four different ways on the same page and handwriting is very slow and laborious. Student X spends so many hours each evening on homework.

Teaching/Learning Activities:

Procedure:

The teacher will discuss the US Environmental Protection Agency. He/she will explain how it was created in 1970 to help set environmental protection and enforcement standards for the entire

country. Technology will be used to aid in the student's excitement and enthusiasm for the topic. The teacher will review the process of how a bill becomes a law. Example of a law (Bottle Bill) and an Act (Clean Act) will be presented to the class.

The teacher will have the students visit the EPA's website and discuss how the EPA sets and enforces standards while it serves the country. The teacher will also lead the class in a law making activity where the students write an Environmental bill and have it passed as a law, using Microsoft Word.

Review with the students the process of how a bill becomes a law. The student will log on to the Internet. The teacher then directs the students to [Ben's Guide to the US Government](#) website and the [EPA Kids website](#).

Brainstorm with the students new Environmental Laws that they would like to pass and write these ideas on the board. Students will take a vote on which three they would like to write a bill for. The teacher then separate the student's into three groups. The students will then write a paragraph bill proposal, using Microsoft Word.

The teacher explain to the students that each group will present the bill to Congress (rest of the class) and that it will be approved or vetoed by the President (the teacher.) One group at a time will be selected to present their bill to Congress (rest of the class) and that it will be approved or vetoed by the President (the teacher). Ballot forms will be distributed and collected for each group that presents. The students will discuss each bill and fill out a ballot form for each group that presents. The teacher will then approve or Veto bill and give reasons to the students.

Materials:

- Computers with Internet Access
- Microsoft Word with accessibility features installed
- Ballot Form

Technology Resources:

- <http://bensguide.gpo.gov/3-5/lawmaking/laws.html>
- <http://www.epa.gov/kids/>

Classroom Arrangement:

The classroom seating arrangement will be arranged so that all students with specific learning needs will be accommodated. Students

with visual impairments will be seated in an area that they can view all material. And, students with learning disabilities will be placed close to the teacher to that the teacher can ensure that each student is on task.

The following is a visual depiction of the classroom layout (compliments of www.smartdesks.com) –



Classroom Management:

There are two teachers in the classroom – one general education teacher and one special education teacher. The teachers work in a Cooperative Team-Teaching arrangement. The special education teacher will work one-on-one with Student X during the parts of the lesson that involve writing the bill proposal. For the remainder of the lesson both teachers will circulate the room evenly.

In order to motivate the students, technology will be used throughout the unit as a resource to help stimulate the student's interest in Environmental Science. Students will participate in a Webquest and visit educational sites, such as the [EPA Kids Website](http://www.epa.gov/kids).

Behavior Modifications will be implemented in order to maintain a proper classroom environment. The teacher will play close attention to ensure that all students are kept on task. In addition to using positive reinforcement, the teacher will use behavior reduction interventions when needed. By redirecting students and using careful reprimands when needed, the teacher will maintain proper classroom behavior. The lesson objectives and appropriate behavior expectations will be stated at the beginning of the lesson.

Students will work in 4 groups of 5, with two of the groups having one extra student. Students will be provided with guided notes for the lesson, as well as, a rubric for the activity. The groups will be

monitored and evaluated. The teacher will also use questioning techniques to check for understanding throughout the activity.

Instructional Modifications or Accommodations:

Differentiated Learning:

For several of the activities students will be divided into cooperative learning groups. Students with lower level skills will be grouped heterogeneously. A variety of teaching strategies, including inquiry-based learning as well as direct instruction, will be used in order to accommodate different students learning styles. Students will also participate in a variety of learning activities such as project-based learning.

The Special Education teacher will pay close attention to any student with an Individualized Education Program and modify their instruction accordingly. Assistive Technology will be provided to students who may need assistance in using the computer. Students will use Microsoft Word adaptations in order to type their bill proposal.

Developmental:

Peer-tutoring will be arranged for the students who do not master the instructional objectives at the same rate as the other students. Students will work together to do practices exercises until each student masters the objectives.

Enrichment:

Each student will be given an Environmental Activity Book. These books will consist of activities with a range of degree of difficulty. More capable learners will be given the opportunity to work on some these activities in class and at home. These activities will focus on making the world a better place. Students will also be given the opportunity to visit various environmental websites to learn more about how they can help their environment by visiting [Environmental Student Resources](#) website.

Assessment Procedures & Accommodations:

Students will receive immediate feedback on their bill proposal. Students will be given positive reinforcement during the discussion of the EPA. The students will hand in their proposal for a grade. As per Student X's IEP, he/she will be required to demonstrate the ability to apply the rules of grammar with 80% mastery. A rubric will be created and distributed to the student prior to beginning the lesson. The students will have the opportunity to print a draft of their

proposal. One student in the group will be assigned as the proof-reader. Students may use this rubric to self-evaluate prior to handing in their bill proposal.

	1	2	3	4	Your Score
Class Discussions	Does not participate in class discussions	Participates in class discussions only when called upon, and does so without a clear understanding of the discussion context; mumbles when speaking	Participates in class discussions voluntarily. Occasionally unengaged while others are speaking; speaks clearly around topics of personal interest, yet unable to engage in other types of conversation	Enthusiastically and articulately expresses educated viewpoints in class discussions; actively listens and responds to peers	
Bill Proposal Group Project	Unorganized and meets less than half the requirements; project includes little variety in presentation techniques	Project meets half of the requirements; well-organized; material presented with little originality or creative thought	Project is well-organized and meets most requirements; some apparent originality displayed through creative use of materials	Project is well-organized and meets all requirements; exceptional originality of presented material	
Written Skills	Has difficulty with paragraph structure and simple sentences; limited vocabulary; difficulty with grammatical skills	Able to write simple sentences; understands basic grammatical concepts, vocabulary is developing; has difficulty with paragraph structure	Able to write complex sentences, understands intermediate grammatical concepts, enhanced vocabulary, ability to compose paragraphs, difficulty with standard essay form	Advanced vocabulary and grammatical skills enhance the composition of clear, focused, creative compositions	
On Task	Constantly talking to others in room, rarely works on task	Sometimes talks about unrelated subjects	Usually follows the task and talks only to partner	Always follows the steps of the task and sometimes goes beyond the concepts	
Creative	Never thinks of other ideas to solve a problem	Occasionally has a new idea, but little follow through	Has new ideas but will not share with others	Develops new ideas or ways of doing things. Products exceed requirements	
Cooperative	Will not help - ignores partner	Sometimes willing to help partner	Shares work when asked and listens to partner	Willingly explains things to partners and will use partner's ideas	
Skillful	Makes no effort to learn new skills	Satisfied with answering questions, but no real understanding	Has general idea of task. Able to answer specific questions	Has clear idea of task and its relationship to technology and education	
Prepared	Never has pencil or willing to find proper place in task	Looks through task to find place and sometimes borrows a pencil	Uses daily wrap-up to find place in task.	Arrives early for class and has notebook open to proper page	

Quizzes and Practice Exercises:

As part of the unit, students will be given a quiz after each component is completed. There will be a quiz on Water, Land, Air, Natural Resources, Recycling, and Earth Day and the EPA. The quizzes will consist of various types of questions including short answer, multiple choice, completion, and matching. Students will be given essay questions as homework assignments, which will be graded. Students will also participate in group projects throughout the course of the unit. These projects will serve as practice exercises for various topics such as sketching the water cycle, natural resources and recycling.

Pre/Post Tests:

A pre-test will be given prior to the start of the unit in order to test to assess the student's entry level of knowledge prior to the start of the unit. A different version of this test will be given as the post test. The test will be a combination of similar questions which appear on the quizzes and the homework essay assignments.