

Pojoaque Middle School
Santa Fe, New Mexico
Loretta R. Padilla, History Teacher
Benjamin Trujillo, Principal
“Illegal Dumping of Trash” awarded \$2,700

1. Project Description

Seventh grade History classes (50 students) at Pojoaque Middle School will investigate the topic of illegal dumping of trash and develop and implement a long-term strategy for addressing this problem. The investigation will be comprehensive and include how illegal dumping affects community health, as well as, long and short-term effects on personal health. The students will also brainstorm about different strategies on how to clean up the illegal dumping in various locations (dumping in arroyos), research the different ordinances that prohibit illegal dumping, and visit recycling centers to teach students what products can be recycled. The students will strategize and plan activities to begin cleaning up the school grounds, the local community, and raise awareness in Santa Fe County. The students will also photograph different sites, produce essays describing how to clean up the area(s) as well as, write to local and state officials about their concerns requesting stricter laws and enforcement of those laws.

This project will increase student/teacher participation in caring for Pojoaque Middle School by utilizing hands on activities, and large and small group activities for problem solving. A unique aspect of this project is that the teacher will integrate the interdisciplinary areas of Math, Science, Language Arts, Art, Computer Science, Civics as well as History to demonstrate how all academic subjects relate to important, real-world issues.

The teacher will begin by having the teacher introduce the topic of illegal dumping to the students; which will include data on illegal dumping in Northern New Mexico and the types of materials, including hazardous materials that have been found in the vicinity. The students will discuss their opinions and concerns about illegal dumping and write down ideas on how to address and clean up illegal dumpsites. The students will then turn their attention to cleaning up the school campus, they will calculate how much trash they find within a square yard, graph their findings, then identify what is recyclable in the trash. The students will set up recycle bins and keep monthly data (graph charts) on the trash around the school. The students will take pictures of the school campus before and after the project, and will discuss the benefits of a clean campus for all students at the middle school. During the next phase of the project students will brainstorm ideas on how to get the community involved with trash reduction and clean up. The students will process the information they have learned and create a pamphlet to raise local awareness of illegal dumping of trash. The students will also write letters to local and state officials and publish editorials and articles in the monthly and quarterly newsletter published by Pojoaque Middle School and the School District.

Pojoaque Middle School has been partnering with faculty at the University of New Mexico Community Environmental Health Program and Department of Pharmacology /Toxicology to incorporate environmental health into the curriculum. They will also provide support for this project by locating illegal dumping data for Santa Fe County, working directly with the students to introduce them to basic environmental health and toxicology information, and training the students and teachers to use spreadsheets to manage and reduce the data being collected for the project.

2. Project Objectives

The purpose of this project is to raise the awareness in students that illegal dumping of trash can be hazardous to the health of people, plants and animals, and educate students on the different products that are recyclable, to teach students to use the proper receptacles to dispose of trash.

3. Project Evaluation

The project evaluation will occur on several levels. Student interest and learning will be evaluated by implementing a pre and post project survey assessing the opinions and background knowledge of illegal dumping, students will also be assessed through their performance and participation in the project and the products they produce (e.g. essays, editorials, and data collection and analysis). Project success will also be evaluated by documenting the change in trash found outside trash or recycle bins pre- and post project, as well as, by the level of response we receive from the local community and state and local officials contacted for the project.

4. Community Awareness

The students will write monthly articles and editorials about the project for the Pojoaque Middle School Newsletter, which is distributed to approximately 350 parents. The students will also write quarterly articles for the quarterly newsletter, which is distributed district wide and submit letters to local and state officials. A group of students will be in charge of keeping the PNM Foundation informed with monthly updates of their findings, current activities, photos, and e-mail or letter correspondence. The teacher will invite local newspapers to interview the students, report on the illegal dumping, and report the students' plan to clean up the school, community, and county. The teacher will contact all the local television stations so that they may take notice as to what the students are doing about cleaning up the environment. The teacher and students will continue working with the University of New Mexico School of Pharmacy, Integrated Environmental Health Middle School Projects (IEHMSP) to expand on the importance of environmental health issues, and get other schools to participate on environmental issues.

5. Project Budget

Item	Price	Justification
Computer & Printer	\$1,170	Pojoaque Middle School has a small computer lab in the library, which students can use for some of their research and data analysis. However, a classroom computer is needed to serve as a centralized storage facility for all of the project work (including saving student work and photos), to support the project in case the computer lab is unavailable, and to have regular email contact with the partners at UNM. The printer is needed to print photos and student work (including the information pamphlets).
3 color printer cartridges	\$150	It is estimated that three-color print cartridges will be needed to support printing that occurs throughout the project period. $3 \times \$50 = \150
2 boxes of computer disks	\$30	The computer disks will be for students to save their ongoing work (essays, letters, data collection, etc.) $2 \times \$15 \text{ per box} = \30
4 boxes of latex gloves	\$30	Latex gloves are needed to protect the student's health while handling the trash on the Pojoaque Middle School Campus.
Field Trips	\$700	(Recycling center, toxic tour of illegal dumpsites, etc.) $\$350 \times 2 = \700
4 recycle bins	\$230	(4) 23 gallon recycling bins with lids, will be distributed in main building, elective wing, Gymnasium, 8th grad wing, $4 \times \$77 = \230
Digital Camera	\$300	Students will use the digital camera to document the project, field trip, illegal dumping sites and before & after photos of the school campus.
Trash Bags	\$20	Trash bags will be used during the campus clean-up/data collection project.
Batteries	\$20	A supply of batteries is requested for the digital camera.
Printing supplies	\$350	A variety of paper supplies is requested to support printing including regular paper, color paper, and photo-quality paper. The regular paper will be used for student printing and draft pamphlets, the color paper and photo-quality papers will be used for pamphlets and promotional flyers for the project.
TOTAL	\$3,000	