

LCMR Final Status Report

I. Teacher Training for Environmental Education - Education 8

Program Manager:

Marion Brooks Wallace
2603 Cohansey Street
St. Paul, MN 55113
St. Paul Chapter of National Audubon Society (SPAS)
612-484-7062
Cooperating Organization: Audubon Center of the
Northwoods (ACN)

A. M.L.1991, Ch.254, Art.1, Sec.14, Subd.5(b) Appropriation: \$5,000
Balance: \$0

Teacher Training for Environmental Education: This appropriation is to the commissioner of education for a grant to the St. Paul Chapter of the National Audubon Society for scholarships for the training of teachers in environmental education integration.

B. Compatible Data: N/A

C. Match Requirement: Not required

II. Narrative

a) Environmental education in public schools is state-mandated, yet elementary teachers have had little if any actual experience in the natural world, or training in dealing with problems in the environment. It is difficult for them to acquire the needed training. b) This project will utilize the Audubon environmental learning Center of the Northwoods (ACN) to teach a small group of teachers in workshops for two consecutive summers, giving them an invaluable experience. c) The need for environmental education is wide-spread in the school system; this should serve as a model for other schools and workshops throughout the state.

III. Objectives

A. Solicit scholarship applications from teachers; scholarships will defray 2/3 cost for board, lodging and instruction at ACN.

A.1. Narrative: Announcement of availability of 15 scholarships for each of two years will be widely disseminated to teachers. The number of scholarships is limited by the dormitory space at ACN.

A.2. Procedure: A personal letter accompanied by an announcement of the scholarships and an application form will be mailed first-class to all teachers in grades 3 - 5 of the St. Paul public schools. There are an estimated 300 teachers in this group. Solicitation will be done at the beginning of the school year in 1991 and repeated in the fall of 1992 for workshops in the following summers. Applicants who meet all qualifications will be selected for the awards in the order in which the applications are received.

A.3. Budget:

a. Amount budgeted: \$300
b. Balance: \$0 (cutoff date June 30, 1993)

A.4. Timeline: Objective A

	July 91	Jan 92	July 92	Jan 93	June 30, 93
Scholarship announcements		
Awardee selections		

A.5. Status: Publicity regarding the availability of teachers' scholarships was not achieved to my satisfaction. This year I personally delivered the announcement brochures to the office of every principal of the elementary schools in the St. Paul district, and requested that the brochures be placed in the boxes of teachers of grades 3-5. Only 13 registrations had come in by the deadline date of March 31. I then extended the deadline to April 30 and mailed new brochures on brightly colored paper to my teacher contacts in all the schools from which I had not received an application. This was followed by 2 more registrations, but two teachers canceled at the last minute so the final count was 13. In the evaluations returned at the end of this summer session, 6 persons said they heard about the program by word-of-mouth of colleagues who had participated last year, and the other half learned from the flyers sent to the schools. All the teachers replied that they definitely would recommend the program to their colleagues. If I were to do this again, I would arrange to be invited (by principal via teacher) to give an oral presentation at a meeting where in-service programs are announced.

A.6. Benefits: Wide-spread announcement of scholarships will stimulate interest and establish credibility among teachers.

B. Conduct 4-day summer workshop at ACN

B.1. Narrative: Two ACN instructors, experts in field training, and a St. Paul classroom teacher experienced in integrated teaching, will comprise the staff. Teachers will be provided food and lodging in the dormitory. Staff will take the teachers on all-day field trips in a variety of habitats to demonstrate principles such as interdependence of environment and diversity of species.

B.2. Procedures: The teachers will make collections of aquatic and terrestrial invertebrates; study plant relationships in forest, meadow, sand/gravel outcroppings, wetlands, and prairie; learn the significance of birds and insects as environmental indicators. In the laboratory they will be shown how to weave this knowledge into the other courses they teach.

B.3. Budget:

- a. Amount budgeted: \$2398 (includes 2 additional scholars)
- b. Balance: \$0 (cutoff date June 30, 1992)

B.4. Timeline Objective B

July 91 Jan 92 July 92 Jan 93 June 30, 93

Conduct workshop

....

....

B.5. Status: A total of 27 teachers were trained and each received 40 recertification credits; 19 of them registered at Hamline University for 3 graduate credits. Instruction in the field was given every day, rain or shine, and evenings in the lodge curricula and lesson plans were developed for future application in the classroom. This method of working hands-on outdoors was a very effective method of instruction and the teachers appreciated it. The successful results of this pilot program are highly significant and can serve as a model for offering environmental education to teachers in numerous nature centers throughout the state. I believe the major modification should be in scheduling one-day in-service training sessions and, whenever feasible, at commuting distance from teachers' homes. These could be scheduled at various times throughout the year. The major advantage of this would be in cost-reduction. There would be two disadvantages, i.e., there would be less time available for informal exchange of ideas; and at some nature centers there would be less biological diversity than there is at Northwoods. Nevertheless, the biological principles could be taught.

B.6. Benefits: The teachers will acquire a wealth of information in a short time that they can incorporate into their teaching for years to come. Moreover, they will be more cognizant of environmental values in day-to-day living.

IV. Evaluation

Toward the end of each school year, 1991 and 1992, each of the 15 trainees will be asked to fill out a questionnaire to explain how he/she used the training in the classroom and how effective it was thought to be in instructing the children. Knowledge of the strengths and weaknesses of the program may be applied to development of more training for teachers on a much larger scale by other schools and environmental learning centers.

V. Context:

A. Training of elementary school teachers in environmental education has not been stressed in their preparation, and many teachers are searching for information to help them in their classrooms.

B. This work will be primarily a demonstration project which may be followed by other organizations.

C. In 1989, SPAS independently conducted a pilot workshop for six teachers. LCMR funds were not available, but the potential for future LCMR funding for consecutive series of workshops throughout each summer is encouraging.

D. Not applicable

E. Biennial Budget System Program Title and Budget: Not available at this time.

VI. Qualifications:

1. Program Manager

Marion Brooks Wallace

- a. Vice-President, St. Paul Audubon Society
Professor Emeritus, University of Minnesota
- b. Ph.D., University of Minnesota, 1954; Zoology
Specific specialization: entomology

2. Major Cooperators:

Mike Link

- a. Director, Audubon Center of the Northwoods (18 yrs)
Faculty, UM-D and Northland College
- b. M.Sc., St. Cloud State University, 1979; Environmental
Education
Past-President, Minnesota Naturalists
Author of nine nature-oriented books

Craig Prudhomme

a. Assist. Director, Audubon Center of the Northwoods
(10 yrs)

b. Candidate, M.Ed., UM-D; Environmental Education
Specific specializations: education, geology and ecology

Judy Balderson

a. Teacher, K-6, St. Paul schools

b. Specific specialization: integrated education; art

VII. Reporting Requirements:

Semiannual status reports will be submitted not later than
January 1, 1992, July 1, 1992, January 1, 1993, and a final
status report by June 30, 1993.

1991 WORK PROGRAM ABSTRACT

FOR THE PERIOD ENDING JUNE 30, 1993

This project was supported by MN Future Resources Fund

TITLE: Teacher Training for Environmental Education
PROGRAM MANAGER: Dr. Marion Brooks Wallace
ORGANIZATION: St. Paul Audubon Society
LEGAL CITATION: M.L. 1991, Ch. 254, Art. 1, Sec. 14, Subd.5(b)
APPROP. AMOUNT: \$5,000

STATEMENT OF OBJECTIVES

To solicit applications from teachers in grades 3 - 5 in St. Paul public schools for scholarships to defray 2/3 of the cost of a workshop training session to learn how to integrate environmentally sound concepts into the other subjects they teach; and to instruct the teachers how to do this through outdoor, hands-on experience at Audubon's Center of the Northwoods.

RESULTS

Two 4-day workshops were conducted in the summers of 1992 and 1993 at Audubon's Center of the Northwoods. A total of 27 teachers were trained and each received 40 recertification credits; 19 of them registered at Hamline University for 3 graduate credits. Instruction in the field was given in geology, maps, compasses, orienteering, the use of keys to identify trees in the area, the relationship of relative abundance of terrestrial organisms to soil types, the collection and survey of aquatic organisms found in a pond and in a lake, the distribution of some common birds according to habitat, and the use by native Americans of indigenous plants and animals for the construction of their needs. Interest in biodiversity of wetlands was generated by wading waist deep in a bog. A simulation game graphically explained normal cycles in deer populations, and another game clarified the meaning of biological diversity. In the evenings curricula and lesson plans for application in classrooms were learned to demonstrate reuse and recycling of "disposable" plastic bottles, how to compost organic matter, and the effect of fertilizer run-off on growth of aquatic plants, all of which give children an understanding of conservation. The growth of plants in garden soil and their cross-fertilization by (dried) honeybees show production of seeds, i.e. crops, and can be integrated into economics. Teaching how to do Indian crafts can be integrated into art, social studies, and Minnesota history. Working hands-on, outdoors, was a very effective method of instruction and the teachers appreciated it.

PROJECT RESULTS USE AND DISSEMINATION

The satisfaction and appreciation of the participating teachers clearly showed the need for such training. They were enthusiastic about recommending the program to other teachers and were disappointed to learn that this was limited to a 2-year pilot program. This work could well be adapted to a large number of nature centers in the state and thus make training accessible to more teachers on an in-service basis. As word spreads of the existence of such a program, the work of announcing it and soliciting applications would be greatly reduced. Teachers are aware of the legislative mandate to integrate environmental subjects into presently taught subjects but they need help in learning how to do it.