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California State University

San Bernardino

2 DEVELOPING AN ENVIRONMENTAL EDUCATION LIAISON
PROGRAM FOR THE INLAND EMPIRE *a*

A Project Submitted to
The Faculty of the School of Education
In Partial Fulfillment of the Requirements of the
Degree of
Master of Arts
in
Education: Environmental Education Option

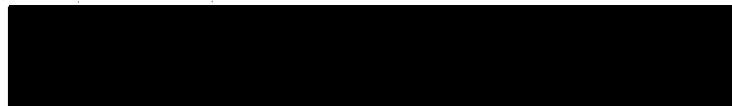
By

Vicki K. Lamborn

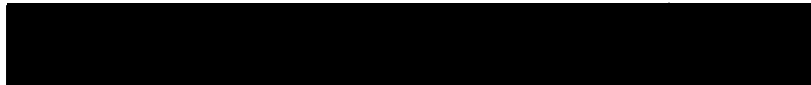
San Bernardino, California

1992

Approved by:



Advisor, Dr. Darleen K. Stoner



Second Reader, Dr. Joseph Jesunathadas

Abstract

This project centered around the development of an environmental education liaison network in the Inland Empire to facilitate the implementation of environmental education curriculum throughout the Inland Empire. The program was designed to enable the establishment of a designated environmental liaison at each school site in the Inland Empire. The environmental liaison would disseminate environmental education information at the school site and participate in leadership training in environmental education. The project itself includes a letter to be sent to administrators, a list of steering committee members, an application form, a survey for participating teachers, and the liaison manual.

Acknowledgements

I would like to thank Dr. Darleen Stoner for her generous help, support, and encouragement with this project.

I would also like to thank Curtis Jacquot for his help and support on this project.

I would like to thank my husband, Frank, and my children, Brett and Erin, for their patience, support, and encouragement.

Dedication

I would like to dedicate this project to my father, Forest Edward Pursley, who taught me the value of hard work and gave me the desire to always do my best.

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Introduction

The implementation of environmental education across the curriculum is of vital importance if educators are to give young people the knowledge they need to make responsible and informed decisions about the environment. There is a wealth of environmental education curriculum and materials available for use by teachers in the classroom that will enable their students to achieve environmental literacy. The materials come from both public agencies and organizations, as well as businesses who have developed curriculum materials. The problem is that the environmental curriculum and materials are not reaching the vast majority of teachers and students.

The need for successful dissemination of environmental curriculum and materials into the schools is the issue that this project addresses. Other areas of the curriculum have professional organizations and networks, but environmental education does not have a designated channel through which information can be funneled to teachers. In order for teachers to receive not only the materials, but also the training they need to implement environmental education, a network for environmental education needs to be established.

The Inland Empire Network for Environmental Science Training (NEST) has been serving in that

capacity for a number of years and is the outreach network of the Environmental Education Resource Center at California State University, San Bernardino. However, the Inland Empire Network for Environmental Science Training (NEST) has not had a comprehensive program that reaches out to all the teachers and students in the Inland Empire. The implementation of a comprehensive program has been restricted both by the lack of an organized emphasis and the lack of a funding mechanism. The environmental liaison network will be implemented by the Inland Empire Network for Environmental Science Training to help meet that need.

The establishment of the environmental liaison network in the Inland Empire will provide the missing link in the chain. It will act as a conduit for environmental information and training to reach the teachers and hence the students of the Inland Empire. The network will have a designated environmental education liaison at every school in the Inland Empire who will receive materials and information to distribute to teachers at their site. In addition, the liaisons will have the opportunity to participate in special training and workshops for environmental education.

The environmental liaison network will enable

every student to be exposed to a variety of educational experiences that concern environmental topics. The students are the future of our nation and the world, and thus must be capable of making informed, responsible environmental decisions.

Today more than ever we need our young people to become aware of their responsibility to protect and care for our planet and to develop decision-making skills that will enable them to do that. It is the responsibility of educators to give them the tools that they will need to make those decisions in an informed and knowledgeable manner. It is too big of a job for one teacher, one school, one district, or one state. One could even say that is too big of a job for one nation. Indeed it is a global task and one which will only be accomplished through the use of environmental education networks. A global network may be out of our reach at the moment, but we can begin with what is in our hands and power to accomplish - an Inland Empire network.

Design of the Project

The project was developed after an initial meeting with the director and assistant director of the Environmental Education Resource Center at California State University San Bernardino and two graduate students in which the need for an environmental liaison program for the Inland Empire was discussed. During that initial meeting the structure of the project was formulated and work began on the body of the project. The completed project contains a sample letter to sponsors, a cover page, a letter to school administrators, a list of names of the steering committee members, an application form for admission to the network, a fact sheet, a survey for participating teachers, a tentative budget, and the liaison manual (see Appendix H). It was a modification of a program in Wisconsin. The program will be implemented as soon as funding is available.

The project was reviewed by nine school district administrators and teachers from both Riverside and San Bernardino. These administrators and teachers were asked to comment on whether they felt the program would be effective for disseminating environmental information to local school sites. The administrators

and teachers felt that it would be a valuable program in which their districts would participate. They also felt that it would enhance environmental science at all levels and support their own efforts in environmental education.

The environmental liaison program has also been sent out to businesses who are potential sponsors. The businesses have an environmental orientation and have supported environmental education programs in the past. Potential sponsors are being asked for a minimum initial contribution of \$5000 cash or in-kind donations. The environmental liaison program will be implemented as soon as sufficient funding has been received.

After the environmental liaison program is in place teachers and administrators will be asked to assess the effectiveness of the implemented program and to make recommendations for its further development. A variety of questions will be asked, including but not limited to the following. Is environmental material reaching the liaison in a timely manner? Is the liaison receiving notification of workshops and training far enough in advance to register for them? Are the environmental liaisons receiving an adequate supply of materials to hand out to the rest of their

staff? Is their staff receiving the training and support they need to implement an environmental education curriculum? These are only a few of the questions that will need to be answered in order to evaluate the effectiveness of the environmental liaison program.

The recommendations will be evaluated by the steering committee and the staff of the Environmental Education Resource Center at California State University San Bernardino. The evaluation of the recommendations will determine which ones are most critical for the success of the program. Recommendations will receive priority for implementation based on available resources and funding.

Goals and Objectives

The goal of this project is to develop a network that will facilitate the dissemination and implementation of environmental education in the Inland Empire. The goal of the project is to develop a model for a school based network for environmental education. The network will be a direct link between teachers in the Inland Empire and agencies and corporations who have environmental information and curriculum to disseminate.

Review of Literature

The literature review focused on the different areas that networks function in: communication with network members, teacher training, dissemination of information, and curriculum development. The functions of the networks are all directed at improving the facilitation of information sharing, teacher training, and curriculum development in environmental education. However, the compelling need for a network to disseminate environmental information can best be justified when considering the real recipients of the networks' programs - the students.

Establishing a university-based network of centers for disseminating environmental materials and/or resources is one way to meet the need for educating our students to be environmentally literate. Through university-based network centers, such as the University of Tennessee-Knoxville Center for Environmental/Energy/Science Education, information has been disseminated to the public schools or the community at large as needs are identified. These centers also serve a coordinating function between other programs that deal with environmental issues and concerns. In addition, centers help to promote new and

innovative approaches to serve the environmental education needs of the community (Slawson, 1989).

The major functions that environmental resource centers serve are: conduct teacher training, develop program activities and projects, provide information services, and disseminate curriculum aids. The key to the growth of the environmental resource centers and their education programs has been the close ties they establish between the university, the school system, and private entities. Contact has been maintained through newsletters, regular meetings, an electronic bulletin board, and periodic mailings (Slawson, 1989).

Another example of an effective network in educational outreach is Zero Population Growth's Population Education Trainers Network. This network has developed a network of volunteer teachers who train other teachers to deal with environmental and population issues in the classroom. Zero Population Growth's network has trainers in 27 states and two foreign countries and continues to grow. This continued growth allows Zero Population Growth to expose more and more teachers and students to present population issues (Brouse, 1989).

Modeled on the university-based centers originally

developed by the Tennessee Valley Authority, the Alliance for Environmental Education has created a network of environmental education centers. This network connects centers for sharing of information and resources on a national and international level. The network coordinates existing and new local, regional, and national education resources. It distributes environmental education materials and programs, shares information with network members, and develops new initiatives to support environmental needs ("Building a Network", n.d.).

The centers in the Alliance Network for Environmental Education function in four basic areas. They do professional teacher training with an ultimate goal of teaching students to make informed decisions about the environment. Centers do community outreach programs to reach populations which are not in school through lectures, workshops, and issue forums. The centers develop and disseminate curriculum and programs. The Alliance serves as the conduit for the dissemination of these programs and materials nationwide. Finally, the Alliance has ongoing programs in research and evaluation. It actively monitors the success of the program and at the same time is involved

in continuing research on current environmental issues ("Building a Network", n.d.).

A substantial amount of time and money has been spent each year to improve education through the development of new curriculum materials and teacher training. Since teachers have a responsibility to teach about environmental issues, there is a compelling need to improve and expand teacher training in environmental education methods and content. Unfortunately, teacher workshops, training, and the availability of materials have not guaranteed that they will be utilized in the classroom (Mayer and Fortner, 1987).

The most common means of disseminating information to teachers are short awareness workshops, implementation workshops, and mail orders of materials. Teachers who enrolled in short awareness workshops were shown to use the materials much more than teachers who used other means to acquire disseminated information. Thus, it appears that just giving out curriculum materials to teachers may not be an effective dissemination device (Mayer and Fortner, 1987). Teachers need short workshops and a support system in order to effectively use the materials they are given.

Today, there are many organizations who utilize networks in the development, implementation, and dissemination of environmental education. These networks have promoted environmental awareness while also developing linkage between environmental educators, government agencies, and businesses. This linkage has enabled teachers, who are actually working with the materials to determine the most effective approaches to use in the implementation and dissemination of environmental education (Wals, 1990).

Networks play a vital role in maintaining communication between various members. Publications help to keep network members in touch through the use of newsletters and periodicals (Wals, 1990). Electronic bulletin boards are also a means of communication between network members. Today's technology has virtually eliminated distance as a barrier to interacting with colleagues. Computers allow network members to communicate through electronic messages, electronic conferences, and to work collaboratively using an electronic notebook (Kimmel and O'Shea, 1988).

One advantage that networks have in disseminating information is that environmental education can be infused across the curriculum at all grade levels. A

comprehensive treatment of environmental education can teach students about responsible decision-making at the same time they learn scientific principles (Simmons, 1990). The benefit of getting environmental education curriculum and resources from an environmental network is that it eliminates the need for schools to develop their own curriculum. In an age when schools and teachers are so overburdened, it permits them to have up-to-date curriculum that they can implement in their schools ("Environmental Education Becomes a Key," 1990).

Today's students are the future of the planet and life on earth as we know it. It is their inheritance and one which they will need to care for if life as we know it is to survive. Students and their teachers can and should be the driving force behind breaking the pattern of abuse and exploitation that is destroying both plant and animal species at an alarming rate. We can no longer afford to watch passively as the planet deteriorates more each day (Wals, 1990).

Implications for Education

Environmental education is more than just teaching students facts and figures; it is teaching students to make responsible, informed decisions that will affect the future of our planet. Yet many of our students are not exposed to environmental education on a regular, on-going basis.

The environmental liaison program will facilitate the teaching of environmental curriculum to all students. Teachers will teach environmental topics because they would have the resources to do so effectively. Students will have the opportunity to learn about environmental topics and learn the decision-making skills they will need as adults.

Environmental education can become a regular part of every school's curriculum. It is only a question of linking up environmental resources with the teachers who will use them. The role of the environmental liaison program is to be that link between teachers and resources. The network will effectively change the way environmental education is taught in schools in the Inland Empire and be a model for the rest of California.

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APPENDICES

APPENDIX A
LETTER TO SPONSORS

Date

Name
Company
Address

Dear _____:

Your company is invited to join as a partner in the implementation of an innovative program that will effectively disseminate environmental education to the Inland Empire schools in Riverside and San Bernardino counties. This new program would establish an environmental education liaison at every school.

The environmental education liaison program is being implemented by the Inland Empire Network for Environmental Science Training (NEST) which has been established for over seven years. NEST is the outreach network of the Environmental Education Resource Center at California State University, San Bernardino. In the past, NEST has established an impressive record in providing training and resources in environmental education to teachers. However, this outreach has never been done through a comprehensive approach to reach all teachers and their students.

Through the combined efforts of public and private agencies, the Network for Environmental Science Training is moving in this new and challenging direction which will have a dramatic impact on all teachers and students throughout Riverside and San Bernardino counties. Although first limited to two counties, this network eventually will be expanded throughout Southern California. Establishing a successful communication network through a partnership effort will surely provide a model program of which we can all be proud.

The NEST environmental liaison network establishes a program that enables an individual at each school site in Riverside and San Bernardino counties to be designated a liaison. The designated liaisons will receive environmental materials and resources from NEST, as well as current information on workshops and conferences. The liaisons will not only disseminate the information and materials to other faculty members, but they will also help train other staff members by sharing their expertise on environmental curriculum and methods. Training will be provided, both through a handbook and workshops, to enable the liaisons to be effective environmental education leaders.

Name
Page 2

The goal is to initiate and maintain a long-term environmental education network that will enable environmental education to be an integral curricular component at every school. This will enable teachers to provide all of their students with the education they need to develop the awareness and understanding to make responsible, informed environmental decisions. It is only through a partnership effort that such a comprehensive program can be successfully implemented. The Environmental Education Resource Center will be responsible for maintenance of the network.

Your partnership in this effort through an initial donation of at least \$5000 and/or other major in-kind donation will enable you to be a major sponsor. In-kind contributions include printing, sponsoring workshops, equipment donations, etc. Since this is a long-term project, a commitment to continue annual sponsorship based on the success of the network is encouraged. As a sponsor, you are encouraged to appoint a representative to the NEST Steering Committee. Your donation should be made payable to The Foundation, CSUSB, which handles the funding for NEST (Federal I.D. 95-6067343) and sent to Dr. Darleen Stoner, School of Education, California State University, San Bernardino, CA 92407. Please call me at 714-880-5640 to discuss any questions, concerns, suggestions, and contributions.

A response at your earliest convenience will enable us to complete our planning. This program would be fully implemented during 1992-93 with the initiation of the network immediately, as soon as sufficient funding is established. Due to the start-up time, the first funding period lasts for over one year. To provide you with an overview of the program, a sample letter that will be sent to principals to introduce the program and the manual sent to liaisons are included with this letter.

Thank you for your consideration.

Sincerely,

Dr. Darleen Stoner
Professor, Environmental Education and
Director, Environmental Education Resource Center

FACT SHEET

- ... The Inland Empire Network for Environmental Science Training has been well established for over seven years. However, a partnership effort is needed in order to reach its greatest potential for success.
- ... NEST will provide an avenue that encourages public and private agencies and businesses to work together to address the need for Environmental Education in the schools.
- ... NEST has established an Environmental Education Resource Center located at California State University San Bernardino. The EERC provides resources in Environmental Education for curriculum development as well as research.
- ... The Environmental Education Resource Center has demonstrated success in providing workshops and conferences on a broad variety of Environmental Education topics. The Environmental Education Resource Center co-sponsors the annual Environmental Discoveries for Innovative Teachers conference and the Environmental Expo Fair.
- ... The NEST liaison network will strengthen the role that the Environmental Education Resource Center plays in the community by providing Environmental Education for hundreds of teachers and thousands of students throughout the Inland Empire.
- ... NEST will establish a baseline of what's going on in Environmental Education by assessing what the needs of teachers are and by providing a conduit for meeting those needs.
- ... Each NEST liaison receives a manual that details their role and responsibilities as well as the benefits they receive, from the opportunity to participate in leadership conferences to access to current resources and literature relating to Environmental Education.
- ... The cost of the program is \$40.00 for each liaison. Each liaison receives a manual, four issues of the NEST newsletter, EE resource curriculum updates, access to leadership workshops, and access to the computer bulletin board if available. As an added bonus, each district which has at least 80% of its schools join will have the cost per liaison reduced to only \$30.00.

APPENDIX B
LETTERS OF SUPPORT

DEPARTMENT OF FORESTRY AND FIRE PROTECTION

P.O. Box 944246
ACRAMENTO, CA 94244-2460

24



April 24, 1992

Dr. Darleen Stoner
California State University, San Bernardino
5500 University Parkway
San Bernardino, CA 92407-2397

Dear Darleen:

I am responding to a letter sent to me by Vicki Lamborn, Mentor Teacher from Fontana Unified School District, who is working with you to establish an "environmental liaison program in the Inland Empire".

I am pleased to be able to support any opportunity that will become available to provide training and information about Project Learning Tree to teachers in your region. It is an enormous task to implement a volunteer based program on a statewide basis. PLT welcomes the opportunity to link to your valuable network of environmental educators in the Inland Empire.

As you are aware, PLT is undergoing a complete revision of the program materials and possibly the program delivery system. There are many trained (certified) PLT facilitators in the Inland Empire region who are not active or have never been active since they received the training. I am looking forward to the opportunity to revitalize their interest in the program and put their talents to work. Your assistance with this effort will play an important part and be enhanced with the establishment of the liaison program.

I look forward to working with you. Please keep me informed about how I can access the network and be of assistance.

Sincerely,

A handwritten signature in cursive script that reads "Kay Antunez".

Kay Antunez
PLT Coordinator

project WILD

California Department of Fish & Game
Conservation Education Branch
1416 9th St., Sacramento, CA 95814
(916) 445-7613



April 21, 1992

Darleen Stoner, Ph.D.
CSU, San Bernardino
School of Education
5500 University Parkway
San Bernardino, CA 92407-2397

Dear Dr. Stoner:

On behalf of Project WILD in California, I wish to commend those involved with the CSU-San Bernardino project for pursuing this environmental liaison outreach program related to experiential environmental education opportunities.

As you know, Project WILD is a wildlife-related conservation and environmental education program that teaches students how to think; not what to think. California was one of 13 western states involved in sponsoring Project WILD from its inception. To date, Project WILD is sponsored in all 50 states throughout the United States and international interest continues to grow. Educators who use Project WILD begin by developing student awareness and moving through the conceptual framework to responsible human actions.

Programs such as Project WILD appear to be perfect tie-ins for this program. Project WILD can provide the foundation needed to understand fish and wildlife issues. Early-on in the guide, the similar basic needs of humans and wildlife are conveyed, in addition to learning what habitat is and its relationship to population dynamics.

I am hopeful that funding will be secured for this very worthwhile project. California's Project WILD program is willing to provide teacher workshops (including materials), and leadership workshops for educators participating in this very worthwhile program.

Sincerely,

Elena T. Scofield
Elena Tarailo-Scofield
Project WILD Coordinator

APPENDIX C
COVER PAGE AND LETTER TO ADMINISTRATORS

DON'T MISS THE OPPORTUNITY
TO
ENROLL YOUR SCHOOL
IN THE

INLAND EMPIRE
NETWORK FOR
ENVIRONMENTAL SCIENCE TRAINING
(NEST)

A CONSORTIUM OF
ENVIRONMENTAL EDUCATION RESOURCE CENTER,
CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
AND
RIVERSIDE COUNTY OFFICE OF EDUCATION
AND
SAN BERNARDINO COUNTY SUPERINTENDENT OF SCHOOLS

Date

Dear School Administrator,

The Environmental Education Resource Center (EERC), California State University San Bernardino, Riverside County Office of Education, and San Bernardino County Superintendent of Schools would like to invite your school to participate in the "INLAND EMPIRE NETWORK FOR ENVIRONMENTAL SCIENCE TRAINING."

The goal is to initiate and maintain a long-term environmental education network that will enable environmental education to be an integral curricular component at every school. This will enable teachers to provide all of their students with the education they need to develop the awareness and understanding to make responsible, informed environmental decisions. It is only through a partnership effort that such a comprehensive program can be successfully implemented. The Environmental Education Resource Center will be responsible for the maintenance of the network.

The Inland Empire Network for Environmental Science Training (NEST) has been well established for seven years. NEST provides the Inland Empire with diverse and wide ranging programs in the environmental field. NEST quarterly meetings present guest speakers who share their expertise on environmental issues as well as provide a forum for discussion of current environmental topics. The annual Environmental Discoveries for Innovative Teachers conference and Environmental EXPO Fair are also co-sponsored by NEST. In addition, NEST sponsors a variety of teacher workshops and conferences that are available throughout the year to teachers in the Inland Empire. Now in response to requests we are extending our network to implement an environmental education network throughout the Inland Empire.

The Environmental Education Resource Center will be the catalyst for the implementation of an environmental education network throughout the Inland Empire. The leadership for the Inland Empire Network for Environmental Science Training (NEST) will come from the environmental specialists affiliated with the Environmental Education Resource Center located on the campus of California State University, San Bernardino. The Environmental Education Resource Center will provide workshops, classes, and information in the area of environmental education. Specialists in environmental education will also be available to assist members of NEST with curriculum or program needs.

One of the major drawbacks related to the optimum diffusion and/or implementation of environmental education in our schools is the lack of an efficient and consistent mechanism for exposing our K-12 teachers to the vast amount of environmental education (EE) resources available to them. Also, it has been difficult for concerned parties to adequately assess the EE needs of educators.

The lack of an adequate EE information exchange is probably explained by the fact that environmental studies is infused into many disciplines and no obvious network exists similar to those in the traditional areas of social science or science education.

In a major effort to improve EE information exchange, we are forming a partnership establishing an Inland Empire environmental education information network for schools and teachers. Minimally, each school in the Inland Empire is invited to identify at least one EE liaison who would function as the primary information exchange agent between his or her faculty and the partnership EE agencies and organizations, and concerned businesses.

No other county in California has instituted a network as extensive as this. By accepting this invitation to have your school participate in the network, you will be contributing to the Inland Empire's role as a leader in environmental education.

WHAT WILL THIS NETWORK ACCOMPLISH?

The formal goals of the network are as follows.

Goals: To initiate and maintain a long term Inland Empire environmental education network linking Riverside and San Bernardino County schools and relevant Inland Empire organizations, agencies, and businesses.

To provide training that dispenses the information and knowledge necessary to achieve understanding and skill in resource management.

To achieve understanding and heightened awareness of environmental issues that enable students to make responsible, informed decisions about their lifestyles.

To increase the efficiency of the dissemination of information to individual teachers from agencies and organizations offering workshop opportunities, courses, and resources in environmental education.

Objectives: To provide information on workshop opportunities, courses, and resources in environmental education through the NEST newsletter and mailings.

To provide an environmental resource curriculum at least once a year.

To provide leadership workshops in environmental education for members of the Inland Empire Network for Environmental Science Training.

To provide a computer bulletin board with information relevant to environmental issues.

It's very difficult for EE agencies to determine the effectiveness of the untargeted mailings to schools which they now pursue. In the future, the agencies involved in developing this EE network will primarily use the network in lieu of untargeted mailings to distribute EE information and assess needs.

Over the course of a year, each liaison identified by a given school will, at a minimum, receive the following resources from the network partnership.

1. An EE liaison manual. The manual includes information and strategies on how to inform the faculty in their building about EE resources. It also contains a directory of agencies, organizations, and/or individuals that can serve as EE resources. This manual will be periodically updated.
2. Four issues of the NEST Newsletter. This joint publication serves as both newsletter and EE curriculum resource. It contains information on workshops and courses in environmental education, including the comprehensive Environmental EXPO that takes place each year at California State University, San Bernardino. Information is also available on state, federal, and corporate grants in environmental education.
3. EE resource curriculum update. This is provided at least one time per year by the Environmental Education Resource Center. Included in this update are bibliographies of recently released curriculum materials such as activity guides, AV materials, and computer software. Accompanying the bibliographies are reviews of the materials by the EERC elementary and secondary curriculum specialists.

4. Leadership workshops. The environmental education liaisons are invited to participate in leadership workshops and courses in environmental education, such as Project Learning Tree, Project Wild, and Aquatics. The liaisons also have the opportunity to visit the Environmental Education Resource Center at California State University, San Bernardino and learn about new programs and techniques in environmental education.
5. Computer bulletin board. A computer bulletin board with information relevant to environmental education will be initiated based on available funding and indicated need and use by schools.

Ultimately, your faculty will become more up-to-date on a vast array of resources and professional development opportunities in environmental education.

COST OF PARTICIPATION IN THE PROGRAM AND OPERATION.

Through the combined efforts of the organizations and businesses involved in this program, you will receive materials and services far in excess of their actual cost. This program is available only through your school or district for an annual fee of \$40.00 for each liaison. If a school district has at least 80% of their schools join at the same time, then cost per school liaison will be only \$30.00 each. The cost of the program could be paid for out of Eisenhower funds. The Environmental Education Resource Center will be responsible for maintenance of the network. Further, a network steering committee has been established to review and adopt policy related to the network.

SOME QUESTIONS YOU MAY HAVE ABOUT THE NETWORK AND YOUR ENROLLMENT

1. How many liaisons should a district have? The expectation is that there will be at least one person per school (i.e., each elementary and each secondary). Having one liaison per school will increase the information exchange potential more efficiently than only one person per district.
2. Can more than one person per school become a liaison? Yes, however, an application form must be submitted for each liaison identified. The school will pay a reduced annual fee of \$30 for each additional liaison.

3. Should the liaison come from a particular discipline such as science? No. There should be at least one liaison for each elementary, junior high, and secondary school (i.e., building). However, more important than the discipline is the liaison's commitment to becoming an effective information link.
4. How far will the \$40.00 take us? The enrollment period will last one year and will run from July 1st to June 30th of the following year. Renewal periods will span the month of June. Regardless of when a new application is submitted it will become active only on July 1st of the next enrollment period.
5. Can any teacher enroll him or herself as a liaison? No. Liaisons are to be identified and formally recognized by the school administration. As you can see by the enclosed application form, building administrators are asked to identify who they recognize as functioning in the liaison position. Similarly, it is expected that the liaison fee would be paid by the school so that the administration takes ownership in the position.

We are pleased to offer you the opportunity to be part of an innovative and exciting program. We hope that you are as enthusiastic as we are and enroll your school as soon as possible. To initiate your enrollment, please mail in the attached application form with the fee. If you have any questions about the network, please contact one of the network steering committee members. The list of steering committee members is attached.

Sincerely,

Dr. Darleen Stoner, Director
Environmental Education Resource Center
School of Education
California State University San Bernardino
(714) 880-5640

STEERING COMMITTEE MEMBERS

Dr. Darleen Stoner, Professor, Environmental Education, California State University, San Bernardino, 714-880-5640

Rick Hall, Science Consultant, San Bernardino County Superintendent of Schools, 714-880-387-3138

Norwood Hazard, Science Consultant, Riverside County Office of Education, 714-369-6453

Zoneth Overbey, Principal, Kimbark Elementary, San Bernardino City Unified School District, 714-887-6429

Vicki Lamborn, Teacher, Fontana Unified School District, 714-357-5650

Curt Jacquot, Graduate Student, California State University, San Bernardino, 714-880-5690

Suzan Burcham, Teacher, Beaumont Unified School District, 714-845-1627

Deborah Morrison, Teacher, Fontana Unified School District, 714-350-8044

Christina Gonzales, Teacher, San Bernardino City Unified School District, 714-887-6429

Other members will represent sponsors

APPENDIX D
APPLICATION FORM

NETWORK FOR ENVIRONMENTAL SCIENCE TRAINING 35
(NEST)

APPLICATION FORM

(Please submit a separate form for each liaison)

Name of School _____
Address _____
Phone Number _____
District Name _____

Enclosed is a check for \$40.00. Please enroll our schools in the Inland Empire Network for Environmental Science Training (NEST). Enclosed is the \$30.00 fee for the second (or third, etc.) liaison in our school.

Type of School: (please check)

Elementary _____ Middle School _____ Secondary _____

Size of School:

Student population _____ Number of teachers employed _____

Electronic Mail Capability:

Yes _____ No _____

I recognize that _____ will serve as the liaison for the Network for Environmental Science Training Liaison at our school.

Signature of Building Administrator

I agree to pursue the responsibilities (see accompanying list) and intent of the environmental education liaison position in our school.

Signature of Liaison

Liaison's grade level of instruction.

Subjects which liaison is teaching.

Send Application To
Dr. Darleen Stoner
Environmental Education Resource Center
School of Education
California State University San Bernardino
5500 University Parkway
San Bernardino, California 92407
(714) 880-5640

APPENDIX E
LIAISON RESPONSIBILITIES AND BENEFITS

RESPONSIBILITIES OF THE NEST LIAISONS

- ... Function as the primary contact for the EE communication with the network and/or its partnership agencies (i.e., Environmental Education Resource Center, Riverside County Office of Education, and San Bernardino Superintendent of Schools).
- ... Receive all information from the network.
- ... Make other faculty in your school aware of the fact that you are filling this EE liaison position. Further, establish and implement a strategy to effectively distribute EE information that you receive to other faculty in your school. (The network will provide you with a description of various strategies that will help you accomplish the above tasks.)
- ... Periodically update your administration on the information exchange that is occurring between you, your faculty, and the network.
- ... Assist in initial and ongoing surveys of faculty for the purpose of accessing needs in Environmental Education materials and curriculum.

BENEFITS OF BEING A NEST LIAISON

- ... Access to current resources and literature relating to environmental education.
- ... Opportunity to actively support efforts to infuse environmental education into your school and across the Inland Empire.
- ... Opportunity to network with other faculty/schools interested in furthering environmental education.
- ... Receive all informational bulletins, etc. from the network.
- ... Invitations to leadership workshops and special meetings.
- ... Receive recognition as school site leader in environmental education.
- ... Opportunity to address issues of special concern through networking with other NEST liaisons and environmental educators.

APPENDIX F
SURVEY

NETWORK FOR ENVIRONMENTAL SCIENCE TRAINING
LIAISON TEACHER SURVEY FORM

District _____

School _____

Grade Level/Subject _____

Years of Teaching Experience _____

Dear Educator,
May we ask you to please indicate your level of familiarity with environmental education curriculum projects by checking the appropriate category.

	Have Had	Using Materials	Would Like
Project WILD Workshop	_____	_____	_____
Project WILD Aquatics	_____	_____	_____
Project Learning Tree	_____	_____	_____
AIMS Workshop (except Water)	_____	_____	_____
AIMS Water Precious Water	_____	_____	_____
Naturescope Workshop	_____	_____	_____
Class Project Workshop	_____	_____	_____
Recycling Workshop	_____	_____	_____
Waste Management Education Workshop	_____	_____	_____
Energy Education Workshop	_____	_____	_____
Other (Write In)	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Check as appropriate:

	Doing Now	Would Like To Do But Need Inservice Training
Spending instructional time weekly on environmental education.	_____	_____
Recycling in your class or school.	_____	_____
Have a program to reduce the amount of waste that needs to be recycled at your school site.	_____	_____
Currently using children's literature to teach environmental education.	_____	_____

APPENDIX G
BUDGET
FOR SUBMISSION TO POTENTIAL SPONSORS

**Environmental Liaison Program
Network for Environmental Science Training
Projected Budget
June 1, 1992 - July 31, 1993**

Salary	
Director (release time)	\$ 7,000
Graduate Student	7,000
Student Assistant	4,000
Secretary	<u>4,000</u>
Total Salary	\$22,000
Other Expenses	
Printing	\$10,000
Postage	2,000
Workshop expenses	2,000
Telephone	1,000
Supplies	500
Travel	<u>1,000</u>
Total Expenses	\$16,500
Total Salary	\$22,000
Total Expenses	<u>16,500</u>
Total	\$38,500
University Overhead (10%)	<u>3,850</u>
Final Budget	\$42,350
(With donations of materials to send out and workshops to supplement the basic budget.)	
Projected Income from schools (If 50% of the schools join.)	<u>\$14,000</u>
Income needed from other sponsors	\$28,350

Program will be initiated when at least \$10,000 in contributions is received.

Additional donations are requested to provide the following equipment: computers, printers, copying machine, fax machine, computer bulletin board.

Additional donations are requested to provide environmental education workshops: materials, printing, postage, presenters, funding for substitutes for participating teachers, teacher stipends.

Inkind contributions to program already include mailing through county schools mail system and teacher workshops for Project WILD and Project Learning Tree.

Considerations for funding future years:

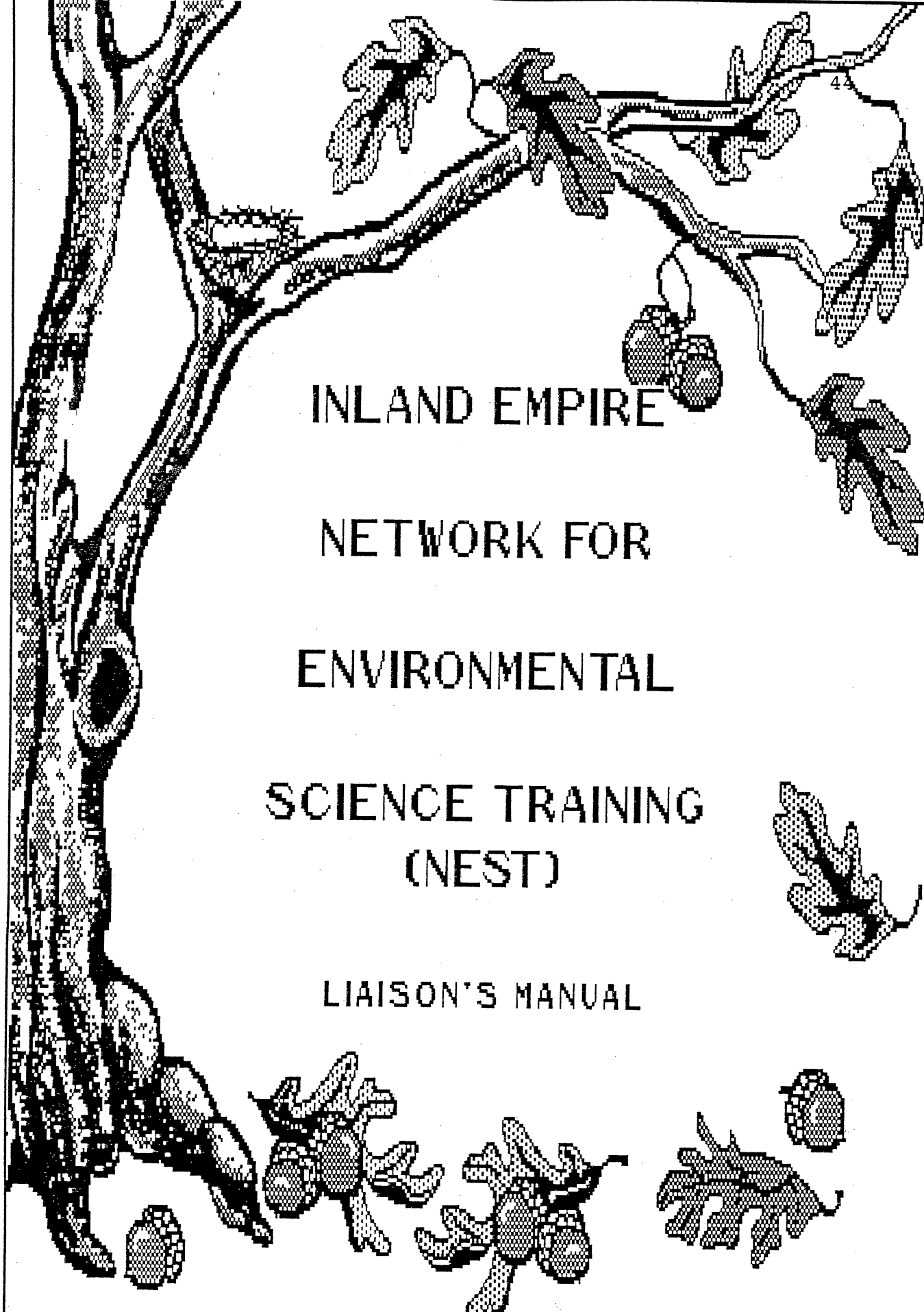
Additional income will come from

- Workshop fees
- Increased school contributions
- Contributions from other companies and organizations

Decreased costs due to

- Program maintenance rather than start-up costs
- Additional schools joining the program

APPENDIX H
LIAISON MANUAL



INLAND EMPIRE
NETWORK FOR
ENVIRONMENTAL
SCIENCE TRAINING
(NEST)

LIAISON'S MANUAL

**WELCOME TO THE INLAND EMPIRE
NETWORK FOR ENVIRONMENTAL SCIENCE TRAINING**

You are about to become part of a new and exciting initiative in the Inland Empire's environmental education history. Through the network, hundreds of educators, and their students, will achieve literacy in environmental education. We thank you for accepting this commitment.

Enclosed you will find a manual describing how the Network for Environmental Science Training will work and outlining your role as the EE liaison for your school. You will receive additional information from time to time as outlined in the manual. The agencies and organizations involved in the network, as well as the other teachers in your school, will be counting on you to make that information available to teachers at your school.

We encourage you to create your own system for dispersing this information. Ideas to get you started are also contained in this manual. We hope network mailings will find their way into the hands of interested teachers who, up to now, have had difficulty locating EE materials. Samples of the types of information we foresee being mailed to you are enclosed with this manual.

No other counties in the state have instituted a network as extensive as this. You are contributing to the Inland Empire's role as a leader in environmental education! Coordinating the efforts of up to 700 individuals in schools across the Inland Empire is no small task. We will need to work together closely to insure the success of this project. You are a vital link in this innovative effort. We need your feedback to get the system up and running and to make it successful. Feel free to offer your suggestions and ideas. Questions regarding the Network for Environmental Science Training and your role as an EE liaison should be directed to the Environmental Education Resource Center. Questions regarding the various agencies and organizations working with the Network should be addressed to that specific entity. We are looking forward to working with you on this project.

Sincerely,

The NEST Partnership
Environmental Education Resource Center
Riverside County Office of Education
San Bernardino County Superintendent of Schools

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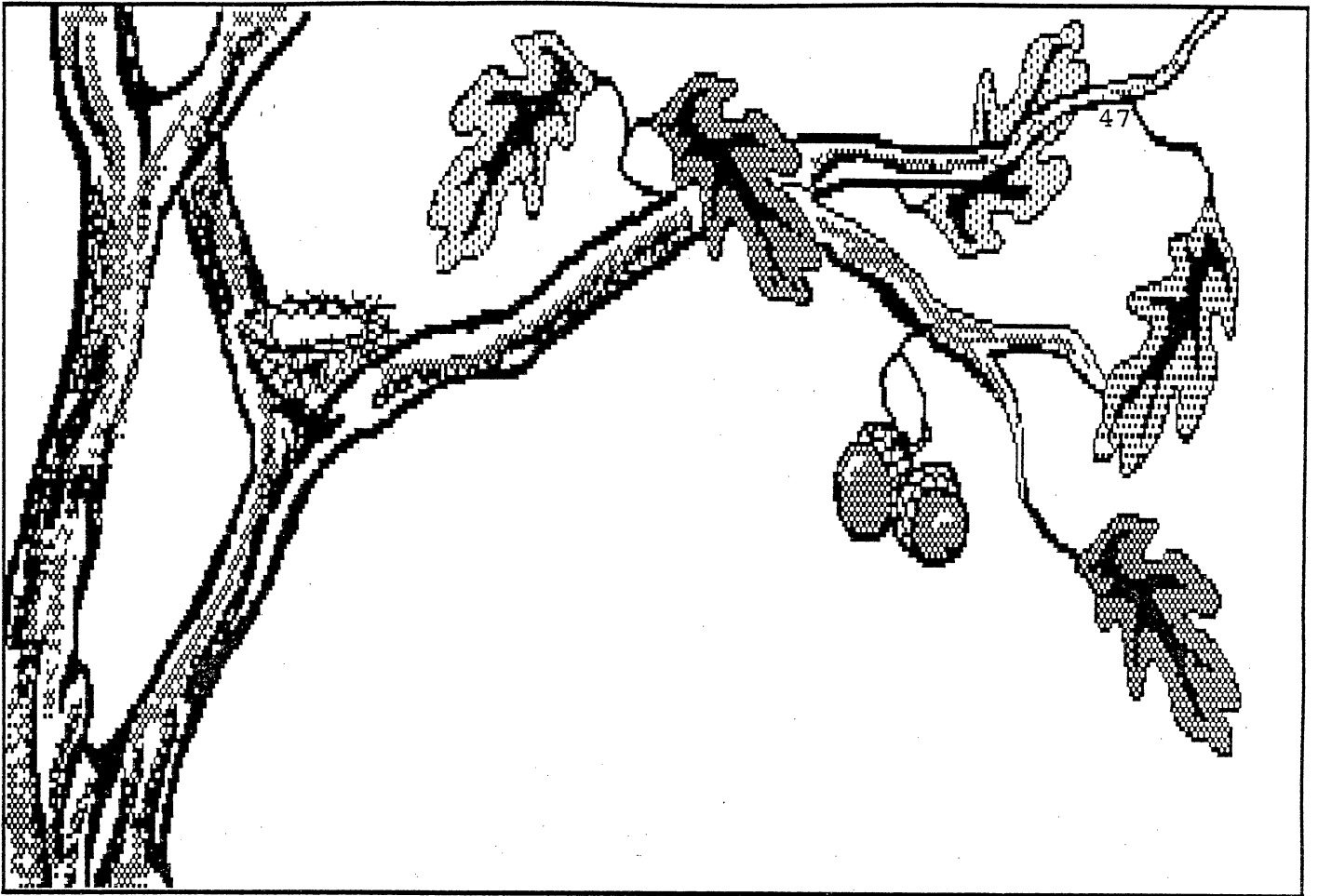
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THE NEED FOR AN ENVIRONMENTAL EDUCATION NETWORK

Environmental education is infused into many disciplines, yet no formal network exists to disseminate information as in the traditional areas of social science or science education. In addition, teachers particularly interested in environmental education in their schools come from many different departments and disciplines.

Until now, there has been no effective system for organizations and agencies to adequately disperse environmental education resources to these interested teachers. Untargeted mailings have proven to be inadequate. There has been no way to determine if teachers are receiving mailings. An organized network with a liaison in each school will provide systematic and dependable connections between teachers and environmental education agencies and institutions.

GOALS OF NEST

There are four broad goals that we hope to accomplish by implementing the Inland Empire Network for Environmental Science Training.

- * to initiate and maintain a long-term Inland Empire environmental education network linking Riverside and San Bernardino County K-12 schools and relevant environmental education organizations and agencies.
- * to provide training that dispenses the information and knowledge necessary to achieve understanding and skill in resource management.
- * to achieve understanding and heightened awareness of environmental issues that enable students to make responsible, informed decisions about their lifestyles.
- * to increase the efficiency of the dissemination of information to individual teachers from agencies and organizations offering workshop opportunities, courses, and resources in environmental education.

BENEFIT TO SCHOOLS

In the future the network will be the Inland Empire's primary mechanism for distribution of environmental education materials to schools. It is expected that schools and teachers participating in NEST will experience the following benefits.

- * more efficient means of information dispersal in regard to environmental education materials and information.
- * opportunity to network with other faculty/schools interested in furthering environmental education.
- * receive up to date information on a vast array of resources and professional development opportunities.

ENVIRONMENTAL EDUCATION LIAISONS

Principals in all schools in the Inland Empire have been asked to designate an environmental education liaison for their school. The liaison will be the main contact for the dissemination of environmental education information.

Liaisons will receive information from the various agencies and organizations in the Inland Empire involved in environmental education. It will be the liaison's responsibility to disseminate that information to teachers in their schools. Liaisons may be from any discipline. They may have a long-standing interest in EE or they may be new to the field.

Regardless of the department or discipline, the liaison will play a key role in NEST. Some schools have chosen to appoint more than one liaison.

RESPONSIBILITIES OF THE LIAISONS

As a NEST liaison, you will function as the primary contact for NEST communication and exchanges with your school and the consortium agencies. You will receive periodic mailings of materials, brochures, and informational bulletins. The consortium is counting on you to :

- * make other faculty in your school aware of the fact that you are filling this NEST position. Let them know that you are now the contact in your school regarding environmental education information from the Network.
- * establish and implement a strategy to effectively distribute environmental education information you receive to other faculty in your school. Ideas to help you get started are listed elsewhere in this manual under Strategies.
- * update your administration periodically on the information exchange that is occurring between you, your faculty, and the Network. Your administration has appointed you as the NEST liaison. Their continued support will assure a strong NEST for the future.

STRATEGIES

The consortium members will work together to send materials to the liaisons. Liaisons will receive some environmental education materials from the Environmental Education Resource Center at California State University, San Bernardino and some materials will come directly from agencies, organizations, or businesses.

REACHING THE TEACHERS IN YOUR SCHOOL

Methods of reaching the teachers in each school will be as varied as the schools themselves. Please use whatever communication channels work best at your school. You can expect to receive a variety of resources through the network. The consortium is counting on you to distribute it to the various teachers who will benefit from the material. Our goal is to efficiently disperse information, not to make it necessary for you to get another file cabinet!

Several ideas on how to do this have been offered by teachers who served as consultants in the formation of the Inland Empire Network for Environmental Science Training. They have anticipated some of the questions and concerns you might have, and have offered a few suggestions that might be helpful.

How do I inform teachers about the materials I receive?

- * Timely announcements at meetings
- * Bulletin boards
- * Announcements in mailboxes
- * Routing slips
- * Model Environmental Lessons

Remember to make bulletin boards and announcements "user friendly." They should not only be attractive, but contain pertinent information and necessary details.

As the NEST Liaison for your site you have a one hour meeting after school in which you model environmental lessons for the teachers at your school that would be appropriate at different grade levels.

How shall I distribute information and materials?

- * Select a strategically located shelf in the classroom or library. (Assure the librarian that you will maintain it!)

- * Place a handy box in the teacher's lounge.

- * Designate a file in the main office.

- * Place a crate or appropriate folder in your own classroom.

Keep display materials current, but remember that "outdated" materials may make great references and/or resource material. Make back issues and unused copies of mailings you receive available for faculty use.

*Create you own Environmental Education Resource Center on a shelf in your room to be used by all faculty at your school. Provide sign-out sheets.

How can I assess what my school already has available?

- * Enlist the school's librarian's cooperation in developing a resource list of materials available in your school.

- * Ask other teachers and liaisons to contribute materials.

- * Seek out brochures and schedules from local sources of environmental education. Your local parks department, zoo, county recreation department and area nature center are all potential sources of environmental education. They will probably be delighted to provide you with materials!

Feel free to improvise and be creative in ways you reach teachers. To what lengths you go to, to make environmental education materials accessible to them, will depend on you. An effective and efficient system will insure that environmental education information gets to interested teachers in a process that will not require extensive hours of work on your part. The important thing is that with the network in place, and liaisons identified at schools, there exists a practical means of reaching teachers who will use the materials.

THE ENVIRONMENTAL CONSORTIUM

The Environmental Education Resource Center, California State University San Bernardino, Riverside County Superintendent of Schools, and San Bernardino County Superintendent of Schools have formed a partnership to establish an Inland Empire Network for Environmental Science Training for schools and teachers.

ENVIRONMENTAL EDUCATION RESOURCE CENTER

The Environmental Education Resource Center is the catalyst for the Inland Empire Network for Environmental Science Training and will provide the following functions:

- * coordinate the Network for Environmental Science Training. The network could potentially connect over 700 schools and 64 districts with the Environmental Education Resource Center.
- * employ specialists and graduate students with teaching experience to assist school districts in providing inservice environmental education courses or programs to teachers in the Inland Empire.
- * maintain an up to date environmental education curriculum and resources library for use by teachers. The Center's environmental education specialists will provide reviews of selected environmental education materials through EERC.
- * cooperate with the School of Education at California State University San Bernardino, in providing an extended master's degree program in environmental education for inservice teachers.
- * assist school districts in conducting environmental education needs assessments.
- * develop, offer, and evaluate environmental education course designed for teachers.
- * provide environmental education workshops and consulting services to teacher educators from the Inland Empire's teacher training institutions.