

Logic Model
EcoTeam Program
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I. **Need or Condition:** Clarify the issue or problem the program will address. What needs to be changed? How do you know there is a need?

According to Harold R. Hungerford and Trudi L. Volk, “The ultimate goal of education is shaping human behavior. Societies throughout the world establish educational systems in order to develop citizens who will behave in desirable ways¹.” Environmental education addresses the need to promote more environmentally responsible citizenship behavior. The widely accepted goal of environmental education stems from two founding documents of the field: the Belgrade Charter (UNESCO-UNEP, 1976) and the Tblisi Declaration (UNESCO, 1978). Adopted by a United Nations conference, the Belgrade Charter provides a widely accepted goal statement for environmental education:

The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.

In 1978, the world’s first intergovernmental conference on EE adopted the Tblisi Declaration. The declaration was built on the foundation of the Belgrade Charter and established three broad objectives for environmental education. As the field evolves, these principles undergo constant research, revision, and critique. Nevertheless, these three broad objectives continue to provide much of the framework for the field of EE. The three broad objectives of EE as defined in the Tblisi Declaration are:

- To foster clear awareness of, and concern about economic, social, political and ecological interdependence in urban and rural areas;
- To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;
- To create new patterns of behavior of individuals, groups and society as a whole towards the environment.

EcoTeam provides...

- **WWC undergraduate students** pre-service experience that helps them transfer educational theory into hands-on classroom teaching experience.
- **Warren Wilson College** the opportunity to enhance community outreach to local public school system.
- **Third grade students** with expanded science knowledge and understanding of their role in the ecosystem. It also introduces them to college student role models.
- **Buncombe County and Asheville City elementary schools** with an opportunity to strengthen school curricula through quality environmental education.
- **The natural world** with human populations that understand how human well being is inextricably bound with environmental quality. Environmentally responsible citizens are more likely to explore and understand their environment with increased sensitivity, knowledge, and skills.

II. **Goal of Program:** Describes the change the program intends to make. What is the desired change?

The intention of the Regional EcoTeam program is three fold:

1. The program aims to offer Buncombe County third grade children the opportunity to actively investigate and draw conclusions about a set of environmental phenomena. Through this experience, the program intends to teach the children that the environment, including the human component, is a vibrant tapestry woven with of interdependent relationships of plants, animals and the elements. The goal of the program is to guide the children, without bias, to *understand* the fundamental ecological principals they experience (cognitive/immediate/quantifiable) and to recognize the need to *act* as responsible environmental citizens (affective/long term/less quantifiable).
2. The program aims to offer Warren Wilson College pre-service education students the opportunity to gain experience teaching an environmental education curriculum in a formal classroom setting and to gain experience facilitating a tested and structured model for learning (in this case, the Learning Cycle model). The goal of this process is to *enhance* the college student's theoretical academic learning by offering an experience that enables the student to *apply* new skills, concepts and ideas in a professional setting.
3. The EcoTeam Program strives to integrate with the public schools it serves by:
 - providing enhanced science learning
 - demonstrating for classroom teachers effective experiential education and use of a tested and recognized model for learning (learning cycle)
 - providing lessons that correlate to state standards and reinforce text book topics

- enabling classrooms and schools to become part of Jane Goodall's *Roots and Shoots* program which enables the action-orientated application of EcoTeam concepts
4. The regional EcoTeam program provides the foundation for the execution of the EcoTeam curriculum and the existence of the EcoTeam expansion program. The goal of the regional program, in this regard, is to teach lessons, gather formative evaluation data from these lessons, and use the data to justify program expansion and to modify the EcoTeam curriculum. This base of knowledge and experience ensures a confident and legitimate expansion program.

III. **Target Groups:** Who are the people, organizations, or other clearly identified groups that your program wants to affect?

- Warren Wilson College pre-service educators who serve on the EcoTeam Crew as educators, mentors and students
- Warren Wilson College Environmental Education and Science Education students by enhancing the applicable skill base of undergraduates
- Warren Wilson College by providing the institution with valuable, on-going community outreach opportunities
- Buncombe County and Asheville City primary school third grade children by providing experiential inquiry based environmental education and by introducing college student role models to the classroom
- Buncombe County and Asheville City primary school third grade curricula by incorporating developmentally and regionally relevant science education that meets state standards and reinforces text book topics
- Classroom teachers by providing an opportunity to continue exploring EcoTeam concepts through application lessons of the *Roots and Shoots* program, by demonstrating experiential environmental education that correlates to state standards and reinforces text book concepts, and by demonstrating a tested and effective model for hands-on and minds-on learning (the learning cycle)
- The field of Environmental Education by developing a replicative model of evaluated, effective and responsible environmental education

IV. **Inputs: develop the budget for your program here**

V. **Activities:** What services will the program provide? Explain why the strategy was selected or how it is expected to effect the desired change.

1. The program will provide undergraduate students with experiential training in delivering environmental education lessons to third grade children in the classroom. The field of Environmental Education has identified the need for pre-service training in environmental education, citing the lack of classroom teaching experience apparent in the performance of too many environmental educators.
2. The program will provide WWC with continued community outreach opportunities and will enhance the applied knowledge component of the college curricula. The college president, Doug Orr, committed the institution to seek out opportunities for

community outreach and the faculty of the college voiced the need for programs that provide hands-on training that relates directly to the academic curriculum.

3. The program will provide regionally relevant, experiential, inquiry based environmental education for third grade children in Buncombe County. There is a national concern addressing the lack of science education in public schools, the regional relevance of curricula, and the de-emphasis of inquiry based, student centered learning.
4. The program will provide a well tested, evaluated and replicative model of environmental education that focuses on training undergraduate students while connecting colleges to their immediate communities. (The EcoTeam Program Model) This is essential for the success of the Expansion Program and for the growth and development of the field of EE
5. The program will provide *Roots and Shoots* with elementary school and college partners while providing the schools with access to a continuing source of experiential environmental education. Classrooms participating in EcoTeam will follow each lesson with an action-orientated project designed by *Roots and Shoots*. By completing the projects, the school will become a *Roots and Shoots* member

VI. Outputs: Describe the product of the strategy.

1. WWC students who participate in the EcoTeam program will receive 40 hours of training for classroom teaching; will teach an average of 4, one hour lessons per week; will be enrolled in the North Carolina Department of Environmental Education's EE Certification Program; will partake in the curriculum evaluation process; will learn how to build a curriculum around a proven model of learning; will learn how to teach in the Learning Cycle format.
2. The EcoTeam will teach between 250 and 300 lessons per year in the primary public school system, which is taught by 5-6 Warren Wilson College undergraduate students enrolled in the majors of education or environmental studies.
3. Approximately 1020 Buncombe County and Asheville City third grade children participate in the EcoTeam program annually, which represents 46% of the total number of third grade children enrolled in the 2001-2002 academic year (n=2,210). In a given year, EcoTeam is taught in at least 63% of the Buncombe County and Asheville City schools (n=27). The number of individual classrooms reached averages 68 per year.
4. The EcoTeam Program Model will be replicated at other colleges and universities and will be presented at 3 national conferences per year.

VII. Outcome Objectives: Describe the change in individuals, population or service system that will result from the strategies.

1. WWC students participating in EcoTeam will become better trained and more effective teachers of environmental education through actual teaching and by reflecting upon critical feed back from the classroom teachers. They will gain a greater understanding of the developmental level of third grade children and of the various structures supporting public school education.

2. Warren Wilson College will become more integral in the educational development of the Buncombe County primary schools. The primary school curricula will be enhanced by the availability of this experiential, practical learning opportunity.
3. Buncombe County third grade children who participate in the program will gain an understanding of the ecological principals presented in the EcoTeam lessons, to be measured by comparing results between pre and post tests. The children will also have an increased understanding of the human role in the ecosystem and, through completing the included action based projects written by Jane Goodall's Roots and Shoots Program, will act more responsibly as environmental citizens.
4. The *Roots and Shoots Program* will engage students and institutions in action-orientated learning experiences that will enhance the communities understanding of regional environmental realities. This engagement will strengthen the presence of the *Roots and Shoots Program* in the South Eastern U.S.

The national replication of the EcoTeam Program Model at colleges and universities will mimic the before mentioned changes in other communities.
