Introduction

by Tim Grant and Gail Littlejohn

ince 1991, we have had the pleasure of working with a great many inspired educators who have shared their innovative environmental education programs, strategies, and activities in the pages of *Green Teacher* magazine. This book is a selection of some of the best of those "green" teaching ideas for educators working with children of elementary school age. Virtually all of the more than 60 contributors to the book have updated and revised their articles in response to comments and suggestions made by peer reviewers. The result is a wide variety of up-to-date activities and teaching strategies designed to engage children in learning the fundamentals of environmental citizenship in the 21st century. Some are strategies for nurturing children's sense of wonder and curiosity as they learn about the natural world. Others are hands-on activities for learning about ecosystems, exploring environmental issues, and engaging in local environmental stewardship projects. Still others help students to recognize the ways in which they are dependent on and connected to other people around the world. Perhaps most important, many of the activities help children to form and clarify their environmental values and to participate in decision making and problem solving.

Children learn best through active exploration of the world around them, and for this reason the hands-on, multi-sensory, multidisciplinary nature of environmental education is particularly well suited to meeting the developmental needs of students in the elementary years. But what exactly does it mean to "teach green"? While definitions and frameworks abound among environmental, global, and outdoor educators, most agree on a few fundamental principles:

Students should have opportunities to develop a personal connection with nature.

We protect what we care about, and we care about what we know well. If students are encouraged to explore the natural world — to learn about local plants and animals, to observe and anticipate seasonal patterns, to get their feet wet in local rivers — they are more likely to develop a lifelong love of nature that will translate into a lifelong commitment to environmental stewardship.

Education should emphasize our connections with other people and other species, and between human activities and planetary systems.

We are connected to other people, other species, and other lands through the foods we eat, the clothes we wear, the items and materials we use every day, and our common reliance on a healthy environment. By gaining an understanding of this global interdependence, children become better equipped to make everyday choices that respect the rights of others and lessen their impact on the Earth's life support systems.

Education should help students move from awareness to knowledge to action.

Even young children should have opportunities to take action to improve local environments. When students act on environmental problems, they begin to understand their complexity, to learn the critical thinking and negotiating skills needed to solve them, and to develop the practical competence that democratic societies require of their citizens. At the same time, educators have a responsibility not to burden children with catastrophic and complex environmental problems that are beyond their ability to help remedy — or, as environmental educator David Sobel has expressed it, there should be "no tragedies before fourth grade."

Learning should extend into the community.

Community projects provide authentic "real-world" reference points for classroom studies and help students develop a sense of place and identity while learning the values and skills of responsible citizenship.

Learning should be hands-on.

The benefits of hands-on learning are widely acknowledged among educators and supported by findings in brain research. Learning is a function of experience, and the best education is one that is sensory-rich, emotionally engaging, and linked to the real world.

Education should integrate subject disciplines.

Environmental issues are complex and cannot be separated from social and economic issues. Addressing them requires knowledge and skills from all disciplines. Inte-

grated learning programs, in which several subjects are taught simultaneously, often through field studies and community projects, help students develop a big-picture understanding and provide opportunities for authentic learning.

Education should be future oriented.

Students should have opportunities to envision the kind of world they would like to live in and to think realistically about incremental steps that might be taken to achieve it.

Education should include media literacy.

With constant exposure to mass media, our mental environments can become just as polluted as the natural environment. Media studies can help students learn to distinguish between fact and fiction in advertising, to recognize racial and gender stereotypes, and to consider the difference between needs and wants.

Education should include traditional knowledge.

Students should have opportunities to learn about traditional ways of life that are based on respect for nature and the sustainable use of resources. Across North America, many educators invite Native elders to share aboriginal perspectives on nature and ecology, exposing students to a worldview that recognizes the intrinsic value and interdependence of all living things.

Teachers should be facilitators and co-learners.

The teacher's role is to facilitate inquiry and provide opportunities for learning, not to provide the "answers." Teachers do not need to be experts to teach about the environment. The natural world is an open book that invites endless discovery by all. As co-learners alongside their students, teachers both model and share in the joy of learning.

Whether you are just beginning or are an old hand at environmental education, we hope you will find many ideas in this book to help you to enrich your teaching. The Table of Contents suggests grade levels, but many of the teaching strategies and activities are easily adapted for younger or older students. On the first page of each article is a handy summary that indicates the subject connections, key concepts, skills to be developed, and, if appropriate, the time and materials needed to carry out activities. With more than 60 individual contributors, the book includes a diverse mix of approaches and styles and a wide spectrum of environmental topics. It does not, however, directly address two topics that are central in many environmental education programs: the greening of school grounds and climate change. In response to the current interest in creating outdoor classrooms and the anticipated impact of climate change in the coming decades, we have published two separate books, *Greening School Grounds* (2001), and *Teaching About Climate Change* (2001), each one a collection of the best articles and activities on those topics from *Green Teacher* magazine.

The environmental and social problems bedeviling humankind will not be solved by the same kind of education that helped create these problems. It is our hope that this book — and the companion books for the middle school and secondary school levels — will inspire educators to take a leading role in helping the next generation to develop knowledge, skills, and values that will enable them to enjoy and share the Earth's bounty while living within its means.