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# Environmental Education

## Teaching Stewardship to College Students

By Bryan Ness

**“Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that lives upon the face of the earth” (Genesis 1:28, RSV).<sup>1</sup>**

**A**ccording to the Genesis account these were some of the first words spoken to humanity. Was God giving Adam and Eve permission to take advantage of the earth? Were human beings instructed to use their dominion so carelessly that the earth would be ruined? Of course not. God intended that human beings should serve as stewards of the earth. They were to care for it and nurture it, not exploit it.<sup>2</sup>

Later God gave the Israelites specific directions about care of the land. “Six years you shall sow your field...but in the seventh year there shall be a sabbath of solemn rest for the land, a sabbath to the Lord; you shall not sow your field or prune your vineyard” (Leviticus 25:3, 4, RSV). This command reminded God’s people of their responsibility to care for the land He had entrusted to them.

As Seventh-day Adventist Christians we also have a responsibility to care for the earth. Some say that Christ is coming so soon that we have no time to be concerned about ecology. When Jesus returns He will clean everything up. That is no excuse for ignoring our duty as faithful stewards. When Jesus comes we should be found caring for our planet, not helping the rest of the population destroy it.

We have a responsibility to teach our students to be good stewards of the earth, to be environmentally aware. This is more important now than in Bible

times because environmental degradation has become so severe and widespread. Despite attention given to these issues by the media, environmental awareness is still quite low.

### **Priorities for Teaching Environmental Awareness<sup>3</sup>**

Environmental science, which studies the interaction between human interests and the environment, is a very complex topic. Many of the problems are large, even global, in scale. Therefore, one can easily feel overwhelmed. To educate students about environmental issues without hopelessly confusing and discouraging them, we must first teach them how to approach the subject.

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### ***God intended that human beings should serve as stewards of the earth.***

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#### ***Emphasize the role of the individual***

It is easy to say that the smog levels in Los Angeles are high because people drive too much, or that the industrial dumping of toxic wastes pollutes our groundwater. But we need to help students understand the ways *their* actions affect the environment. For example, we can point out how much pollution their driving adds to the air, how buying certain products adds more toxic waste to the groundwater.

Teaching individual responsibility for the environment must be the major goal of environmental awareness. Students need to know that their habits and lifestyles determine the future condition of our environment. Rather than seeing pollution as a problem caused by society, students need to see it as a problem caused by them, individually.

With the awareness of personal

responsibility must come the necessity for individual action. Many problems appear so large that one person’s actions seem insignificant. Every solution to our environmental problems must start with the individual. Only individual action will lead to societal action.

#### ***Cover all sides of an issue***

With environmental issues, it is easy to take sides. The teacher must seek to be as unbiased as possible in presenting these topics. Because the subject is so complex, no one answer or viewpoint may be entirely correct. Be honest with your students. If certain evidence contradicts your view, discuss it openly.

A good example of a complex issue is the use of paper versus plastic grocery bags. One view supports paper as the best choice, because it is biodegradable, whereas plastic is not. But recent evidence indicates that neither paper nor plastic degrade in a landfill, even after 10 to 20 years.<sup>4</sup>

Some have suggested that plastic is better because it takes up less space in landfills and produces less toxic waste during the manufacturing process. Another viewpoint stresses that since all waste must be reduced, people should bring their own canvas bags to the store to fill with groceries. Further confusing the debate are new degradable plastics. Some see them as a solution, whereas others consider them a bane.<sup>5</sup>

When dealing with such complex issues, avoid trite answers. Present all sides, giving the students enough information to make an intelligent decision. Help them use critical thinking skills to come to a conclusion.

#### ***Emphasize solutions***

Discussing environmental problems with students can be frustrating, since the problems are large and complex. Environmental issues seem intertwined with other problems in a bewildering mess. As a result, we focus on defining the problems, but never discuss solu-

*Students, administration, and alumni of Pacific Union College plant a tree to commemorate the anniversary of Earth Day.*

tions. This creates a sense of hopelessness that inevitably results in inaction. Why act if it is hopeless?

Emphasizing solutions will help combat this sense of hopelessness. There *are* solutions to environmental problems. Some are simple, others are more complex. Many of the solutions involve coordinated action, which often requires personal sacrifice of time or money.

I have found that the best solutions to share with students involve personal action. For example, driving only when absolutely necessary (and not modifying a car's smog equipment) solves several problems:

1. It conserves a nonrenewable energy source, fossil fuel.
2. It reduces carbon dioxide and other emissions. This helps reduce acid rain, the greenhouse effect, and smog levels.
3. It reduces automobile wear and tear. Cars then last longer, conserving the resources that are used to make new vehicles. Even more important, the toxic by-products of car manufacturing are also reduced. An action such as driving less may not seem significant on the large scale. However, if many people

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drove less, this would produce positive results.

**Methods for Teaching  
Environmental Awareness**

***Assign outside reading***

Environmental science changes almost daily. New information frequently makes old information obsolete. Textbooks are out of date almost before they come off the press. Outside reading is therefore almost imperative. One solution is to use a supplemental text and update it yearly.<sup>6</sup>

Reading reports might also be assigned. Have students select an article from a current journal or magazine and

write a brief summary. Ask students to analyze the viewpoint of the author and answer questions such as these: Is the author biased? Are his arguments reasonable? Students should learn how to recognize the bias of an author and still use the information.

You might also assign a term paper on a specific area chosen by the student. To ensure that the student uses the most up-to-date information I always specify that a minimum of five sources must be used, three of which must have been published within the past year. You might also ask students to present the paper orally in class.

***Audiovisual materials***

Videos and 16mm films can be used effectively. I have personally reviewed all the videos listed in this article. Be sure to preview your own choices before buying.

***Class discussion***

Lecturing can help students understand the topic. However, the majority of class time should be devoted to discussion. To make sure the students

grasp the material, I give daily in-class or take-home quizzes. This not only ensures that they read the textbook, but also helps them focus on the topic.

Class discussions work best if the teacher compiles a list of specific questions ahead of time. Although breaking a larger class into smaller groups may work, it is usually best to discuss topics with the entire class. Without direct teacher involvement student discussion groups often lack direction.

A variety of questions can be used, but they should emphasize topics that affect students on a personal level. For example, if your class discussion deals with overpopulation, you might ask: What is our personal responsibility with regard

- A personal record of water use and outlining ways of conserving water;
- A recycling feasibility study for a portion of campus or the community;
- A local restoration or clean-up project.

Projects such as these not only enrich the students' classroom experience, they also promote ongoing involvement after the class has ended.

### Conclusion

Adventist colleges have long promoted a wholistic education. For this reason they have been committed to combining liberal arts and ethics. Including environmental education in this cur-

riculum can make a significant contribution to shaping the sensitivities of young Christians.

A genuinely liberal education will produce whole persons with intellectual breadth, able to think at right angles to their major field; practical persons able to act competently; and persons of deep commitment, willing to roll up their sleeves and join the struggle to build a humane and sustainable world. They will be not merely well read, but also ecologically literate citizens able to distinguish health from its opposite and live accordingly. Above all, they will make themselves relevant to the crisis of our age, which in its various manifestations is about the care, nurturing, and enhancement of life.<sup>8</sup>

By including environmental studies in liberal-arts education, Adventist colleges

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to overpopulation? Is it acceptable to have a large family?

Related questions that involve a broader perspective might include: Should abortion ever be used as a form of population control? In countries where overpopulation is an especially serious problem, should couples be forced to limit their families to only one or two children? Class discussion should encourage students to think critically about environmental issues so that they can make responsible decisions about their own life-styles.

### Assign outside projects<sup>7</sup>

Outside projects can serve as effective teaching tools. Rather than just reading, talking, or writing about environmental issues, students participate in hands-on experiences. Such projects may vary from recycling to comprehensive water and garbage inventories. Each project should promote personal action and increase environmental awareness.

Ideas for projects often develop spontaneously. During a discussion of recycling in human ecology class last spring, several students asked about campus recycling. I said that I didn't think anything was being done at that time. In response, several of the students started a recycling program in their dorm. They not only provided containers, but also transported the collected items to the recycling center.

Other worthwhile projects:

### Supplemental Books

*Environment*. Annual Editions, Dushkin Publishing Group, Guilford, Connecticut. A yearly compilation of well-chosen articles on a variety of environmental topics.

*Taking Sides: Clashing Views on Controversial Environmental Issues*, Third Edition (1989), Theodore Goldfarb (ed.), Dushkin Publishing Group, Guilford, Connecticut. An excellent book to encourage discussion on environmental topics. Includes collections of essays by experts supporting opposing views.

*Fifty Simple Things You Can Do to Save the Earth*, The Earth Works Group, Earthworks Press, Berkeley, California. Inexpensive, and a good source of practical ideas for personal action.

*Environmental Action Guide: Action for a Sustainable Future*, Ann Causey, Benjamin/Cummings Publishing Company, Redwood City, California. Another good guide for personal action. More detailed than *Fifty Simple Things*.

*Sierra Club Earth Day Activist Sourcebook*. Packed full of information on books, videos, posters, and many other educational materials. A good source for project ideas. Available free by writing to: Sierra Club, Dept. SA, P.O. Box 7959, San Francisco, CA 94120.

### Journals and Magazines

*The Amicus Journal*. Includes some news, longer well-written articles, and book reviews. Published by the Natural Resources Defense Council, 40 West 20th St., New York, NY 10011.

*Garbage: The Practical Journal for the Environment*. Popular format, printed on recyclable paper. Numerous short news items and shorter well-written articles. Published by Old House Journal Corp., 435 Ninth St., Brooklyn, NY 12215.

*Buzzworm: The Environmental Journal*. Published by Buzzworm, Inc., 1818 16th Street, Boulder, CO 80302. Includes numerous short news items, announcements about environmental projects, lists of "green" products, and well-balanced longer articles.

*World Watch*. Published six times yearly by WorldWatch Institute, 1776 Massachusetts Ave. NW, Washington, D.C. 20036. Good source for information and analysis of world and national environmental problems.

### Videos

*Race to Save the Planet*. A 10-part series from the Annenberg/CPB Collection. Covers all aspects of environmental science. Distributed by Intellimation (1-800-346-8355), it sells for \$275.

*Putting Aside Pesticides*. A good presentation of alternative pest control methods that are either currently available and being researched. Distributed by Films for the Humanities and Sciences (1-800-257-5126). Cost: \$149.

*The Toxic Goldrush*. Examines the issues involved in the disposal of toxic wastes. Also distributed by Films for the Humanities and Sciences. Cost: \$149.

*What Is the Limit?* Covers some of the causes and effects of overpopulation. Distributed by the National Audubon Society, 950 Third Ave., New York, NY 10022.

**Students at Andrews University set up a recycling program for bottles, cans, paper, old school newspapers, cardboard—and used money!**

### **Environmental Awareness for Institutions**

Environmental awareness and responsibility must be taught by example throughout the college or university campus. Students should be encouraged to organize campus environmental efforts. Following is a list of some ways campuses can accomplish these goals:

- Minimize the creation of waste — particularly hazardous waste.
- Place containers at convenient locations around campus for collection of aluminum cans, glass bottles, and paper.
- Have the cafeteria sort all recyclable items, or even better: let the people who eat there sort the items.
- Minimize environmental, health, and safety risks to employees and students.
- As students study design techniques, have them help redesign the physical plant to improve energy efficiency. Make sure that the recommended improvements are made.
  - Safeguard the environment by minimizing the use of products that contribute to the pollution of air, water, or land or that promote the greenhouse effect, depletion of the ozone layer, acid rain, or smog.
- Protect wildlife habitats, open spaces, and wilderness.
- Involve students in landscaping the campus to maximize water and energy efficiency without sacrificing aesthetics.
- Encourage car pooling and provide a shuttle service where feasible.
- Encourage conservation and use of renewable energy sources.
- Install low-flow shower heads and low-water-use toilets.
- Invest in companies that exhibit environmental consciousness.
- Conduct a yearly environmental audit of campus policies and programs.

can inspire their graduates to make this kind of commitment. □

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#### NOTES AND REFERENCES

<sup>1</sup> The Bible texts marked RSV are from the Revised Standard Version Bible, copyright 1946, 1952, 1971 by the Division of Christian Education of the National Council of Churches of Christ in the USA, and are used by permission.

<sup>2</sup> See J. Prosnit, "Guardians of God's World," *The Amicus Journal* (Winter 1990), pp. 54-56 for a discussion of this concept.

<sup>3</sup> Although this article is primarily directed to environmental science teachers, many of the approaches covered can be used in other classes to promote environmental awareness.

<sup>4</sup> W. L. Rathje, "The History of Garbage," *Garbage*, 2:5 (1990) pp. 32-39.

<sup>5</sup> J. Donnelly, "Degradable Plastics: Are They a Delusion, a Solution, or a Downright Hoax?" *Garbage*, 2:3 (1990), pp. 42-47.

<sup>6</sup> Examples include "Environment" and "Taking Sides." See the list of supplemental books provided with this article.

<sup>7</sup> Assignment of an outside project and a term paper be too ambitious for some classes. Giving the students an option of doing a project or a paper may work better.

<sup>8</sup> David W. Orr, "The Liberal Arts, the Campus, and the Biosphere," *Howard Educational Review*, 60:2 (May 1990), p. 216.