

Planning State Programs For Conservation Publications*

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Conservation and education leaders in most states have tried at one time or another to design one or more conservation publications for public school use.

In my recent survey of the *Nature and Extent of Leadership in Conservation Education*,¹ published in August, 1958 and covering the period of 1956 to 1958, I discovered that at least thirty states have a conservation guide of some kind for school use.

In Michigan our State Conservation Education Committee has been engaged in a publications program for three years. Therefore, we have been interested in learning what other states have been doing and in designing a program to meet our own needs which would capitalize on the strong features of publications from other states. Thus, in reporting our analysis and plans, I am hopeful that leaders in other states may utilize some of our findings in their own planning.

Statement of Philosophy

In our initial efforts in Michigan we soon discovered that we needed to agree on a particular approach to conservation education. Since our curriculum program in Michigan is geared particularly to the community school philosophy, our statement became entitled *Conservation Education in the Community School Program*.² Although it was printed separately and distributed quite widely, we envisioned it as the first chapter or introduction to later publications.

As a committee, we have generally felt that conservation should be woven into the total warp and woof of the educational program at

whatever places it could make a contribution and help to enrich the program, particularly the physical, biological, and social sciences. We envision conservation as one of the major emphases which can help to unify the efforts of school and community leaders in training civic leaders and informed citizens. We see conservation as the cornerstone for relating the school to the community and the community to the school. Problems of community living become the focus for problem solving in the classroom. Special courses in conservation may be used as capstones but do not substitute for an integrated approach throughout all of the grades.

Similar philosophic statements concerned with a community orientation can be found in the publications of Tennessee and Florida.

Using a Team Approach

Our committee felt the need of an instrument for evaluating a school program and the faculty to see the extent of the leadership in and the facilities for conservation education. Thus, we assisted Dr. Clarence Messner in developing *A Check List of Criteria for Conservation Education*³ as a part of a doctoral program at The University of Michigan. This was printed as an evaluation instrument for the committees' use by the Departments of Public Instruction and Conservation in October, 1958.

This set of criteria was patterned somewhat after the set used by the National Association of Biology Teachers in the Conservation Project and printed in the *Handbook for Teaching Conservation and Resource-Use*.⁴

*Presented at the NABT sessions with the AAAS, Washington, December, 1958.

¹"The Nature and Extent of Leadership in Conservation Education in State Agencies, 1956-1958." Department of Conservation, University of Michigan, Ann Arbor, 65 pages, 1958.

²"Conservation Education in the Community School Program." Department of Public Instruction, Lansing, Michigan, 1955, 12 pages.

³Clarence Messner, "The Development and Try-Out of a Set of Criteria for the Evaluation and Improvement of a Conservation Education Program in an Elementary School." Unpublished Doctoral Dissertation, University of Michigan, 1958, 182 pages.

⁴"Handbook for Teaching Conservation and Resource-Use." National Association of Biology Teachers, 1958. 500 pages. Interstate Printers and Publishers, Inc., Danville, Illinois.

This in turn had been stimulated by the efforts of the Illinois Curriculum Committee to evaluate Illinois Schools in other areas than conservation.

The Michigan set of criteria calls for an estimate of the faculty on such things as the strengths or weaknesses of its philosophy, personnel, curriculum, and organization.

Guide to Resources

Michigan's Resource Guide called *They Need Not Vanish* has been out of print for over ten years. Only a few states have resource guides specifically prepared for school use. Florida and Louisiana each has such a guide prepared for use in the eighth or ninth grade as a text. Wyoming published an excellent reference in 1957. Arizona, Minnesota, Montana, Oregon, South Dakota, and Nevada also have guides to their states resources. Some of these include some teaching suggestions. Missouri has a series of leaflets on the various resources, first printed in 1933 and reprinted regularly and distributed in large numbers. Indiana had a similar set, but these were not reprinted after the initial small editions became exhausted.

Only one state has a significantly outstanding guide to its resources and that is Wisconsin. It is called *Natural Resources of Wisconsin*⁵ and grew out of a special legislative act requesting the state agencies to prepare such a report.

After it was prepared the Legislature appropriated the money for its publication, and the Soil Conservation Committee has reprinted additional copies for its use.

We in Michigan would like to develop a similar plan as we are impressed with the cooperative nature of the project and the inclusion of such things as transportation and communication.

Teaching Guide to the Resources

A few states have tried to gear specific techniques of teaching to a guide of the resources, and this is a preferable way of proceeding. However, only a few states have had the basic

resource guides. Therefore, many others have had to prepare their teaching guides as separate publications.

Many excellent teaching guides have been produced in recent years by such states as Idaho, Kansas, Maryland, Minnesota, Montana, Nevada, New Hampshire, New Mexico, New York, North Dakota, Oregon, South Carolina, South Dakota, Virginia, Vermont, West Virginia, and Wyoming.

Wisconsin's guide has been reprinted many times since its origin in 1949 and is an excellent one. A few states have come out with guides to one of the resources like the one on forests in California.

Michigan's teaching guide produced in the 1930's has long been out of print, so we have undertaken the preparation of a guide. Since our resource guide has also gone out of print we had to find a framework which would give some direction to the kinds of content which should be taught.

We were influenced by New Hampshire's attempt to organize a set of understandings or concepts for each of the resource areas. We decided to prepare such a set of statements, which we are calling understandings, and then we have tried to illustrate how each could be taught in the classroom or outdoor laboratory.

We used a ten-day writing workshop to do the writing in August, 1958, at which sixteen experienced teachers, five staff members, and eight consultants attended. The expenses were underwritten by conservation groups and industries. The workshop was cooperatively sponsored by The University of Michigan, Michigan State University, the Department of Public Instruction and the Department of Conservation, under the auspices of the Conservation Education Curriculum Committee of the State. Some preliminary work on the understandings was done in my summer conservation workshop at The University of Michigan and by some of our graduate students. The faculty members of our School of Natural Resources have also assisted at various stages.

We decided to organize the understandings into four categories, with the first two sections covering the background information from science and geography needed to understand the technical aspects of conservation. The categories were as follows:

⁵"The Natural Resources of Wisconsin." 1956, 159 pages, The Natural Resources Committee of State Agencies, Madison.

- A. The characteristics, distribution and status of the resource.
- B. The importance of the resource to mankind and the problems growing out of man's use.
- C. The techniques of management to solve the problems created, and finally,
- D. The policy and administration techniques.

We have printed the set of understandings⁶ to use in our state committee work, as an evaluation instrument for teachers to use in seeing how much conservation they are including in their present teaching. They also serve as a guide for building a program. We have already improved the first edition through a recent three-day work conference of the writing committee and with the help of six consultants and our University staff members in the School of Natural Resources.

Vermont has used a somewhat similar approach in their new bulletin, and Ohio leaders are developing their new bulletin around a similar set of statements or understandings.

A "Guide to Teaching Conservation and Resource-Use in Michigan"⁷ has now been published by the Department of Public Instruction in Cooperation with the Department of Conservation. Each of the *understandings* used as a framework has been illustrated with specific techniques for teaching, such as demonstrations, experiments, discussions, field trips, use of audio-visual materials, surveys, questionnaires, research and observations.

A Leadership Guide

Our Michigan committee felt the need for one more type of publication, which we have not discovered elsewhere. We developed a 55-page bulletin called a *Leadership Guide in Conservation Education*⁸ to be given to people

⁶"Important Understandings for Conservation Education." Department of Public Instruction and Department of Conservation, 14 pages, 1959. Bulletin No. 424, Lansing.

⁷"Guide to Teaching Conservation and Resource-Use in Michigan," Bull. No. 425, 1960, ——— pages. Department of Public Instruction and Department of Conservation, Lansing.

⁸"Leadership Guide in Conservation Education." Bulletin No. 421, Department of Public Instruction and Department of Conservation. 55 pages, 1958, Lansing.

who acquired new leadership responsibilities in conservation and needed some suggestions. We included such things as: suggestions for the administrators, and the teacher, for curriculum committees, in-service programs, school projects, and developing instructional materials. We also described such leadership techniques as the workshop approach, community surveys, field trips, outdoor programs, and the use of resource personnel.

Some states, such as Wisconsin have special bulletins on some of these things and others include some such information as a part of their teaching guides.

Summary and Recommendations

It is apparent that there are at least three and maybe four basic needs in each state for publications in conservation which will do the following things:

- 1) Describe the resources of the state, giving essential factual information for the teacher, and pointing up the basic conservation problems which are important in the state.
- 2) Give the teacher helpful suggestions of ways and means of making the teaching about these resources and problems, interesting and valuable. These teaching guides can be geared to a resource guide if available or to a set of basic understandings developed by competent authorities in conservation. These can best be illustrated usually by experienced teachers who have used the techniques being described.
- 3) Assist new people to undertake the responsibilities of leadership. Such leadership suggestions can be included in the teaching guides, but there may be considerable merit in having these in one bulletin or Leadership Guide.
- 4) Provide a means of evaluating a conservation education program by a checklist or set of criteria which can be used for self-analysis by teachers and administrators.

Any state which embarks on such a program of publications will probably find that a continuing committee on conservation education will be immensely helpful. There should be adequate use of the various resource agency consultants as members of the committees.

Various industrial groups and conservation organizations can make important contributions too.

The philosophical bases for all of these bulletins should be founded on the laws of learning, and geared as closely as possible to the learning opportunities available in the community and the state, while not overlooking the national and international implications and responsibilities.

States with Curriculum Guides, Manuals or Handbooks on Conservation Education

(Taken from pages 20-22 of the first reference cited.)

Many states have an official guide or handbook for teaching conservation in the schools. Those which have them are listed, with the title and the date of publication and number of pages. *All have been printed by the Department of Education unless otherwise indicated.*

1. *Alabama*, "Using Resources of the Community to Build a School Program." 1950, 118 pages.
2. *Arizona*, "Natural Resources of Arizona—A Guide for Improved Teaching." 1950, 180 pages, published by The Arizona Conservation Club, Inc.
3. *Arkansas*, Manuscript in preparation by means of summer workshops.
4. *California*, (a) "Conservation—Concern for Tomorrow." 1954, 173 pages. (b) "Teaching Conservation and Natural Science in the Outdoors." 1958, Department of Natural Resources. (c) "Forests of California." 1955, 147 pages, Department of Natural Resources.
5. *Florida*, "Florida—Wealth or Waste." 1954, 176 pages.
6. *Idaho*, "Conservation Handbook for Idaho Teachers." Grades 1-12, 1954, 78 pages.
7. *Illinois*, A conservation text for teachers has been prepared by personnel of the Department of Conservation and will soon be ready for distribution. It is jointly sponsored by the Department of Public Instruction.
8. *Indiana*, (a) A series of booklets on wildlife, soil, plants, minerals, and water, printed from 1946 to 1950, in limited editions and no longer available. (b) Teaching Conservation in Indiana Schools, Department of Public Instruction, Bull. No. 232. (With scope and sequence chart).
9. *Iowa*, "The Teaching of Conservation." Grades 1-8, 1949.
10. *Kansas*, Reports of Conservation Education workshops were prepared as possible state guides in limited multilith editions.
11. *Maryland*, A manuscript in mimeographed form called "Abundant Living—A Guide to Natural Resources" was prepared in three summer workshops. "Things To Do In Conservation." 1954, 41 pages. Now out of print, is under revision by the Division of Research and Education of the Department of Natural Resources.
12. *Michigan*, (a) "Leadership Guide to Conservation Education," Bull. 421, 1958, 60 pages. (b) "Conservation Education in Community Schools," 1955, 10 pages. (c) "Important Understandings in Conservation," Bull. 422, 1959, 14 pages. (d) "Guide to Teaching Conservation and Resource-Use." Bull. 425, 1960, — pages.
13. *Minnesota*, "The Guide for Science and Conservation." 1951, 158 pages. Price \$1.00 from Syndicate Publishing Company, 501 Park Avenue, Minneapolis, Minnesota. "Guide for Conservation in Grades 7-12." Published in 1956.
14. *Missouri*, A series of teacher's manuals on soil, water, forest, birds, mammals, and fish was published from 1935 to 1953 by the Missouri Conservation Commission and between 100,000 and 150,000 have been printed and distributed, with some revisions made upon reprinting.
15. *Montana*, (a) "The Conservation of Montana's Natural Resources." 1953, 64 pages. Montana Conservation Council. (b) "Suggested Activities for the Teaching of The Conservation of Natural Resources." Montana Conservation Council, 1956, 47 pages, \$1.00 Reporter Printing and Supply Company, Billings, Montana.
16. *Nevada*, (a) "Conservation and Nevada." 1949, 131 pages. (Out of print). (b) "Nevada Conservation Adventure." 1954.
17. *New Hampshire*, (a) "The Wise Use of Natural Resources in New Hampshire." 81 pages, (Out of print). (b) "Learning To Use New Hampshire's Resources." A guide for secondary schools. 1956, 57 pages.
18. *New Mexico*, "Elementary Science and Conservation Handbook." 1953, 126 pages.
19. *New York*, "Using Resources Wisely." 1956, 48 pages.
20. *North Dakota*, "Conservation, Soil, and Water for the Public Schools." 1948, 127 pages.
21. *Oregon*, (a) "Conservation Education in Oregon Schools." 1955, 104 pages. (b) "Conservation Programs and Projects for Classrooms and Clubs." 1955, 33 pages by the Conservation Education Committee of Izaak Walton League of America, Oregon Division.

22. *South Carolina*, (a) "Our Land Is Our Life." 1955, 134 pages. (b) "Guide for the Teaching of Social Studies, Grades 1-12." 1956.
23. *South Dakota*, "Conservation of South Dakota's Natural Resources." 1953, 168 pages.
24. *Virginia*, "A Look at Virginia's Natural Resources." By the Virginia Resource-Use Education Council, 1955, 68 pages, reprinted in 1957.
25. *Vermont*, "Conservation Education Bulletin." Manuscript mimeographed, 1956.
26. *West Virginia*, "Living, Learning, Loving West Virginia." 1957, 82 pages.
27. *Wisconsin*, (a) The "Guide to Conservation Education in Wisconsin Schools." 1949, 96 pages, reprinted as needed. (b) "The Natural Resources of Wisconsin." 1956, 159 pages, by the Natural Resources Committee of State Agencies. (c) "Guide to Conservation Education Bibliography in Wisconsin Schools." 1958, 77 pages.
28. *Wyoming*, "Wise Use of Wyoming's Resources." 1957, 129 pages by Harold Webb. Wyoming Soil Conservation Committee, Room 308, Capitol Building, Cheyenne, Wyoming. \$1.60.

BIOLOGY IN THE NEWS

Brother H. Charles, F.S.C.

THE TRUTH ABOUT THOSE REDUCING PILLS, Lester David, *Good Housekeeping*, February, 1960, pp. 50-51, 127-131.

Peddling pills, most of which are worthless and some really dangerous has become a million dollar a year racket. This is a good article to stimulate discussion of the best methods for weight control.

WONDER DRUGS: HOW MUCH CAN YOU BELIEVE? Walter Goodman, *Redbook*, February, 1960, pp. 31-33, 79-82.

The advantages and disadvantages chart contained in this article is good bulletin board material and a useful reference for your files. The article shows how indiscriminate use of these drugs can cause tragic consequences.

IS NOISE GETTING YOU DOWN? Ruth and Edward Brecher, *Saturday Evening Post*, February 6, 1960, pp. 32-33, 72.

Noise is becoming an increasingly important cause of nervousness. The article describes methods for controlling noise. It might stimulate "no noise" campaign in your school.

ORCHIDS FOR EVERYBODY, Frank J. Taylor, *Saturday Evening Post*, January 30, 1960, pp. 32-33, 88-90.

One man's efforts to popularize the use of orchids by everybody. Methods of culturing, breeding, and marketing these exotic flowers are described.

SHOULD WE KILL MORE PHEASANTS? Durward L. Allen, *Field and Stream*, February, 1960, pp. 49, 90, 128.

Too many pheasants survive the hunting season. Some experts believe 75% of all birds, male and female, should be taken each fall. This is a good article for those who want to do research in conservation.

THE ELK, Jack O'Connor, *Outdoor Life*, February, 1960, pp. 48-51, 114-110.

The life history and habits of the elk as told by a hunter who regards the animal as the "grandest and most beautiful of the deer tribe."

SHARK! Thomas Lineaweaver, *Sports Illustrated*, February 22, 1960, pp. 54-63.

Sharks are much feared by most people. This article gives much information about these large fish and gives the truth about some superstitions about the shark.

Newsletter

"Outdoor Education" is a Newsletter for the exchange of ideas on school camping and outdoor education, published by The Outdoor Education Project of the American Association for Health, Physical Education and Recreation, printed by the College of Education, Michigan State University, East Lansing, Michigan.

Boy Scouts

A special "Conservation Citizenship Award" has been presented to the Boy Scouts of America by Secretary of Agriculture Ezra Taft Benson. The United States Department of Agriculture honored the Boy Scouts for their continuing conservation programs which have made noteworthy contributions to the conservation of our Nation's natural resources.