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*RCSI Bulletin 153
Environmental Education Survey*

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The Rochester Committee for Scientific Information

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Environmental Education

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ENVIRONMENTAL EDUCATION SURVEY

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Summary Teaching environmental education is not an established part of present educational programs. In some schools it is in the experimental stage and in some it has not even begun. The survey showed that concerned teachers and administrators are unable to make use of the full range of available resources. Recommendations include the following: comprehensive planning for K-12; an interdisciplinary approach including the development of environmental values; communication amongst schools regarding materials available; and the development of an environmental education section in every school library. A Follow-up section details what is being sent to the schools by RCSI, as a result of the survey.

Introduction In October, 1972, copies of a one-page *Environmental Education Survey* were sent to the Rochester City School District and all Monroe County public and private schools. Enough copies of the survey to cover all schools in each district were sent to each superintendent or district principal, with a cover letter requesting that he get them to the various buildings.

The following County schools responded: Allendale-Columbia (2 forms returned), BOCES #1 (1), Brighton (6), Brockport (1), Churchville-Chili (1 for K-12), East Rochester (1), Fairport (5), Gates-Chili (2), Greece (5), Pittsford (9), Spencerport (7), Webster (8), and West Irondequoit (4), giving a total of 52 forms.

It was clear in reading the surveys that those who filled them out had given them some thought and were concerned about environmental education. Some sent along additional information or sample materials being used. The City School District responded with a letter from its Research Advisory Committee stating that, "the proposed questionnaire was too detailed and demanded much information which is not readily available to those who might be asked to complete the questionnaire."

See pages 4 - 6 for detailed results of the survey.

Results In summarizing the results, it was evident that, while most districts have at least one course called Ecology or including some ecological concepts, no district has developed a continuing curriculum to cover K-12. Two districts and one BOCES are working on such a curriculum. In many cases, the present courses are standard science courses which barely touch on the many ramifications of ecology.

Of 35 schools which stated that they *offered a course or major unit* in environmental education, 12 were elementary and 23 were junior high and high school. The one

which responded for K-12 on one form listed one course at the junior high level. Of the 17 who responded negatively, 11 were elementary and 6 junior high and high school.

Six of those which had no program (representing 4 districts) stated that a program was being developed (4 elementary and 2 junior high and high school); 8 said none was being planned (4 elementary and 4 junior high and high school, in 5 districts); and 3 (2 districts) did not respond.

Although 17 schools stated that teachers had participated in a workshop or inservice program, the comments were to the effect that most of these were too short, inadequate or poor. The Roth Junior High workshop listed was an RCSI-sponsored county-wide workshop.

Only 18 of 49 schools responding to the question about *current resources and materials* felt they were "ample." While this is a subjective appraisal, it indicates that most of the available resources are often not known to the schools. Only recently have attempts been made to get information about local resources to them. In some cases, information has been available, but in a library or curriculum center unbeknownst to the teachers. In other situations, teachers have known of material, but have felt unable to find time to use it.

Field trips and discussions led the list in indicating which *sources of information best acquaint students with the status of the local environment*. Next were TV and films. Teachers obviously vary in what they judge most useful. One might conclude that all things listed could be useful, depending on planning and follow-up and that any teacher will best use those which he feels are most productive. Optimal use of many of the methods is often difficult, since actual worth will depend on preparation, follow-up and integration into a total unit. If used in isolation, results often depend on a given student's ability to use the information by himself.

The *successful projects carried out by students* were so diverse that the largest number doing any one thing was 5 (groundskeeping). One is struck by both the number and the variety of things done. Critics have been concerned about one-day projects, such as litter pick-ups or ecology days, since they feel that environmental problems demand continual interest. One may counter, however, that one day is far better than nothing and one day of concentrated study may have far more effect than several units taught from a textbook. As with so many areas of education, value to the individual or longlasting effects are extremely hard to measure or judge.

Conclusions In conclusion, there are many healthy signs in the survey results. Two districts and one BOCES are aiming for a total environmental education curriculum. Many schools are making some attempt to teach environmental education units and many more are planning such units. There is considerable awareness of the need for 1) curriculum additions or changes, 2) workshops and inservice programs, and 3) more resources and materials and better ways of learning of their availability.

Recommendations Recommendations for improving environmental education are as follows:

1. Comprehensive planning for K-12 should occur as soon as possible in each school district.
2. The longrange aim should be for an interdisciplinary approach. Since this may take considerable time to emerge and is more difficult at some levels than others, units in various subject areas should be encouraged.
3. One aim of environmental teaching should be to develop values.
4. Each school should make a list of materials used and send it to all other schools.
5. Each school library should have a section for environmental education materials and a list of these materials should be made available to every teacher.

Follow-up Copies of this bulletin are being mailed to the participating schools, with a cover letter thanking them for their help. Also enclosed will be the following:

- information regarding the "Directory of Environmental Groups" (available in every school library)
- information regarding "EnviroNews" (separate copies of this newsletter are now being mailed by the Monroe County Environmental Management Council to every school principal, faculty and library)
- information regarding "Overview" (newsletter mailed to every high school library by the Monroe County Planning Council)
- information regarding school paper recycling (Better Life Recycling, Inc., has offered to collect paper, at no charge, from any school which will make it available in an appropriate form)
- copy of the RCSI Master List of Bulletins
- copy of the RCSI "EcoPac Contents"
- copy of the "Environmental Self-Guide" (sells for 50 cents)
- copy of "Environmental Issues," a collection of lesson plans and curriculum guides written by local area teachers (sells for \$1)
- a return card for indicating interest in a summer inservice workshop for actual writing of curriculum.

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RESULTS OF ENVIRONMENTAL EDUCATION SURVEY*

1. Does your school offer a course or major unit in environmental education?

Yes	E-12, JH-11, HS-11, K-12-1	Total	35
No	E-11, JH- 5, HS- 1	Total	17

If yes, name of course	taught at grade level	no. of schools
E- units at various levels		4
Conservation & Ecology	5	2
art unit	6	1
Biology	6	1
Fresh Water Communities	6	1
Oceanography, Geology	5	1
JH- 10-week Ecology elective unit	-	2
1 - month Ecology in social studies	-	1
Environmental Science	7	1
Ecology	7	1
Interaction of Man & Biosphere	7	2
Science unit	7	1
Environmental Pollution	7	1
Ecology	8	1
Aspects of Ecology	8	1
HS- Biology	10	1
Biology, Ecology unit	-	1
BSCS, green version	-	2
Advanced biology	-	1
Soc. Stud. (Man Builds, Man Destroys)	10	1
Ecology	10,11,12	1
Earth Science	-	1
Physical Science	-	2
Man and His Environment	-	1

If no, is program being developed?

Yes	E-4, JH-1, HS-1	Total	6
No	E-4, JH-4, HS-0	Total	8
No response			3

2. Have your teachers participated in any workshops or curriculum in-service programs on environmental education:

Yes	E- 4, JH- 4, HS-8, K-12-1	Total	17
No	E-20, JH-10, HS-4	Total	34

*Survey was developed and results tabulated by Richard Warner, member of the Environmental Education Committee. E=Elementary; JH=Junior High; HS=High School.

2. (cont'd)

If yes, who sponsored the sessions? Length of time? Any results?

- E- 15 weeks in-service course
one teacher at UR for one semester
- JH- local course resulted in curriculum change
NSF, 6 weeks
- HS- Brockport SUNY, 1970, 2 days: poor, need more time, more dynamic speakers
UR, 3 days, poor, need different approach
NYS Education Dept.
NSF
Cornell
ESSEC at Fairport, Mon. nights, 6 weeks, need for more HS material
Roth Jr. High, 1 day, good
State science conference

3. Are ample *current* resources and materials provided for individual classes for discussion and motivation on environmental matters?

Yes	E- 6, JH- 6, HS- 6	Total	18
No	E-20, JH- 8, HS- 3, K-12-1	Total	32

If yes, what specific sources are most helpful?

- E- County Conservation (2), garden clubs (2), Scholastic school materials (2), Community Environment, computer-based Resource Guide - Ecology, ESS, SCIS, Health & Growth text for 6th grade, magazines, pamphlets, NYS Ed Dept
- JH- Filmstrips (3), test kits, films (2), records, printed materials in IMC, environmental information center being developed in school, Millipore Equipment, video tapes, NYS Environment, library learning center, Allen's Creek
- HS- EnviroNews, Overview, Environmental Action Bulletin, Organic Gardening, reprints, filmstrips, 16mm films, NYS Conservationist, National Wildlife

4. Which of the following sources of information *best* acquaint students with the status of your local environment? (Check one or more.)

TV	E-14, JH- 7, HS-5, K-12-1	Total	27
Films	E-12, JH- 6, HS-9, K-12-1	Total	28
Speakers	E- 9, JH- 2, HS-3, K-12-1	Total	15
Field trips	E-19, JH- 9, HS-9	Total	37
Discussions	E-21, JH- 4, HS-6, K-12-1	Total	32
Reading	E-10, JH- 5, HS-8, K-12-1	Total	24

Other Own experience, ESS, SCIS, science units, perception labs

5. What has been the most successful project carried out by students in your school (by a class, a student organization, or an individual)?

- E- composting (2), collecting paper (3), overnight camping (2), Environment Day (3), planting with garden club, field trips (2), Bay Day, beach clean-up, collecting bottles-papers-cans, tree planting (4), groundskeeping (5), making posters (2), writing essays, pollution unit
- JH- clean-up (4), environment club, petition to Board of Education to end burning of paper and cafeteria refuse, posters, science club, recycling collection,

5. JH (contd.)
 beautification of school grounds
 HS anti-litter campaign, chemical analysis of commercial gasoline, bird feeders, ecology club (4), recycling paper (2), Bay Day, Walk for Water, survey of litter, poster campaign

6. Have you heard of the Monroe County Environmental Education Committee?

Yes	E-10, JH- 3, HS-8	Total 21
No	E-14, JH-11, HS-4, K-12-1	Total 30

Have you heard of the Rochester Committee for Scientific Information?

Yes	E- 3, JH-8, HS-8	Total 19
No	E-22, JH-7, HS-4, K-12-1	Total 34

Which of their services have you used, if any?

Parent working with groups; teacher-made lessons examined; Mrs. Weir as visiting speaker; consultants and equipment from RCSI; mailing list materials; Delta Lab; list of books in Wallace Memorial Library; publications