

Ecology Is Alive and Well in Hinton!

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You're a biology teacher in a small rural school in southern West Virginia with less than 1,000 students in grades 7-12. You have a yearly budget of \$28 for supplies and 120 receptive and highly motivated sophomore biology students to spend it on. The students from your two previous years of teaching sophomore biology are begging for more work in the life sciences and the principal of the school is reluctant to add more classes because the school has always had only one year of biology and it's too much trouble to change. You want to open up your classroom more and provide more outside experiences and the principal wants less noise and more discipline. This was the situation my students and I found ourselves in and this is how we are dealing with it.

All organisms seem to share three alternatives when faced with an unendurable situation: they can perish, migrate, or adapt. My students and I are too young to die and we love the southern West Virginia mountains too much to migrate, so we found a viable adaptation—we organized an ecology club.

We started our club in 1972 with a membership of 35 that has grown to over 200. We have won seven state conservation awards, a Garden Club "Best of Show" award, and the Ecology Council of America's award for the last two years for the "top environmental project in the State of West Virginia." We have been featured in *Senior Scholastic Magazine* and *ECO-AMERICA News*, and we have received a great deal of state and local coverage for our projects. We have received honors, awards, and commendations from the President of the United States, the governor of West Virginia, and one of our U.S. senators. Four of our members have participated in the biology summer honors program at West Virginia University, one in

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the summer ecology honors program at Emory and Henry College in Virginia, and two in the Florida ecology honors program at the University of Iowa. In addition to those seven fortunate young people, ten students have won camperships to the West Virginia Conservation Leadership Camp, two were accepted to work at the National Youth Conservation Training Camp at Camp Wood near Lewisburg, W.Va., and eleven were chosen to work on the State Conservation Program at Pipestem and Bluestone State Parks. I am convinced that what we have done at Hinton High School can be done anywhere at any grade level.

The idea started with the expressed desire by some junior and senior students for more work in the life sciences. They were dissatisfied by the lack of additional biology courses to substitute for study hall or other courses that they felt they did not need or want. If the school would not offer junior and senior level biology classes, would it be acceptable to form a club that could provide added experiences in biology?

A favorable response from the principal led to an organizational meeting of the Hinton High School Ecology Club. The 35 students who showed up elected officers and voted to assess themselves dues of one dollar per year. Then, with the business part of the meeting out of the way, the fledgling members looked at each other and asked, "Now what?"

As the sponsoring faculty member, I looked outward to Concord College and to a successful high school conservation club in a nearby city for advice and guidance on what the club might do. My search for guidance quickly led me to believe that whatever the club did must come from the club members themselves and be tailored to their needs and the resources and needs of the community. We decided to do a county-wide land use survey. The results were not very exciting, since they only verified the fact that there were no strip mines or polluting industries in our county. What we did have was a breathtaking scenic wilderness where wildlife roams the forested mountains and a large variety of fish swim the magnificently wild New, Bluestone, and Greenbrier Rivers. It appeared to be an area without ecological problems.

In the meantime, our membership was steadily growing. It was like having 56 Smokey-the-Bears and no forest fire to warn people about or to put out. Since we had no ecological dragons to joust, we decided to enter a float in the homecoming parade. We would incorporate an ecological theme into the normal pledges of confidence in our football heroes! The result was a "tiger," attired in the upcoming opponents' colors receiving a bath, and another similarly dressed "tiger" being swept into a trash can. The caption read "Clean Up Shady Springs." Word spread that the new ecology club planned to do something different with their float and the night we built it, 12 new members

showed up. The club members had great fun building the float, and deep in that enjoyment I saw something develop that evening that has been the key to the success of the group. The class distinction that usually exists between seniors, juniors, and sophomores melted away and the group worked cooperatively toward a common goal. Students were there who had never before participated in any school activities.

It was with tremendous pride and enthusiasm that the Ecology Club's first project was presented to the people of Hinton. But trouble was soon to come. It seems that there were two temporary settlements of the "flower children" in the area, and the residents of both came to town to see the parade. Ecology was something they readily identified with and soon they were all marching behind the float offering obvious vocal support for the theme. No greater disaster could have befallen the fledgling group. "Hippies" are *not* well thought of in Summers County, and on that fateful Friday ecology was added to the list of Satan's devices. And I knew we were in real trouble when our principal cast a long and jaundiced look at us.

Sensing that the community might not be in the mood to accept an ecology club at the high school after the parade episode, the club bought space in the local newspaper to explain that the overall objective of the organization was to watch over and perpetuate the beauty of the area for future generations. An invitation to inquire about the nature of the club and its more specific objectives were also included. There was an ominous silence in the community.

The club was at a critical point in its embryonic development, because community disapproval or indifference could carry over to the students and cause their enthusiasm to wither. As I searched for something significant for them to do, I engaged the club members in a couple of minor projects.

I got in touch with Robert Anderson, the environmental education specialist at West Virginia University and invited him to meet with the group. He accepted the invitation and gave an excellent presentation on how a group of concerned citizens fought to save a river in northern West Virginia and won the fight. Anderson's talk had a very positive effect on the club members since it let them know that ecology can be a winner. Enthusiasm was on the upswing.

Shortly after Anderson's talk, I learned from the local chapter president of the Isaac Walton League that it was engaged in a project to add a number of West Virginia streams to the state's existing Clean Streams Preservation Act. Our own Greenbrier River and Indian Mills Creek were two of the streams. At the next meeting the League president addressed the group on how to write letters to legislators and how to draft a petition. For students who had always been taught that children were to be "seen and not heard," this was a whole new experience. Nonetheless, they vigorously engaged themselves in this new project. Letters and signed petitions were sent to state senators, members of the state house of delegates, and to the governor. Within two weeks, the club received replies and pledges of support from a senator, a delegate, and one

from the governor commending the group on its interest in this very important issue. Two months later, legislation was enacted to preserve and protect the beautiful Greenbrier River and Indian Mills Creek. The students were pleased with their first taste of the politics of ecology.

The success of the letter writing project was still fresh when the club learned that the U.S. Department of Agriculture Soil Conservation Office was having difficulty finding manpower to plant trees and grass on an ecologically devastated area caused by the construction of a new tunnel by the C & O Railroad. The railroad company had turned a hillside into a "shale barren," and had made no attempt to reclaim it. It was causing a serious siltation problem in our Greenbrier. There were also two other badly eroded areas near Pipestem State Park which needed planting.

The club had another project! The Isaac Walton League provided the trees, the Department of Agriculture Soil Conservation provided grass seed and instructions in soil sampling and planting, and the club provided the manpower. Four weeks of afterschool and weekend work in snow and rain completed all three plantings.

The local newspaper carried the story with pictures on page three. On page one was an article reporting that the Hinton City Council had voted to remove the beautiful old trees around the downtown area to provide more parking area. The club members still had blisters on their hands from planting 3,300 trees and were adamant in their determination to halt the destruction of the trees and grassy areas. The students were convinced that, although parking was indeed a problem, there must be a more suitable solution. A committee of 5 representing the club was appointed, and I went with the committee to the Hinton *Daily News* office to publicly state opposition to the City Council's plan and to request that alternatives be considered. The following day we were in the headlines again . . . this time on page one.

This was the first time the students had ever been involved in local politics and their stand was met by mixed reactions from the various segments of the community. The first reaction came from our principal, who was unhappy, to say the least. He felt the club was sticking its nose where it did not belong, and thereby bringing criticism on the school and community. I was reminded that I was not a native of Summers County and did not understand the attitudes of the people down here. According to his prediction of gloom, the righteous indignation of the entire community would come down on us. I translated this to mean that he had had a phone call from a council member. I was further reminded that my contract came up for tenure consideration at the next Board of Education meeting and was ordered to rescind the statement that appeared in the previous night's paper and keep my kids in line . . . or else! I considered his "sage" advice, smiled sweetly, said *NO* in my firmest tones, left his office, and asked the officers of the club and the committee of 5 if they would meet with me.

The officers and committee members volunteered to

back off to save my job when they learned of the repercussions. But I could not justify sacrificing the value lesson for a job. The destruction of those trees was a legitimate concern of an ecology club. The right to oppose actions of an elected government body by peaceful means is the right of every citizen. I honestly believe it was the first time most of the students ever thought of themselves as citizens with rights. The basic rights of a free citizenry to express themselves through the news media and to petition were in jeopardy, and we could not quit now—job or no job!

By the end of the week the support for the club's stand was overwhelming. The club members and I received phone calls and letters complimenting the group on its stand. The newspaper office was also getting a large volume of mail in support of the club's position . . . and printing it.

Encouraged by increasing support, the officers called a special meeting of the club to discuss the circulation of petitions for a presentation at the next City Council meeting. The club membership was about 64, but 97 students showed up for the meeting. Some of the more dramatic suggestions, such as chaining themselves to the doomed trees and picketing the council members' homes, were discouraged and the members were instructed to *politely* solicit names on the carefully worded petitions. Within two weeks nearly 500 people had signed the "Petitions To Reconsider The Destruction of the Trees."

The committee representing the club submitted the petitions at the next Council Meeting and sat back to view the effect of their handiwork. It was moved by a council member that the petitions be accepted, but the mayor and other council members appeared oblivious to the motion and went on to other business. The motion died for the lack of a second. The kids were crushed and stunned. They had just experienced their first taste of cold political reality. Their disappointment slowly turned to indignation at the shabby treatment that their weeks of hard work had received.

The treatment received at the hands of City Council prompted the club members to conclude that the best remedy for high-handed politicians was to "throw the rascals out." If they could help elect a new city council and a mayor more sympathetic to their stand, perhaps the trees could be saved. Unfortunately, the election was still a month away, and it would take much less time than that to cut the trees down. The club explored the possibility of an injunction to halt the felling of the trees. However, they found that no legal basis existed for it. The only choice was to concentrate on the upcoming election.

All candidates running for Council were invited to address the club or to publicly state their position on the "tree issue." The candidates who supported preservation of the trees said so. Silence on the part of those who did not was taken to mean that they favored cutting the trees. The club members worked with a dedicated passion for those who favored preservation of the trees. The students learned a very important lesson in the "politics of ecology" on the project, because there is no doubt that their efforts were signif-

icant in electing a new city council and mayor. The first action by the new council was to rescind the old council's order to cut the trees, and they have since found a less expensive and more efficient alternative solution to the parking problem. This was a satisfying victory for the club with which to end the school year.

When school opened in the fall, I found the officers of the club and 157 members enthusiastically awaiting new challenges. The club activities of the previous year had been invaluable in stimulating the students, and to do more of the same would certainly add to the existing enthusiasm. My objective for the year, however, was to capitalize on the high level of student interest to move into a more direct instructional mode. With this in mind I suggested two new club activities—a clean streams project and a regular lunch time get together. The club considered the proposals and then endorsed them for the year.

In my own mind, the clean streams project translated into Saturday biology field trips. So, armed with the conviction that the clean streams project was worthwhile for the club, we began our Saturday trips to the Greenbrier River. We were loaded with all manner of collection paraphernalia, field guides, and, of course, plastic litter bags.

Student participation in the field trips ranged from 10 to 20, and I found it interesting that the mix of individuals varied from one trip to the next. Among the students who participated, I frequently found one or more of the school's "discipline problems." At no time were these people a problem on the field trips—to the contrary, they seemed to be among the most active participants.

The field trips also made it clear to me that most of our students have an insatiable desire to know the name of this plant or that animal. At first I was a bit concerned that I had not been trained as a field biologist, and I was forced to plead ignorance to most of the identification questions. The combination of my ignorance and the students' curiosity about the names of things turned out to be a fortuitous combination. They wanted to know and I had absolutely no way of giving them the "right" answer. The result was the collection of all kinds of organisms to be carried back to school for later identification. The large number of organisms, along with the water and soil samples collected during our trips, made it impossible to complete the identifications and analyses during class time. Consequently much of this work was shifted to our lunch time meetings.

All of the students who constituted the "lunch bunch" were not involved in the identification and analysis work. Many of the club members and officers engaged themselves in planning new projects and evaluating old ones. Other students involved themselves in experiments and projects they had designed. The noon meeting became a very exciting part of the day for the students, and it was not unusual that every available space was being utilized for some activity.

I am convinced that the ecology club itself, the field trips, and the lunch time meetings have led to fantastic improvements in my classes, and the excitement

over the life sciences has never been greater. Fewer students fail biology, and more are asking for additional experiences in biology. The classroom has become more open, the self-directed laboratories much more successful, and the discussions more inclusive. The renewed interest in learning and the increase in pride and self-awareness of the students has been a most satisfying experience for me.

As much as I would like to believe that a love for what they are doing is the primary motivation (and for some it is), I feel sure that the awards they receive at the school awards assembly are great incentives. We have developed a point system based on the participation of members in the various projects. By earning prescribed numbers of points, club members are eligible for various "in-house" awards ranging from an ecology pin to the school letter. Points earned are the basis for selection of club representatives at various outside functions, and they also determine the winners of awards made available by outside agencies and organizations.

At the national level we have gone to the Environmental Protection Agency for their "Certificate of Merit" and "Award of Excellence." These can be obtained free by writing to The President's Environmental Awards Program, Environmental Protection Agency, 401 Main St., S.W., Washington, D.C. 20460. Incidentally, these are the most sought-after awards.

The Ecology Council of America is another national level organization that has become one of the strongest supporters of youth environmental programs. They can be of great assistance in providing ideas and materials for use in developing a club. Membership is free to any school group of grades 9-12. For details write to ECO-America, Room 220, 99 Park Ave., New York, N.Y. 10016.

Do not overlook state agencies. In West Virginia, the Department of Natural Resources provides an active youth program called "The Junior Conservation Club" which owes a great deal of its success to the dynamic leadership of Maxine Scarbro. She has operated the program for 12 years, and was recently honored by Keep America Beautiful, Inc., for her outstanding dedication. For details about the program, write to Mrs. Scarbro, Department of Natural Resources, Charleston, W.Va. 25305.

Local civic organizations and conservation-oriented clubs can be of invaluable assistance. Indeed, many of our projects have been done in conjunction with them. In addition to projecting an atmosphere of acceptance to the students for their work, these local groups also make awards available for meritorious work.

When I filter through the conditions in the environment before and during the development of the club here at Hinton, I settle on four that were extremely important to the success of the effort. These can be summarized as (i) the existence of a void in the perceived needs of and by the students; (ii) the presence of some resistance to fill that void; (iii) a persuadable community and one that publicly recognizes positive contributions; and (iv) a hot issue or two. I am convinced that had one or more of these conditions

been absent, the club would not have developed into the strong and viable organization it is today.

I have learned that being adviser to such a group is not without sacrifices. It has cost me money and enormous chunks of time. My house is not exactly spotless, and the chickens have become accustomed to being fed every other day. There have been times when I have "cussed" the cows and kicked the couch. But, if you asked me, "Would you do it again?" my answer would be "Indeed I would."

If you want the time of your life as a teacher, try an ecology club.

NSF Guide to Programs, 1975

The 1975 edition of *Guide to Programs* is now available for \$1.70 from the Central Processing Section, National Science Foundation, Washington, D.C. 20402 (stock number 3800-00195). Colleges, universities, and individuals are free to reproduce all or part of the *Guide* to meet their own needs, and the new edition includes an updated NSF organization chart and a statement on the criteria for the selection of research projects.

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