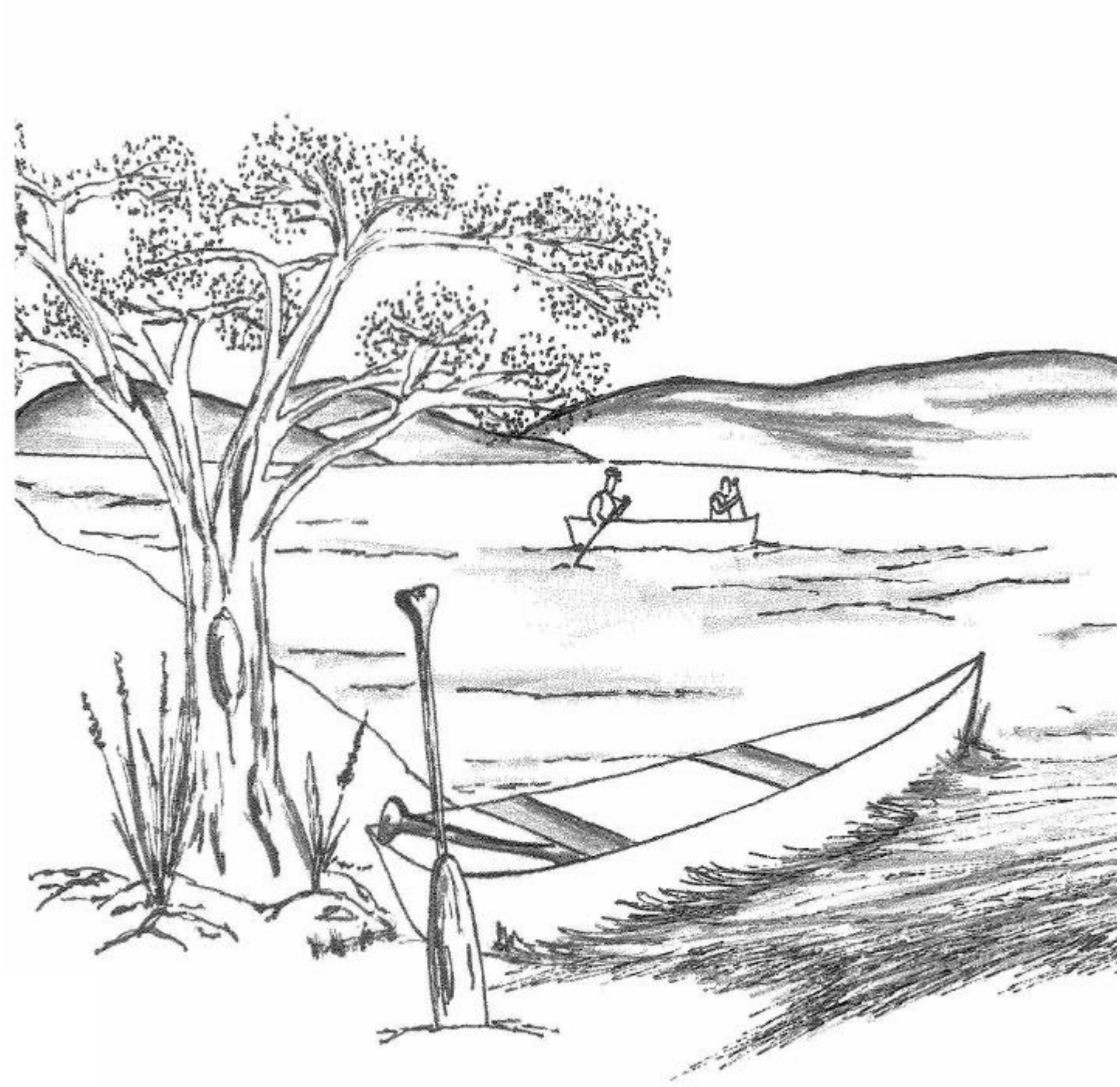
Pathways

THE ONTARIO JOURNAL OF OUTDOOR EDUCATION

Autumn 2002, 14 (4)



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Pathways

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CONTRIBUTIONS WELCOME

Pathways is always looking for contributions. If you are interested in making a submission, of either a written or illustrative nature, we would be happy to hear from you. For a copy of our submission guidelines, please contact Randee Holmes, Managing Editor.

If you are interested in being a guest editor of an issue of *Pathways*, please request a copy of our guidelines for guest editors from Randee Holmes, Managing Editor.

If you have any questions regarding *Pathways*, please direct them to either of the *Pathways* Editorial Board Co-Chairs, Bob Henderson or Connie Russell. If you'd like more information about COEO and joining the organization, please refer to the inside back cover of this issue or contact a Board of Directors' member.

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Features

Columns

Pathways is published five times a year for the Council of Outdoor Educators of Ontario (COEO) and distributed to COEO members. Membership fees include a subscription to *Pathways*, as well as admittance to workshops, courses and conferences. A membership application form is included on the inside back cover of this issue of *Pathways*.

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Pathways is printed on recycled paper.

Editors' Log Book

This issue highlights a persistent, successful and exciting niche for outdoor education in Ontario. While many outdoor centres are under threat of or already being closed, integrated programs continue to exist, providing powerful learning experiences for high school students. They do so mostly because of the creativity, determination and skills of those who teach them, coupled with a combination of either active support or benign neglect by the school administrators in the program's home school. Through our experiences as both teachers and researchers, we have witnessed firsthand the many possibilities for student learning and growth in integrated programs.

The wide variety of Ontario programs has evolved out of a combination of the strengths and interests of teachers, opportunities and interests existing in the local community, and needs and interests of students. These programs usually incorporate four courses; a few offer five. Students generally spend the entire day with the same classmates and one or two teachers. Some programs are based out of a single classroom or portable, moving out onto the land for day-trips and extended expeditions; others are based at outdoor centres or camps, creating a mini-school campus away from the traditional school walls. Subject boundaries blur as students draw on disciplines as diverse as science, English, physical education, art and geography to complete complex, real-life projects, such as conducting environmental action campaigns, publishing a community-based magazine, or teaching younger students.

In 1996, approximately 30 such programs existed in Ontario. With the shifts and challenges of the new curriculum, and the retirement of several past program teachers, this number appears to have dropped. The publication of the Ministry of Education's Interdisciplinary Studies document, however, has generated new interest and new opportunities.

Building on the work of Bob Henderson and his students, Connie Russell and Aynsley Klassen have been working to update the catalogue of integrated programs. Thus far, 17 programs have completed surveys of their programs; this tells us for certain that they are still in existence! They are as follows:

- two Bronte Creek Projects in the Halton Board
- Outdoor Environmental Education Package at A.Y. Jackson S.S.
- Geostudies at Barrie North Collegiate
- Environmental Studies Project at Carleton Place High School
- Community Environmental Leadership Program at Centennial High School
- program at Centennial Secondary School in Belleville
- program at Dunville Secondary School
- Environmental Studies Program at Grey Highlands Secondary School
- Natural Bridges in the Hastings and Prince Edward Board
- Outdoor Education program at the Kenjgewin Teg Educational Institute
- Geoventure at Moira Secondary School
- Northern Outdoor Studies at North Hastings High School
- Windsong at Opeongo High School
- Integrated Semester Program run by Outward Bound in Burk's Falls
- Community Environmental Leadership Program at Paris District High School
- Beyond the Walls at Resurrection Catholic Secondary School
- TERRA at Timiskaming Secondary School

We believe that there a few other programs in existence whose teachers have not yet filled out the survey, and we suspect there are even more out there of which we are, as of yet, unaware. If you know of a program currently in existence that is not on this list, please contact Connie (email: constance.russell@lakeheadu.ca, telephone: 807-343-8047) as soon as possible with the name of the program, school and Board. Your assistance will be greatly appreciated!

This issue of *Pathways* is designed for those who want to learn more about integrated programs. With a mix of voices of teachers, students and researchers, updates, activities and resources, we hope that you will find it useful and perhaps even inspiring!

Thanks to all the contributors.

M.J. Barrett and Connie Russell

Outlook

It is difficult to believe that three years have passed since I first took on the role of President of COEO.

I have shown my commitment to the organization by having participated in every possible executive position on the Board of Directors as well as in numerous conference committees. A volunteer organization such as COEO thrives on the support of its members, both financially by way of membership fees and through active committee involvement.

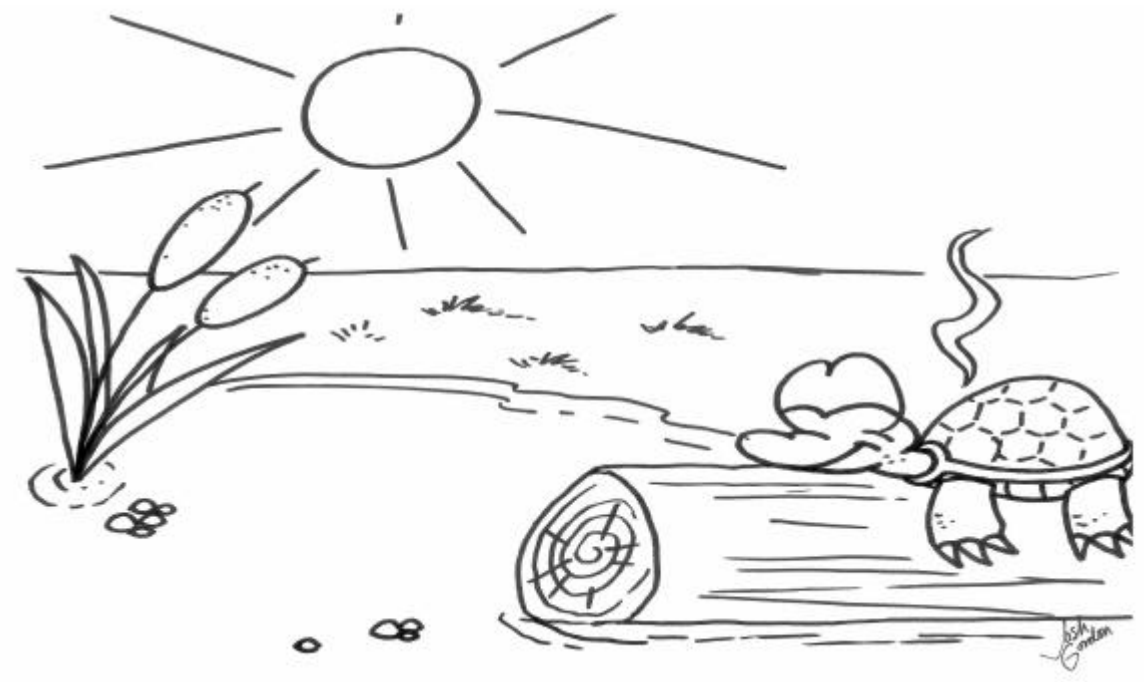
Over the past three years COEO members have

- seen the organization move to a more financially stable position
- enjoyed very successful fall conferences
- witnessed wonderful changes in the presentation of our journal, *Pathways*
- seen the creation of the new COEO Web site, www.coeo.org
- been involved in the presentation and leadership of many workshops
- actively supported outdoor/environmental education through lobbying
- continued conversations with like-minded organizations
- voiced support for marketing of COEO through brochures and advertising

Thank you to all who have worked with COEO get us to where we are at this time. It is my hope to see COEO continue to move forward, meeting the needs of its members and supporting them from the "cutting edge."

Best wishes for continued success and growth,

Mary Gyemi-Schulze
President — COEO



Art for this issue was provided by integrated program teacher John Burton (photographs on pages 6, 10, 12, 14, 15, 23 and 27), McMaster University student Gopika Nagul (cover and page 30), Josh Gordon (pages 3, 13, 18, 24, 26, 32 and 36), Martha Scythes (pages 21 and 35) and Helena Hocevar (page 28).

The Persistence of a Good Idea

by Bert Horwood

I'm impressed with the stubborn persistence of a good idea. The good idea in this case is integrated curriculum, but it has other names and guises. Learning that counts is part of a whole; a person's mind, heart and body are all engaged.

This is the same as Ojibway Elder Art Solomon's assertion that true education is learning your true identity and your true path. There are different ways to find out who you are and what your path in life is, but any way must provide some sort of integration of experiences into a unity that is the person in his or her community.

I mention Art Solomon's statement because, in tracing the beginnings of integrated curriculum in Ontario schools to the work of Paul Tamblyn and his colleagues at Acton, it is important to acknowledge that the idea is much older, and found in both American indigenous knowledge and European tradition.

Curriculum integration persists partly as a reaction against the isolation of academic disciplines. Disciplines are useful as means of organizing knowledge and methods of inquiry. They provide a necessary focus of effort, and they are a valuable part of schooling. But taken alone, they do little to help young persons learn identity and purpose.

And it is against the dominance of the disciplines that curriculum integration persists. Yet in documents supporting integrated curriculum, the Ontario Ministry of Education subtly asserts the hegemony of the disciplines by calling such courses "interdisciplinary." The relationship to the disciplines continues to be the defining element for the ministry. In my view, this undervalues the benefit of seeing things whole.

The Ontario experience with curriculum integration over the last (roughly) 30 years illustrates the persistence I'm talking about. Outdoor experiences were a defining characteristic at first, and continue to be strong. But integration can and does happen with little or no outdoor work, at least as outdoor educators know it. For example, there are integrated courses in building trades where the outdoor site is a building lot. And there are integrated courses that emphasize the arts and are located mostly in theatres and studios. The persistence of a good idea is helped by its adaptability and evolutionary potential.

These qualities are evident in other ways. Teachers are very determined to carry on with their programs despite administrative and ministerial obstruction. They find loopholes and cracks in the system that allow space for their programs to thrive. This ingenuity would be in vain if there were not students and parents who know that the programs accomplish what they most want done.

There are also teachers who, for good reasons, are unable to operate integrated programs, but value the good idea. It's quite amazing to see what an individual high school teacher can do within a single course, within a discipline, to blur the boundaries and to make the experiences of the course whole.

In other jurisdictions, the good idea has taken altogether different forms. A prime example is Expeditionary Learning in use in US schools.

Along with the persistence of the good idea, there is the equally stubborn persistence of problems. The evaluation dilemma continues to plague instructors. The dilemma is whether to evaluate student learning to fit discipline-based expectations, or to evaluate on the basis of integration. Another ongoing problem is convincing skeptics of the value of integration by gathering data. Both these problems demand stronger research, especially longitudinal inquiries.

Whatever is the future for holistic education for youth, I have confidence that we are among the guardians of a good idea that, even if it fades for a while, will resurface and persist, like fertile seed.

Bert Horwood is a COEO member and a keen observer of integrated programs.

Interdisciplinary Studies Curriculum Update

by MJ Barrett

The Ministry of Education has developed curriculum materials and workshops to support the newly released Interdisciplinary Studies Curriculum document. Some regional workshops have already taken place. The ministry is working on a "train-the-trainer" model; contact the Secondary School Curriculum liaison within your school board for more information. In addition, the Ontario Librarians' Association Conference will host two sessions at its January conference in Toronto, and may also be conducting full-day workshops on October 26 and June 20.

Sample course outlines and culminating units representing different ways to structure interdisciplinary programs have also been developed. Of particular interest to outdoor and environmental educators will be a model 5-credit package incorporating Interdisciplinary Studies (Grade 11, Open), Environment and Resource Management (Grade 12, University/College), Healthy Active Living Education (Grade 12 Open), English (Grade 11, University), and Field Ecology from a Local Perspective (Science) (Grade 11, University/College; a locally designed course that has already received ministry approval).

I was involved in the design of both the second half of the ministry workshop and the 5-credit program outline described above. The task was both a privilege and challenge. The greatest difficulty was adhering to the ministry's need for coherent units that meet curricular expectations while remaining true to the reality that, in a fully integrated interdisciplinary package, learning refuses to move forward in a strictly linear fashion or to be bound by static curricular units. The resulting package outline required merging a vision of holistic curricular integration with specific expectations from the five different courses, then identifying general areas of focus into which curricular expectations could be clustered.

A couple of days and a room full of coloured paper resulted in 13 units and 7 unifying threads that weave their way throughout this package. The threads include communication, collaboration and conflict resolution, research and analysis, critical reflection, creative expression, active living, and environmental responsibility. Each thread is of equal importance to the successful integration of the five initial disciplines and overall cohesion of course components. The units include Paradigms in Life and Literature; Communication, Collaboration and Conflict Resolution; Active Living; Ecological Footprint; Media Construction, Deconstruction and the Environment; Processes and Methods of Research and Action; Stories of and on the Land; Healthy Relationships; Soil; Water; Global Connections; Outdoor Living; and Community Action Project (Culminating Activity).

It is my hope that this sample program may provide ideas and a starting place, both for teachers who wish to develop an integrated program, and for those who wish to revise their current one to incorporate the Interdisciplinary Studies document. Generally, if you wish to run a program that includes a significant degree of research drawing on different disciplines, it is worth considering using the Interdisciplinary Studies Document. If the program is primarily based on outdoor adventure activities, the document may not be applicable. At the time of print, the program outline had not yet made its way through the ministry approval process, so is not yet available. For more information, contact Tim Guntley at the Ministry of Education or Liz Kerr at the Kawartha Pine Ridge District School Board.

Other developments: Full course profiles are also in the process of being written for the following model Interdisciplinary Packages: Introduction to Information Studies (1 Credit, Grade 11 Open), Archaeological Studies (1 Credit, Grade 12 University), and Science and the Community (3 Credits, Grade 12 Open). They are expected to be completed in late 2002 or early 2003. The Ontario Librarians' Association has been given responsibility to develop a Web site to support dialogue and resources for the Interdisciplinary Studies Document, though no timeline has yet been established. While things are moving, the movement is slow.

MJ Barrett was recently contracted by the Ministry of Education to help develop support materials for the Interdisciplinary Studies Document.

Editors' Note: We are delighted to reprint this article that has not been readily available to integrated program teachers or researchers. It originally appeared in Coalition for the Outdoors, Second Research Symposium Proceedings, January 14–16, 1994. Bradford Woods, Indiana. *Reprinted with permission.*

The Influence of Outdoor Education on Curriculum Integration: A Case Study

by Bert Horwood

> *Getting out there and doing different things. I think it's the best way to learn. No question about it. You can't learn from a book like that. . . . [It's] the most valuable learning, I'm sure. (Student, U. P.)*

Background

Introduction: Outdoor education is a marginal component of education in many mainstream schools. Teaching (and learning) outdoors is confined to occasional field trips in natural sciences or for recreational purposes. Inside the schools, teachers and administrators struggle with the curriculum that is fragmented into isolated subjects, and they make numerous attempts to combine them into a unified whole. Such attempts are generally called curriculum integration in the curriculum studies literature (Case, 1991; Jacobs, 1989). Recent successful attempts at curriculum integration in one high school included large blocks of outdoor education. This paper describes the influence that extended outdoor education had on the process of integration in that particular program.

The paper makes a series of related assumptions. First, curriculum integration is a desirable goal. As Case (1991) put it, who would want learning to be fragmented? Second, curriculum integration is an elusive goal. This assumption is evidenced by the numerous attempts in schools to achieve it and by the short life of most integration efforts. At the same time, outdoor educators are being challenged to justify their work within school systems (Brookes, 1993; Raffan, 1993). So far, there is neither compelling evidence nor convincing argument that outdoor education provides something of value that cannot be obtained by conventional schooling. Research is needed to discover such evidence and arguments, if they exist. This investigation seeks to reveal a part of the unique contribution that outdoor education can make within the standard curriculum and is grounded in the conviction that it will be useful to both the field of outdoor education to study the influence of outdoor components within a successfully integrated program.

A third assumption is that ethnographic methods have power to shed light on factors that influence student learning. The methods used in this research provide data that are treated as texts. The texts are a form of lived experience that is excavated for patterns from which it is possible

to construct a description of relationships not previously described. The fourth assumption is that what students experience, and the meanings they build as the result of the curriculum are the prime time considerations of education. Based on these assumptions, I examined the reports and actions of students as they responded to the demands of the outdoor education components within an integrated curriculum. The account that follows is grounded on a students'-eye-view of their school program.

Context: I was invited to conduct an illuminative evaluation (Hamilton et. al., 1977) of an integrated curriculum package being offered for the first time in an Ontario high school. The package gave senior credits in Environmental Science, English, Physical Education and Life Skills. There was one teacher working with one class (7 females and 6 males) all day, every day for one semester. The framework for the evaluation was essentially ethnographic and constructivist.

The first question to be addressed was, "What were the students' experiences of integration?" During mid-point interviews, students showed that putting school subjects together in time and space did not produce integration. Snowshoeing by map and compass to a wilderness lake to perform environmental measurements did nothing, in their minds, to integrate Physical Education and Environmental Science. But by the end of the program, students revealed a sense of connectedness and unity in their work. As detailed in the published reports (Horwood, 1993, 1994), the data revealed six factors in the program that transcended the school subjects and did lead to integration. The integrating factors were experiential learning, whole process, authenticity, responsibility, challenge and community.

Experiential learning means that instruction placed prime value on students having early, first-hand experience with every aspect of the program. In addition, the students were required to interpret their experiences and develop their own understandings of them. The power of experiential learning as an integrating factor was revealed at the end of the program by students, who commonly harked back to events from the first week of the semester.

Whole process refers to the experience of a reasonable complete sequence of events. For example, students sponsored a benefit concert by a folk-singer to raise funds. They had to prepare advertising and distribute it. They had to book and prepare the hall, sell tickets and get stock for the refreshment booth. Afterwards there were clean-up, accounting and thank-you letters to be written. Whole process contributed to integration because the sequence of work cut across any arbitrary subject matter lines. *Authenticity*, the experience that work in the program made a real difference in the real world, had a similar integrating effect. Students made speeches to civic groups and worked in research laboratories. They felt that their school work mattered in the world outside school, where most people do not make a distinction between disciplines they use to complete a task.

Students reported that they had more *responsibility* to their teacher than in regular school. In addition, they keenly felt a new axis of responsibility to their classmates. In a similar way, the *challenges* in the program were much greater than usual. The demands of increased responsibility and increased challenge contributed to integration because they put pressure on the students to use all of their knowledge without concern to its relation to subject boundaries. A strong feeling of *community* developed in the class and made it possible for individual learning to become common property. As individuals began to appreciate the unique perspectives and strengths of classmates, personal boundaries began to blur, as did the boundaries between school subjects.

Having learned that these six factors were central in students' experiences of curriculum integration, a second question was considered: "What was the influence of outdoor education in creating and sustaining those integrating factors?" I will show how the students' accounts of outdoor activities revealed the power of outdoor education to enhance curriculum integration by influencing the integrating factors previously identified.

There were three sets of interviews with individual students: one before the semester-long project began, another at mid-point, and a final

interview several months after it ended. Parents of students were also interviewed three times, and three teachers in the host school who were not connected with the program were interviewed twice. The researcher and an assistant acted as field staff members and made field notes as participant observers. Students submitted their journals for analysis. Video-taped evaluative statements by students in both the first and second years of the program were included as further data. The teacher's plan book completed the data set. All procedures were subject to ethical review.

The recorded interviews, statements, and field notes were transcribed and analyzed independently by two people looking for patterns and critical incidents relevant to the research questions. Preliminary findings from student data were cross-checked and confirmed before being tested for consistency and compatibility against data from sources other than students. Finally, findings were validated by the teacher of the program.

Results of this study are illustrated by quotations from students' videotaped evaluative statements made at the end of the semester. These quotations are icons for the complex of other evidence in interview transcripts and field notes, which are too voluminous to report in full. Students' voices are the only ones given, because students' experiences, as they articulate them, are the central part of this research. The quotations selected are like the pottery shards chosen by an archeologist to illustrate the evidence for the inferences being drawn about the culture being studied. Each student quoted is identified by a pair of initials coded to preserve confidentiality.

Results

Outdoor education events took more than one-third of the school time in the semester. The actual time in outdoor education is hard to calculate precisely, because a normal school day occupies students for about seven hours, including homework, whereas most of the outdoor events engaged the students 24 hours a day, plus preparation time. There were 11 single-day events (no overnight experience) and four extended expeditions: a winter base camp (5 days), backpacking (5 days), and a white water canoe trip (10 days). The outdoor excursions included field work connected with the school subjects being integrated in the package.

It is one thing to put schools subjects together by administrative fiat; it is quite another for students to integrate their learning (Horwood, 1994). There is evidence that students did experience integration:

> *[I]n [this class] everything you learn is connected to you. So, when we wrote our resume, that was piece of you; when we did our [magazine] interview, that's you, your thought processes, all you. So I feel that all the learning was connected. And what will make this learning extra special is that, and what will make it stay with you is that all the triumphs and the memories and the hardships that went along with learning. (S.L.)*

Patterns in the data show that there are three main ways in which the outdoor experiences influenced integration. These are inescapable consequences, personal growth, and the sense of wonder. The single most revealing and concise evidence for these factors comes from student evaluative statements recorded at the end of the course. A few exemplary statements will be given to support each factor.

Inescapable Consequences: In the normal course of school days, students are able to escape or soften the consequences of their actions (or inaction). But in sustained outdoor trips, where the class is engaged 24 hours a day for 5 or 10 continuous days, there is nowhere to hide and no one to intervene. The consequences of good or bad planning, for example, become obvious without evaluative comments from the teacher. Mutual support in the face of an indifferent and implacable environment enriches the sense of community. Isolation from other friends and parents eliminates shields the student might otherwise use to escape consequences.

Three examples of mutual support were often cited by students: team work, packing for trips,

and sleeping in snow shelters. The statement by T.N. also illustrates how several factors may be mentioned within a very few words.

> *If we hadn't worked as a team we wouldn't have got over the wall, we wouldn't have built that bridge . . . when we built snow caves, I figured, "Well, I'm going to freeze." And then my roof collapsed. . . . I would have had to sleep outside, but thank you girls for letting me use your cave to sleep in. (T.N.)*

> *The Highland Hiking trip was . . . a challenge. The big heavy packs on your back. And it was a good trip and we learned . . . packing and stuff like that. And . . . [for] all the trips I packed pretty well. And it was really good to know, "Oh yeah, I didn't forget this." And well, I never really said . . . "I should've done this or could've got along without this." (U.P.)*

> *In order for the group to function properly, you have to put away your dislike of people. And so work with them. (E.P.)*

Personal Growth: The students experienced personal growth during outdoor work as a concomitant of school learning. Kinds of learning that were normally separated happened together in the outdoor settings. The extremely challenging expeditions demanded extension of self-imposed physical, emotional and intellectual limits within a supportive community.

One student described an aspect of this growth as it was inspired by hearing stories told by an old-timer in the community:

> *I know [his stories] affected the way that I work. And now, when I mow the lawn, I stay for another 15 minutes before taking a break. Or I go another hundred metres on the portage, or I whistle a happy tune while standing in the rain. All because his stories inspired me and gave me a neat perspective and attitude towards work. (K.N.)*

Another student, whose remarks were articulate and positive, described the extension of limits she experiences in response to challenges:

> *Just by taking this course, each and every one of us has dared to be different. And I think that's important 'cause that's the way you grow. That's the way that you can expand yourself to the full extent . . . . You also look at challenges in a new way now, I find. [If] there's a challenge in it, you don't look down on it . . . there's not this little voice telling you that, "Uh, I dunno if I can do it." You know? You know you can. You conquer your fears . . . and teamwork, cooperation help. (…I never thought that we'd work so well together.) It's . . . pushing yourself to your limit. You often find that, many times I've said, "Do you have limits? You know, even after 75km of bike riding, do I really . . . is there a limit? Like where is it? Far ahead." You find out that it's way further ahead than you thought it was. (S.L.)*

The same student told how she recognized that she lacked qualities she had previously thought she possessed. This illustrates an aspect of personal growth in which increasingly accurate assessments of one's status result in lower but more realistic expectations. Loss of self-deception is an especially poignant part of personal growth.

> *I realized that I am capable of great physical feats . . . . I also learned that I think I'm more of a . . . wanna-be leader than an actual leader, as I thought I was. I'm more of a wanna-be type leader. But I'm trying. (S.L.)*

Sense of Wonder: Students commonly expressed surprise or amazement at events or people. Their expressions were occasionally poetic and often heartfelt. I call this "the sense of wonder." New experiences in natural settings contributed to the sense of wonder.

Two quotations illustrate wonder-like responses to outdoor events. The silence and darkness of the snow cave and an encounter, shared by almost the entire class, with a Grey Jay (locally called "whiskey jack") are typical. Students claimed that these feelings are unforgettable.

> *Being in a snow dugout at night is an experience in itself, totally quiet and dark, cut off and independent, with nothing to do but sleep, talk and think, or eat. I noticed that it's a great place just to lie and wonder. (K.N.)*

> *What really sticks out in my mind is the whiskey jack. I think many people had it eat right out of their hands. It was great. I couldn't believe it. A bird would just come, land on your arm and eat from your hand. I'm sure I'll always remember it. I just can't imagine forgetting it. (U.P.)*

Two other students commented, with tones of wonder, on their discovery about the powers of classmates. D.C. was not speaking so much about his own physical limitations in hiking and cycling as about his perception that others in the class would be incapable.

> *[I was] sort of shocked, actually, when we did our backpacking or biking [training]. If you were ever to say to me, "We're going to walk 20 kms with 30 pound packs, and you're gonna bike 75kms or so," I really would never, ever, ever believed we could do it. (D.C.)*

> *I've learned that everyone is a poet. (S.L.)*

B.N. combines her aesthetic response to the bush with the dirty pragmatics of water purification. She saw beyond the superficial loveliness to a deeper identification with the degraded state of the land.

> *[You] get a real appreciation for space and for the outdoors. It makes you really think because being in Temagami, it's so beautiful and everything. But then, here we are purifying water and that kind of [thing]. It's like a mask; that beauty is like a mask. We still have to purify water ever since the beginning of that land deteriorating…we'll have to do that. It's just a first step, the water is gone and that may lead to other things. (B.N.)*

Student U.P. made a statement that directly illustrated the powerful influence of the sense of wonder on reinforcing and adding a new personal dimension to his reading for the English requirements of the program.

> *One night there, a few of us were just lying by the lake and we heard some wolves. That was a really neat experience for me, 'cause in my two book reports I read books about wolves. And right from the first one, [I was] really intrigued by them, really interested in them. And then to be able to go out and actually hear them . . . It's a haunting sound. (U.P.)*

Discussion

The inescapable consequences found in outdoor travel situations particularly enhance five of the previously outlined integrating factors: experience, whole process, authenticity, responsibility, and community. Inescapable consequences ensure that experiences have an edge they would lack if the outcomes of the experiences could be evaded. The world of the school is too small to be able to follow the complete process in any enterprise. But when the necessary indoor and outdoor steps are strung together, there is continuity of linked processes and integration is improved. It is the inescapable consequences of the outdoor elements that

bring authenticity to the program. The real world, as students see it, is much less forgiving than the school world. And, of course, responsibility is enhanced when one must live with the results of one's actions or inactions. The students' statements are rich in references to their sense of community. They attribute that community to the absolute need to respect and use each other's talents engendered by the implacable demands of backcountry outdoor activities.

Students recognized their own personal growth in relation to four integrating factors: experience, responsibility, challenge, and community. Personal growth makes experience have personal meaning, as distinct from academic or impersonal meaning. Outdoor education provides the most pointed demands for responsibility, and students know when they rise to that demand. The challenge of apparently impossible outdoor events enables students to probe their perception of limits, both for themselves and others, which includes the artificial limits of subject-specific learning. Personal growth also promotes the sense of community: as individuals change in response to similar stimuli, they grow in awareness and mutual respect, while maintaining their individual paths.

The sense of wonder especially enhances the integrating factors of experience, whole process, authenticity, challenge, and community. The sense of wonder brings emotional validation to processes that are otherwise mostly intellectual. Experiences are put into a context that includes intellectual, emotional, spiritual, and social elements. Students marvel at the cumulative, creative effect of linked steps in complete processes. Apparently insurmountable challenges, experienced in the outdoor components of the program are, when accomplished, manifest in expressions of wonder. A particular clear example of the integrative effect of wonder on authenticity is found in the statement of U.P. on hearing wolves howl. U.P's reading of books on wolves was interesting enough, but the thrill of hearing wild wolves made it real. Students who marvel together, who share the experience of hand-feeding a wild bird, for example, grow in community.

Learning through direct experience is the quintessential factor that integrates curriculum elements. Direct experience is present to the highest degree possible in outdoor education. On this count, therefore, the outdoor curriculum stimulated integration of the whole. A major component of the integrated package was a cultural journalism project. I have not counted this as outdoor education, yet critical parts of it were done outside the school. Most students responded to the direct experience of interviewing local elders, transcribing, editing and producing a magazine in the same ways as they did to the more usual outdoor education elements. The thoughtful and emotional responses of students to these direct experiences were the key to their integrative effects.

The stimulation and examples spread from the outdoor to the indoor work. Raffan (1993) suggests that outdoor education provides personal meaning, as distinct from the public meaning of propositional knowledge taught in schools. Personal meaning is made by students as they respond to both school problems and outdoor living problems with inescapable consequences, personal growth, and a sense of wonder.

Brookes (1993) argues that outdoor education can only be defended if it can be shown to contribute to the social good in deeply unique ways. His proposition is that deep outdoor education must enable students to experience life in some kind of alternative world view. The requirements he gives as examples are providing an alternative to our customary emphasis on time, alternative ways of understanding school life, and new ecologies of ideas. It is not clear that the outdoor education studied here would fully meet Brookes' requirements, but learning to see things holistically certainly provides a distinct alternative to the customary fragmented views of school learning. The freedom from the school timetable in the program studied provided a marked shift from the customary emphasis on time. The use of time to flow with natural cycles in outdoor events and to be responsive to the demands of tasks rather than the demand of clocks enhance conditions such as personal growth and wonder, neither of which happens on schedule. There is no basis in the data to

claim that students experienced anything that could be construed as a new ecology of ideas, and, in this respect, the program does not meet Brookes's criteria. If integrated learning is a desirable goal, then sustained outdoor education provides a unique and critical dimension in enhancing integration.

It is not easy for schools to provide the kind of repeated, long-term outdoor education found in this case. There are four possible barriers: the administrative difficulty of finding adequate blocks of time; the dominance of assessment for grades in most school systems; budget constraints; and lack of teachers competent in both school subjects and outdoor leadership. Long periods of time for outdoor education were found, in this case, by assigning the students' entire course load to one teacher and requiring that teacher to have no other courses to teach. This administrative maneuver is available in any school but is viewed as unusual. Budget constraints need not be a problem where there is parental support for the program (such as providing transportation) and where fund-raising by students is part of the program. Imaginative planning can provide effective programs within available funds. Teacher education can be a problem, depending on the jurisdiction. Wherever teacher education programs combine licensing for schools with outdoor teaching qualifications, there are plenty of competent teachers. But where these training functions are separated, capable personnel may be hard to fine. The necessity of training outdoor leaders as teachers and school teachers as outdoor leaders are obvious if programs like this one are to flourish.

The difficulty of conducting customary evaluations of student work within the structure of an integrated program like the one described is not so easily addressed. It is a truism that the evaluation tail wags the curriculum dog. In any jurisdiction where grades are the only outcome of education that counts, it is nearly impossible to spend significant time in outdoor education. It is not possible to go into this difficulty here, except to identify it as a serious and endemic conflict that cries out for study and resolution. The integrated curriculum project studied in this research, and a few others like it, shows that it is not impossible to live with the dilemma.

The description in this paper springs from a single school's program and the work of a single teacher. There is no guarantee that any other school or teacher would achieve similar results. Yet the results show what is possible. Anzai and Simon (1979), when arguing for the usefulness of a single case, wrote, "One swallow does not make a summer, but it does prove the existence of swallows" (p. 140). They went on to add that careful study of even one swallow will yield much valuable information. There are other integrated curriculum projects with very similar attributes. It is enough that this investigation demonstrates the powerful influence that outdoor education has on curriculum integration and suggests directions and impetus for further work.

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Dispelling the Myths: Student Teachers and Interdisciplinary Programs

by John Burton

Many teachers believe that accepting a student teacher into their classroom from one of Ontario's faculties of education represents additional work during an already busy teaching schedule. With the significant changes that education has experienced over the last several years, one more change in the classroom is more than most are willing to accept. Teachers have heard of a few bad experiences with student teachers so they simply say "no" when an opportunity presents itself to be an Associate Teacher.

Over the last decade or so, there has been an incredible change in the demographics of those entering the teaching profession. Gone are the days when many believed "those that can't, teach"! Today's graduating teachers are often those who have had a previous professional career. This might include nurses, doctors, lawyers, engineers, accountants, university scientists, law enforcement officers, business executives, or social workers. In fact, a sampling of teaching graduates would show most careers in the workforce are represented. In addition, the degrees that many hold when entering teacher's college are no longer the minimum such as a BA or BSc; many of today's graduating teachers already hold post-graduate degrees including an MA, MSc or PhD. There are numerous reasons why today's student teacher has decided to change careers and join the teaching profession. For many, it is the opportunity to work with students and they feel they have the experience that will allow them to make a difference.

No longer do the majority of student teachers "fast track" and go the traditional route of "high school to university to teacher's college to teacher." As a result, today's student teachers will often come into the classroom with a wealth of knowledge that will quickly establish them as a teaching "partner" in the classroom rather than simply "student" teachers. The student teacher of today is a highly motivated, well-educated individual who is willing to contribute to your classroom in a highly effective manner. The majority of teachers who open up their classrooms to today's student teachers are rarely disappointed and many become Associate Teachers year after year. In the following, I will answer common questions I am asked about hosting student teachers in the Environmental Studies Program (ESP) at Grey Highlands Secondary School, Flesherton.

How long you have used student teachers?
Student teachers have been placed with ESP for the past several years. Often, given the demand for and limited number of interdisciplinary program placements, I have hosted two student teachers at one time. I actually now believe that

this is an ideal situation as it provides student teachers an opportunity to not only teach in a real classroom, but also learn to team-teach with another teacher. Learning to team-teach is a valuable skill when they begin their new teaching careers and one that many teachers have had little opportunity to explore, particularly during placements.

From which faculties of education do the student teachers come? There are many universities in the province of Ontario that have faculties of education. The ones that have sent me student teachers over the years are those that have an interest in interdisciplinary programs or outdoor/environmental education. Lakehead University's Outdoor Ecological Experiential Education program has sent several student teachers for placements over the last several years. In fact, there has been such a demand for interdisciplinary teaching placements that this past year I hosted four student teachers over two semesters. Queen's University has an Outdoor Experiential Education program and has placed a student in ESP. Nipissing University has also sent student teachers to me for interdisciplinary teaching placements. The timing of student teaching placements vary between universities and are usually four to six weeks in duration.

What do you get student teachers to do? When a student teacher has been assigned to my classroom, I think that it is a good idea to contact the student to ensure they know what an interdisciplinary program is and what they can expect during their placement. Often, it is the student teacher that will contact me first, normally via e-mail. During the first few days of their placement, they will observe and assist within my class, like a teaching assistant. I ask the student teacher to identify their areas of interest within the high school curriculum in addition to the interdisciplinary program. I then set up a visitation schedule with other teachers in the school. Over the next few days, the student teacher's day might look like this: Period A in a Grade 12 History at the university level, Period B in a Grade 9 Science applied level, Period C in a Grade 10 Math academic level, and Period E in a Grade 11 English at the college level. I also have the student teacher "shadow" the vice-principal or principal for at least one period so that they gain an understanding of what is involved in the administration of a high school. Depending on the interest of the student teacher, they may also spend time in the library, computer room, co-op program, or special education classes or assist with sports teams and clubs. This provides the student teacher with an opportunity to experience as many aspects of a high school as is possible during their placement in the school, and feel more part of the school community. They get a balance of grades and levels of study in several subject areas. It also provides them with a contrast to and framework for an interdisciplinary approach to teaching across the curriculum at the beginning of their placement.

After three or four days of visitations, they are then placed back in my classroom and are ready to begin teaching, often beginning with one or two periods per day; within a week or so, they are usually able to assume most if not all teaching responsibilities of a full-time classroom teacher. Student teachers are provided with the

opportunity to plan a unit, teach, develop and administer assignments, and evaluate. Student teachers have also attended parent nights and added valuable feedback to parents. In this model, they are very much looked upon as a teaching partner.

Under my guidance, they are also given the opportunity to plan their own field trip to complement what they are teaching in the classroom. They are responsible for planning and conducting their own trip, including completing relevant school board permission forms, obtaining the principal's permission, ordering the school bus, and arranging bookings. On the day of the field trip, the student teacher is in charge and I adopt more of a "shadow" role, being there if needed.

How do the students respond to the student teachers? In my experience, student teachers in interdisciplinary programs arrive with higher expectations, great motivation and much initiative. They spend a great deal of time with the students. As a result, the high school students have usually responded very positively to the student teachers throughout their placement. Indeed, many of the high school students have commented that they miss the student teachers when they have gone.

How do student teachers help interdisciplinary programs? Student teachers provide extra help in the classroom, and they bring many skills and areas of expertise that can add a new dimension to the class. They also provide an opportunity for professional development. As well, they free up time for me to do long-term planning and fine-tune the program during the semester.

What qualities make an ideal student teacher? An ideal student teacher is one who brings enthusiasm and a willingness to think outside of the box. They are willing to contribute effectively to a classroom. They are highly motivated and show a great deal of initiative. They become confident in their understanding of interdisciplinary programs and the philosophy behind them. They possess an environmental ethic that they can pass on through their own actions, demonstrating to the high school students that all age groups are concerned with what is happening to the environment, and that individual choices can and do make a difference.

Recommendations to other integrated program teachers? Being an Associate Teacher is an opportunity to bring new perspectives to the program and gain help in the classroom and on field trips. It is also an opportunity for the Associate Teacher to learn new ideas and incorporate them into the program. Further, it is a tremendous opportunity to share the concept and practices of interdisciplinary programs with new teachers entering the profession. Indeed, it is a great way to "spread the word" about interdisciplinary programs. To sum, it is a very worthwhile experience for all.

John Burton teaches the ESP and is Head of the Science Department at Grey Highlands Secondary School in Flesherton.

A Student Teacher's Perspective on Integrated Programs

by Ryan Henderson

I recently graduated from the BEd program at Lakehead University where I took courses in outdoor ecological experiential education (OE3). As part of my BEd, I had the wonderful opportunity to do one of my practicums at an integrated environmental studies program at Grey Highlands Secondary School in Flesherton, Ontario, under the direction of teacher John Burton. For my placement, I was eager to try something new, experiment with a placement that differed from standard school placements, find a place where I would feel that I could make a difference, and push my own boundaries. The Environmental Studies Program (ESP) met all of my expectations.

The program is designed such that the teacher interacts with the same students for the entire day, unlike regular high school classes where students rotate. This in itself created an atmosphere in which issues could be examined more thoroughly and in an enjoyable manner. For instance, field trips were frequent and lasted the whole day without interfering with any other class; classes were often taught outdoors without the logistical complications that might otherwise accompany such activities; and the curriculum felt more holistic, encompassing ideas that might not be able to be covered if time had to be spent each day reviewing information, as in traditional classes.

Since the students were interacting with the same people each day, a community was created within the classroom. In comparison with other classroom environments to which I have been exposed, the interactions between the students and with the teacher seemed more meaningful: as students learned to trust each other, they were more willing to take risks, and thus pushed their limits to the point where real learning could take place. This also made my job as an educator easier. Since students were more apt to solve their own problems, classroom management issues were usually solved by individuals before they could become disruptive to the rest of the class.

Another aspect that makes ESP an excellent program is that it focuses on an issue too often neglected in our education system: the environment. I believe that there needs to be a renewed commitment in Ontario to fostering an environmental ethic among students. It is our responsibility as educators to make the environment a priority when we are designing our lessons. ESP, because of its flexibility, is able to give this issue the attention it deserves. For example, while there, I tailored a unit towards the ways that food and the environment are inextricably linked. Another student teacher working with me focused on climate change.

In my experience, integrated programs like ESP offer a unique alternative to the regular classroom environment. They create an atmosphere where students can develop a love of knowledge, the ability to think critically and creatively, and a respect for our world and for others. In the program, I felt that students became more informed about themselves and about the world in which they live. If the goal of public education is to create engaged and informed citizens who are dedicated to life-long learning, then there should be more integrated programs since they go a long way towards meeting this goal.

In conclusion, I would recommend to other teachers-in-training that they consider an integrated program placement, and I encourage integrated program teachers to consider hosting students for their practicum. The more people who are exposed to this type of learning, the more these programs will increase in popularity. Both teachers and students alike have much to gain.

Ryan Henderson recently completed his BEd at Lakehead University and now teaches in Kashechewan, Ontario, near James Bay.

Liz and Julie's Excellent Adventure: Exploring the Diversity of Interdisciplinary Programs in Ontario

by Liz Hood and Julie MacMillan

> *It's about life. It's about learning and growing and becoming passionate about something that matters to you. It's about developing a community and nurturing friendships. It's about challenging yourself to take risks and to push your limits.*

It would be fantastic if every student in high school could believe in those words, and understand how and where that could happen. But they don't (and we didn't either). And that's why we embarked on our excellent adventure. We had both been exposed to interdisciplinary programs in the past, and were inspired by what they were striving to accomplish. Having some time available to us during our alternative practicum at the Queen's Faculty of Education, we decided to dig a little deeper into this world. We were curious. Were all interdisciplinary programs similar to the Bronte Creek Leadership Program with which we were both familiar? Who teaches these programs and why do they do it? How did they get into it? What do the students think? How could we find out more about the programs in Ontario? We had questions, so we went looking for answers.

We found wonderful contacts from people who want to help spread the word of what these programs can accomplish (Bob Henderson from McMaster University, MJ Barrett from York University and Connie Russell from Lakehead University) and started calling around. Slowly but surely, "The Tour" came together and we each lined up six different programs to visit. Since we were both outdoor and experiential education (OEE) students, we chose to visit programs that were outdoor-based and environmentally focused.

We would stumble out of bed in the wee hours of the morning to arrive at the school or program sites in time to watch every minute of the action. Although each program is unique, the outcomes for the students seem to be much the same. We both observed that the students appear to thrive in the fun, experiential learning environments. The personal skills that they develop throughout the semester are invaluable. The teachers leading these programs all seem to be experts in creating a respectful, safe, positive learning environment in which students become an integral part of a community and take responsibility for their own learning. Regardless of the specific courses being taught, students are provided with a supportive classroom community in which to explore new interests or concerns. They understand the importance of maintaining an open mind and that change can happen through their leadership. It was incredible to see that students were able to make important connections between their newly acquired knowledge and the real world. Isn't that what all teachers and the new curriculum hope to accomplish?

We both find it disturbing that, after Grade 8, just about the time students become more insecure about themselves and unsure about what they know or are interested in, there is less emphasis on classroom community. They still need support and to feel that they can take risks. It is incredibly difficult to create that atmosphere in one 70-minute period each day. As teachers, we understand the importance of trying to initiate and promote critical thinking in our students, but the opportunities for making those connections are radically limited by time and space in the traditional high school classroom. Interdisciplinary programs provide teachers with the chance to dig into a number of important issues, and to create and initiate projects and discussions that are relevant to the students' needs.

Each program we visited was unique and this related to the teacher's beliefs and background, as well as the history of the program itself.

Although the programs grant similar credits, they are diverse in the way that they present the information. Some are focused on teaching the students an awareness of environmental practices that are destroying our world. Others focus on having students earn a number of certifications throughout the semester to enhance their 'employability' in the outdoor field after high school. There are programs that concentrate on either the physical (outdoors) skills or the academic skills that the teachers feels are integral to the development of their students. Still others give their students the opportunity to apply their knowledge by teaching younger students (through the Earthkeepers program or with innovative outdoor activities).

Although we only chose to visit programs with an environmental theme, it must be noted that there are other interdisciplinary programs in Ontario. Drama-based programs, technical education, and career-based programs are also found. The Limestone District School Board's Focus Programs, in particular, provide an excellent model for nurturing such programs. With a suitable proposal and enough interested students, the board seems willing to support the establishment of any new, viable integrated program. As many as 37 programs have sprung up in this nurturing environment. For example there are articulation programs (radio broadcasting, pre-veterinary technology), broad-based technology programs (automotive internship, marine technology, guitar building), career/unique programs (animation, Celtic studies, theatre complete), Ontario Youth Apprenticeship programs (hairstyling, carpentry, and cooking internship), referral programs (ESL, parents attending school) and the Bridges program (connecting kids from high school to the workplace). We can only hope that with the advent of the new Interdisciplinary Studies curriculum, more boards of education will understand the importance of helping our students make the essential connections between school and life.

Yet all is not rosy. Amidst the myriad of positive outcomes that the diversity of programs provides for learners and educators, we discovered a dominant theme of isolation. Although some geographic regions produced nodes of programs loosely connected to one another, often only one teacher runs such a program in a whole board and struggles through on their own. Because integrated programs often involve comparatively unusual experiences like trips, outdoor lessons, skills training, or teaching elementary classes, program teachers are faced with enormous pressures. These teachers handle all the duties of regular teachers, including juggling permission forms, supervision concerns, and co-ordination issues, in addition to having the pressure of meeting all of the expectations in the new curriculum. Above and beyond that, in their own programs, they also play the roles of principal, vice principal, secretary, financial planner, business planner, marketer, recruiter (often for both participants and elementary classes) and are responsible for teaching three or four credits. Add to this coaching a team or two, serving on different administrative boards or committees, and other professional requirements, and it can become an overwhelming mixture.

Teacher burn-out is thus perhaps the most significant concern within interdisciplinary programs. Many programs begin with the creative energy and determination of a single

teacher with the support of administrators. Yet as the weight of responsibility, overnight excursions, long trips away, and late night planning and preparation take their toll, both individuals and families struggle under the burden. Some teachers decide to leave these programs after a while. Some, like the Bronte Creek Project in the Halton District School Board, Tamarack in Renfrew County and Environmental Leadership at Bayridge Secondary School in Kingston, have successfully negotiated passing the program on from the originator to a new teacher. Sadly, many programs have not had those same successes and are dying or have died without their creator.

Perhaps as pervasive in its impacts, but less visible, is the 'program as an island' issue. It was amazing to witness how all the program teachers we visited are united by their firm conviction that they are teaching in a way that feeds both their students' and their own souls, yet they have virtually no contact with other program teachers. We perceived an enormous amount of reinventing of the wheel. From lesson plans to course outlines and administrative paperwork, planning trip routes and transportation, to making creative summative evaluation activities, program teachers have been doing the same things separately. In fact, many of them have little idea of who else is out there and whether they are doing the same things. It would seem that in this difficult period of transition to a new curriculum, funding constraints and administrative cutbacks, it is time to stand together, lest we all fall divided.

This leads us to a new development. Interdisciplinary programs have existed on their own, in all corners of the province, for some time; ancestors like Tamarack, the Environmental Studies Project (ESP) in Flesherton and the Bronte Creek Leadership Program (previously the Bronte Creek Project) have given rise to Outward Bound's new program at Chetwynd, the CELP programs in Guelph and Paris, and a cornucopia of programs in the Limestone and Hastings–Prince Edward District School Boards. Despite funding cuts and burnout, integrated learning persists because there remain too many visionary educators who continue to believe in it to let it fail. We believe it is time for interdisciplinary program teachers to come together as a community to provide support, ideas and research for one another. With the release of the new Interdisciplinary Studies curriculum package, there can be no better time to become more visible, to help integrated learning take its rightful place in education within this province. Having been inspired by the programs we saw, we *can* imagine the difference integrated programming educators can make together!

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John Chomitz, Enviroworks, Kingston
Peter Andras, Ecobound, Belleville

Liz Hood is a two-year veteran of the Bronte Creek Leadership Program and a recent graduate of the Queen's Outdoor and Experiential Education (OEE) program. She currently is reveling in the experiences of her hands shaping wood, buried in the soil, paddling northern rivers and fixing up her new home in Guelph.

Julie MacMillan recently graduated from the OEE program at Queen's University. She is currently indulging in many outdoor pursuits, learning Spanish and gearing up for new adventures in South America before coming back to Ontario to teach in the second semester.

The International Reemergence of Integrated Curriculum: Can Environmental Educators Lead the Way?

by Susan M. Drake

In the late 1980s and early 1990s, integrated approaches to curriculum flourished throughout North America. Unfortunately, there was little clear documentation of student improvement. Educational reform that began in the mid-1990s ushered in accountability in the form of discipline-based standards and standardized testing. Successful integrated programs generally disappeared; the common wisdom was that interdisciplinary approaches could never work in a standards-based climate. In 2002, educators seem to be more comfortable working with standards and are seeing new ways to cluster them across subject areas. Often integration efforts begin within a subject area — intradisciplinary work.

The most global standardization of the education system has occurred in the sciences (Lang, 2002). Competitive standardized testing done by OECD and the Third International Mathematics and Science study (TIMS) and the Program for International Student Assessment (PISA; German PISE Konsortium) have led to science curriculum reform. There is surprising similarity in these reforms: practical work, applications and topics from everyday and social life. There are now a number of integrated science programs across the globe. In Germany, PING, an integrated science approach, has been introduced successfully in comprehensive schools in Grades 5 and 6. This curriculum uses the "big ideas" common in subdisciplines to make connections. In 1999, China offered an integrated option for Grades 3 to 6 and Grades 7 to 9. In the US, Mayer (2002) developed Global Science Literacy (GSL) where the Earth is seen as a system, the underlying processes (physical, chemical and biological principles) are learned in an everyday context, and students are encouraged to see the awe and mystery of the universe. GSL was also accepted as part of standards in Japan, Korea and Taiwan. In the UK, GSL is embedded in the framework of "Beyond 2000: Science Education for the Future" (King, 2000). An environmental ethic ties together these programs.

Parts of Asia turned to integration because traditional education did not foster understanding, creativity or social interest. In Japan, the "New School Science Course" (2002), a revision of the national curriculum, aims to promote environmental consciousness and love of nature. In 1998 in Taiwan, the curriculum integrated science and technology, and application, environmental interest, communication, problem solving and relationships between the individual, human existence, society and nature became essential concepts.

Where are we in Ontario? I suggest we are ready to lead the way. Fortunately some of the integrated environmental studies programs from the Common Curriculum era survived and are still going strong. Other successful programs have been recently developed. In an era concerned with accountability, they indicate that combined credit programs can offer real benefits to students. With the release of the Ontario Ministry of Education's Interdisciplinary Studies Document, the door has been reopened for integrated programs. Ontario integrated program teachers can offer voices of experience to help create a professional knowledge base. This experience can inform and inspire teachers globally who are struggling with new mandates for integrated programs. Ontario educators are thus in a position to lead.

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Susan Drake is a professor in the Faculty of Education at Brock University.

Challenging Paradigms: A Whole Body Experience

by MJ Barrett

When discussing the rapid increase in environmental problems, people often speak of the need for a paradigm shift. The following activity introduces the concept of a paradigm, and highlights some of the challenges to changing one's way of thinking. The activity can be very useful near the beginning of a program to create a framework for further discussion, and also helps students get to know one another.

Purpose:

To introduce the idea of a paradigm (worldview), to help students understand how paradigms change, and to demonstrate how much resistance there usually is to change.

Materials:

- One or more balls
- A space large enough for the group to make a circle in which to toss the ball
- Overhead, flip chart or blackboard
- Handout (in table below) outlining the stages of a paradigm shift

Process:

I. Introduce the activity by randomly tossing balls around the group. One ball is sufficient but it is often more fun to have several balls going at once. This first part can also be used as a name game (people call the name of the person they are going to toss the ball to and thank the person they received it from).

II. After an initial warm-up period, put away all balls but one and ask the group to continue passing the balls and establish an order so that each person gets the ball only once. (This activity is often referred to as the initiative 'Warp Speed').

III. Once the order is established, propose the challenge: to pass the ball in that same order as fast as possible. Be precise and sparse with your instructions. Be sure not to say anything about remaining in a circle or changing places.

IV. While the group works though the challenge, you become an observer, saying as little as possible. I often answer questions about what they can and cannot do by simply repeating the challenge: pass the ball in the same order as quickly as possible. Usually, the group eventually gets people to change places so that they can pass the ball to one another rather than tossing it across the circle. They may also move to a line. Most groups of around 25 people can get their time down to well under 10 seconds.

Debrief:

I. On the board or chart paper, have the group create a detailed list of the steps they took, from beginning to end. Try to note different suggestions people made, whether they were heard or not, whether the suggestions were tried or not.

II. Walk through and describe, using an example, the steps of a paradigm shift, using Thomas Kuhn's steps as a framework (see table below). Since Kuhn's description of the way a paradigm changes is based on Western science, I often use as an example the shift in belief from the Earth to the sun being the centre of the universe, paying particular attention to the resistance to change (e.g., Copernicus was unwilling to publish his theory, Bruno was burned at the stake for it, and Galileo, once he did publish it, was put under house arrest).

III. Go back to the students' list of their process solving the Warp Speed activity and ask them to place their experience into the various stages of Kuhn's model of shifting paradigms.

Things to consider highlighting in discussion:

- The stages are not clearly defined and merge into one another.
- Resistance and what forms it took. Some things I have noted in the past include 1) an assumption that they must stay in a circle (Where does that assumption come from? What other assumptions do we have that make us resistant to new ideas? Why was there resistance to moving out of a circle? How strong was that resistance?); 2) some suggestions are made but not heard (Whose voices were heard? Why? Who said something but wasn't heard? Why?); and 3) some suggestions are heard but rejected even before trying them (Why?).
- Extending the discussion to examine other contexts. For example, if considering personal or environmental change, pondering why is there so much resistance, for example, to reducing car use, stopping makeup use, or resisting capitalism and a consumer society?
- Noting the implications of the example you choose to illustrate a paradigm shift. The Copernican revolution puts the shift in the context of Western science and highlights science as *the* way of knowing; a different cultural, local, or personal example will have different implications.
- Addressing the assumptions inherent in the concept of a pre-paradigm period. Including it without discussion makes the unquestioned assumption that there was no organized way of thinking or knowing before Western science. Taking the time to discuss this assumption could provide great fodder for an exploration of different ways of knowing and making sense of the world.

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MJ Barrett, a former integrated program teacher, recently completed her MES at York University and has now begun a PhD at the University of Regina.

Kuhn's Paradigm Shifts, Summarized

Pre-paradigm Period: No established order or way of thinking
First Paradigm: First explanation or understanding of how things happen
Normal Science: Carry on, do things the way the paradigm suggests
Accumulation of Anomalies: Increasing number of things that don't fit or don't work within the established paradigm
Crisis: Things are beginning to break down, not work; feels dangerous
Extraordinary Science: A new way is introduced
Resistance: This is in operation throughout the transition period
Conversion of the Scientific Community: People are convinced of the new way of thinking
Scientific Revolution: New way is accepted and many related things change as well New Paradigm

There's No Place Like Home

by Mike Elrick

The integrated program that I teach, the Community Environmental Leadership Program (CELP), begins with a 5-night wilderness trip. Here our connections to the Earth are clear — water comes from lakes, fuel comes from trees and our waste decomposes in the soil below. Students learn quickly that they shouldn't pee in the water they are drinking. This is logical and easy to understand on trip. But on a typical day at home and at school, water comes from the tap, waste is flushed down the drain and fuel comes from a gas element on the stove. The learning is not as simple. The connections are not as clear.

It is my opinion that to live sustainably on this planet, we need to begin at home. We need to bring the wilderness trip lessons into daily life. The following unit, called "Bioregions," is an example of how I attempt to do this in an integrated program based in the city of Guelph. This unit can be taught in all settings, obviously tailored to fit each community. Bring the lessons of the wilderness trip into daily life.

This is one of my most enjoyable units to teach and I believe it represents the essence of what an integrated program allows: full-day field trips, all by bicycle, no conflicts with other classes, and seven days when our community is the classroom and we never step inside the traditional four walls.

Bioregions: A Seven-Day Unit for Understanding Home

Day One: We begin with a one-day CANBIKE instruction course. The morning is spent discussing rules of the road for bicycles and doing riding exercises in the parking lot. In the afternoon, we head out on the city streets and learn to "be traffic." This is important since five of the seven days are spent entirely on bicycle, the Earth-friendly and cost-effective form of transportation. (Teacher's Note: Of all the activities we do in CELP, urban biking is by far the most dangerous. Safety and proper instruction is critical.)

Day Two: Water Day by bike. Stop #1: We begin with a tour of the Arkell Spring Grounds just outside of town. This is where Guelph obtains 80% of its water supply. I make sure the city employee lifts off the maintenance hole cover so that we can actually view the water flowing out of the ground. While there, we also visit the local river at the Spring Grounds to discuss the ground water recharge system. Stop #2: We then follow the underground pipeline into town to our purification plant and pumping station. Here we see where the water is stored, how it is chlorinated and the way it is then pumped into our houses. (At this point, I ask all students to take a drink of water, and then try to go to the washroom. In this way, we become part of the water's journey!) Stop #3: We finish the day by getting a tour of the sewage treatment plant. I ask

for students to be shown the outflow pipe into the river. We discuss how Brantford gets its drinking water from this same river further downstream.

Day Three: Waste Day by bike. We begin by riding to our local WET/DRY plant where 60% of our waste is either recycled or composted, a progressive facility for our times. We then travel to the landfill where the rest of our waste ends up. (I gather up any non-recyclable garbage that the class has produced over the last week and ask them to toss it on the ground at the landfill. I tell them this garbage is simply taking a shortcut!)

Day Four: Food Day by bike. We first tour a local farm. Over the years we have visited dairy, chicken and vegetable operations. We then tour our local abattoir. Guelph is home to the largest abattoir in Eastern Canada, in which over 1500 cattle are slaughtered each day. They take us through the entire "disassembly line" (as they call it), including the place where the life of the cows is taken. This is not meant to be an anti-meat tour but a discovery process of where our meat comes from. (This is a highly emotional tour and I do an in-depth discussion prior to going and engage in a post-trip reflection. I don't ask them to eat anything after the tour!)

Day Five: Organic Day by bus. We look at a sustainable alternative in agriculture. Over the years we have visited an organic lettuce-grower, a meat operation and a vegetable farm which supports a CSA (Community Supported Agriculture). We do lots of tasting when possible!

Day Six: Sustainable or Eco-Home Day by bus. We visit a house that typically has solar/wind power generation, passive solar design, rain-water collection, composting toilets, masonry woodstoves, wood and solar hot water. We investigate alternatives to the norm and talk about what is possible.

Day Seven: Municipal Politics Day by bike. We visit City Hall where we sit in the actual chairs of our local Council and Mayor. One of our councillors discusses how local government functions and answers questions regarding local environmental issues.

While the curriculum links are endless, here are some straightforward ones for courses taught at the Grade 10 level:
Outdoor Activities: Bicycle unit
Civics: Local politics and active citizenship
English: Hands-on research and interviewing for debates on local environmental issues
Interdisciplinary Studies: Research skills and collating ideas into debate form

Mike Elrick teaches the integrated Community Environmental Leadership Program (CELP) in Guelph.

Resources for Supporting Student Community Action Projects

by MJ Barrett

Community environmental action projects can form an excellent focal point for an integrated program. Identifying, researching, planning and taking action on an area of environmental interest or concern gives students direct experience in research, problem solving, and teamwork and can provide them with opportunities to connect directly with the natural, social and political aspects of their local community. Action projects naturally draw on diverse disciplines; in fact, I suggest that attempts to address environmental issues by only looking at the ecological aspects of the issue is at best limited, and at worst, naive.

The following is an annotated list of resources that may prove valuable to teachers and students wishing to take on local action projects.

Federation of Ontario Naturalists. 2002. *Take Action: Conservation Projects for Ontario Students*. Outlines a range of possible project ideas for Ontario students. Available at www.ontarionature.org.

Hammond, W. (1997). Educating for action: A framework for thinking about the place of action in environmental education. *Green Teacher, 50*. A great overview of ways to think about and frame action projects. www.greenteacher.com

Hungerford, H. et. al. (1996). *Investigating and Evaluating Environmental Issues and Actions: Skill Development Program*. 'How-to' student- and teacher-ready Modules. Includes lessons on how to identify underlying beliefs and values, design and interpret surveys, and develop an action plan. Useful practical lessons that are teacher-directed and focused on quantitative data as a primary decision-making tool. Does not include ways to move from developing an action plan to implementing it. Available at www.stipes.com.

Learning for a Sustainable Future, (2002). A guide for engaging students in community action projects. A compilation of key activities useful for issue identification, analysis, action planning and implementation. Visit www.schoolnet.ca/learning or e-mail rubinoff@yorku.ca

Moore, R., Taylor, D. & Chamberlain, C. (1994). Red Deer Social Action Project. In C. Chamberlain (Ed.), *Don't Tell Us It Can't Be Done! Alternative Classrooms at Work in Canada and Abroad.* Our Schools/Our Selves. Case study of a Grade 6 class taking on a local issue and presenting their strategies to their town council.

Project Wild. (1995). *Taking Action: An Educator's Guide to Involving Students in Environmental Action Projects*. Good starting place. Includes an overview of types of action, examples of student projects, and highlights possible stumbling blocks. Phone 713-520-1936 or visit www.projectwild.org or www.acornnaturalists.com.

Stapp, W., Wals, A., & Stankorb, S. (1996). *Environmental Education for Empowerment: Action Research and Community Problem Solving*. Outlines an action research process that can be used with students. A more student-directed approach than Hungerford's modules and a useful overview of steps in the process, leaving room for individual adaptation. Appendix includes activity suggestions. Order via www.acornnaturalists.com.

UNESCO. (2002). *Teaching and Learning for a Sustainable Future*. Multimedia teacher education program developed by UNESCO, focusing on sustainable development. Modules 7, 18 and 25, highlighting citizenship education, experiential learning and community problem solving may prove particularly useful. Great Web links provided. www.unesco.org/education/tlsf.

York University & York Region Board of Education. *Grade 10 Civics Course Curriculum Profile: Active Citizenship with an Environmental Focus*. Uses environmental action projects as a focus for the course. www.yorku.ca/fes/envedu/enved_ont.asp.

Green Teacher is an excellent general resource; the following list of articles provides examples of action projects undertaken by students. (The number after each article refers to the issue number.) Back issues or on-line thematic "e-kits" are available at www.greenteacher.com

Schoolyard Rehabilitation & Environmental Restoration

- A World A-greening: International Snapshots of Schoolyard Projects. 47
- Fashion a Field Guide to Your School Nature Area. 47
- Transfoming School Grounds. 47
- Avian Attraction. 47
- Outdoor Classrooms: The Learning Links. 47
- Setting Down Roots: Creating a Schoolyard Tree Nursery. 47
- Ecological Restoration: Bringing Back the Prairie. 52

Environmental Monitoring

- Exploring Wetlands: A Six-Step Model for Wetlands Monitoring and Stewardship at the High School Level. 47
- Choosing an Environmental Monitoring Program: A Survey of the Types of Monitoring Programs Available to School and Community Groups. 55
- Keeping Our Heads Above Water. 55
- Beyond Substituted Experience: Environmental Monitoring as a Resource for Educational Development. 55
- Environmental Monitoring Programs and Resources. 55

Agriculture

- Homegrown Hope: The Youth Farmstand Project. 52

Working With Wildlife

- The Stevenson Salmon Hatchery. 56
- Birdathons: Counting for Conservation. 60

Green Community Mapping

- Community Mapping: Creating a Sense of Place. 55
- Green Mapmaking. 58
- Valley Quest: Strengthening Community Through Educational Treasure Hunts. 61

Identifying a Local Issue and Taking Action

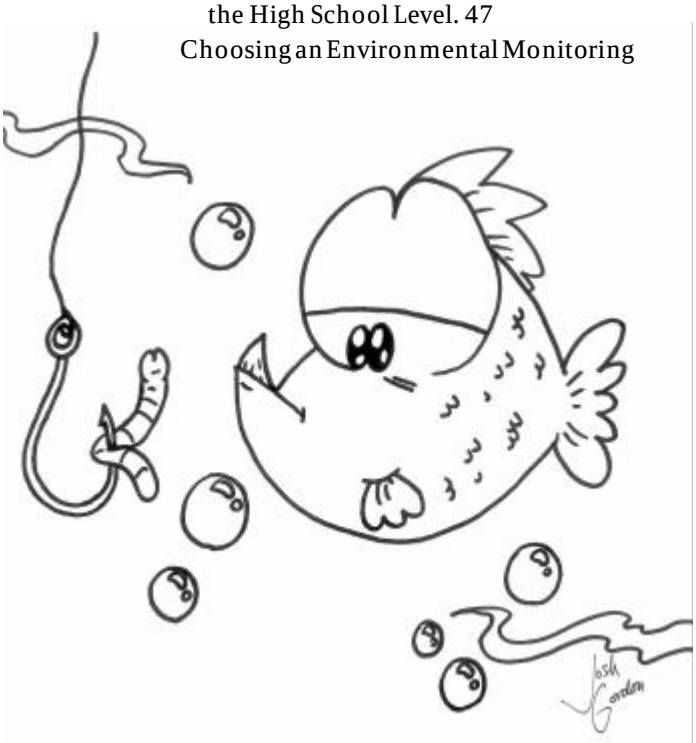
- Getting the Lead Out. 48
- Cool Schools: What Can Schools Do About Global Warming? 51
- From Gridlock to Global Warming: A High School Unit that Investigates the Link Between Local Transportation Issues and Global Climate Change. 60
- Measuring Your School's Ecological Footprint. 61

Miscellaneous

- The Integrated Reader. 48
- The Making of the Tropical Tribune. 52
- Green Futures: An Environmental Industries Co-op Education Program. 58
- Community Environmental Involvement. 59

Resources

- Schoolyard Naturalization: Who Ya Gonna Call? 47
- Environmental Action. 55
- Resources. 58



MJ Barrett recently completed her MES, focusing on student involvement in community environmental action projects as part of their school coursework.

"Beyond the Walls" Class of 1999: A Reflection

by Elise Pierre

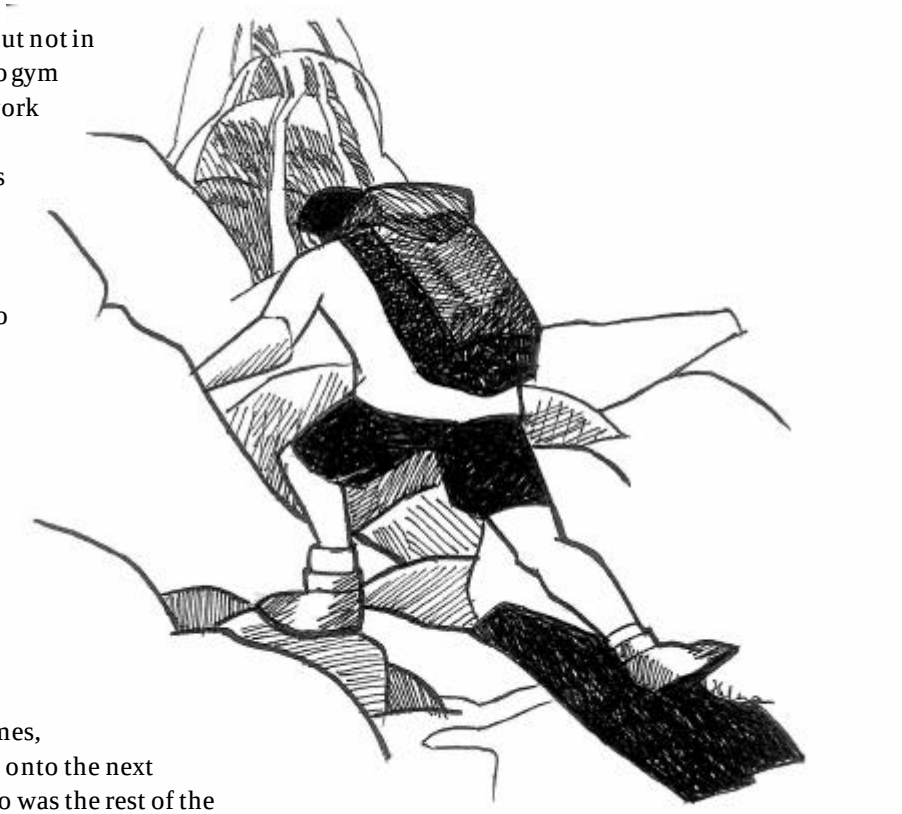
With two days left for course changes for the first semester of 1999, I went to the guidance counsellor. A couple of friends had signed up to take the Beyond the Walls (BTW) program that was offered at my school. I had no idea what this course was about prior to talking to my friends. I found out that it was a special program that gives you five credits in one semester. I would receive a gym, environmental science, leadership, physical geography and English credit. Plus I would be going on camping trips and going to Laurel Creek to do a variety of nature activities. When I heard about it, I thought that I had died and gone to heaven. So I went into the office and in five minutes, I was switched into BTW. I was so excited that I could hardly wait for the two weeks for the second semester to start.

Two of my friends and I walked down the path to Portable Three. We were excited but we had no idea about all the wonderful things that were in store for us during the next five months. When we walked into the room, a quick glance told us that we were going to learn a lot of things about the outdoors. Posters of animals, plants and rock formations covered the walls. At second glance, I noticed that there was an overhead on and there was a layout of all of the desks in the classroom with the names of every student written on the desk where we were supposed to take a seat. I was lucky enough to be sitting beside a girl named Dalia Najera. I didn't know her too well. We sat down and the bell rang to mark the beginning of the most awesome semester.

Within the first week, we had a trip to Laurel Creek to look at animal tracks and an assignment to go along with it. The workload was one of the biggest shocks I got in this class. A very wise woman, Ms. Patti Huber, one of our teachers, had the perfect response: "You are getting FIVE credits!" And she never let us forget that. From the beginning, we had projects due and we were constantly told that if we didn't get them done, we would lose our credits. Also looming over our heads was that if we let our grades drop below 50%, we wouldn't be going on the trips. This wasn't a problem for me but it was a problem for a few of my peers. If for some reason you couldn't go on a trip, you were forced to go to study hall for the duration of the trip, sometimes for five full days. This was not something anyone looked forward to. Don't get me wrong about the workload though: projects like water testing using real chemicals, tracking animals and learning how to read a geographical map beat doing four essays for each one of your classes in normal school. ("Normal school" is what we came to call a regular semester with four classes and a lunch.)

Aside from the work that was always there, we were also taking a gym credit. Most people say that gym is the only credit that is a break; all you have to do is show

up and you get a good mark, but not in BTW. Every day, we would go to gym knowing that were going to work hard at whatever we did. The most popular gym activity was running. At first we started off slowly with the cornfield run, a common gym run. It only takes about 15 minutes to complete, 10 if you are going fast. Then came the Westvale run, which is considerably longer than the cornfield, about 3 km around a looping road. The distance really threw me for a loop. I never thought I would be able to run that far, even if I was on the track team.



We did this run quite a few times, mastering it before we moved onto the next one. I was getting better and so was the rest of the class, but we still worked when we went out for runs, trying to better our own times, trying to better each other. Next we moved to the Monarch run, which was about the same distance as the Westvale, maybe a smidgen longer, but it was through a forest where you had to watch your feet, which made it more difficult. The route then traveled onto the sidewalk, which was long and straight, making it not very fun. Once again, it became easier every time we ran it.

The final run, however, was totally different; it was the holy grail of runs. The Erb St. run was 8 km, all roads, with four turns and an incredibly large hill right in the middle of it. Even the best runners in our class struggled to put the next step in front of them while going up that hill. When you reached the top, you had the daunting feeling that still you had half of the run left. Personally, I only ever finished the run once without stopping and I remember the feeling afterwards. Pain shook my body, sending knives ripping up my Jell-O legs into my burning lungs; it was the best feeling I have ever felt! When I finished the run that day, I ran past the portable right to the water fountain. I knew I needed water and if I stopped before I got there, I would never get up again. It was one of my best accomplishments.

Work! Work! Work! That is all people would have thought that we did in BTW. But, oh, how they would have been wrong. I don't think that there was ever a day that went by that I didn't laugh and joke with my friends in that class. It could have been in the middle of a lesson, when someone would blurt out something and the entire class, teachers and all, would be crippled with laughter. Once we had the teachers laughing with our jokes, we became more like a big family than a class. That was the best part and that is when the work didn't seem too hard any more. It was the only time in 12 years of schooling that I felt comfortable talking about *anything* in the classroom. For example, one time a guy in class was curious about tampons and how they worked. I taught all the boys about it. Could I have done that anywhere else? I think not!!

Once we became like a family, all of our time was spent together. At school we were together in class and at lunch. After school we were doing projects together and on weekends we were hanging out with each other. And there was still one thing that brought us even closer — the trips that we took as a class.

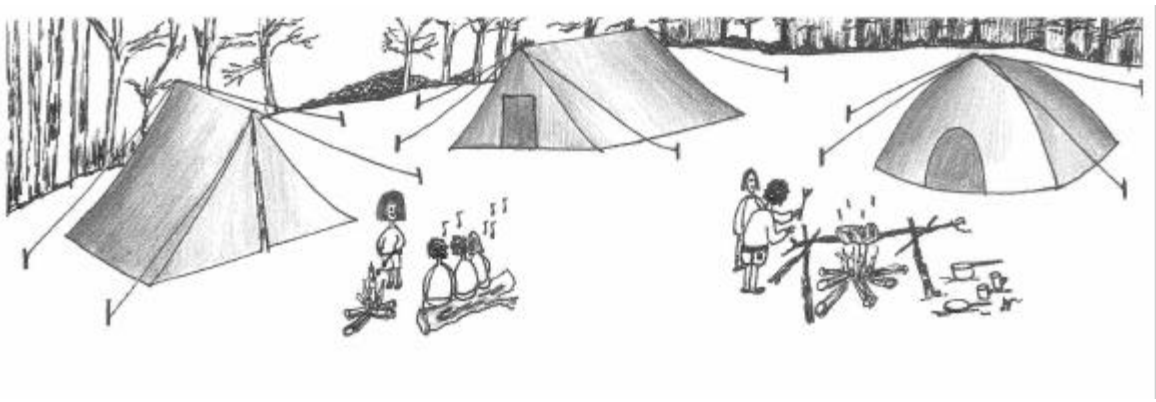
Our first trip was to the Heidelberg Optimist Club where we stayed for four days learning about each other as well as First Aid and basic camping skills like collecting wood and starting a fire. We weren't connected yet with each other and were still worried about our marks. The following trip was also to the Optimist Club except that we were no longer using the building. Instead we were asked to use all of the skills we had learned two weeks earlier and live overnight on our own. We sang while putting up our shelters and laughed while eating our slightly burnt hotdogs. Looking back on it now, we came away from that camp as friends and a foundation of trust was established for every person in the class.

After the two Optimist camps, BTW was off to the Everton Boy Scout Camp in Guelph. This was sort of a training camp for us, because we were taking long hikes to prepare us for our next trip to the Bruce Trail. This trip unexpectedly became much harder. Our trip was in April, a time for spring showers; this April, however, it had decided to snow and was extremely cold. With the little gear everyone had, we had to make do and hope that it would warm up. I remember wet socks and freezing feet! We built a tarp shelter to keep the wind out of our eating area and three of us slept together in two sleeping bags zipped together so that we stayed warm. It really was that cold! The hardest part was still doing all of the required work. We had a major water testing project that had to be done even if it was cold; although we didn't get wet, putting on hip waders did not make the water any warmer! We did get through the week, with a lot of good memories. Of course, the day we left that camp was the warmest day of the year and we were putting on shorts to stay cool!

The next trip was full of shorts and t-shirts as we hiked along the Bruce Trail for five wonderful days. This was the most physically demanding trip. The walking took a toll on our feet while the rough terrain was demanding on every other part of our bodies. My shoulders hurt for weeks after the trip because we carried packs that weighed about 60 lbs. For me, it was like carrying half of my weight on my shoulders every day. The trip was a fun experience for all of us because only a few of our class of 25 had ever been to the Bruce Trail. We were able to experience for the first time those breathtaking views from the top of an overhang or from the rock beaches where we slept. Sharing something that is that beautiful and knowing that you will never see that same sunset or those waves hitting the rocks in the exact same way ever again bonds you to the people you shared it with. Everyone helped make that moment what it was, and without even one of them, it wouldn't have been the same.

> *"I loved every moment I spent in BTW. It is the best memory I have of high school. In fact, if I had to start high school over again, I would see if I could do it twice!"*

The culmination of what we had become as a class was the Algonquin trip. This trip counted for a third of our exam mark. To all of us in the class, though, it was so much more than just part of an exam. Aside from it being another great experience that we would be able to share together, there seemed to be magic in the air. Everyone knew that it was our last trip together. Every thing we had worked for, every friendship, was now on the line. Would all our inside jokes die with the last day of school? Would all of our weekends spent together fade into the past? A thousand questions raced through my mind and I think that the very same ones raced through



everyone else's. It rained a couple of days but nothing could stop us or dampen our spirits; we had worked too hard. We traveled through the water with flashes of silver on our paddles and flew through the mosquito-infested portages on Hermes' shoes. For seven days, we enjoyed each other's company. It was so simple but that is what made it so special. When the trip was over, we returned our canoes, threw Huber and Szybbo in the lake and then went to put on some half-decent clothes. (When you are camping for seven days, your pj's were always a good idea because they were the cleanest!) We loaded the bus and were on our way home. On the bus, we finished a project that was given to us on the first day of this trip. We each had a piece of paper with everyone's name on it and a space to write a positive comment about each person. Huber and Szybbo were then going to type them all up and give each person their own sheet of positive comments. When we stepped off the bus after it pulled up to the school, we had finished BTW. I had made best friends, cried, loved, laughed (and laughed and laughed) and learned. I loved every moment I spent in BTW. It is the best memory I have of high school. In fact, if I had to start high school over again, I would see if I could do it twice!

BTW is a revolutionary way to teach kids so much about life. And it is scary that not only do most kids never get to experience it, very few schools even offer it. Resurrection is the only school in Kitchener–Waterloo that offers BTW or any other similar program. Why would innovative programs like this be challenged by budget cuts? The members of the boards of education must not recognize the passion and work the teachers put into this class and all we get out of it.

"Don't get me wrong about the workload though: projects like water testing using real chemicals, tracking animals and learning how to read a geographical map beat doing four essays for each one of your classes in normal school."

When I started writing this piece, I had only intended it to be a two-page reflection. But when I started to write, I couldn't stop! For a program and the teachers who taught it to invoke a passion that two years later still causes me to smile at every memory and to remember almost every lesson I learned in and out of the classroom is a great accomplishment. I owe a part of who I am now to BTW. That is what *real* learning is.

Elise Pierre is a graduate of the BTW program and studying English at Wilfrid Laurier University with the goal of eventually becoming a teacher.

Integrated Programs Bibliography

by Connie Russell and Aynsley Klassen

The following is a sample of articles and books, organized thematically, that focus on integrated programs at the secondary school level. There is, of course, much else written on the topic but these are good places to start if you want to know more.

Updates on the Ontario Scene

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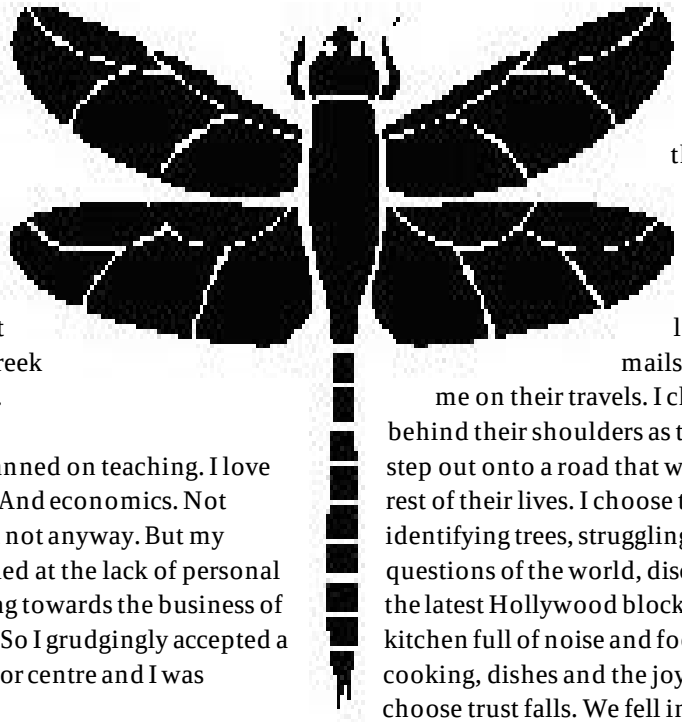
Connie Russell teaches in the Faculty of Education at Lakehead University. Aynsley Klassen teaches in the Bronte Creek Leadership Program, loves to eat cheesecake for breakfast, and is attached at the hip (and heart) to her truest partner in crime, her beloved dog Yoko.

Dragonfly Days

by Liz Hood

They were my dragonfly days. I never knew what hit me really. In a life where I had bemoaned the sad absence of a coming-of-age ritual — the camping, solos, and wilderness trips that were old hat for my peers — I found myself both facilitating and participating in one of the most powerful experiences of my life, teaching at what is now the Bronte Creek Leadership Program.



No, I never really planned on teaching. I love plants. And politics. And economics. Not people. Or I thought not anyway. But my radical inner self railed at the lack of personal progress I was making towards the business of changing the world. So I grudgingly accepted a position at an outdoor centre and I was hooked.

After teaching at outdoor centres, parks and camps, a job fell in my lap. It meant working with the demi-god Mike Craig (so described in my Waterloo community who spoke his name with reverence) at the illustrious Bronte Creek Project. I felt small and up against a calling both destined and frightening. But bolstered by the simultaneous hiring of my best friend at the other site, I stepped onto that path. And never wavered.

You'll notice I've not yet mentioned anything about my interest in integrated programs. Right, well there it is. I was about as clean a slate as they come. I had never seen the horrors of the inside of a teacher's college (since then I have, and I survived), never heard the rhetoric of The New Curriculum, never had to imagine what is was to teach any differently than the idyll I had come to know as "teaching." My understanding now, and respect for those who choose the classroom, is infinite. And I never want to do what they do.

Instead I choose this: I choose knowing my students because I live with them every day. I choose late night talks and e-mails years later updating me on their travels. I choose to stand behind their shoulders as they pick a path and step out onto a road that will take them to the rest of their lives. I choose tying knots, identifying trees, struggling with the big hard questions of the world, discussing the merits of the latest Hollywood blockbuster. I choose a kitchen full of noise and fooling around, cooking, dishes and the joys of sharing a meal. I choose trust falls. We fell into each other's arms for five months and after that we never learned to let go.

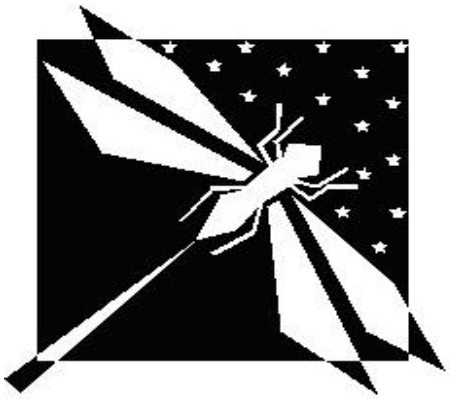
OK, it wasn't perfect. My students would never hand in assignments on time, sometimes the rice would burn, and I both lost and found a life:

> "Just like this journal, the relentless mixing of my work and my life can be confusing. It makes me question if this is to be the way of things; when work blends with play blends with school, blends with life. . . .[T] he leaves are turning and I almost missed it. Everyday I come to this place eyes turned inward, thoughts winging elsewhere — to the cupboards and fridges, the big box stores and Zehr's aisles — never to the colours burning

> the tops of the trees golden, ochre, sienna, crimson, tangerine, goldenrod. . . . I need to make some distinct lines between my work and my life. It spreads too much and I am weary of it . . . Carving out space seems infinitely hard."

This excerpt was written when I still found time to write in a journal. Soon I stopped. My reflective nature was squashed somewhere between directing and shopping for an 80-person Earthkeepers session, marking the Healthy Communities assignments and planning the Eco-Conference. A small price to pay, of course, when you realize that you are preparing the ink that will indelibly mark the life of another person.

Bronte Creek became two things for me: a place where lives were changed, and a place where the fate of the planet changed. I don't need to tell you that for too long we have taken for granted that the Earth can absorb the consequences of our actions. Before Bronte Creek became my life, I traveled enough to see for myself the inequities that exist between North and South. I have seen a clear-cut and I have seen a barrio. I have marched in protests and I have vowed to ignore it all and flee to some yet untouched place and spend my days living in exile and peace. Yet none of those were places to anchor a soul's longing. I learned that teaching in the environment of community and support was the most effective, most inspiring and most hopeful thing I could do to address the inequities of the world. I could see ignited in the eyes of my students the fire burning in me. I could see that the changing of hearts and minds had begun.



Integrated programs like Bronte Creek change lives. I am not so old to have escaped being raised by television. While the planet limps along, we human stewards suffer from loneliness and alienation and are preyed upon by corporate advertising urging us to fill our holes with things, urging us towards dissatisfaction with our selves, with one another.

But you can see the slow process over time, see how a kid opens up slowly, not trusting her senses that tell her she is safe to share feelings and thoughts, that it is safe to risk herself here. It's hard to trust when most of us have a lifetime of messages programmed into our brains that making ourselves vulnerable to others means being hurt. But it does happen, the opening. Sometimes right away; with others their opening in the last week of the program is like a jewel, or a flower, perfect and fragile and precious. There is simply nothing comparable to the intimacy and trust developed in a five-month old group — the laughter, the efficiency, the ease, the release. For many of my kids, this was the first time they understood community because they felt it in their guts.

I feel some need to end this reflection with a realistic discussion of integrated programs in this political climate, the logistics of adapting to new curricula, funding and so on. But I will resist that voice, knowing it all to be true. I will speak instead with the voice of the girl who began a life there and tell you this: Programs like Bronte Creek and its cousins are vehicles to give kids back their own sense of power, their ability to connect, to feel compassion to others and the planet. They re-inspire kids to love learning, to think critically and to connect with the Earth that is their home — the home that is in dire need of their compassionate touch.

I am convinced this is so because it happened to me, and for that I will never be the same.

Liz Hood is a recent graduate of Queen's OEE program and a big fan of integrated programs.

Dragonfly Days

Crazy days
spill to crazy nights.
Even this wooded slope,
crickets chorus
gentle trickling
startled jay
is broken by planes
clamouring overhead.
Even peace is not full.
But we have moments —

Snatches of dewdrop
encrusted
jewelled webs
glistening by the 401.
Mist-cloaked lowlands where
faeries dwell
hides the Grand
hides the fields
hides the quarry
but feels magical,
momentous,
is its moment as it passes.

The fragile sickle of a fresh
new moon
cuts and bleeds
its beginning.
Growth is painful and
alarming,
all newness and uncertainty.

But needed
to break the skin,
to feel the split
along the shoulder blades
arching neck,
sucking, pulling
peeling back the old,
worn faded thing
to begin
again.

Regimented Business Becoming . . .

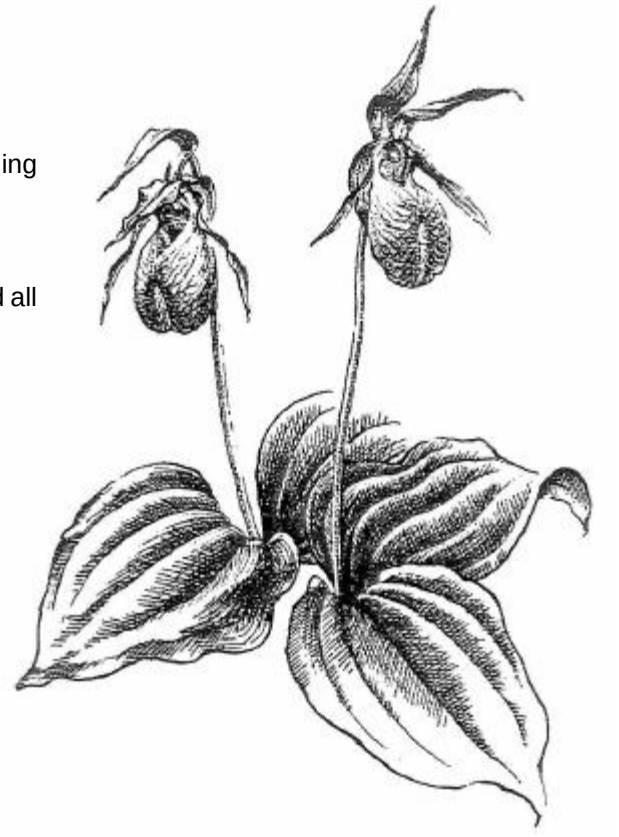
The days fly by
and they try me
as I ply my hand
at this business of
becoming.

The highway fades beneath
my feet
as the kitchen warms
and friendships form
in cinnamon
and margarine.
The air chills
and the shrill cry of kids
echo and fade
from this place.
And so the learners
learn to teach
and in the teaching
learn to be the students
of their own journeys.

And the time ticks past.
The minutes
and the moments
of regimented discovery
and stolen scraps of
camaraderie.
The sound of voices singing
sneaking down the hall,
of burning cork,
bits of twine —
these precious each and all
I'll take from this time
of us
together.

What are we but strangers
sharing space?
In my face
and in my heart
on my mind,
all the time.
Bring you with me
out to tea,
to the show
and in my dreams
you walk with me.
And so it seems
you shall stay.

First to mark me,
first to make me,
first to push and
nearly break me,
first forever,
teacher-friends,
first forever
beyond this end.



Student Voices from the ESP

Here are a few of this year's Grey Highlands' students' impressions of their integrated Environmental Studies Program, written on the bus home from a 10-day canoe trip in Temagami.

I know I complained a little about everything, but I want you to know I had a really awesome time in this course and I will highly recommend it to everyone. The 24-hour experience was very memorable; it was a kind of a meditation time, which I think is important to do. It's great how everyone is included in everything. The games, like Capture-the-Flag, were fun. It kind of allows you to express yourself. Rock climbing is definitely something I think you should keep doing. I'm not sure if I'm a wimp or what, but I really feel like I pushed my limits in a lot of ways. Temagami would have to be the biggest accomplishment and I feel great about it. We are really fortunate to have this course in our school and I commend you on all the hard work you've done to put it all together throughout the years.

Anna Neil

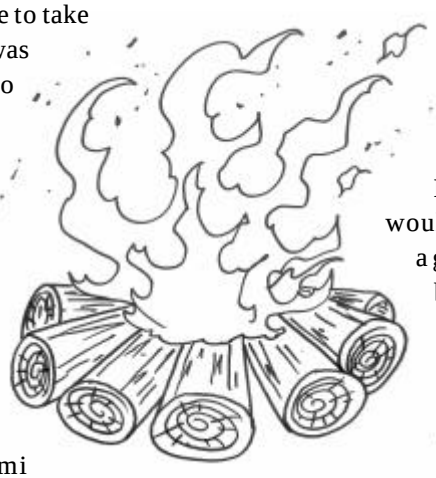
At first, I wasn't positive I was going to like the course, but in the end, I really, really enjoyed a lot of the things that we did. My favourite part of the course would have to be Cyprus Lake and Temagami, except for the bugs and rain. I also enjoyed going rock climbing in Guelph, mountain biking, ultimate Frisbee, "crazy night game" at Cyprus Lake and winter camping. I am really happy that I got the chance to take the course with everybody that was there. I felt like I became closer to most, if not everybody. I will definitely recommend this course to others and I will always remember all of the fun I have had.

Bryan Hannon

The Temagami trip was Da Bomb!! I learned so much new stuff, it was amazing. I will never forget my time in Temagami with all the bugs. The course, in general, was awesome also! Everything we did was a new challenge and a new experience. There are many long-lasting friendships coming out of the course. I really liked the journals even though there were times when I didn't want to write, but being able to make it something that reflects you as an individual was awesome. I also loved winter camping, skiing with Fletch, rock climbing, the 24-hour experience, Cyprus Lake, co-op, mountain biking, ultimate Frisbee, orienteering, just chatting in the portable. Everything allowed me to push myself to new limits, stuff I thought I could never do. Awesome job, I will definitely be passing on the word about this course.

Allison Essland

This course has been, by far, the best course that I've taken in high school. It has changed my outlook on things, especially environmentally. I think that I understand a lot more now just how important the environment is to all of us. I also feel great because I realized that I can do a lot of things that I never would have thought I could. I wouldn't change much. It seemed really organized. I liked the student teachers and all the trips that we went on. I couldn't believe when I did a 1050 m and a 750 m portage in one day, carrying the canoe! I felt so great afterwards, like I had really accomplished something. The meals were great, but I wouldn't have peanut butter and jam for more than one day! You picked good groups (for the canoe trip). I think it might have been a bit more fun for some people if they picked their own, but it was good. I got a chance to talk to people I wouldn't normally. Overall, it was a great course. I loved it. I'll be bragging about it for quite some time. The only thing that made me mad was getting my journal wet!



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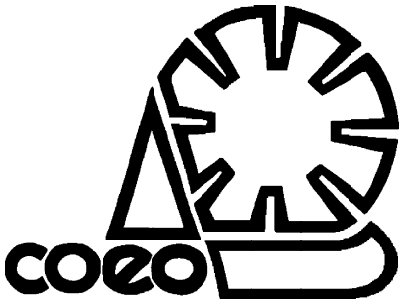

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