Developing Ecological Habits of Mind Through the Arts

Rena Upitis
Queen's University, Canada

Abstract

This study describes the experiences of nine school-based artists who took part in a six-day professional development course on ecology and the arts at an off-grid wilderness facility. The course was designed to increase artist-educators' awareness of issues surrounding energy use and consumption as well as to provide them with direction for approaching these topics through arts-based learning in schools. Analyzing participants' views regarding renewable and non-renewable energy use, as well as documenting anticipated changes in personal and professional practices, were two important aspects of the research. Data were collected through observations and field notes over the six-day period, and through semi-standardized interviews which were conducted at the end of the course. Participants also completed an on-line survey regarding various energy conservation and consumption issues before arriving for the course. In the interviews, the artist-educators detailed what they learned about thermal mass, solar power, and consumer purchasing patterns. Most participants anticipated making changes in

their home lives, such as cooking with locally available produce. Participants also described anticipated interactions with teachers and students upon returning to their local schools, both in terms of content related to energy conservation and ways that they would approach this topic through their respective art forms. Some participants also indicated how they anticipated changing their own artistic practices in their studio settings, such as switching to less toxic materials and using fewer consumable items. Having the opportunity to live at an off-grid wilderness facility was a key feature of the course for all of the artist-educators who took part in the experience.

Developing Ecological Habits of Mind

Our planet is undergoing human-induced changes at an unprecedented rate. We who live on this earth destroy 17 million hectares of tropical rainforests each year—an area larger than the country of Switzerland (Nicholson, 2000). In so doing, we also eliminate up to 140 species of plant and animal life each day in rainforests alone (Rainforest Alliance, 2008). Unsustainable use of renewable and non-renewable energy sources is a related concern (Enger & Smith, 2006; Leakey & Lewin, 1995). Canadians are very much implicated in this environmental crisis: we are the world's second largest consumers of water, per capita, and are responsible for using the most energy, per capita, in the world (OECD, 2008).

Striking as these numbers are, they remain fundamentally incomprehensible to most people. Philosopher Mary Catherine Bateson (1994) has written about this kind of incomprehensibility, describing how we pay attention only to a small portion of the information we receive. Hearing statistics like those just cited will not shape the thoughts and actions of students or teachers. Instead, people must reach a deep and personal understanding about how their actions affect the earth. One way of reaching this kind of deeper understanding is through engagement in artistic practices. This research explores how the arts can serve to enhance understanding and knowledge in the field of ecology. For the purposes of this study, the arts are broadly defined as including the fine and performing arts (e.g., music, dance, creative writing), the media arts (e.g., electronic portfolios, photography), the outdoor arts (e.g., nature walks), and the domestic arts (e.g., canning and preserving, quilt-making).

The present study describes the first phase of a three-year research program designed to determine how artists, teachers, and students modify their habits regarding energy use as a result of being involved in an extended ecology and the arts curriculum project. Artists who are members of the ecology and the arts initiative of Learning Through the Arts (LTTA) of The Royal Conservatory work directly with teachers and students in public elementary schools in Toronto, Niagara, Sudbury, and Windsor. Nine of these artist-educators took part in

a professional development course on energy consumption and conservation in the fall of 2008. The Principal Investigator has had a long-term affiliation with the LTTA project as an external evaluator, as well as an abiding interest in both arts education and environmental issues.

The present study describes changes in participants' views towards energy use that occurred as a result of taking part in the course as well as anticipated changes in their personal and professional practices. The ways in which art-making and artistic sensibilities interacted with the topic of energy use are also explored.

Literature on Energy Conservation, Informal Learning, and Complexity Theory

Despite the urgency of addressing environmental issues through education and practice, there are many barriers that inhibit people from developing more ecologically sound habits. Research studies with consumers have demonstrated that barriers to conservation most often stem from a lack of knowledge about energy sources and use, entrenched habits and behaviours, and closed-minded attitudes toward conservation (OPA, 2007). Scholars have argued that the lack of personal connection to the issues, resulting in complacency regarding the environmental implications of one's actions, also leads to a lack of engagement with environmental issues (Orr, 1992, 1999). Still others hold the belief that energy conservation comes at the expense of quality of life (Orr, 1999). Misconceptions abound about off-grid facilities being dark, primitive, and uninviting. But many off-grid facilities have abundant solar-powered hot water, and temperate rooms created by the use of high thermal mass materials, insulation, and heat from renewable sources. A central premise of the present study is that these barriers must be overcome on a personal level by the teachers and artists who work with students in schools, so that they might, in turn, influence the actions of the students they teach through their professional work. Another premise of the study is that the arts provide a powerful means for engaging people in deeply personal ways.

The literature suggests that another powerful way of engaging learners in environmental issues is to link their learning to their local environments (Mumford, 1946; Noddings, 2005; Smith, 2008). The notion of becoming engaged through personally relevant issues also resonates with the literature on transformative learning in adults. Mezirow's (1996, 2000) work demonstrates that meaningful adult learning is a complex and multi-staged process, in which beliefs and actions stem from meaningful and novel personal experiences. According to Mezirow, it often takes a powerful catalyst to prompt an adult to engage in the partial dissolution of identity that is required in what he calls the transformative learning process. Mezirow calls this catalyst a disorienting dilemma. In her research on teacher transformation through art-making, Patteson (2004) demonstrated that art-making itself can serve as a disorienting dilemma. One of the goals of the present research was to determine whether, in this wilderness setting, art-making in

combination with the formal sessions on energy use, might serve as a disorienting catalyst for participants in the program, causing them to think differently about the environment, their art-making, and their teaching.

Yet another important way of engaging adult learners is through informal learning. It has been demonstrated that successful adult learning often occurs in informal settings—such as reading groups or quilting bees—when the instruction is integrated directly into the setting, and where there are many opportunities to interact socially with peers, including effective peer support and mentoring (Fuller, Hodkinson, Hodkinson & Unwin, 2005; Zepke & Leach, 2006). These features of informal learning environments also bear the hallmarks of complex learning systems (Davis, 2004; Davis & Sumara, 2006). Complexity theory focuses on patterns and systems and provides a way of conceptualizing learning associated with the arts and ecological issues that goes beyond the individual actions and thoughts of learners, extending to broader social and physical spheres. Because of the nested nature of complex systems, the learning of the individual is viewed as part of a greater whole: the individual learns, but so too does the system—whether the system is a contained classroom or a group of connected classrooms studying the same phenomenon.

Complexity theory first arose as a defined field of study in the latter half of the 20th century when various branches of science and mathematics conjoined to study adaptive and self-organizing systems (Capra, 1998; Johnson, 2001; Maturana & Varela, 1987). Because complexity theory seeks to explain how a system functions when its members are involved in some form of self-organization, educators have applied this framework to describe classrooms, schools, and other learning settings (Davis & Sumara, 2006). There is wide agreement about the key conditions that allow complex systems to arise: redundancy, diversity, neighbour interactions, decentralized control, and enabling constraints (Johnson, 2001). Common elements make the system robust, and such redundancy is present in most classrooms simply because most children are of a similar age. But diversity is also needed to enable a system to respond with flexibility to new situations. Redundancy and diversity work together through neighbour interactions where diverse ideas come into contact—and contradict, harmonize, or amplify one another. The collective also requires some enabling constraints, or a particular shared structure allowing for emergence of unexpected phenomena and learning. Further, complexity theory implies that knowledge systems are shaped by learners, even as learners are shaped by the knowledge they acquire (Davis & Sumara, 2006; Tomasello, 2000). This framework is particularly appropriate for theorizing about the knowledge and views of the environment held by students, teachers, and artists, as ecosystems themselves are complex systems and are modified and changed through cyclical feedback. Indeed, complexity theorists use ecosystems as a metaphor for encapsulating some of the features of the theory.

Theoretical Frameworks for Self-Regulated Learning in the Arts

Self-regulated learning (SRL) is widely recognized as a core feature of metacognition. The extent to which a person recognizes what enhances his or her learning and how he or she consciously chooses strategies to learn more effectively marks the degree of self-regulation present in the learning process (Montalvo & Torres, 2004; Reynolds & Miller, 2003; Zimmerman, 2000). The research literature suggests that students should be encouraged to develop metacognitive skills early in their schooling, thus avoiding the calcification of ineffective learning behaviours and attitudes (e.g., Bronson, 2000).

Three cyclical phases of SRL include both metacognitive and motivational components. The forethought phase includes task analysis, including goal setting and strategic planning and self-motivation, including expectations regarding outcomes. In the performance phase, attention, self-instruction, self-observation, and various task strategies are foregrounded. The third phase, self-reflection, includes self-judgment and self-reaction (Zimmerman & Tsikalas, 2005). SRL learning strategies—learning how to learn—are exceedingly relevant when what we need to know is no longer static or fixed, as in the case of environmental change.

A recent study in two American high schools led to the identification of eight 'habits of mind' associated with studio art-making (Hetland, Winner, Veenema, & Sheridan, 2007). Some of these habits of mind, such as reflecting (questioning, explaining, evaluating), persisting, and envisioning, can also be described as self-regulatory behaviours. In our research, we borrow the notion of habits of mind, as developed by Hetland and her colleagues in the studio context, with the idea of examining how these habits of mind might apply to other domains—in this case, to issues of ecology, and more specifically, energy conservation. While Hetland et al. suggest the eight habits of mind are important for a wide range of disciplines, they caution that it does not follow that the habits of mind used in the studio arts are automatically transferable to other disciplinary contexts. Our three-year research program will determine the extent to which the habits of mind developed in the arts overlap with ecological habits of mind, a topic that we begin to explore in the study reported here.

Other researchers have also demonstrated how the pursuit of music, visual arts, drama and dance, guided by teachers well-versed in self-regulatory practices and language, can support the development of students' self-regulation in arts education and beyond. Baum, Owen, and Oreck (1997) determined that self-regulation in the arts includes paying attention, using feedback effectively, problem-solving in a curricular context, self-initiating, asking questions, taking risks, cooperating, persevering, and setting goals. But Baum et al. found some students who demonstrated self-regulation during arts lessons were unable to use the same skills in other academic environments, a finding aligned with other empirical research on self-regulation (Zimmerman, 2000). In a follow-up study, Oreck, Baum, and McCartney (1999) examined the

impact of prolonged arts involvement for young people with interest, aspirations, and talents in the arts. In this second study, the development of resilience, self-regulation, and general habits of practice, focus, and discipline transferred to other out of school contexts. These two studies in combination suggest that self-regulatory skills can transfer between the arts and other settings if there is a cross-curricular focus, in which several subjects are approached as essential parts of a complete educational experience, and where the teaching of self-regulatory behaviours is an explicit instructional objective.

Electronic Portfolios and Self-Regulated Learning in the Arts

An electronic portfolio is a digital container capable of storing and organizing visual and auditory content, including text, images, video and sound. Electronic portfolios may also be learning tools when they are designed to support a variety of learning processes and are used for assessment purposes (Abrami & Barrett, 2005). Since they are web-based, they provide remote access that encourages anywhere, anytime learning and makes it easier for peers, parents, and educators to provide input and feedback. The use of portfolios has become commonplace, and even a requirement in some educational jurisdictions. Research has demonstrated that when students use portfolios, they assume more responsibility for their learning, better understand their strengths and limitations, and learn to set goals (Avraamidou & Zembal-Saul, 2003; Reideinger, 2006; Zellers & Mudrey, 2007).

Electronic portfolios have three broad purposes: process, showcase, and assessment. But most important of all, electronic portfolios can scaffold attempts at knowledge construction by supporting reflection, refinement, conferencing and other processes of self-regulation, important skills for lifelong learning and learning how to learn. Students who are self-regulated are cognitively, motivationally, and behaviorally active participants in their learning processes (Zimmerman, 2000) and thus may demonstrate better academic performance (Rogers & Swan, 2004). The active use of electronic portfolios can contribute to a student's ability to self-regulate his or her learning and to enhance meaningful learning of important educational skills and abilities, especially literacy skills (Abrami et al., 2007; Meyer et al., 2009; Wade, Schalter, & Abrami, 2005).

Electronic portfolios also provide a way of storing work that is less cumbersome than traditional portfolios in the arts, a particularly relevant aspect of the present research. In the **E**lectronic **P**ortfolio **E**ncouraging **A**ctive **R**eflective **L**earning (ePEARL), students set goals, plan strategies, store versions of work, and collect reflections, peer, teacher, and student feedback.[1] The use of multimedia allows students to store audio recordings of their reading,

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[1] To see demonstration videos and to explore the tools please visit http://doe.concordia.ca/cslp/.

and collect video images as well as written work. In addition, there are both prose and multimedia support materials for teachers and students embedded within ePEARL. The professional development just-in-time materials provide models of student-centred skills and instruction.

Until recently, evidence on the impacts of electronic portfolios on outcomes was sparse. Carney (2005) declared, "Electronic portfolios show promise for enhancing learning, but if we fail to critically evaluate our uses of the device, we may find that they will go the way of Papert's Logo turtles and become yet another educational fad—an innovation poorly understood and often implemented in ways contrary to its theoretical underpinnings" (p. 4). Zeichner and Wray (2001) concluded similarly: "Despite the current popularity of teaching portfolios, there have been very few systematic studies of the nature and consequences of their use for either assessment or development purposes" (p. 615). More recently, Barrett (2007) noted that, "The empirical research is very limited and focuses more on the development of teaching portfolios than on K-12 student portfolios" (p. 436).

A year-long non-equivalent pretest-posttest quasi-experiment conducted by Meyer et al. (2009) provides new evidence that ePEARL promotes significant gains in children's literacy skills. Participants in this study were from elementary schools (Grades 4–6) in Quebec, Manitoba, and Alberta, using Level 2 of ePEARL. The constructed response subtest of the Canadian Achievement Test (CAT-4) was administered along with a self-regulation questionnaire in both the fall and the spring. The student questionnaire data showed that students who used ePEARL reported higher levels of some SRL processes, including: setting process goals, listing strategies, using comments from their teacher to improve, and understanding how they are being evaluated, than students who did not use ePEARL. In our long term three-year project with artist-educators, teachers, and students, we will be looking for similar evidence, using the same research tools, to see if growth in SRL occurs in ecological habits of mind through a curriculum focus that engages artistic thinking while exploring environmental issues.

Summary of Literature and Theoretical Frameworks in Relation to the Present Study

The genesis of the professional development program that is examined in the present research was that changes in attitudes and behaviours toward energy conservation are best addressed through personal and direct experience, as supported by the literature on barriers to conservation, informal learning, and art-making as a transformative process. In keeping with this approach, the course featured a combination of personally relevant local issues and art-

making, with artists and teachers examining issues from their home communities through financial, social, legal, ecological, and artistic lenses. This work took place at an off-grid wilderness educational retreat centre, where formal instruction was complemented with opportunities for informal learning (see Appendix A).

In addition, the course involved a cross-curricular focus with arts education and ecology and explicit instruction regarding self-regulated learning, so that these processes might in turn be taught by the artist-educators when they returned to their school settings. One course session introduced the electronic portfolio, ePEARL, focusing both in its theoretical basis and practical applications in arts education. The research questions outlined below were designed to determine whether this potentially compelling combination of a wilderness setting, formal and informal sessions, and a cross-curricular focus, would lead to changes in attitudes and actions for the artist-educators. Further, we aimed to determine whether any perceived changes could be described from both the point of view of individuals as they learn to self-regulate their thinking and actions about energy use, and in terms of the system as a whole—in this case, the group of artist-educators taking part in the course.

Research Objectives and Questions

The overall aim of the three-year research program is to describe changes in artist-educators beliefs, knowledge, and actions towards energy use that occur as a result of taking part in guided professional development sessions, and how such changes affect their teaching in schools. A secondary objective is to examine how a teaching approach that emphasizes developing ecological habits of mind through the arts affects the attitudes and learning of the students and teachers involved in the program

The present study, which focuses on the first fall professional development course for artist-educators, was designed to address the following research questions:

1. What knowledge did the artist-educators demonstrate regarding energy use at the beginning and at the end of the six-day course?
2. To what extent did the informal interactions and arts activities facilitate changes in knowledge and attitude about energy conservation and use over the six-day period? More specifically, did the arts in combination with a wilderness setting provide a disorienting dilemma for the artist-educators?
3. How did the artist-educators anticipate making changes in their personal and professional lives as a result of taking part in the course?
4. To what extent did the artist-educators embrace the possibilities of developing ecological habits of mind with their students through the use of the electronic portfolio, ePEARL?

5. To what extent was learning evidenced on the part of the group (or system) as well as for the individual participants? How well did the literature on adult learning, complex systems, and self-regulated learning in the arts appear to account for changes in participants' attitudes, knowledge, and actions, both on an individual and group level?

Methodology

Course Schedule

The course opened on a Sunday evening with an outdoor arts experience designed to sensitize participants to the environment where the course would take place. Following the opening meal and orientation to the facility, participants were introduced to the course materials and a reading on place-based education was distributed (Noddings, 2005). Participants were asked to identify a local ecological concern before arriving at Wintergreen Studios[2], where the course took place. These issues were also shared in the opening session, and were developed in various ways throughout the course. The next four days featured formal morning and afternoon sessions dealing with issues such as local food production, energy use, sustainable building, the use of electronic portfolios (ePEARL), and the Ontario curriculum (see Appendix A), linking these issues to the local issues raised by the artist-educators. Some of these formal sessions involved art-making, such as a day-long session on collages and a half-day poetry session. Music events featuring local musicians took place for two of the evening sessions, with informal opportunities to gather during the remaining evenings. The course closed on Friday morning with an examination of how ecological issues could be applied to one section of the Grade 3 Ontario curriculum.

Data Collection

Prior to beginning the research, the study received ethical clearance from the General Research Ethics Board (GREB) of Queen's University, and after receiving information about the study, all nine participants who had registered for the course signed consent forms, agreeing to take part in the study and to having still photographs taken for the purposes of reporting the research.

Before arriving at the site, the participants were invited to complete an online survey assessing their knowledge of energy consumption and conservation (see Appendix B). All but one of the participants filled out the survey. Five researchers and twelve facilitators interacted with the

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[2] http://www.wintergreenstudios.com

participants over the course of the week, observing sessions, and taking field notes and photographs. On the final day of the course, semi-standardized interview protocols were used to interview all of the artist-educators (see Appendix C for interview guide). There were questions regarding participants' impressions of the site, of the formal sessions offered during the course, and of their beliefs and habits about energy consumption and conservation. Interviews were transcribed and analyzed and the most prominent themes were extracted from the interviews and field notes. All of the transcriptions were analyzed by at least two researchers, after a core set of themes was determined through a preliminary analysis of four of the transcripts.

Findings and Analysis

The findings for the present study are presented in terms of the five research questions outlined earlier. Accordingly, the following section begins with a discussion of the participants' knowledge of energy use and conservation prior to their arrival at Wintergreen, followed by a description of some of their learning as evidenced throughout, and at the end of, the course.

Knowledge of Energy Use at the Beginning and Changes by the End of the Course (Q1)

Based on the survey completed prior to the course, it was clear that most LTTA artist-educators were already sensitive to many issues regarding energy and the environment, particularly in terms of energy conservation. Certainly they viewed themselves as being environmentally aware as indicated by comments made throughout the course. However, even with this savvy group, many participants had limited knowledge about energy consumption patterns and environmental toxins. For example, nearly all of the participants underestimated the energy requirements needed for sustaining their current habits related to food consumption, shelter, transportation, and consumables. Participants also underestimated the true costs of using bottled water as opposed to tap water, and this surprising discovery became a theme throughout the course and beyond. That being said, in the words of one of the researchers, "The group was amazingly receptive and eager to learn more about environmental conservation and [highly] motivated to learn about environmental issues because they all have a powerful [artistic] medium through which they can spread their awareness of the environment."

There was a wide range of learning as indicated by the interview results, the field notes made by the researchers as the course unfolded, and by email messages sent to Wintergreen following the course. Participants spoke of having (a) greater awareness about water, (b) better understanding of energy use and renewable energy, (c) increased knowledge about thermal mass, insulation, and traditional building techniques (d) heightened sensitivity around

issues of food production, and (e) affirmed the importance of the land and place-based approaches to education. Each of these themes is now examined.

Participants learned about the costs of bottled water, and about the energy required to pump water up from a well, to heat water, and to treat grey water. Most participants gained a new understanding of how low-flow appliances such as toilets, sinks, and showers, could aid in water conservation, as the lodge at Wintergreen provided first-hand examples of all of these water saving devices and gave participants ideas for what they could do to adjust their own water consumption in their homes and studios. One participant claimed, "I learned more about water consumption than anything else." Another commented that, "We learned that bottled water costs 10 thousand times as much as ordinary tap water. This was stunning to me." Yet another participant noted that, "Most of us are now more aware [of energy requirements]— learning where the water here comes from, and that the water pump and water heater uses a lot of energy." The issue of reducing water consumption associated with toilets and showers is a significant one. Judging from American figures collected over decades, roughly a third of all municipal water consumption is domestic (Tchobanoglous & Schroeder, 1985; An Aecom Company, Tchobanoglous, Burton, Leverenz, & Tsuchihashi, 2007). Of this domestic use, nearly 75% of the water goes to toilets and hand and body washing. If consumers were to use low-flow devices such as those demonstrated during the course, this use would drop dramatically, not only reducing the call of water but also reducing the energy used to transport the water from its source to its ultimate consumer destination.

The awareness of how solar energy is collected and transformed to electricity was also a prominent area of learning for the participants. One of the formal sessions included a segment where various household appliances were tested for both the power they require, and calculations for energy were then made accordingly. Not only did participants learn about solar energy, but they learned about how energy is consumed—the amount of energy required, for instance, to power a computer or a hair dryer for a given period of time. As one participant put it:

> [I learned] TONS! It was fascinating to be sitting and being aware [of energy]. It was really fascinating with a new building, trying to track where the energy was going. This constant awareness of limiting energy that you are able to use here and the usage of it and unplugging from everything… it was fantastic.

Others commented about how the solar and renewable energy session made them more aware of the sources of energy and how it can be stored. A new understanding of the difference between energy and power was also achieved by the participants. One participant stated, "The solar energy session was interesting regarding the storage of

energy, and the difference between energy and power. The session helped de-mystify the technology behind it."

Every participant had something positive to say about the lodge and the 204 acres of wooded land that surround it. Comments about the straw bale lodge and living roof revealed the participants' delight and surprise at the success of these traditional building techniques. One participant's observations indicated how the direct experience of being in the lodge was a powerful teacher:

> So, it's one thing to read about it academically… the theory is that if you heat up [a straw bale building] once, you'd never have to heat it again all winter if you didn't open a door or window. And you think, "Wouldn't that be nice—but it's all science fiction." But to come and experience it and see—wow—that's actually true—it feels so warm on your skin.

Other learning around traditional building techniques was also evident. While the straw bale lodge remained the most poignant example for many of the artist-educators, there were others who were equally impressed by the three cordwood structures. One of these structures was a root cellar, partially buried underground and constructed from a section of road culvert 7 feet in diameter. As one participant noted, "And then there was the fridge versus the root cellar. We learned how older technologies can be used in modern times and ways."

Other participants not only commented on the energy implications of using materials with considerable insulation and thermal mass, but on the aesthetic qualities that result. After speaking of the energy issues around the strawbale lodge, one participant then observed, "There is also a very wonderful aesthetic effect with the plastered walls. The effects are so interesting, it is not flat, it has texture." Another participant commented on the aesthetic appeal of the "living roofs—even in their dormancy… I can't get my mind off them."

There was a formal session on food production, and during the course, the chef prepared meals using local and seasonal ingredients. While every participant commented on the full flavours of the food or about how the food was prepared with such "loving care," for one participant, the session on food production was the most salient feature of the course. She commented:

> My most memorable experience was the workshop [on the politics of food production]. It was holistic, grounded, integrated, passionate, political, and informative… I want to bring that message back to my community… [The facilitator] was hugely inspiring because she is living and doing, facilitating and connecting, not just preaching. You need to provide resources and then step out

and do it again somewhere else. Her living example of the truth of the situation is inspiring.

One of the formal sessions that appealed to all participants was the opening outdoor arts session, a Japanese Viewing Party (see Appendix D), which took place just south of the lodge. The attraction of this session was two-fold: it took place in a meadow as the sun was setting, and it was experienced as a collective event. Like other experiences on the land that took place during the course, it was the visceral learning that took place on the rugged piece of land that participants described most often. They also remarked on how taking part in the Japanese Viewing Party gave them the opportunity to be alone within the collective. A comment to this end is as follows:

> During the Japanese Viewing Party, I was really brought to a place of retreat. It was the most private place of the retreat, otherwise, when I was walking, I was aware I was under someone else's timeline. I would have liked something like the Japanese Viewing Party to happen once a day for the collective.

Other comments about the lessons from the land were related to simply being at Wintergreen or taking informal hikes through the forest. One participant commented that, "[Being at Wintergreen was] fabulous! We're immersed in nature, we don't hear cars, and we feel deep in nature." Yet another observed how, "The woods create a huge grounding. Life is very quiet this time of year, as far as animals…I found that silence different."

Learning Through Informal Interactions and Arts Activities (Q2)

Learning occurred through formal sessions, during informal interactions between facilitators and participants, and from being present in the lodge and on the wilderness site itself. Throughout the six-day course, there were opportunities for participants to learn from one another over meals, during hikes in the woods, during art-making sessions, and in the evenings when music was enjoyed and rich conversations took place. While it is difficult to ascertain the learning that took place during these informal interactions, it is clear that this aspect of the course was of benefit to the participants. Indeed, many wished for more opportunities to share informally—for more walks in the woods, for opportunities to share

their art forms with one another. Some of the comments about the informal aspect of the course and its benefits were:

> I thought it was so brilliant – the dance lesson led by the Swamp Ward Orchestra [one of the groups playing in the evening]. During our time here, every art form was covered. [It was done in] a really subtle way. It was brilliant and exciting.
>
> The most memorable thing wouldn't be any of the workshops. It was the music.

> This whole experience was a compilation of meeting people who are passionate about what they do, seeing and feeling what they do with that passion, and the whole whimsical fantasy that is thought to be frivolous in everyday life coming true here in a positive concrete way that is going to touch hundreds and thousands of people. Sunlight through glass in the Hobbit house, the woodstove in the morning…it was a panorama of little glistening jewels.

Anticipated Changes in Personal and Professional Contexts (Q3)

While most artist-educators were readily able to express what they had learned through the formal instructional sessions and through their time in the building and on the land, not surprisingly, many had a more difficult time identifying what changes might ensue in their personal and professional lives. A number of participants suggested that it was impractical to forgo driving a vehicle, for example, or to invest in photo-voltaic panels. Others suggested that it would take time for them to be able to process what they had learned into actual changes in practice, in terms of their home lives as well as their artistic and teaching practices. As one participant thoughtfully commented, "I don't know that I learned anything new that I could apply quickly." Another noted that one of the reasons that habits are so entrenched is that, "It is difficult to see how your actions contribute. That's the challenge. You need people to know, and people to care."

What is significant about their responses, however, is that most participants were able to identify at least one small change that might be possible in their personal and/or professional

lives, recognizing that even small changes can be profound when amplified by the number of people making such changes over time.

Some comments regarding anticipated changes were at the level of heightened awareness about energy and ecology, which participants felt would help them make changes over time. For example:

I learned a lot. My husband and I have been trying to change patterns of consumption, although we're not huge consumers. My new learning here was that I found out that I can, and want, to use less.

I feel like I've started to put things back in proper perspective. I'm inspired and motivated to live more simply, less wastefully, and less selfishly. [from an email received three weeks after the course was over]

In some cases, it was after leaving Wintergreen that the full impact of living off-grid for a six-day period was felt. The following comment was sent by email from one of the participants soon after the course had ended. The comment illustrates both how she noticed things in her environment in new ways that she hadn't questioned before, and the kinds of conversations she is now having with others who are attending to environmental issues:

It was quite something to leave Wintergreen, and realise I hadn't been in stores, banks, or driving a car for almost a week—I went into McDonald's on the highway to use the washroom, and was overwhelmed by all the plastic bottles! I think we will continue our learning experience for quite a while—I had some good talks last night and this morning with my friend in Toronto who is interested in wind-farms and other ways of making the world more ecologically sound and functioning as a complex, sustainable, and life-enhancing system.

Other comments about anticipated changes had less to do with overall attitude and awareness and were more specific dealing, for example, with food consumption and water, two of the areas where considerable learning took place during the course itself. For example:

> [The presenter on food] gave a list of the worst contaminated vegetables and fruits. That is going in my wallet and I will be using that. I do buy local, I do go to my farmer, but we have so little time. We still do that big grocery thing. I am going to try to prepare meals on Sunday more often. I really want to take my family and volunteer on a farm. I want to cook with my kids more. With the slowness of food I think we could make a big improvement.

> I have decided to start a rainwater collection, which is something I've wanted to do before but was unsure how… it's not as difficult as I thought! I have a consciousness again of how the things I do personally affect the world around me.

Still others commented on how they planned to avoid using toxic products in their homes and studios. One participant said, "Based on what happened here, I'm more convinced that I will be doing visual arts with nature-based materials."

Habitual habits related to arts teaching and studio practices were also questioned as a result of taking part in the course. As was the case for personal habits of mind, the habits associated with teaching fell under the two broad categories of heightened awareness or sensitivity to ecological issues in general and specific changes that these artist-educators expected to make in their practices. For some, taking part in the course was a re-awakening of a commitment they had made in times past to ecologically sound artistic practices. For others, part in the art-making sessions at Wintergreen reminded them of how the art-making itself is a powerful teacher, or, in Mezirow's (2000) terms, can provide a disorienting dilemma that serves as a catalyst for transformative learning. Another participant talked about how each art form must be presented in order to make it possible for learners to take part in art forms that they may not be experienced with or favour, as was the case for her during one of the sessions that she had been dreading because it involved the visual arts. She commented:

> [In the collage session] we started with print media. I started with just words like smog and statistics as the base. We then added a layer of images with a little of the words showing… it was like we started with the negative and pulled forward from that to hope…That was a memorable experience for me. [The presenter] gave us parameters that I could deal with. It demonstrated for me how definitely in visual art pieces you can bring up [local ecology] issues. These are ideas I will use in my teaching.

Still others talked about how they could continue to pursue their own art forms that draw considerable energy in more sustainable ways. For example:

> I am a potter and I use electric kilns and I am thinking of doing glass as well. I have always realized that electricity is sold cheaper at night. I have to be conscious of how I load a kiln and when I run the kiln…and I'm also looking at building a wood fired kiln. I will have to research that. I definitely want to build a bread oven. These are priorities that I am able to do now. The people here are inspirational.

A related comment was made by a participant who became more aware of the aftermath of art-making—what happens when the project is finished and the students take the work home as a temporary stop en route to a landfill site. She commented that she would

> re-evaluate how the students will use the art even after they are done with it—I hope it doesn't just become 'stuff.' It must have an environmental exit route. It was something I hadn't even considered before. You have to ponder about this; walking the walk in small steps everyday would be a huge factor... making one choice over the other. It will also change the supplies I use and how I use and dispose of them.

Self-Regulated Learning and ePEARL (Q4)

One of the explicit goals of the course was to plant the seeds for using a self-regulated approach to learning about ecology through the arts, and in so doing, incorporate the use of the electronic portfolio, ePEARL, as a potential tool for teachers, artist-educators and students for the three-year curriculum and research project. To that end, one of the sessions focused on the theory behind self-regulated learning, and introduced the participants to the ePEARL tool. Several of the participants saw the value of the electronic tool, but one of the participants, a dancer, was especially interested in ePEARL, partly because of her dedication to self-regulated learning, and partly because her own art form is often difficult to archive and critique with students. Several months after the course took place, she agreed to take part in a study involving one of the LTTA schools in Toronto, where ePEARL was used to support an Ecology and the Arts curriculum unit on sustainable energy. The students prepared movement sequences and dances, which were archived and critiqued using ePEARL. The results of this

work with the students and their teacher is described elsewhere (Upitis, Abrami, & Patteson, 2009).

Group Learning, Complex Systems, and Ecological Habits of Mind (Q5)

Perhaps the most profound learning, evidenced by the group as a whole, was the growing notion of energy as a community resource—something that belongs to us all. One participant was particularly taken with how his understanding of energy had been generally related to saving money. That is, in his home environment, one of the motivators for saving energy was to reduce out-of-pocket costs. But at Wintergreen, he became aware that the energy was "everybody's energy" and that conserving energy meant that the community could function as a whole. He noted:

> [It's a] different system in the city, where everything relates to an expense, an abstract money expense. Because [energy] is so plentiful, I'm thinking of conservation in terms of what I'm paying in money, not in terms of what I'm drawing from the community. [But here] whenever you're using energy, you're using everyone's energy. More than anything, that's a kind of a lesson that's come forward, and that's probably something I'll take back with me. Because when we say energy in the city, it's all related to pocketbook. That's the reason for it. I'm thinking of conservation in terms of what I'm paying in money, not in terms of what I'm drawing from the community.

This particular comment is important because it was one of the ways that the focus of the group was broader than having individuals simply think about replacing incandescent light bulbs with compact fluorescent light bulbs (CFLs). Rather, participants were engaged in thinking about energy use in broader terms—terms that, in time, might lead to what is arguably the most important change of all, namely, reduced use of resources.

Another participant's comment, based on a screening of the Internet downloadable film, The Story of Stuff,[3] narrated by Annie Leonard, also addressed this crucial issue of using less in terms of non-renewable resources and of producing less waste. This participant noted that until we all learn to consume less, modifying habits will only offer marginal relief to the energy problem—again, a community related form of learning that is also an example of a complex system learning and adapting based on the small actions of individual members of the group. Indeed, perhaps the most prevalent issue that came up for the group regarding changes in practice was the notion that participants wanted to identify "one small change" that

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[3] http://www.thestoryofstuff.com

they could make in their teaching practices. This was an issue that arose in multiple contexts: during the course itself, in the interviews conducted at the end of the course, and in face-to-face and email conversations several months after the course ended.

Participants also felt that this notion of one small change could also be communicated to the students they teach, beginning to change not only habits of behaviour, but habits of mind. In fact, as a result of this finding, it is likely that a central focus of subsequent professional development courses for the artist-educators will begin with one small thing rather than local issues, which was attempted but difficult to enact. A sample of the suggestions relating to one small thing appear below:

> We all know that water bottles are bad, but we didn't know how bad. I would like to study that more. And that would be something that could be passed on. Every kid in class could make a cup and use that cup for the year.

> Turning the lights off in a classroom…planning a school garden. Maybe we could encourage students to use less packaging and talk about what could the students do at home. One small thing that could make a difference. What if the student tried even one small task for a week?

The real test of one small thing will be if such an approach becomes a sustained change in practice or habit of mind—and a change for many people so that the small change has an overall impact of some consequence to the system as a whole, whether that system is defined by the boundaries of a school or a larger regional community.

Concluding Remarks

Several months after the course was over, email messages were still arriving at Wintergreen regarding the lasting and transformative impact of the course. In these emails, some artist-educators reported changes they had made in their home lives, artistic practices, and arts teaching. Others talked about how they had maintained a heightened sense of awareness about energy conservation through the long winter months. Some wrote about how the power of the informal music-making sessions and walks in the woods had remained with them. Still others spoke about the importance of connecting—and how courses like this one make it possible to weave a web that will foster healthier habits and ecological practices. One participant spoke about the weaving of a network of relationships to sustain social and environmental change, and how artists have a particular role to play in creating such a network and serving as advocates for more connected living. These comments, along with the findings reported in the previous section, collectively speak to the applicability of the theoretical frameworks outlined earlier in the paper. That is, local issues and practices appear to be a powerful and fundamental way to reach adult learners regarding the topic of energy use and conservation

more generally. The networks and connecting that some participants referred to are another way of showing how complexity theory serves as a useful model for both describing and analysing the learning that takes place within individuals and groups. The fact that several of the artist-educators continued to refer to the informal sessions, especially the music-making, also highlights two aspects of the research literature described previously, namely, the power of informal learning settings for adults and the ways in which the arts can serve as a catalyst for new habits of mind to take root. Finally, it would appear that the ongoing reflection that these artist-educators have evidenced indicates that some of them, at least, have achieved a level of self-regulation regarding energy conservation that in turn promises to yield shifts in ecological habits of mind and shifts in daily practices as well.

Overall, then, this research study has demonstrated the role that professional development can play in changing ecological habits through engaging in personally relevant environmental issues in a setting where such issues can be examined in context. The next phase of the research program will examine how the artist-educators who took part in the course brought their learning back to their homes and classrooms, and how, in turn, teachers and students were shaped by the artist-educators' work. What will be crucial, in this phase, will be to seek out and support changes in habits that do more than tinker at the margins. That is, the notion of one small change can raise awareness and can certainly mitigate some harmful environmental practices if enough people make such a change. But larger changes in ecological habits are needed so that, ultimately, reduced consumption comes to the forefront. Earlier in the paper, the focus on community energy and the production and consumption of objects were highlighted as among the more profound issues tackled by participants during the workshop. There is a danger that small modifications in practice—such as changing light bulbs—can lull people into thinking that they are "doing their part"—justifying, perhaps, the continued expenditure of resources that the planet cannot sustain. Ultimately, the success of the Ecology and the Arts initiative must be measured in terms of awareness and knowledge, yes, but also in terms of reduction of demand on the resources that are never going to be renewed.

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Acknowledgments

About the Author

Dr. Rena Upitis is a former Dean of Education at Queen's University, Kingston, Ontario, and is currently Professor of Arts Education at Queen's University. She served a six-year term as National Research Co-director of *Learning Through the Arts*, a multi-year project that brings artists to the classrooms of over 100,000 students. Her current passions revolve around the ways in which school architecture both constrains and opens up possibilities for learning. Rena has recently completed a book manuscript titled *Raising a School*. She teaches courses on music and mathematics curriculum methods, arts and technology, and research methods. She frequently presents at conferences and publishes widely in academic and professional journals, mostly on issues mathematics and arts education. Two of her books, *This Too is Music* (Heinemann) and *Can I Play You My Song?* (Heinemann) focus on teaching music in elementary classroom. A co-authored book, *Creative Mathematics* (Routledge) explores ways of approaching mathematics through the arts. Her various research projects, funded by national granting agencies, foundations, industry, and government, have explored teacher, artist, and student transformation through the arts and the use of electronic games in mathematics and science education.

Appendix A: Sessions and Schedule

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Breakfast						
MORNING SESSION 9:30-11:30		Environmental Education: Facts & Figures *Rena Upitis*	Evoking the Local Issues Through Art *Jan Swaren*	Politics of Food *Joli Manson*	ePEARL: Archiving Student Work *Phil Abrami*	Ontario Curriculum & Course Wrap-up *Rena Upitis*
Lunch						
AFTERNOON SESSION 1:30-4:30	Arrival	Energy Systems: How Wintergreen Works *Mike Scott*	Art and Local Issues, cont. *Jan Swaren*	Eco-Art: Poetry as a Means of Communication *Rebecca Luce-Kapler*	Sustainable Building *Rena Upitis*	
Dinner						
EVENING SESSION 7:00-9:00+	Japanese Viewing Party, Course Overview *Gary Rasberry & Rena Upitis*		*Sheesham & Lotus: Old-time fiddlers* Teilhard Frost & Sam Allison		*Swamp Ward Orchestra* Laura Murray, Jan LeClair & Alison Gowan	

Appendix B: Pre-Course Survey on Water, Conservation, and Ecology

Water[4]

1. The best way to save water at home is:

- o Check your toilet valve for leaks and fix them
- o Don't leave the tap running when you brush your teeth
- o Rinse your vegetables in a pan of water rather than under the tap

2. Shortening your shower and adding a low-flow restrictor shower-head can save:

- o 100 gallons of water/month
- o 700 gallons of water/month
- o It won't make any difference

3. Of all the water in the world, how much of it is fresh water?

- o Slightly less than half
- o About 20%
- o Only 3%

4. The most efficient way of boiling water is:

- o On top of the stove
- o With an electric kettle
- o In a microwave

5. In one day, the average North American person uses:

- o 50 gallons of water in all
- o 100 gallons of water at home
- o about 20 litres of water

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[4] These questions were adapted and compiled from the Earth Day Canada survey, Earth Day Every Day, the Earth Policy Institute, and Festival Hydro.

6. Which of these four activities use the most water? Rate them on a scale of 1 to 4, with 1 being the most use.

- o Flushing toilets
- o Drinking water and cooking water
- o Doing laundry, dishes, and watering lawns
- o Taking showers and baths

7. How many litres/minute does a STANDARD shower-head use?

- o 12-20
- o 4-8
- o 40-48
- o 48-60

8. How many litres of water per minute does a LOW FLOW shower-head use?

- o 12-20
- o 4-8
- o 40-48
- o 48-60

9. What is the greatest source of ocean pollution?

- o oil tanker disasters
- o waste water from land
- o acid rain
- o offshore drilling
- o waste from ships

10. When considering all of the costs associated in creating bottled water (packaging, distributing, waste, etc.), the cost of bottled water as compared to tap water is:

- o 100 times more expensive
- o 500 times more expensive
- o 10 times more expensive
- o 10,000 times more expensive

Conservation and Ecology[5]

1. 30 hectares of tropical rainforest are destroyed every

   o   second
   o   minute
   o   hour
   o   day
   o   week

2. Which is the only province that requires all beer and pop be sold in refillable bottles?

   o   Alberta
   o   Quebec
   o   Manitoba
   o   Ontario
   o   PEI

3. Plastic soft drink bottles can be recycled into all but:

   o   auto parts
   o   shower curtains
   o   fleece clothing
   o   tennis balls
   o   food containers

4. 13 billion of these are delivered to homes in Canada each year:

   o   pizzas
   o   bottles of water
   o   newspapers
   o   bills
   o   junk mail flyers

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[5] These questions were adapted and compiled from an EcoQuiz by EarthCARE and from the Earth Day Canada website.

5. 14 million litres of this is used every DAY in North America:

- o fertilizer
- o motor oil
- o pesticides
- o paint
- o mouth wash

6. Pulp and paper is the third largest industrial polluter to air, water, and land in North America.

- o true
- o false

7. Over a billion trees are used to make disposable diapers in North America each year:

- o true
- o false

8. The atmosphere's natural process of removing carbon dioxide takes between 5 and 10 years.

- o true
- o false

9. 60% of a tree harvested for paper does not wind up as a paper product.

- o true
- o false

10. Like Australia, Europe, and the United States, Canada has laws that regulate and limit acceptable levels of six air pollutants: ozone, particulates, sulphur oxides, nitrogen oxides, carbon monoxide, and lead.

- o true
- o false

Appendix C. Interview Questions

1. What was your first impression of Wintergreen when you first arrived at the site?

2. Please describe your most memorable experience at Wintergreen.

3. How will you describe your overall experience at Wintergreen in terms of the architectural and environmental features? (Probes: sights, sounds, smells)

4. What did you learn about energy consumption patterns? [water consumption, etc.]

5. How has your experience at Wintergreen changed your ideas about energy conservation?

6. How is learning about energy consumption and conservation particularly important for artists?

7. What environmental issues are most pressing for you? To what extent were these addressed during this workshop?

8. Why do you think that arts are a good medium for increasing environmental awareness?

9. To what extent would you consider changing the artistic materials you use so that they are more ecologically friendly? How will this impact your art?

10. What new knowledge did you gain about energy conservation while you were at Wintergreen that will apply to your home life? To your life as an artist? To your life as a teacher?

11. Please describe what new idea about energy conservation will be the easiest to implement in your home life, art-making and/or teaching?

12. Please describe what new idea about energy conservation will be the most difficult to implement in your home life, art-making and/or teaching?

13. Please describe a new approach you plan to use in your work as an LTTA artist as it relates to energy conservation and the Ontario curriculum.

14. How will you incorporate this new idea as an artist/teacher of the arts?

15. How can artists increase awareness about environmental matters? To what extent will you be able to do this?

16. What improvements would you recommend in this workshop?

17. What would you like to do at Wintergreen next time you come?

Appendix D: Japanese Viewing Party

The Viewing Party
An Institute for Earth Education Activity[i]
by Steve Van Matre

One of the first formal activities you will take part in upon your arrival at Wintergreen is something called a Viewing Party. The following text describes the origins of the Viewing Party as well as a set of pedagogical notes for organizing and orchestrating a viewing party of your own.

A Viewing Party is an activity designed by a group called The Institute for Earth Education. The Institute for Earth Education, founded by Steve Van Matre, is a non-profit organization dedicated to helping people of all ages live more harmoniously and joyously with the natural world. The Institute designs and disseminates educational programs, grounded in deep ecology, that help people develop a basic comprehension of the major ecological systems and communities on the planet.[ii]

The Institute for Earth Education Viewing Party borrows from a Japanese tradition in which a person might invite guests for a special "viewing" of a single flower reaching the peak of its bloom, or perhaps a tree losing its blossoms. Sometimes moon-viewing platforms would be placed in gardens where people could go on special nights to just sit and watch the moon. Steve Van Matre describes a particularly singular and unique viewing party that would take place on late summer evenings when all the guests would bring small bamboo cages of winged insects. At the height of the party the guests let them all go at the same moment, then listen to the sound the insects make whirring away in the night air.

The Institute for Earth Education classifies Viewing Parties as "solitude-enhancing" activities whose criteria include the following:

+ Focus on being alone, in direct contact with the elements of life: light, air, water, and soil

+ Include specific things to do but gradually wean you away from a regular need for such tools

+ Emphasize both relating to the natural world and relating the natural world to yourself

+ Utilize and strengthen such nonverbal skills as watching, waiting, receiving.

+ Involve you in a personal realization and appreciation of the flow of life

+ Require the leader to carefully set your expectations and provide the structure necessary to foster your experience

One of the Institute's most popular solitude-enhancing activities, "Magic Spots," alludes to the essential reason for this vehicle in its very title. We want people to reach out and touch the earth and its life, to discover for themselves the inestimable richness awaiting them there. As Thoreau so aptly expressed it: "You learn that when you sit down in the woods and wait, something happens!" Above all, solitude-enhancing activities demonstrate how a meaningful and rewarding experience with the natural world can be had without any conversation at all.

How to Lead a Viewing Party

Before you begin, explain to your group what a Viewing Party hopes to accomplish and go over the entire order of events very carefully. (It helps to repeat your instructions a couple of times.)

Emphasize that the focus is on the subtleties—for a nighttime experience that might include the silhouettes of trees, the texture of the earth, the shades of black, the sounds and smells of the night air, perhaps reflected sunlight of the moon reflected again by water or stone.

Many people in our contemporary Western societies are so over-stimulated that if a plane doesn't fly over the peak of such an event, with someone parachuting out twirling sparklers, they're likely to respond: "That wasn't much." So be sure to set the expectation that what you are going to view is not the shooting stars, nor the lights of the city, but the natural world turning away from the sun.

Of course, Viewing Parties don't have to be held just at night or just in fair weather. Van Matre describes one of his most memorable viewing party experiences: it took place in mid-afternoon on the edge of a bluff overlooking the prairie in Manitoba. Although we didn't carry a candle lantern, everything else was exactly the same, and we settled in to view the patterns the wind made as it blew across the grasses from as far away as the eye could see.

Be sure to emphasize also that Viewing Parties are held in total silence, and that the lighting of the old candle lantern signals the beginning of the silent time. Point out that people should also sit up at the party. When you lie down, you're in more of a passive mode, and we want to be sure they can actively engage with the flow of life around them.

Describe the plum wine you'll be serving by saying that we've also borrowed a little something extra from the Japanese, something we think adds a nice touch to the experience. Make sure they understand they'll only be getting a small amount, just enough to sip, and explain that if people don't want to share the wine, that's fine, they can just wave a hand when you come by, and you'll pass on. In any event, they can still enjoy the wine's fragrant bouquet on the night air.

Finally, conclude your explanation by asking everyone in your group to meet you outside after a short break (be sure everyone dresses for the weather and include "sit-upons" if necessary).

After you have met the group and lit the candle lantern, ask everyone to line up behind it. It's important to line them up carefully, single file, before you begin. (Go down the line touching the participants and counting them off. This way you make sure you have their attention; you physically establish a single line—thus eliminating conversation between pairs; and you check your numbers so you don't leave someone behind.) Explain that you will set a slow pace and ask the participants to walk very carefully, always stepping just behind the person in front of them.

When you reach the spot you have selected beforehand, motion people off to both sides of you, forming a sort of "gallery" of viewers. They should all be facing the same direction and they should sit fairly close to one another—not touching one another but close enough that they can feel the silent sharing of the view.

Blow out the candle lantern and settle in yourself for a few minutes. After everyone has had a chance to begin absorbing the view, bring out the plum wine and start your rounds, pouring each person a small amount (about an ounce) in his or her special cup.

When you've completed the serving of the wine, return to your seat and settle back in again to enjoy the experience yourself. Allow about fifteen minutes of viewing time, then re-light the candle lantern and stand up to signal for departure. Walk away very slowly, allowing plenty of time for everyone to line up again behind you as you prepare to return.

When you've arrived back at your starting point, step aside and quietly say goodbye to each person as he or she walks by. This breaks the silence and adds a personal touch to mark the end of the experience.

General Notes

There are several varieties of imported Japanese Plum Wine. For a non-alcoholic substitute, try white grape juice or sparkling cider. (Don't overdo it on the drink though. One round is enough.) The best cups are those made by a potter especially for this purpose—nothing too fancy—just ask for something with an earthy look and feel, something about the size of a traditional sake cup.

Carry the bottles of plum wine and the cups in a small day pack. Wrap them in towels to keep them from clinking together, and crack the seals on the caps ahead of time. If you use potter cups, you can pass them out to each person (from a small basket) as you line up before hand.

Select your spot for a Viewing Party with some care. At night, great vistas are not always the best. Look for a small clearing where the silhouettes will offer more variety. A morning mist promises to reveal hidden views as the sunlight slowly dissolves these 'natural curtains.' Don't overlook the possibilities provided by light rain or snow either, and remember the fog suffuses everything with magical qualities.

Don't set up a Viewing Party too far away. A five-minute walk is ample. And if you're taking a group in the dark, be sure the path is smooth and clear. You may want to place a couple of candle lanterns along the path where there's a tricky spot to negotiate or when you have a fairly large number of participants. If you can't find a candle lantern, make one.

For first-time participants, a thirty-minute experience is about right. For the old-timers you may want to extend that a bit. Remember, the point of a Viewing Party is to get away from all the words—to feel the earth and its life on a different level. Refrain from the temptation to go back and "process" the event.

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[i] This description of a Viewing Party, originally reprinted from "Talking Leaves," Winter/Summer 1986, appears in The Institute for Earth Education's Associates Manual.

[ii] For a more detailed look at The Institute for Earth Education's philosophy and programs try, Van Matre, S. (1990*). Earth Education: a new beginning.* Warrenville, Illinois: The Institute for Earth Education.

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