Creating a Spark with Outdoor Education

Adria A. Gleeson

Vancouver Island University

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Abstract

By reflecting on my own teaching practice and listening to my students questioning their learning I realized that I was not using my best practice. This paper examines some of the benefits of reconnecting children with nature and how doing so can create meaningful learning experiences to engage students. This study sought to answer the following questions: How do I go about making a change to my teaching practice that better suits my needs and those of my learners? How can creating a nature connection for my students ensure learner engagement? I conducted interviews with four local educators and wrote the results up as case studies. I then examined each one and pulled out the common themes. These themes along with the literature in favour of outdoor education helped me create a set of learning experiences that included being outdoors, being active and getting to know our own school yard. The outcome of this project allowed me to change my teaching practice and to create meaningful learning experiences for my students.
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Chapter One - Introduction

When I first started out teaching in Northern Ontario I believed that I was going to make a difference, that students would love learning French in my classroom. I planned lessons that incorporated singing, speaking, reading and writing. The students were well controlled and they all sat nicely in their seats. We were all a happy bunch or so I thought. Some time in my fifteen year career I fell into the trap of instructing the students to do the same thing every day: singing, speaking, reading, writing, and sitting nicely in their seats. My days were well planned out and each lesson covered prescribed learning outcomes. It was safe for me, the students did what they were told and strangely enough I became known around the school as the teacher the students liked. My class was safe and predictable and is that not what most students seek?

My career progressed, time passed and very little changed in my classroom. I taught the way I had learned at school, my students sat in rows at their desks, they read independently from textbooks, and showed their comprehension by answering questions. It was controlled, I was in control and the students learned how to sit properly and listen. Most of the students complied but there were some for whom this teaching style did not fit. These students questioned, moved around the classroom whenever they could and sought out opportunities to talk about the subject matter, instead of just completing the task at hand. The behaviour of this particular group of students caught my attention and it was this behaviour that made me uncomfortable and I became more and more restless. I recalled their voices questioning, “Why are we learning this?” I did not always have the answer and this unknowing made me reflect more on my practice. If the learning had no meaning to the students then what was I doing? What was the point? I had to figure out a way to make learning meaningful and relevant. These students’ voices were strong and I had to listen to them.
I looked around my classroom and wondered if what I was doing was having any long-term lasting effects. Was my teaching having an impact and making the students think beyond the school walls? Was my teaching style the best way to teach? What was it about my teaching that made the students question the relevance of the subject matter? They seemed to be bored but was there more to it than just the delivery of the lessons? Inside I knew that always teaching the same way was not effective teaching and that my need to be in control was hindering my students’ learning. My teaching practice had to change but I was unsure of how to change. As I reflected on my practice I remembered occasionally teaching math lessons using manipulatives, like blocks and dice, and how much the students enjoyed using these objects to learn. Also, in a measurement unit the students had to measure the actual dimensions of classroom objects. This task was exciting and the students became chatty and engaged. The learning had meaning and relevance. They loved the opportunity to manipulate these objects and to socialize and problem solve with their peers. If I could draw on these teaching methods and use them daily could I address the needs of the group of students that I felt like I had been neglecting, those learners with the strong voices?

With that question rattling around in my head I signed up for a Professional Development session titled Outdoor Experiential Learning. I love the outdoors and spent my childhood in the woods of Northern Ontario. I loved being in nature, hiking in the forests, fishing on secluded lakes, and building forts behind our Lake Superior camp. I had somehow forgotten to weave my interests and myself into my teaching. How had I let my need to be in control of a classroom become so important that I had lost myself? At this Professional Development session I soon learned the value of instructing in an innovative environment called “outside”. It was different from the way that I had been taught but I liked it. We went outside and walked to the beach, on
the way, talking about ourselves, our challenges in the classroom and why we were interested in changing our teaching practice. While at the beach we learned about eagles, marine life and tides. On the way back we stopped at the park to try an active simulation of the life cycle of a salmon. We were all curious, soon engaged and truly having a great time, all the while thinking about salmon and their difficult journey. This was incredible as I quickly thought of my own class and how much more the students would learn this way rather than reading about things in a book sitting at their desks. The one obvious thing I noticed was that when we were outside many teachable moments just happened. They were not always planned and that was when I realized that control was not necessary for learning to occur. I needed to let go and think about my students’ needs over my own. My mind was transforming and I was beginning to see how my teaching practice would have to as well. Would being outside make students’ learning meaningful? I was willing to give it a try.

Back at school, I began taking risks by taking my class outside for Science lessons. I felt scared not really knowing if this was going to work. I would not have the same control outside that I had inside. I had taken my students outside before, but it was for the occasional Physical Education class or for a walk to the local museum. This felt different. I was taking my class to an unstructured setting for fun and learning and I had to set the scene. I worried about losing control of them. As the year passed we had many successful endeavours as we began identifying trees, empathizing with the salmon in the Salmon Model, learning about making maple syrup and visiting our neighbour’s garden. The students were abuzz even the silent ones. They loved the opportunity to do something different, to be in a space that allowed them to move and feel free and to talk about it. They were mirroring my exact sentiments. The students that I had worried about, the ones I felt I was neglecting, were beginning to see the connections and relevance to
what and how they were learning. It seemed that their sense of accomplishment with an outdoors hands-on task was satisfying. They were much more engaged in the learning and I could tell that they wanted to be there.

**Purpose and Importance of the Study**

A growing problem that I have observed and one that Richard Louv, a nature enthusiast, writes about is that children do not just go and play outside any more. Much more common now is the “over scheduled” child whose life after school involves a wide range of activities that keep them very busy (Louv, 2008). They have very little free time to just play outdoors. “For a new generation, nature is more abstraction than reality. Increasingly, nature is something to watch, to consume, to wear-to ignore” (Louv, 2008, p.2). This phenomenon is a reflection of today’s values that has become problematic. If I can help my students realize how important it is to get back to basics and reconnect with nature then I will have made a difference. Secondly, I wonder if can empower them to take risks if I release my own control over their learning. Will this ensure student engagement?

Learning can take place anywhere but what I have noticed is that, when given the opportunity to connect with nature, children come alive. Thinking back to my childhood and all the time I spent outdoors I remember knowing every short cut through the forest, where the good skipping rocks were at the lake and where it was best to build a fort behind our house. David Sobel, an advocate for place-based education where children really get to know their own backyard, states, “This is what I am advocating for-an approach to education that simultaneously honors developing a child’s love of the earth and developing a child’s academic and social competence” (Sobel, 2008, p.3). Sobel’s hope is the change I want to make in my practice to
benefit my students. I did have the right idea starting out as a young teacher. Teaching is about making a difference. I have since observed that providing a context, the outdoors, will allow students to learn, feel confident, energized and excited to be at school. Meeting the needs of all of my learners is the key.

I have also recently recognized that I have a responsibility to my learners that goes beyond the adage “I want to make a difference.” It is much more complex than this and involves helping them see that they must be engaged in their learning and helping them to actually be engaged. Will reconnecting students with nature create engaged learners? Will they come to see that they are “owners of their own learning” (Wiliam, 2010, p.145)? Will this nature connection create students who will see the relevance and meaning in their learning?

Research Questions

I realize that the change will start with me. I must be the catalyst in order to meet my students’ needs. Will a teaching methodology that is more student-led than teacher-led allow me to release my own control to the learners while they take more risks exploring outdoors? If so, I suspect the buy-in will be much higher for the students as the learning experience becomes more relevant. I realized that what I was wondering was this: How do I go about making such a change to my teaching practice that better suits my needs and those of my learners? How can creating a nature connection for my students ensure learner engagement?

Definition of Terms

Richard Louv, author of Last Child in the Woods, draws on the works of John Dewey to define experiential learning, “While environmental education focuses on how to live correctly in
the world, experiential education teaches through the senses in the natural world” (2008, p.202).

According to Dr. Karen Malone, researcher at the University of Wollongong in Australia,

Experiential learning is a process that develops knowledge, skills and attitudes based on consciously thinking about an experience. Thus, it involves direct and active personal experience combined with reflection and feedback. Experiential learning is therefore personal and reflective in nature, influencing both feelings and emotions as well as enhancing knowledge and skills (2008, p.8).

As students are allowed to ask questions and draw connections about what they are learning they have an emotional link to the subject matter and to the experience. This creates student engagement. The British Columbia Ministry of Education recognizes, in its document, The Environmental Learning and Experience Curriculum Maps, the value of these experiences. In 2009 it published a document that states, “… direct experience, critical reflection and negotiation and experiential learning present the richest form of learning” (p.9). Further explanation from Bill Proudman, a practitioner of experiential learning, reinforces this point, “Good experiential learning combines direct experience that is meaningful to the student with guided reflection and analysis…experiential education engages the learner emotionally” (1992, p.20). No matter how one looks at this teaching methodology the main idea is that the student is at the center of his own learning and is guided by the teacher to gain meaningful knowledge and skills.

Integrating the curriculum is a teaching practice that is also beneficial to learning. This involves, “incorporating a wide range of sources, related concepts and flexible schedules” (Hayes, 2010, p. 382). According to James Beane, “Curriculum integration is a way of looking at
what schools are for, about the sources of curriculum and about the uses of knowledge. It begins with the idea that the sources of curriculum ought to be problems, issues and concerns posed by life itself” (1995, p.616). Addressing problems that are relevant to the students increases engagement and provides them with opportunities to share and connect (Vars, 1991). Educators in favour of this teaching practice often hold the view that children should learn by direct experience rather than being told (Hayes, 2010).

The final term to be defined is narrative inquiry. This research project includes the story of my own teaching career and that of three other educators and their experiences using outdoor education. It seems that in order to honour their words narrative inquiry would be the obvious methodology. Narrative inquiry is the process of listening to stories, analyzing them, reflecting, and creating insight from them (Clandinin & Connelly, 1990). Once this process of “restorying” (Clandinin & Connelly, 1990, p.9) is complete, learning can occur. “We say that people by nature lead storied lives, and tell stories of those lives, whereas narrative researchers describe such lives, collect and tell stories of them and write narratives of experience” (Clandinin & Connelly, 1990, p.2). This is my goal as I strive to learn from other educators’ experiences. We all have the same passion: reconnecting young learners with nature.
Chapter Two—Literature Review

The needs of students who are disengaged with their learning can be addressed using a teaching approach that is both experiential, integrative and one that happens outdoors. The literature in support of outdoor experiential education reveals many benefits to children’s learning. Three key ideas that will be addressed in this section are: the developmental physical health benefits of going outdoors, developing a child’s sense of place and integrating the curriculum.

Why should children spend time outdoors?

To start is the theory that Richard Louv and David Sobel have advocated for, that is, reconnecting children with their natural surroundings. They feel that educators and parents need to reconnect our youth with nature (Louv, 2008; Sobel, 2008). They both agree that doing so will increase children’s awareness of and appreciation for nature. Instead of educating our youth about how dire our planet’s situation is we should be simply going outside to enjoy its beauty (Louv, 2008; Sobel, 2008). This reconnection will create a generation that will want to fight for a sustainable future; they will want to save the planet that they have learned to care for (Louv, 2008; Sobel, 2008).

Louv cites work by Robin Moore, who has worked in the field of landscape architecture as an educator, researcher, and consultant and who has designed children’s play spaces. Moore states, “children are losing access to outdoor space” (1997, p. 203). His research in 1978, 1980 and 1986 which is also supported by the more recent works of Kahn and Kellert in 2002 found various reasons for this: traffic dangers, the Bogeyman Syndrome, lack of play space, curtailment of children’s playtime, changing family relations, electronic media, air conditioning...
and the commercialization of play. The consequences of children spending less and less time outdoors are now being realized and Louv’s work with The Children and Nature Network aims to change them. Recent reports show that unstructured playtime that allows children to use their imaginations to explore outdoors is recognized as an essential part of wholesome child development. Diverse natural settings allow for curious scientific learning as questions are posed about the plants and trees around them (Burdette and Whitaker, 2005).

There are so many children who spend the majority of their free time indoors, interacting electronically, that a generation of our youth are unaware of the wonders that nature holds (Louv, 2008). Louv coined the phenomenon nature-deficit disorder as an unofficial non-medical diagnosis for these children. Today’s youth who choose to or are told to stay indoors are suffering from a number of problems ranging from increased obesity to threats to their independent judgement because their parents are afraid to let them outside (Louv, 2007, p.3). So how can we help solve this societal dilemma? All primary schools in Vihti, Finland, have implemented an outdoor education program that provides children with hands-on experiences of nature, forests and the knowledge and production of where their food comes from (OECD, 2011). The learning aims of this program are to allow children to learn by doing. The students need to collaborate with others, for example, in the garden, farm or forest in order to gain skills and knowledge that will make their learning meaningful. Environmental settings near the schools allow for social contact with local farmers and foresters. This builds community ties and provides a new approach to learning (OECD, 2011).
What Are the Benefits to Being Outdoors?

So what are the benefits to reconnecting children with nature? Several studies have reported that positive outdoor experiences result in increased overall life skills such as: creativity, observation, imagination, and relationship skills (Miller, 2007; Malone, 2008). One study reveals that learning outdoors and about nature allows children to feel more connected to their surroundings; they develop self-confidence and learn to take risks (Miller, 2007). Paul Clarke, an environmental educator, supports the claim that our youth are missing out when they spend all or most of their time indoors (2012). When children spend time outdoors, their connection to it allows for meaningful hands-on learning. Children can also develop skills that will help them to become successful in school (Miller, 2007; Malone, 2008).

Further to this is the realization that “our sedentary indoor lifestyles have contributed to childhood chronic conditions such as childhood obesity, asthma, attention/hyperactivity disorder (ADHD), and vitamin D deficiency” (Perrin, Bloom & Gortmaker, 2007, p.275) One report concludes that in order to combat these conditions more emphasis should be placed on promoting outdoor activity in nature (McCurdy, Winerbottom, Mehta & Roberts, 2010). Supporting Moore’s research around the design of play spaces for children was a study conducted at 59 Canadian schools that had taken an initiative to “green” their school grounds. Teachers, parents and administrators were interviewed about whether the natural features of their school yard had any influence over the physical activity level of the children. Seventy percent of the participants responded that the “green” natural features increased physical activity from light to moderate and fifty percent also added that the “greening” promoted more vigorous activity. The study also showed that the natural features were much more appealing to more children (Dyment & Bell,
According to another such study, “Play has the potential to improve all aspects of children’s well-being: physical, emotional, social and cognitive” (Burdette & Whitaker, 2005, p.46). These reports all point to the same conclusion that going outdoors is beneficial in promoting active healthy children.

**What Are the Benefits of Integrating Curriculum?**

Along with becoming disconnected from our natural world is the issue of keeping children engaged at school. How can we teach students so we maximize learning while making it meaningful for them? One such approach is teaching in a cross-curricular way, or integrating the curriculum. Why integrate curriculum? The school system itself is not designed to accommodate such a radical change. The school day is scheduled so that curriculum outcomes can be “covered” within a set time frame and the specialists stick to their areas of study (Drake, 2010).

There is little to no time or effort made to connect subject areas and collaboration with other teachers is promoted but not easily accomplished within these strict schedules (Drake, 2010). This approach is not new and has been rearing its head for years but has yet to make a stronghold, the idea that instead of teaching subjects apart from the others they should be taught cross-curricular or integrated (Drake, 2010).

Advocates argue that by teaching the curriculum as an integrated whole, pupils’ view of learning is likely to be more holistic, whereas if teachers emphasise the separation and discreteness of subjects it can establish artificial barriers in the minds of younger children and they may fail make secure connections between knowledge components (Hayes, 2010, p.383).
Integrating curriculum occurs when subject matter is connected and related in meaningful ways. It draws together knowledge, skills, attitudes and values from within or across subject areas to develop a more powerful understanding of key ideas (Alberta Education, 2007). Susan Drake has an established record of research in the area of educational reform and she indicates that "Integrated curriculum teaches core concepts and skills by connecting multiple subject areas to a unifying theme or issue" (2010, p.1). Drake’s many years of research have led her to the same conclusion that connecting subject matter is a valuable and effective teaching method. Benefits of this approach include greater student engagement, increased teacher collaboration and professional growth and more opportunities to differentiate learning, all especially helpful for at-risk students (2010, p.1). Integrating the curriculum leads students to see the relevance in what they are learning and how it can apply to their real world lives (Jacobs, 1989).

Supporting this type of teaching is research completed at the Integrating Curriculum Department at Eastern Oregon State College. In their report, “A Curriculum of Caring”, the benefits of integrated curriculum are illustrated. The participants in the study were given many opportunities to contribute their own ideas and opinions about what and how they wanted to learn and what resulted was a “negotiated curriculum” (Davenport, Jaeger & Lauritzen, p.352). After an initial attention-grabbing introduction to the co-created unit it was apparent that the students were enthused and fascinated at what they were learning. They took ownership of the investigations and soon their questions transitioned from, “What are we going to find out today?” into "We need to do this next. Can you [the teacher] get us the supplies we need?" (p. 352) Throughout the entire unit the students were engaged and eager to learn more. They completed a culminating celebration that allowed each student to present their learning in a different way. The benefit to student learning was evident and the initial time it took to plan the lessons was
worth it in the end. “An environment conducive to inquiry and exploration was created. Our perspective places the focus on learners and learning rather than on teachers and teaching” (p.353). One of the greatest benefits that this process demonstrates is that student learning is important and that the educators care about that. The students’ prior knowledge and skills are honoured as they work together with fellow students (1997).

A report on an Ontario Secondary School Integrated Environmental Studies Program done by Russell and Barton 2000 reveals that there are some schools offering an alternative approach to environmental education. Rather than the curriculum being organized around specific subject areas, environmental education is infused across themes or issues and many different subject areas are taught. In one such program students spend 75% of their days outside on school property, nearby farmland, forests and wetlands. Environmental science, outdoor recreation, and environmental education are learned as students test water quality, go camping in summer and winter conditions, rock-climb, cross-country ski, snowshoe, hike and complete a 16-day canoe trip. There are various assignments ranging from journaling, co-operative teaching of elementary students and presentations to the class. The research cited the benefits to student learning as, “learning outdoors was more effective than a traditional school setting, the students felt a sense of purpose and their learning was authentic and meaningful” (p.295). Also, students developed inter-personal skills that helped them communicate and cooperate better with others.

With all of these benefits it is not to say that there are not limitations to this program. The curriculum is still science and geography focused while the arts are neglected. Fundraising for this type of program is a challenge as the Ontario government claws back on funding for these types of initiatives. The teachers must commit to many extra hours for the field trips that occur
after school hours. Even after all of these limitations the benefits to student learning keep these types of educational programs alive.

**Place-based-Education as an Alternative Approach**

If, as educators, we want to develop the capacity within our students to become responsible citizens then we must start to teach sustainable education early on (Sobel, 2008). Sobel refers to sustainable education as in teaching children to think about their future and allowing them to see that they can take responsibility for change. We can instill habits of care for the environment, for the classroom and for each other in the young grades (Sobel, 2008; Clark, 2012). As students get older, they begin to expand their thinking to include the community and soon they see where their place is and how important they are. Environmental education that focuses on the local community can help children to see how they can contribute to making their school, home and community better places (Sobel, 2008). Sobel’s beliefs are valid as many believe that a “Berlin Wall” (Bigelow, 1996, p.15) has gone up between school and nature and children lose touch with the outdoors. Sobel adds,

> This is the situation in too many American schools, where children actively learn to “not-think” about the relationships between what goes on inside the school walls and outside in the social and natural communities. On the other hand, what would it be like if the Berlin Wall came down? What if children were asked to think, rather than not-think, about the earth? (2008, p.2)

Sobel’s approach to learning, called Place-Based Education, aims to teach young children early on about their school yard, neighbourhood and community. They really get to know the plant
life, trees, and animals in their immediate environment. This knowing creates a connection between children and nature. He reminds us that “Sustainability and environmental education must be approached in a way that is developmentally appropriate at a variety of levels” (2008, Oct.23). This approach nurtures children’s connection to nature and does not create feelings of helplessness for the doomed future of the environment (2008).

Sobel cites work done by Louise Chawla, a professor in the Environmental Design Program at the University of Colorado. Chawla conducted research into the reasons that adults have sensitivity towards the environment or why they consider themselves to care for the environment. Her research points to a need for “extended time spent outdoors in natural areas, often in childhood; parents or other family members; teachers or classes; involvement in environmental organizations; books” (1999, p.2). Chawla asserts that a long-term goal of education should be to ensure we have future adults that will want to care for the environment and protect it. We need to start early on to instill this pride and care for the natural world. Nurturing an outdoor connection while exploring and examining our local environments, schoolyard and neighbourhood is another strategy that I see as helping my students become more engaged at school. Helping them realize their role and importance in caring for the environment will instill habits of care once they really get to know their own backyard.

Many of the studies and much of the research of this project are not Canadian. After reading through this research I can draw many parallels to my Canadian school setting. I see the disconnect between children and nature more and more and the participants in this project also expressed the same. When Louv talks about children in the United States being over scheduled and spending much time in front of screens I can relate to this as this same trend is happening with the students that I have taught. As a teacher at a school with a very stable student population
I began to notice a change in the comments teachers were making about the general behaviour and concerns about their students. There was more discussion around children who could not sit still, those that had difficulty concentrating on a task and those children who did not exhibit cooperative play skills. Furthermore, Professional Development sessions were addressing our concerns as Controlling ADHD Compulsive Behaviour and Experiential Outdoor Education were offered as choices to learn more about.

One Canadian who has dedicated his life to reconnecting children to nature and educating others about our fragile earth is David Suzuki. He has conducted research here in Canada and has found that our youth do not spend enough time outdoors, are disconnected from nature, and have a lack of free time to just “play” outdoors. These findings are similar to those of some American studies.

This Literature Review focuses on a few of the benefits of children spending time outdoors and how doing so can motivate students and create relevant learning experiences. To aid in motivating students I have also drawn on the practice of teaching children to get acquainted with their own backyards. All of these aspects of “best practice” of teaching will be touched on by the participants in the interviews.
Chapter Three—Methodology

Qualitative Research and Narrative Methodology

This project is designed to draw on the stories of four educators in the field of outdoor education in the Campbell River and Comox Valley in British Columbia. The research questions are focused on their experiences. Their stories will be presented as qualitative data in the form of narratives and will be written as separate case studies. This approach seems the best as, “Qualitative research seeks depth over breadth and attempts to learn subtle nuances of life experiences as opposed to aggregate evidence” (Whittemore, Chase & Mandle, 2001, p. 524). There is much debate over the validity of qualitative research versus quantitative which is more scientific and based on facts and numbers (Whittemore, et al., 2001). Larson (1997) also argues that narrative inquiry requires close scrutiny. Whether a researcher’s interpretation of a participant’s story is valid and truthful comes into question (Blumenfeld-Jones, 1995).

“Qualitative research is pragmatic, interpretive and grounded in the lived experiences of people” (Marshall, Rossmann, 2011, p.2). Paul Hart, a professor at the University of Regina has written various articles and books about research methodologies suitable for environmental education. He describes narrative as "…the making of meaning from personal experience via a process of reflection in which story telling is a key element and in which metaphors and folk knowledge take their place" (p.68).

Narrative inquiry and outdoor education complement one another well, especially when outdoor education is concerned with the relationships people have with themselves, other humans and the environment (Keeble, 1995). Paul Hart and Kathleen Nolan’s analysis of the
types of environmental education research conducted in the 1990s, suggest that narrative certainly is an emerging form of outdoor and environmental educational research. They have found that "Environmental education research continues to grow as an active area of inquiry within the field of education" (1999, p.1).

**Participants in the Study**

The participants in this study have varied backgrounds and currently work in different milieu within the Public School system in Campbell River and Comox at the Elementary, Middle and Secondary levels as teachers and administrators. Their stories are individual yet their common passion for outdoor education is evident. I met all of them at the first meeting of a book club for *Coyote’s Guide to Connecting with Nature*. I quickly realized that I could learn much from these experienced educators.

**Conducting the Interviews**

Once I was ready to conduct the interviews I visited each site with my laptop. The first interview was the most interesting yet the most casual as it occurred, fittingly outdoors on the beach. I spoke with Sue Lidster and asked her my questions. I was unable to tour her classroom as she was on medical leave but assured me that once she was back teaching that I was welcome to visit. The interview with Steve Joyce occurred in his classroom and I was instantly drawn into his Outdoor Club by the wall mural of student photos. It was clear to me that Steve’s program and his students were very important to him. This second interview was inspiring as Steve’s enthusiasm for nature showed me that getting children outdoors needs to be a priority. Preparing for the third interview involved driving north to Sayward, which was about an hour drive. I had never been to this small village nor did I know much about the elementary school so I was
somewhat hesitant arriving there. I interviewed Marion Waters, the Principal of Sayward Elementary School, over the lunch hour. She allowed me to visit one of the two classrooms and some of the students volunteered to show off their school’s forest and trail area. This school’s efforts to make nature an integral part of every day is evident in the various photos of their outdoor adventures and the children’s art work made from found natural materials. I conducted the fourth interview in Lou Bakota’s classroom at Phoenix Middle School. As Lou welcomed me into his classroom, I noticed photos of students biking and hiking hung on the windows. This reminded me of Steve Joyce’s classroom. We talked for an hour about the benefits and it was again, obvious that I had found another educator that shared my passion for teaching outdoors. The sites were in different locations but they each showed a deep respect for learning and a connectedness to the natural world.

**Analysing the Narratives**

Seven interview questions posed to each participant were used to gather the qualitative data and a voice recording computer program was used to record their responses. Each interview was transcribed into a Microsoft Word document. Observational field notes were also transcribed after each site visit. To analyse the data, a thematic approach seemed appropriate in order to gain insight into the educators’ experiences, thoughts and ideas. I read over each interview and used different coloured tabs for each similar theme. Blue indicated the benefits of getting outdoors and in particular, encouraging physical activity, red was used for references to safety, and finally, green was used for any ideas about getting to know our school yard. Once each interview was coded with the tabs it was clear to see that these themes were touched on by the participants. The participants’ words were be grouped thematically as the emphasis is placed on what they have to
say rather than how they say it (Riessman, 1993). These themes helped form the units of study in the final chapter of this project.
Chapter Four-Findings and Results

Case Studies

This section of the project will clearly describe each of the schools where the participants teach. Each case study will be organized with the following headings: Background, Findings/Themes, and Recommendations.

Case #1: Sue Lidster, Teacher in the Comox Valley

Background

Sue Lidster is an Elementary school teacher who resides in the Comox Valley. She has taught as a grade 6 teacher at Brooklyn Elementary, and presently she is teaching grades 4, 5 and 6 at the more rural school, Huband Elementary. Her classroom is centred on the outdoors and nature. She strives to instill her love of nature in her students. She is passionate about reconnecting her young students with the outdoors and she has done extensive research in this area. She has spent time at Jon Young’s Wilderness Awareness School in Washington to really understand his principles of mentoring. I first met Sue on the beach between Campbell River and Oyster River. A colleague of mine put us in contact knowing we both had the same interests in outdoor education. Sue spoke of her own learning and understanding of environmental education and sustainability and this allowed me to easily ask her the interview questions. Below is an example of how Sue plans her day. She uses this template to weave Jon Young’s Core Routines into her teachings.
Findings/Themes

When asked about the benefits to student learning Sue quickly answered, “Students need to return to sensory and experiential practices.” This concept is one that she emphasizes daily so that her students understand their role within the natural world. She takes them outside to experience and feel the weather, trees, and plants so they feel a connection to them all. While outdoors she integrates the curriculum with project-based learning.

It is clear that the philosophy driving Sue’s work is “learn by doing”. She uses Jon Young’s principles and clearly mentors her students. She added, “What I value will maintain
nature.” She lives by the model that she would like her students to emulate. The challenges she faces as she delivers her outdoor environmental program are varied ranging from scheduling with colleagues to arranging for School Board approval for her field trips to the legal liability issues. She does not let these hindrances stop her.

**Recommendations**

Presently, Sue is working on updating her unit plans to include more of Young’s Core Routines and four compass directions. Her advice to me as I work to plan an outdoor education program is this, “Keep coming back to the question ‘why am I doing what I am doing’. This question will keep you going and focused.” She also suggests finding other educators with like-minds and common passions.

**Case Study #2 Steve Joyce, Teacher in Campbell River**

**Background**

Steve Joyce is a Secondary School teacher at Timberline; he teaches History, Geography and Law and until it was cut from the school budget, Outdoor Education. He is an energetic passionate teacher who cares about each of his students. When you enter his classroom you are immediately overwhelmed by the collections of model war airplanes, army costumes, and the wide array of student pictures. Ever since he started teaching in Campbell River Steve has played an integral part in the Outdoor Club. It was once a course offered to grade 11 and 12 students and when the funding was cut Steve volunteered on his own time to keep the club going. He meets with interested students every Tuesday and on Fridays he holds meetings for the Global Issues
Club. Steve has always worked in the outdoors as a park ranger and he draws from this experience in his teaching career. During our interview one of his students came into the classroom. Steve addressed the student and asked if I could stop the recording so that he could talk to this student. It seems the student wanted to show Steve an old camera he had acquired as Steve was just starting up a photography club. Instead of telling the student to return later he talked with keen interest with him. Steve invited me into the conversation explaining the attributes of the camera and what a great find this camera was. Steve is a teacher who lets his passions for photography, the outdoors and global issues be known. His students have great respect for him and many leave Timberline school and return to help out with the Outdoor Club annual adventures.

**Findings/Themes**

Steve cites a variety of benefits to student learning but the most obvious one for him is literally teaching “outside of the box”. When he takes his students outside the constraints are lifted and he can take advantage of spontaneous teachable moments, like when the weather changes or if there is a geologic formation along the trail. While on their trips there is no technology allowed. Steve recalls, “Because the kids are so connected constantly (to technology) they do not have time to think about themselves, for themselves. When we do trips we have solo time which forces the students to go out and reflect. More often than not they are drawn into the beauty of the nature around them and they start to think about it. When I bring them back and debrief they start talking and this experience gives them something to draw, paint or write about.”
The philosophy driving Steve’s work is admittedly selfish. His goal is to have fun and to show his students that being outside is fun. He hopes this will get more people interested in wanting to be outside. He also hopes this appreciation will spur more people to want to protect the environment.

The challenges Steve has faced in delivering his outdoor program are numerous and he states safety as number one. “Whenever one takes somebody outdoors one has to be aware of all the safety issues. Are you prepared for every situation? Do you have a first aid kit?” Another challenge is establishing trust with the students so that they know you are in control and you know they will not just “take off from the group.” Once this trust is solid then you can get on with what you are there to do, study birds, literature or learn how to rock climb.

Recommendations

Steve recommends considering safety first for every outing. He also advocates for integrating the curriculum to give the students a well-rounded experience while outdoors. He advises, “Ask yourself what the kids will get out of it? (the outdoor excursion) You bring your skill set and your interests but what are the kids into?” Considering their interest level is important while addressing the learning outcomes.
Case Study #3 Marion Waters, Teacher/Administrator in Sayward

Background

Marion Waters is currently a music teacher and administrator at Sayward Elementary school. Sayward is located about 70 kilometers north of Campbell River on Vancouver Island and is surrounded by nature. There is the Kusam Mountain to climb, trails to explore that lead to views overlooking the Johnstone Strait, there are lakes to fish in and the ocean is close by. The school’s population has diminished greatly over the years as the forest industry has come to a close around the area. The large, now mostly empty school, houses two classrooms of children from grades K-7. It is surrounded by trees. In fact the forest area behind the school is part of the school property and a fence encloses the area beyond the tree line. This area is used by the two other teachers and together with the students they have created guided trails in their forest that describe the various trees and plant species. They also have a fire pit surrounded by log stools behind the school that they use for a Sharing Circle after their outdoor adventures. Marion has taught in Sayward for 3 years and she has made outdoor education her priority. Acknowledging her school’s population decline, Marion hopes to save the school from closure by turning it into an outdoor education center in the near future. She already has a brochure sent out to all the district schools encouraging them to come and visit.

Findings/Themes

When asked about the benefits of outdoor education to student learning Marion responded with similar ideas as the other participants and she also brought up her concern for the children at her school that have behaviour issues. “These students immediately calm down when they go outdoors. Indoors they are restless and need to move about all the time. Going outdoors
provides an outlet and a reason to move around. Being active is allowed outside.” She also expressed the notion that going outside allows for less directed lessons, more free association, observation and thinking all of which help the students make connections and remain engaged in the task. Marion also added, “The fact that the children live in a community surrounded by nature makes it necessary for them to know about it for safety reasons.” She uses this as part of her justification for taking the children outdoors. Similar to Steve Joyce, Marion attests to the idea that teachable moments lend themselves well in nature and that after being outdoors the students have something to write about and tell about, they have shared adventures to talk about.

After reading Richard Louv’s book *Last Child in the Woods*, Marion agreed that taking children outdoors was beneficial and she had to encourage more of it in her school. A former teacher built a greenhouse on the school site and helped each class plant seeds and care for the plants. The students were able to see and understand the whole cycle from composting fruit and vegetable waste into the same soil in which they planted their seeds. This experience provided much more meaningful learning than just reading about it from a book.

In Sayward the challenges of teaching outdoors are similar to other sites. Marion noted that going outdoors involved a lot of time, from the actual planning to the time it took to get the students outside, but she also agreed that it was worth it. One frustration she sees at her school is that some students arrive at school unprepared to go outside. “They wear inappropriate clothing for the weather, but the more they go outdoors the more these barriers go down.” Another challenge is having enough funds for transportation.
Recommendations

Marion advises that collaboration with like-minded teachers is another advantage to making really successful learning opportunities for students and teachers. A final word from Marion is this, “Just go outside. It doesn’t have to be perfect and more confidence will come with more experience.” This is exactly the advice she has taken herself.

Case Study #4 Lou Bakota, Teacher in Campbell River

Background

Lou Bakota teaches Math and Outdoor Education to grade eight students at Phoenix Middle school. He is a nature enthusiast and tries to impart this passion to his students. Phoenix Middle school is perched atop a hill in Campbell River and is not far from many natural sites like the Beaver Lodge Lands for hiking and biking and the Campbell River estuary for kayaking - all of which Lou makes use of. Lou’s career is varied ranging from teaching in Regina in an outdoor education milieu, to teaching in a one-room school at Strathcona Park Lodge to last year when he taught at Sayward Elementary school. He brings much experience with the outdoors to his teaching and in his spare time he volunteers with a youth nature club on Quadra Island. Phoenix Middle school has approximately 600 students in grades six, seven and eight from Campbell River and Quadra Island and offers both English and French Immersion instruction. There is a large First Nations population at Phoenix and the importance of First Nations cultures is integrated throughout the school and the curriculum.
Findings/ Themes

Starting with the benefits of outdoor education to student learning Lou remarked, “I think it is beneficial developmentally in that kids need to move, use their whole body, and be outside, run, walk, and bike. So, in that sense it meets them where their bodies are at. That’s often been the start for me. I don’t think the kids should be sitting for 6 hours. I don’t think it is healthy. I think the research shows it is actually not healthy.” Lou also believes that integrating concepts is an effective teaching tool that lends itself well to the outdoor environment.

It’s not just about the hiking and canoeing. I need to integrate something into it. I think it works. I think they learn concepts and they can learn things more directly. So the Grade 7’s are learning about ecosystems. Rather than just talking about the seashore we go and actually visit it. If you’re talking about forest ecology why look at a diagram in a textbook when you can go and walk through a forest and examine it like a scientist would? And then you also have something to report for journaling and writing. I go for a hike with kids and then they actually have something to write about. Often kids don’t have anything to write about.

Another benefit Lou sees is that going outside provides an outlet for the students to be social without the teacher hanging over them telling them to be quiet and focus. It gives them the chance to talk freely and mostly it is about the topic at hand. In Lou’s class he tries his best to do as much of the program in the environment that the students live in. He adds that he could book a bus and go to Mount Washington or go to Tofino but he thinks his learners need to know their local environment which is more accessible to them. “It’s where they live so I think that is another way to be sustainable.”
“Best Place” is the philosophy that Lou refers to when planning his lessons. This is in reference to a former colleague who would always ask, “Where is the best place to learn this concept?” Lou comments that the classroom is not necessarily the best place for all learning to occur. Lou explains.

For some things it’s a good place but not for others. When I used to take kids on overnight trips and they had to plan meals for 3 days for themselves and they had to make sure they had all the proper gear and be ready for every condition out there they had to be independent thinkers, be resourceful, be organized, gather their material, work on a team. All of that is in our curriculum. I can set up some hokey scenario in the classroom or I can actually take them on tasks where they will really need teamwork.” Doing all of this makes the learning meaningful.

One of the biggest challenges Lou faces today when teaching his Outdoor Education course is the high student to teacher ratio. It makes going outdoors into certain environments very difficult. He has tried to arrange outings with community volunteer groups and they have refused because the numbers of students would be too large for the delicate natural setting, for example, a salmon stream under repair. A greater challenge Lou says is the way our school systems are set up. “Our schools are designed like a factory, rectangular cages, this box is very controlled. If you are going to be working with 30 people at once it has to be a regimented controlled environment. The outdoors is not regimented nor controlled.” Despite these barriers Lou keeps finding ways to get his students outdoors because he believes the benefits outweigh the challenges. Back in his classroom, a conversation with the students brings about an insight that the students are so accustomed to being driven everywhere that they find the notion of walking or biking as transportation strange and unlikely. “We are fighting the social norms of
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today that say that you don’t go outside and you get driven everywhere.” This he cites as another of his challenges.

**Recommendations**

Lou recommends giving the kids the freedom to roam, depending on what is being taught. It is easy to pile on the objectives and take the joy out of an outdoor lesson. He believes effective learning time outside includes letting 50% of the lesson be spontaneous play time. He also echoes the same sentiment about safety as Steve Joyce, “There is always a safety component. Safety is most important.” Lastly, Lou leaves me with the exact feeling I had from the beginning of this research journey;

Often times these outdoor programs start with a teacher who has an interest that takes them outside of the classroom. So whether you like hiking, biking, canoeing and this teacher wants her students to do the same thing. In my situation, I take the kids from biking, road rules, and maintenance and then I add in issues of sustainability and alternative transportation. So, it starts with my own interests and then I look at how I can fit in the curriculum outcomes.
Chapter Five-Summary, Conclusion

Researcher’s Synthesis

Reviewing each of these interviews I realize that I better understand the components of a good outdoor education program. It is more than a matter of just taking the students outdoors to play and hope something is learned. Play is a part of it but a successful program requires careful and purposeful planning that integrates the curriculum and has lessons involving much diverse physical activity. When I consider how Sue Lidster plans her lessons I can see that the use of the Core Routines from Jon Young’s book *Coyote’s Guide* can provide structure to the school day. Each of these routines allows for self-reflection and connection with the natural world. Sue’s plans also allow for “play” time outdoors that I have learned is especially necessary for young children. Echoed throughout each interview was the sentiment of safety. Being outdoors is about learning and having fun and also about being responsible and safe. Making sure my administrator and my students’ parents are fully aware of the safety plan for each excursion is of the utmost importance. Before I take children outdoors it is imperative that I can trust that they will listen and follow the rules. It is equally important that the students believe in my abilities and skills. This mutual respect makes for successful outdoor adventures.

I believe the most important part of this research has been the reaffirmation that I heard from the participants about teacher directed learning. It is evident that Sue relinquishes her control and she takes care to guide the students so that their learning is much more student-led. Helping and guiding the students towards project-based learning has made learning meaningful for her students. Steve takes the time to train and support his students before going on over-night excursions in the back country. He makes sure they are confident and ready for any situation.
These steps make for invaluable learning as the students become independent self-directed learners.

Returning to my research questions, I believe that I have learned that making a change to my teaching practice involves keeping in mind my students’ voices and their needs. In order to make significant changes I need to change my lessons to be more student-led and less teacher-directed. If I am able to think differently about my role in the classroom, wherever that may be, then I believe success will happen. Allowing my students to communicate how, where and what they would like to learn within the confines of the curriculum can be the impetus of my new outlook on teaching. As I sat and talked with Steve Joyce I was able to see how creating a nature connection between students and nature is long lasting. He is a perfect example of how when we expose children early on to the wonders of nature we create future adults who want to continue to be outdoors and to care for that space.

I would say that reversing the current trend that Richard Louv believes about nature becoming more abstraction than reality is the main goal of outdoor education programs. The participants in this study would agree as they each see the short and long-term benefits to students and their learning. David Sobel’s theory of Place-Based education is alive in Steve Joyce’s Outdoor Club as his former students go on to become park rangers and nature guides in provincial parks. They have learned to value nature and now want to give back.

Application of My Synthesis

Following this part of the project will be a plan of various learning experiences focusing on physical activity, integrating the curriculum and using the natural spaces surrounding our school yard, neighbourhood and community. These all will enhance learning for the students.
The overall goal is to create nature connections and therefore making learning meaningful so the first unit will be centered on this focus.

**Implications of this Project**

The greatest implication of this project has been the realization I have come to about my role as a teacher. After reading the literature in favour of children being more connected to nature and the benefits of this, I have truly made a mindset change about my teaching practice. I see my role now as a nature guide that will set the scene, provide the context and ask many questions to get the students thinking. The students will know that I am always there to help and support them and their responsibility will be to learn and work together. In order to better suit the needs of my learners I have planned learning experiences that integrate the curriculum and are nature centered. So, instead of going outside to just “play tag” there is an added layer that integrates a learning outcome. For example, students can learn empathy for a rabbit being chased by its predator, the fox. Each unit involves students working outdoors and ultimately becoming more aware of their immediate natural surroundings. The main objectives I will keep in mind are being outdoors, being active, being safe and getting to know our own backyard.

The implications for student learning as a result of this research project have yet to be seen but based on the published research and on the interviews that I conducted I hypothesize that the students will be much more engaged and therefore learn more. The types of experiences and culminating tasks outlined in my plans provide for long-term learning and those that students will remember for years to come. Improving student learning was my goal as I started out with this project and I hope to see results of this kind in the future.
The implications of this project for teachers are that they will see the impact of outdoor education on student learning and want to try the same type of techniques and core routines. Such changes school-wide and perhaps system-wide would have a positive impact. They would also provide an opportunity for collaboration amongst colleagues. When I reflect back on David Sobel’s urging to invite children to know their own backyards I see that my unit plans achieve that. The activities start out in the school yard and slowly move out to the school’s neighbourhood and finally to the community and its members. Each unit has an inquiry focus showing students the value in starting with a question. This approach creates motivation to discover the answer. The learning is meaningful for the students because from the beginning they see that by the end they will need to show what they have learned along the way. Also, they are each held accountable for some piece of the final culminating activity or celebration. Susan Drake’s research work has shown that integrating curriculum is important for greater student engagement. It is my hope that my unit plans will achieve this.

Though I have researched many different experts advocating for outdoor education I recognize that there are many others out there. This is one project that addresses a few of them.
Outdoor Education Planning Matrix

<table>
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<tr>
<th>Grade: 4</th>
<th>Title of Unit: Habitats and Communities</th>
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**Focus:** BEING OUTDOORS, BEING ACTIVE, GETTING TO KNOW OUR OWN SCHOOL YARD

**Overview of Unit:** This first unit aims to establish a COMMUNITY OF LEARNERS within our classroom. The students will learn and/or build on the necessary skills to work cooperatively. To become more familiar with nature and habitats the students will learn to identify the trees, native plants and animals in our school yard. They will tap maple trees for sap, and they will learn how to make syrup. All of this will occur outside directly behind our school on the wooded hillside and in the forest area beyond our school yard. Our school’s neighbour, an avid naturalist and gardener, is willing to teach the students to tap the trees and make syrup. Also, the students will explore the idea that our school yard is not taken care of by everyone who uses it. The students will be tasked with the challenge of how to convince others (within our school and the community) to act responsibly when they are in our schoolyard.

**Rationale for Unit:** We will start the year off with this unit to foster confidence while outdoors and create a feeling of connectedness to nature. The students will have numerous opportunities to play, explore, study and examine nature while working cooperatively. The students will use the immediate school yard, the neighbourhood and the community to learn about native tree and plants species and local animals.

**List of Provincial Learning Outcomes:**

- Participate in physical activities for a minimum of 30 minutes during each school day (Daily Physical Activity)
- Describe interpersonal skills necessary to build positive relationships (co-operation, inclusion, communication skills, empathy, and respectful behaviour) (Health and Career Ed.)
- Compare the structures and behaviours of local plants and animals in different habitats and communities (Science)
- Analyse food chains (Science)
- Determine how personal choices and actions have environmental consequences. (Science)
- Express a variety of ideas and perspectives through drama (Drama)
- Using speaking and listening to interact with others for the purposes of sharing ideas and opinions, solving problems, completing tasks. (Lang. Arts)
- Identify opportunities for physical activity in a variety of setting (Phys.Ed.)
- Demonstrate an ability to participate safely in specific physical activities (Phys.Ed.)
- Demonstrate leadership in selected physical activities (Phys.Ed.)
- Create clear, focused personal writing for a range of purposes and audiences (Lang.Arts)
- Write variety of informational writing (Lang.Arts)
- Read fluently and demonstrate comprehension of grade appropriate information texts,
such as non-fiction books. (Lang.Arts)
• Demonstrate an understanding of area of regular rectangular and irregular shapes. (Math)
• Demonstrate an understanding of line symmetry by identifying symmetrical 2D shapes and drawing one or more lines of symmetry in a 2D shape. (Math)
• Draft ideas for images using feelings, observations, memory and imagination. (Visual Art)
• Create 2D and 3D images that communicate ideas, experiences and stories. (Visual Art)

**Culminating Task/Celebration of Learning (Assessment):**

- Formative-The students will examine our school’s plant and tree species and identify them.
- Summative- They will create a field guide for other classes to use. Students will also take groups (younger classes) on guided tours of the school yard explaining how to use the field guides. During the tours class mates will assess each other based on co-created criteria.
- Summative-The students will invite younger students, teachers, parents and community members to our “Did you Know” Expo. Students will have chosen an area of the school yard and a natural feature (trees, plants, animals, uses of our school yard-maple syrup) to highlight and tell about. Their presentations will include researched information, examples/pictures of their natural phenomena and a model.

**Resources:** *Coyote’s Guide to Connecting with Nature*, every second year Robin Williams, Forester Educator, does 9 weeks of lessons about Vancouver Island Forests, Luisa Richardson, Water Specialist with City of Campbell River will conduct guided tours of local parks, trails, and water treatment facility

**Core Routines:** These routines will be implemented slowly and then 2 or 3 per day.

- Sit Spot (p.36)
- Story of the Day (p.41)
- Expanding Our Senses (p.44)
- Animal Forms (p.50)
- Journaling (p.63)
- Thanksgiving (p.73)
Outdoor Education Planning Matrix

**Grade:** 4  
**Title of Unit:** Identity, Society and Culture

**Focus:** BEING OUTDOORS, BEING ACTIVE, GETTING TO KNOW OUR OWN SCHOOL YARD

| **Overview of Unit:** This unit will provide students with the opportunity to ask Who am I? Where am I from? Where do I live? Students will draw on the leadership skills they learned in the first unit to work in a small team and complete various tasks to help them answer these questions. The students will have various opportunities to explore their own homes, our school’s neighbourhood, and our town. They will also visit the local museum to discover more about the First Nations People that were and still are in Campbell River and British Columbia. They will be outdoors mapping the school yard and the neighbourhood. Core Routines established in the first unit will continue so that nature will still be an integral part of the day. Students will help in caring for salmon eggs and fry until they are released into nearby stream. |
| **Rationale for Unit:** Students will create various maps of their homes, bedrooms, school yard and neighbourhood. Students will learn more about our town and what it has to offer by examining different maps. This will help them see how they fit in to the community. They will also learn about the First Nations People to help them appreciate and understand their culture and how important nature was and is today. These experiences will allow the students to think critically and to understand different perspectives. |
| **List of Provincial Learning Outcomes:** |
| - Participate in physical activities for a minimum of 30 minutes during each school day. (Daily Physical Activity) |
| - Apply critical thinking skills—comparing, imagining, inferring, identifying patterns and summarizing—to selected problems and issues. (Soc. Studies) |
| - Use maps and timelines to gather and represent information. (Soc. Studies) |
| - Gather information from a variety of sources. (Soc. Studies) |
| - Create a presentation on a selected historical event or topic. (Soc. Studies) |
| - Demonstrate knowledge of early European exploration of BC and Canada. Identify effects of early contact between First Nations and European explorers and settlers. (Soc. Studies) |
| - Identify the impact of Canadian governance on First Nation people’s rights. (Soc. Studies) |
| - Describe technologies used by First Nations people in BC and Canada for transportation, navigation and food preservation. (Soc. Studies) |
| - Express a variety of ideas and perspectives through drama (Drama) |
| - Using speaking and listening to interact with others for the purposes of sharing ideas and opinions, solving problems, completing tasks. (Lang. Arts) |
| - Describe the relationship between nutrition and physical activity. (Phys.Ed.) |
| - Demonstrate proper technique to send and receive various objects with control, including one-hand catch, strike a moving object with implement, strike an object with hand, |
**CREATING A SPARK WITH OUTDOOR EDUCATION**

**dribble an object with feet. (Phys.Ed.)**

- Demonstrate leadership in selected physical activities. (Phys.Ed.)
- Listen purposefully to understand ideas and information by generating questions, visualizing and sharing, identifying viewpoints, and summarizing main ideas. (Lang.Arts)
- Write variety of imaginative writing modelled from literature, featuring sentence fluency, effective word choice, a voice and organized thoughts. (Lang.Arts)
- Read fluently and demonstrate comprehension of grade appropriate information texts, such as non-fiction books, materials that contain maps, diagrams, and reports. (Lang.Arts)
- Represent and describe whole numbers to 10 000, pictorially and symbolically. (Math)
- Use natural objects
- Compare and order numbers to 10 000. (Math)
- Demonstrate an understanding of addition of numbers with answers to 10 000 and their corresponding subtractions by using personal strategies for adding and subtracting and estimating sums and differences. (Math)
- Demonstrate an understanding of fractions less than or equal to one to using pictorial or concrete representations. (Math) *use natural object and situations
- Draft ideas for images using feelings, observations, memory and imagination. (Visual Art)
- Create 2D and 3D images that communicate ideas, experiences and stories. (Visual Art)

**Culminating Task/Celebration of Learning (Assessment):**

- Formative-The students will create aerial maps of their bedrooms, homes.
- Formative-In teams they will also create aerial maps of our school yard and our school neighbourhood to help answer the question where do we live (and play). These will be displayed in the school for all the students to see.
- Formative-Students will care for salmon eggs, demonstrating responsibility and respect for living creatures.
- Formative-Students will release salmon fry into nearby stream and recall the process of raising the young salmon.
- Summative-The students will research their own heritage to help them answer the question who am I and where I am from. They will use their information to write an autobiography that will include photos, maps of the place of origin of their ancestors and also a family tree. Students will also write the salmon’s life story from egg to adult fish.
- Summative-After learning about how First Nations people gathered food and made shelters the students, in teams, will build a shelter following the co-created criteria. They will invite other classes, parents and teachers to visit their shelters and they will highlight their features.

**Resources:** *Coyote’s Guide to Connecting with Nature*, Campbell River Museum guided tours, parent volunteers to help with neighbourhood walks, (in Fall) Quinsam Fish Hatchery provides tours and will bring salmon eggs to school to be cared for, fry raised and then released in a nearby stream.

**Core Routines:** These routines will be implemented slowly and then 2 or 3 per day.
Sit Spot (p.36)- Observe the changes over time of our spots.
Story of the Day (p.41) – Tell about the changes you notice.
Expanding Our Senses (p.44)
Animal Forms (p.50)
Journaling (p.63)- Write about the changes (weather, seasonal) in your spot.
Thanksgiving (p.73)- Has your appreciation of nature changed?
Outdoor Education Planning Matrix

Grade: 4  Title of Unit: Where Does Our Food Come From?

Focus: BEING OUTDOORS, BEING ACTIVE, GETTING TO KNOW OUR OWN SCHOOL YARD

Overview of Unit: This unit will provide students with the opportunity to get to know their food and its origins. They will try to answer various questions like, How many kilometres do my vegetables travel to get to my plate? Where does my meat come from? and ultimately What food can I grow myself? The students will visit local supermarkets and ask questions to gain insight to their overall research question. The students will research farms in Campbell River, Comox Valley and BC to discover if they can eat foods closer to home to reduce their carbon footprint.

Rationale for Unit: Students need to know where the food they eat comes from. They need to be aware that eating foods closer to home can have a positive impact on the earth. The students need to research how they can grow their own food, what is involved and the impact of doing so.

List of Provincial Learning Outcomes:

- Apply critical thinking skills-comparing, imagining, inferring, identifying patterns and summarizing-to selected problems and issues. (Soc. Studies)
- Gather information from a variety of sources. (Soc. Studies)
- Participate in physical activities for a minimum of 30 minutes during each school day. (Daily Physical Activity)
- Describe physical and emotional health benefits of regular participation in physical activity (ex: building strong bones and muscles, improved flexibility, improved self-image, opportunities for making friends) (Phys. Ed)
- Identify the major muscles in the body that are involved in physical activity and digestion. (Phys. Ed)
- Demonstrate various ways to monitor exertion during physical activity (ex: heart rate monitoring by checking pulse, monitoring ability to talk during activity) (Phys. Ed)
- Identify the steps in a decision-making model (ex: identifying the decision, listing the alternatives, selecting a course of action, assessing the results) (Health and Career Ed.)
- Describe the choices an individual can make to attain and maintain physical and emotional health. (Health and Career Ed.)
- Describe choices they can make for healthy eating, based on Canada’s Food Guide to Healthy Eating. (Health and Career Ed.)
- Describe physical changes that occur during puberty. (Health and Career Ed.)
- Describe how personal choices and actions have environmental consequences. (Science)
- Analyse impact of weather on living and non-living things. (Science)
- Using speaking and listening to interact with others for the purposes of sharing ideas and opinions, solving problems, completing tasks. (Lang. Arts)
- Describe the relationship between nutrition and physical activity. (Phys.Ed.)
- Demonstrate leadership in selected physical activities. (Phys.Ed.)
- Listen purposefully to understand ideas and information by generating questions, visualizing and sharing, identifying viewpoints, and summarizing main ideas. (Lang. Arts)
- Write variety of imaginative writing modelled from literature, featuring sentence fluency,
effective word choice, a voice and organized thoughts. (Lang.Arts)

• Read fluently and demonstrate comprehension of grade appropriate information texts, such as non-fiction books, materials that contain maps, diagrams, and reports. (Lang.Arts)

• Construct and interpret pictographs and bar graphs involving many-to-one correspondence (Math) *use results from food surveys

• Read and record calendar dates in a variety of formats. (Math)

• Demonstrate an understanding of multiplication (2- or 3-digit by 1-digit) to solve problems by using personal strategies, using arrays, using concrete or pictorial representations. (Math) *use plants and seeds

• Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by using personal strategies with and without concrete materials, estimating quotients and relating division to multiplication. (Math)

• Demonstrate an understanding of fractions less than or equal to one to using pictorial or concrete representations. (Math) *use plants

• Demonstrate collaboration skills during drama. (Drama)

• Express a variety of perspectives through drama. (Drama)

• Use vocal and movement elements appropriate to various roles and situations. (Drama)

• Use a range of materials, technologies, and processes alone and in combination to create images. (Visual Art)

• Create 2D and 3D images to illustrate and decorate. (Visual Art)

Culminating Task/Celebration of Learning (Assessment):

• Formative-Read and respond to Robert Munsch’s book *Something Good.*

• Summative- Create a play version of the same story and present it to parents and younger students.

• Formative-Students bring in various fruits and vegetables from home. They note their origin and then sample them. Students then tour 2 different supermarkets in Campbell River to discover the origin of the foods they eat.

• Summative-Students can visit local farms (in Campbell River and Comox Valley) to better understand the process of food-to-table. To help with their research, students are encouraged to visit, with their families, the Farmers’ Market on Saturdays in the Comox Valley.

• Formative-Students participate in “Spuds in Tubs” program offered through BC Agriculture in the Schools. They will plant, care for and harvest potatoes. Summative-Depending on the crop, the student will cook different dishes to share with parents and students. (salad, soup, baked)

• Formative-Students can tend to our current flower garden and observe plants for deer destruction. How can these plants and trees be protected?

• Summative-Students create a plan to reduce their carbon footprint and try to eat locally. They present this plan to their parents and report back to the class after 1 month the progress of this plan.

• Summative-students will create a window sill garden (in Spring) to grow herbs, quick growing vegetables (lettuce, peas, beans) and edible flowers (pansies). The plants can be transported outdoors during the day and back indoors at night to protect from deer. The students will invite their parents and grandparents to our outdoor Spring Tea and they
will serve them their own grown food (salad) and if needed, locally grown food.

**Resources:** *Coyote’s Guide to Connecting with Nature*, Campbell River Museum guided tours, parent volunteers to help with neighbourhood walks, (in Fall) Quinsam Fish Hatchery provides tours and will bring salmon eggs to school to be cared for, fry raised and then released in a nearby stream, BC Agriculture in the Schools “Spuds in Tubs” program, parents’ and teachers’ expertise in growing gardens.

**Core Routines:** These routines will be implemented slowly and then 2 or 3 per day.

- Sit Spot (p.36) - Observe the changes over time of our spots. Do you feel a connection to nature?
- Story of the Day (p.41) – Tell about the changes you notice.
- Expanding Our Senses (p.44)
- Animal Forms (p.50)
- Journaling (p.63) - Write about the changes (weather, seasonal) in your spot.
- Thanksgiving (p.73) - Has your appreciation and understanding of nature changed again?
References


    www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/whatWorks.html


Dyson, L. (2012). In unplugged classrooms, these students dig the environment. *AdmInfo*, December 2012, 4-7.


