

OUTDOOR LEARNING AS AN ALTERNATIVE TO THE CLASSROOM  
FOR STRUGGLING STUDENTS: DOES IT INCREASE MOTIVATION AND  
ENTHUSIASM?

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**A Descriptive Abstract of Paul Jeffery's "Outdoor Learning as an Alternative to the Classroom for Struggling Students"**

**The reason for writing this capstone is to share information gathered from middle level students that have difficulties learning in a traditional classroom.**

**The main idea of this capstone is to demonstrate learning in the outdoors increases motivation and enthusiasm of low performance students. The focus of writing this paper explains that the amount of time that children spend in the outdoors has decreased in just a few years. Less amount of time spent in the outdoors has created a generation of individuals that have become less knowledgeable of the environment and the importance of nature's offerings.**

**This project set out to improve academics by intensively using the outdoors as the classroom. The results show that learning outdoors improved student eagerness for being outside and preference for learning outdoors rather than learning indoors.**

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## Chapter I

### INTRODUCTION: Nature's influence on childhood development

#### How nature influenced my early development

I was raised in the suburbs. My childhood home was situated in an area that used to be a forest of old growth oak trees. Most yards were filled with old oak trees and the street was given the name Hidden Oaks Drive. Unfortunately, in the process of designing the development of Hidden Oaks, many of the trees were cut down.

As a young child I spent my time as an adventurer around a new cul-de-sac that became my place for learning about nature. Being young, I didn't wander to far from where I lived. Occasionally I was daring enough to venture just beyond sight of my house, while having the sensation of being far from home. The best part of being in the woods away from home was that I felt surrounded by new mysteries that nature provided.

One of those mysterious places was a patch of woods. I viewed the woods as heavenly. Inside of the forest was an old oak tree. I spent countless afternoons around this tree and practically considered the tree to be a neighborhood friend. These memories would eventually influence who I was to become later in life.

I recall specific details about that tree. For example, it was a meeting place for the neighborhood kids. We walked so many circles around the tree that we wore a permanent

path around its massive trunk. I recall a time when the boy-scout group I belonged to came over for a meeting. On one side of the trunk was a fist size hole about waist high. As part of the scout meeting, my father and I had planned for me to pretend to have my arm stuck in this hole. When the time arrived, I marched the scouts down to the majestic old tree, stuck my arm into the hole and started yelling for the boys to help me get unstuck. Our plan worked! I had convinced the boys that the tree had a hold of my arm! Needless to say, many of the young scouts were very startled.

As years passed my curiosities of the natural world continued. My small area of natural wonder expanded from the lot on each side of my house to one more than one-half mile large. I found fields beyond the oak groves with tall grasses and interesting bugs. I braved mosquito bites to spend time in swamps filled with turtles and salamanders. I found raspberries that grew along the banks just above where a lake opened up to blue skies and flocks of Canadian geese that seemed to stretch out on the horizon forever. This half-mile radius was my child-hood refuge! I suddenly felt as if there were no boundaries holding me back.

I recall risking my life riding my bike on the shoulder of a major freeway to find areas with green parks. My friends and I would pack lunches, find a path that led to a lake and swim for the remainder of the day. When sunset arrived, we rode trails through the woods on our mountain bikes before making the dangerous ride home again. It was experiences such as these that allowed me to become the friend who was known as somebody with passion about camping, or spending time outside. Anything other than

having to loiter around at shopping malls like so many other peers enjoyed doing during this period in life.

### Continuing interests of learning outdoors

Following my interest in outdoor learning I visited an exchange student in Guatemala that had stayed with my family the previous year. The experience was filled with unforgettable memories of people, places, and events. This trip gave to me initial realizations that I was geared towards making the natural world important in my future endeavors.

My college years were filled with events in the natural world. One program that greatly influenced me was called the Peer Resource Program (PRP). The PRP was comprised of students who strive to enhance the college experience by creating awareness of issues and aspects of college life for the student body. The program did this by offering a variety of outdoor experiences aimed at positive risk taking, self-growth, trust, wellness, communication, and group development.

While involved in the PRP, I went on to facilitate a number of backpacking and canoeing trips. I experienced a great deal of self-growth and was able to practice designing engaging activities for participating students. It was the PRP that added new insights that helped me bring new skills into the world and to make a difference in the lives of other people at the same time.

Ultimately, the most influential experience that guided me towards becoming a teacher of nature was the Wild Rockies Field Institute (WRFI) based in Missoula, Montana. This program provided extended periods of time conducting studies in the field and sleeping under the stars! The experience was unmistakably important to my overall education. A huge influential piece of this trip was the evening campfires where our class came together after a long day of learning to discuss what had happened during the day.

While enrolled at Wild Rockies, I had the same type of realization I had while in Guatemala during high school. Learning about the environment became more than just camping outside and kayaking down a river. I was now fully convinced that being in nature provided a rewarding education that increased compassion, patience, and self-esteem.

Using these skills of outdoor experience I had growing up applies towards how I teach today. From these experiences, I have made learning more meaningful for my students by taking my classes outdoors more frequently. I have chosen to continue expanding my passion for nature in my teaching by using the outdoors on a regular basis to help students learn.

Outdoor learning has been neglected by our educational institutions. Far too often students and teachers spend the seasons trapped in a poorly lit brick walled environments. It does little to stimulate the senses and fails to teach about essentials that enable us to

survive. There are educators and institutions that recognize the separation that exists between the natural world and our daily routines, but have little knowledge of understanding in making quality outdoor learning experiences.

### Incorporating environmental education

Finishing college I felt prepared for teaching and entered the profession ready to change the world. I was bringing my experiences from the natural world into my teaching. In a short amount of time teaching I became the one teacher in the building that other students and staff came to with curiosities or questions regarding science or the outdoors. I didn't mind the additional recognition. For example, it aided in providing me with eager students on the first few days of each semester and was an advantage for creating student curiosities outside for a lesson in nature. When my classes return back from learning outdoors, student's eyes look as if invisible light-bulbs are glowing brightly above their heads.

In many environmental based classes students are subjected to a variety of issues of global concerns. Teachers must change their methods so that students can relate to environmental issues happening on a local level. Students must be become active in their own neighborhoods creating changes and differences in their own community. Learning about whales might prove very interesting, however to really bring to life learning in the outdoors must tie into our own community.

Just as important as learning at a local level is that a quality outdoor education must allow for teachers to diversify their curriculum to incorporate all disciplines. To spend time outdoors and learn only about science or the environment robs students of other disciplines. Specialization is one component that has limited individual potential to improve the social and natural systems of our planet.

I find that using the natural world (the outdoors) in the each of the core disciplines is critical for moving schools to a higher level. All things that the students are learning are closely connected and need to be shared and expanded to make learning exciting.

Students often repeat one of my popular phrases, “Science is everywhere!” Language Arts, history, math, health and science all overlap in material and concepts covered during each year. School schedules should be designed for groups of teachers to work together to create a complete interdisciplinary-based unit using the community project as the focal point.

The chosen community project may or may not be based around making the environment a better place. Most important is to involve the community when possible so that students develop a feeling of ownership and pride. Spending time outdoors reaches a wide spectrum of students that make up most classrooms today. For example, the outdoors allows children with attention difficulties to experiment by creating investigations and observations that interest them. Students become the catalyst in resolving complex problems occurring at a local level. Ultimately, students explore their interests while

each teacher involved facilitates the student projects guides the kids toward following the path in which each of the student projects proceeds.

### An adventure in the outdoors

My supervisor approached me and asked, “Mr. Jeffery how would you like to teach summer school this year?” My immediate response in an upbeat tone was, “Sure, sounds like fun!” Later that day I questioned myself about the quick reply back to my supervisor.

In our district, summer school is reserved for the children that did poorly during the school year. For some of the students, summer school is their last opportunity to achieve success or else retention will be instituted. Being responsible for the learning of twenty-five low achieving students would prove to be a challenging invitation. On a more positive note, what better opportunity did exist to provide students an education in the outdoors?

I began collecting curriculum and creating teaching plans for the month of July when summer school occurs. Without any restrictions on what gets taught I had control of planning summer school any way that I saw fit. I refused having to spend summer days in the classroom reading from textbooks and doing worksheets. This particular group of students needed a new experience and exposure to learning in a different way. With this in mind, I decided to use the outdoors as a motivating factor for students whom are struggling with getting good grades.

David Orr (2004) suggests that educators must become students of the ecologically proficient mind to foster adolescent minds. Furthermore, he thinks that first-hand knowledge of nature is how real intelligence grows. Lastly, he says this begins by breaking down walls made by clocks, bells, rules, academic requirements, and tired indoor pedagogy. Similarly, I conducted this study to propose putting learners that have a hard time being successful in the regular classroom outdoors more often.

In my years of teaching I have performed outdoor experiences with students as an alternative to the regular classroom. These outdoor experiences can decrease low student achievement and motivational issues in school. This study will share an experience of immersing twenty-five low performance students in the natural world to evaluate their willingness to participate and learn. This study was performed to investigate the question of: *Does learning in the outdoors increase motivation and enthusiasm of low performance students?*

## Chapter II

### LITERATURE SEARCH: Separation of Children and Nature

Teachers must recognize the lack of natural studies taking place in the classrooms.

Richard Louv (2005) suggests that new studies are finding that when you take away the natural world, the attention spans of individuals are shortened. Using the outdoors in our teaching can help to bring back the missing relationship between children and the natural world.

In addition, Louv (2005) describes the separation from the natural world in the following way:

“Our society is teaching young people to avoid direct experience in nature. These lessons are being delivered in schools, families, even organizations devoted to the outdoors. Consequently, our institutions, suburban design, and cultural attitudes unconsciously associate nature with doom-while dissociating the outdoors from joy and solitude. Well meaning public schools, media, and parents are effectively scaring children straight out of the woods. As a result, the young spend less and less of their lives in natural surroundings, their senses narrow, physiologically and psychologically, and this reduces the richness of the human experience.”

The information Louv describes above seems to have increased over the past couple of decades and probably began with the invention of the television. Within the space of a few decades, the way children understand and experience nature has changed radically. Consequently, kids are aware of the global threats to the environment-but their physical contact, their intimacy with nature, is fading.

Moreover, David Orr (2005) provides additional examples of our separation from nature and asks the question of how do we go about educating the young to think clearly about important things in a culture that spends \$500 billion per year to deceive using the finely honed tools of advertising? How do we prepare them to comprehend systems, patterns, and larger contexts in a society much distracted by entertainment and specialization?

To put it differently, nature becomes portrayed as something to watch, consume, to wear-and to ignore. Louv (2005) provides us with the example of how automobile companies exploit nature and depict it as a place that needs to be conquered. A recent television ad depicts a four-wheel-drive SUV racing along a breathtakingly beautiful mountain stream-while in the backseat two children watch a movie on a flip down video screen, oblivious to the landscape and water beyond the windows.

Subsequently, at this moment in time, Louv (2005) thinks that the separation is deteriorating between young people and their relationship to the natural world is deteriorating. This is alarming considering that a growing body of research links our

mental, physical, and spiritual health directly to our association with nature in positive ways. Several of these studies suggest that thoughtful exposure of youngsters to nature can even be a powerful form of therapy for attention deficit disorders and other maladies. As one science teacher puts it, we can assume that just as children need good nutrition and adequate sleep, they may very well need contact with nature.

Today more than ever humans are taught to see similarities between us and other animals. Disney movies depict animals with the ability to talk and live in ways that human beings live. Children visit zoos to see wild animals that are caged and dependent on their human caretakers. Learning in these ways mistakenly perpetuates the thoughts that nature is in our control and is something that needs to be cared for by us. A world that operates with the common held belief that society rules over all other species and nature deteriorates the ecological balance.

Louv's describes the separation between the child and nature in the following quotation:

“Our culture and upbringing uses nature to soften our loneliness as a species, however nature is not soft and fuzzy. For example, fishing and hunting for food is messy-to some, morally messy-but removing all traces of that experience from childhood does neither children nor nature any good. Not understanding the sources of where our food comes from disconnects us from the natural world”.

In comparison, I think of people in the meat section at a supermarket not understanding how the chicken and cow really come from the outdoors without cellophane wrapper and a price tag on them. Today, this realization has many of our young people ignorant to their important means of daily survival that was regular practice only a few years ago.

For the time being, globally the studies of sciences continue to expand, and are being exposed to new technologies to further enhance human survival. Even with these new technologies, one has to ask whether or not these new technologies can fix pressing environmental problems. Might it make more sense to take care of what we have in front of us right now? Otherwise our hopes for survival may rest on such hollow promises of technologies.

The decreasing level of awareness of the natural world has further disconnected people from the environment. Children must be re-exposed to having the opportunity to learn in the outdoors, to get their hands dirty, to see trees growing in a forest. We need to reconnect ourselves to nature.

The strength of strong societies stem from being nurtured by nature. If you decrease the space of nature or the teachings that the natural world withholds, nations will lose their sources such as the air, land, and water that makes places what they are. To put it differently, Louv (2005) asks what happens when future generations are so restricted that they no longer have room to stretch? . Considering these types of circumstances with the

children in our society Louv refers to a quotation by Robin Moore, President of the International association for the Child's Right to Play. "Most countries do not even have a general guideline for play space allocation," Moore comments that local businesses and public funds are used up to create sports facilities rather than land where kids can free play in the natural environment. The vacant lots are vanishing and suburban development is changing. Moore describes this movement as the, "commercialization of play". Fields that were once left open for play are now erased and replaced by denser, planned developments with manicured green areas strictly maintained by the ordinances in place.

Once again, David Orr (2004) agrees with Louv (2004) in the same sense that more of the same kind of education will only compound our problems. This is not an argument for ignorance but rather a statement that the worth of education must now be measured against the standards of decency and human survival-the issues looming before us in our current century.

#### A lack of outdoor learning indoors

Local educational reforms happen annually in this country and David Orr (2004) suggests that many being proposed have little to do with the goals that address attributes of personal wholeness, or the pursuit of truth and understanding, and even less to do with the great issues of how we might live within the limits of the earth.

Many classrooms consist of students moving from one classroom to the next for seven class periods during the course of one school day. In day to day learning students are

continually changing from classrooms and subjects many times. This continual repetition of classroom rotation from year to year is ineffective in equipping our young people with skills. As a result, students leave school each day feeling bored and out of touch with the information being presented. This manual type of learning interferes with student comprehension and their overall interest in their schooling. Accordingly, The NAAEE (2001) explains that we continue to put children into sterile, constricted environments and make them sit still and be quiet when their bodies and minds want to be engaged and active.

In the report of Project 2061, of the American Association for the Advancement of science (1989), James Rutherford and Andrew Ahlgren stated:

“Sound teaching begins with questions and phenomena of interest to students, not with abstractions or phenomena outside their range of perception, understanding or knowledge. Students need to become acquainted with things, to observe them, collect them, handle them, describe them, become puzzled by them, ask questions about them, and then try to find answers to their questions about them.”

A typical classroom does not provide students the chance to experience alternative recommendations such as the ones mentioned above by Rutherford and Ahlgren. However when we imagine using an area such as a pond ecosystem or a forested area, Rutherford and Ahlgren’s suggestion seems to open up a new window for learning.

It is well established that young people learn best when they develop their own paths of discovery. Most good environment-based programs use investigative approaches and student directed learning. Rainer (1999) suggests several studies indicate that focusing on student needs empowers learners and leads to greater overall achievement levels and higher self esteem. To put it differently, DePleiss (2001) says that instead, much greater appreciation prevails for the role that learners take in actively constructing their own learning when classes base their information around the outdoors.

In addition, another positive attribute of an outdoor program mentioned by Rainer (1999) says that students create their own path of learning by cooperative learning with other classmates. Cooperative learning accounts for the group students are communicating with, as well as the individual and how well they are keeping up and being active. Ultimately, team learning is not to do something as a team, but to learn something as a team.

#### Decreasing more of the same

David Orr (2004) comments on what the regular indoor classrooms do not provide:

“The plain fact is that the planet does not need more successful people. But it does desperately need more peacemakers, healers, restorers, storytellers, and lovers of every kind. It needs people who live well in their places. Indoor classes create an illusion that learning only occurs

inside four walls, isolated from what students call, without apparent irony, the “real world”.

A movement towards outdoor learning and restorative education using the natural world as a guide will ultimately help in making social justice and restorative professions more respectable and sought after into our society.

Jerry Lieberman (2001), of The State Education and Environmental Roundtable (SEER), who is an expert on integrated curriculum points out that learning shouldn't be considered disconnected pieces of information, but rather, a complex network of associations linked together through a specific frame of reference or context. Furthermore, if a goal of education is to prepare students to become active and valued members of a community, then students must learn in and about their community. This can only happen when classrooms move beyond the classroom walls.

Several authors (e.g., Kraft, 1991; Richards 1977) have pointed out that experiential learning dates back beyond recorded history and remains pervasive in current society, whether formalized by educational institutions or by occurring informally in day to day life. In this sense, experiential learning is not an alternative approach, but the most traditional and fundamental method of human learning (Neill, 2004).

Rogers (1969) distinguished two types of learning: cognitive (meaningless) and experiential (significant). The former corresponds to academic knowledge such as

learning vocabulary or multiplication tables and the latter refers to applied knowledge such as learning about engines in order to repair a car. The key to the distinction is that experiential learning addresses the needs and wants of the learner. Rogers lists these qualities of experiential learning: it requires personal involvement, is self-initiated, and is evaluated by the learner. All three of these qualities provide pervasive effects on the learner.

### What is Outdoor Education?

L.B. Sharp (1943), one of the earliest advocates of camping education, offered the following rationale for outdoor education:

“That which can best be taught inside the schoolrooms should there be taught, and that which can best be learned through experience dealing directly with native materials and life situations outside the school should there be learned”.

As the field of outdoor education matured, organizations emerged that worked to gain support from school personnel. For example, Julian W. Smith began the National Outdoor Education Project in 1955. Smith elucidated the connection between outdoor education and the school curriculum in his definition: “Outdoor education means learning in and for the outdoors. It is a means of curriculum extension and enrichment through outdoor experiences” (Hammerman, 1980).

To pinpoint a definition of outdoor education is difficult. Over time, definitions of outdoor education became more general to accommodate a wide variety of programs. Richardson (1969), has studied different types of outdoor learning and explains that originally, outdoor education was used mostly for nature study. Today, it includes outdoor experiences designed to meet objectives in many areas.

### John Dewey

The terms outdoor, experiential, and environmental education are interchangeable and can trace their roots, at least in part, to the educational philosophy and methods of John Dewey (Adkins and Simmons, 2002).

John Dewey, an early advocate of outdoor based education believed that, “Good education should have both a societal purpose and purpose for the individual student.” According to Macmillan (1997), for Dewey, the long term mattered, but so does the short term quality of an educational experience. Educators are responsible, therefore, for providing students with experiences that are immediately valuable and which better enable the students to contribute to society.

Moreover, students are all unique in their interests and personal experience, Dewey believes that there is a strong emphasis on the subjective quality of a students’ experience, therefore there is as also as strong of a necessity for the teacher to understand the students’ past experiences. Understanding what the students are bringing to the table

allows the teacher to effectively design a sequence of liberating educational experiences to facilitate students towards their potentials as a member of society.

Few students are actually predisposed to an ease of spending time in the outdoors.

Students that are not given the opportunity to learn in the outdoors have little to build from previous outdoor experience. Without outdoor experience, the older the students become, the more difficult it becomes to catch on as easily.

Using an individual's local surrounding and focal point of an investigation, student learning expands beyond walls and places them into the natural world. Students not only learn in an area where they live, but also explore, become part of, and participate in it. In *The School and Society*, John Dewey advocated an experiential approach to student learning in the local environment:

“Experience [outside the school] has its geographical aspect, its artistic and its literary, its scientific, historical and mathematical sides. All studies arise from aspects of the one earth and the one life lived upon it.” (1915).

### Teacher responsibility

To Rogers (1969), experiential learning is equivalent to personal change and growth. Rogers feels that all human beings have a natural propensity to learn; the role of the

teacher is to facilitate such learning. This includes: (1) setting a positive climate for learning, (2) clarifying the purposes of the learner(s), (3) organizing and making available learning resources, (4) balancing intellectual and emotional components of learning, and (5) sharing feeling and thoughts with learners but not dominating.

Rogers continues by stating that learning is facilitated when: (1) the student participates completely in the learning process and has control over its nature and direction, (2) it is primarily based upon direct confrontation with practical, social, personal or research problems, and (3) self evaluation is the principal method of assessing progress or success. Rogers also emphasizes the importance of learning to learn and an openness to change (Patterson,1973).

Chet Raymo, a professor of physics and astronomy at Stonehill College in Massachusetts shared an experience that relates so well to what Stevens (1992) is trying to demonstrate in the previous paragraph. One day Professor Raymo found himself going into the woods behind the local campus where there is a wild cranberry bog that almost no one knows about. The Professor invited along to wade into the freezing water and gather some berries. It was not that they wanted the berries to eat but instead an excuse to enjoy the beautiful day where they could take off their shoes. The following quotation shares the experience that the students and the teacher shared together:

“What does wading into a cold cranberry bog have to do with higher education? After all, the students in the class would be getting academic credit for the semesters efforts. The students proved themselves by

immense amounts of reading and writing. The answer is that it all boils down to there being another kind of education. One that comes through the soles of one's feet, through the eyes, ears, taste, touch and smell, the squish of berries between the toes. The slant of mid-November light through sulking pines. Berry-pocked clouds reflected in black water. It's a kind of education that doesn't stop with graduation and has nothing to do with credits and GPA's and diplomas. There is no distinction between students and teacher in our peripatetic class" (Raymo, 2005).

#### Movement towards Outdoor Education

Parents report that the "What did you do at school today?" question no longer gets just a grunt or a one-word non-answer. Instead, dinner table conversations tend to be nonstop discussions about projects-from night skies and different modes of transportation to hostile takeovers (Curtis, 2005). Curtis continues to elaborate on the interest level of the students by providing the following quotation by a parent of two Newsome Park Students in New Jersey. "It gets these kids excited about a subject both inside and outside of school," says Ingo Schiller, parent of the two children. "There's actually a visible hunger to learn."

Additional examples of outdoor learning taking place are exceedingly successful. For example, the Zoo School in Apple Valley, Minnesota teaches with the natural world in mind. Bruce Jilk, Architect for the Zoo School in Apple Valley, Minnesota stated that:

“If you put thirty kids and a teacher in a nine hundred sq. foot room, guess what?” he asks. “The teacher is going to take control and start lecturing.

So we needed to break that kind of mold or model for this school.”

This importance of making the place where learning occurs becomes reflected in not only the role of the teachers, but in the classroom, the atmosphere being created, and even the meals that are being served. Everything that students are subjected to in the school day should go toward creating a spirit of a healthy and invigorating environment.

A second successful outdoor learning model is Project Adventure which evolved in the USA as an effort to introduce adventure learning principles into the school setting. Neill (2004) points out how Project Adventure is a series of adventure-based principles, processes, and activities which are adapted and applied to meet particular needs in different settings. For example, Project Adventure is used within physical education in High Schools and is in use with treating drug and alcohol problems in youth.

Another successful outdoor learning program is Expeditionary Learning Outward Bound (ELOB) which evolved in the early 1990's. Similar to Project Adventure in origins, ELOB educates by applying outdoor principles to the school-setting and evolved in a somewhat similar way-with a big funding boost from the US federal government to support alternative educational methods in schools (Curtis, 2005).

One widely adopted form of experiential education is learning through service to others (Kielmeier & Willits, 1989). An example is Project OASES in the Pittsburgh public

schools. Eighth graders, identified as potential dropouts, spend three periods a day involved in renovating a homeless shelter as part of a service project carried out within their industrial arts class.

Other schools offer overnight trips in the outdoors. For example, at The Alexander Dawson School, students write in journals and conduct councils where they discuss their insights and feelings about trips. Students are active in planning and organizing trip plans and itineraries. These processes become an integral part of the cooperative learning that occurs as part of these trips. Students are provided everlasting life skills such as culture, confidence building, community service, leadership, personal responsibility, challenge and independence. Trips provide the opportunity to reflect on their achievements and to prepare them for the upcoming challenges they will encounter in the later stages of school.

Students in programs such as these learn enduring skills such as planning, communicating with a variety of age groups, and group decision-making. In carrying out their activities with strong reflection component afterward, they arrive at new insights and integrate diverse knowledge in other areas of school like English, political science, mathematics, and sociology (Stevens, Richards, 1992.)

Jerry Lieberman of SEER expresses the benefits of using the environment to learn:

“Using the environment has also been proven effective towards how well students learn. Importantly, students have an extraordinary enthusiasm for environmental subjects, which if nurtured, will naturally lead them to become effective environmental stewards in addition to better learners. Beyond stewardship, environmental-based learning has the potential to revitalize our nation’s schools and to provide numerous side benefits to students, teachers, and communities that continue far beyond a student’s tenure in school”.

### **Teachers role in outdoor education**

Besides changing student roles, experiential education requires a change in the role of teachers. When students are active learners, their endeavors often take them outside the classroom walls. Because action precedes attempts to synthesize knowledge, teachers generally cannot plan a curriculum unit as a neat, predictable package. Stevens (1992) shares that teachers become active learners too by experimenting together with their students, reflecting upon the learning activities they have designed, and responding to their students’ reactions to the activities. In this way, teachers themselves become more active; they come to view themselves as more than just recipients of school district policy and curriculum decisions.

Furthermore, collaborative instructional teams usually include teachers from several core disciplines. It also may include people and places in the local community (Lieberman,

2004). Through these cooperative efforts, students are exposed to a variety of viewpoints, specialized skills and knowledge. The interchanges among the teachers contributes toward using the outdoors to further refine the objectives that best meet the needs of the students and other team members. Similar to Stevens (1992), Lieberman (2004) stresses that teachers in collaborative instruction should expect to actually broaden their expectations, ambitions and goals. It ought to describe the teams expected outcomes and guide the actions of the group.

One school that uses the philosophy of teacher collaboration and teamwork that Lieberman suggests is important is a school called Kaleidoscope Charter School in Elk River, Minnesota. Outdoor projects aim at the environment while educating students to become engaged in sustained cooperative investigations to motivate the children. Having a smaller student to teacher ratio is helpful but not necessary. Unlike the role of typical classrooms, the role of the teacher in the outdoors is to act as a facilitator while students help out one another. Essentially, the adults create the environment that supports improved learning. This creates the culture that exudes the feeling of community and teamwork.

Kearney's research (1999) suggests a growing body of evidence links environment-based education to improved test scores and grade level achievement. Kearney's research supports additional studies by the NAAEE (2001) that have shown improved motivation, improved skills for life long learning, career preparation, and attitudes of respect and responsibility that are attributed to using the environment to unite the disciplines.

### Research based on using the outdoors for learning

In 1977, Cobb published her influential book, *The Ecology of Imagination in Childhood*. Cobb was not a sociologist; her expertise came mainly from her many hours of observing and documenting children at play, and her years of reflection on what she had learned about children's relationships with nature.

Cobb writes that it is possible that the developing consciousness of all children involves a dynamic sense of a relationship with their place of growing up:

“Only in some children, however is this experience so intense that it burns itself into memory to animate adult life.”

She concluded that inventiveness and imagination of nearly all of the creative people she studied was rooted in their early experiences in nature. These experiences Cobb believed, take place primarily in the middle years of childhood (Cobb, 1997).

A few years later, environmental psychologist Louise Chawla, who had been inspired to specialize in this area continued the research of Cobb and was intrigued by the questions that it raised. Chawla went further than Cobb and believes that the relationship between creativity and the environment is more complex. Chawla thinks that childhood transcendence doesn't necessarily need to have been any spectacular type of natural experiences, but could have been as simple as, “a small patch of weeds at the edge of a

sleeping porch, or during freedom as brief as an escape into nature during school.”  
(Chawla,1986).

Memories nature provides for the young will stay with them for the rest of their lives. Chawla explains that in order to hold onto natural memories they must require space, freedom, discovery, and “an extravagant display for all five senses.” When these requirements are met, even in cities, nature nurtures children. Chawla continues to explain that the outdoors provides:

“Meaningful images; an internalized core of calm; a sense of integration with nature; and for some, a creative disposition. Most of these benefits are general human advantages, whether or not we make our way in the world as creative thinkers.”

#### Disorders due to a lack of outdoor learning

Children’s Hospital and regional Medical Center in Seattle maintains that each hour of TV watched per day by preschoolers increases by 10 percent the likelihood that they will develop concentration problems and other symptoms of attention-deficit disorders by age seven (Healey, 2004).

“But television is only part of the larger environmental change in our lifetime: Namely, that rapid move from a rural to a highly urbanized culture”, says Louv (2005). Louv continues saying,“ For most of humankind’s history we have come from some form of an agrarian

society. Many of the children would have been directing their energy and physicality in constructive ways: doing chores, farming, swimming, climbing trees, and playing sports. Their unregimented play would have been steeped in nature.”

Having changed the ways in how we live has impacted our individual views and perceptions of how the world works.

Even without corroborating evidence, many parents notice significant changes in their hyperactive child’s behavior when they hike in mountains or enjoy other nature-oriented outings (Louv, 2005). Parents can notice subtle changes in their children’s actions better than anybody else. The important piece for the parents is to recognize the positive changes and use it more often to the child’s benefit.

Many physicians and psychologists agree. “Our brains are set up for an agrarian, nature-oriented existence that came into focus five thousand years ago,” says Michael Gurian, a family therapist and best selling author. “Neurologically, human beings haven’t caught up with today’s over stimulated environment. The brain is strong and flexible, so 70-80 percent of kids adapt fairly well. But the rest don’t. Getting kids out in nature can make a difference.”

### Evaluation and assessment

Educators (from practitioners to theorists) are giving up the idea that they can dissect, predict, and control learning with technological precision. As a result, qualitative approaches to assessment and evaluation are becoming more common, usually in addition to-and even in place of-quantitative approaches (Hendricks, 1994). Qualitative learning fits perfectly with the way students learn outdoors.

Though new developments in evaluation are critical for the future of experiential education, almost 40 years of assessment and evaluation have shown that many experiential and outdoor education programs are effective in positively impacting individuals and society. Demonstrated effects include enhanced self-concept, reduced rates of recidivism, and effectiveness in treating chemical dependency (Ewert, 1989).

Stephen and Rachel Kaplan are environmental psychologists at the University of Michigan. The Kaplans spent nine years studying for the U.S. Forest Service and followed participants in an Outward Bound-like wilderness program, which took people out into the wilds for two week periods of time. During these treks, or afterward subjects reported experiencing a sense of peace and ability to think more clearly; they also reported that just being in nature was more restorative than the physically challenging activity, such as rock climbing, for which such programs are mainly known.

The Kaplans (1998) found that too much direct attention while in the outdoors leads to what they call "directed-attention fatigue," marked by impulsive behavior, agitation, irritation and inability to concentrate. Directed attention fatigue occurs because neural

inhibitory mechanisms become fatigued by blocking competing stimuli. As Stephen Kaplan explained, “If you can find an environment where the attention is automatic, you allow directed attention to rest. And that means an environment that’s strong on fascination.” The fascination factor associated with nature is restorative, and it helps relieve people from directed-attention fatigue. Indeed, according to the Kaplan’s, nature can be the most effective source of such restorative relief.

In 2001 Nancy Wells, assistant professor at the New York State College of Human Ecology conducted a study that found that being close to nature in general helps boost a child’s attention span. She discovered this by comparing children’s cognitive functioning before and after they moved from poor-to better-quality housing adjacent to natural, green spaces.

Additional studies have been done at the Human-Environment Research Laboratory at the University of Illinois. Andrea Faber Taylor, Frances Kuo, and William C. Sullivan have found that green outdoor spaces foster creative play, improve children’s access to positive adult interaction-and relieve the symptoms of attention-deficit disorders. The greener the setting becomes, the more relief it provides. By comparison, activities indoors, such as watching TV, or outdoors in paved, non-green areas, increase these children’s symptoms (Taylor, 2002).

In a survey of the families of ADHD children ages seven to twelve, parents and guardians expressed that greenery through a window, specifically reduces attention-deficit symptoms. While outdoor activities in general help, settings with trees and grass are the

most beneficial. As they reported in the journal *Environment and Behavior* using the work of Taylor (2002):

“ Compared to the aftereffects of play in paved outdoor or indoor areas, activities in natural, green settings were far more likely to leave ADD children better able to focus, concentrate. Activities that left ADD children in worse shape were far more likely to occur indoors or outdoors in spaces devoid of greenery.”

Taylor and Kuo’s most recent research findings, which have yet to be published, shows that attention performance for un-medicated children clinically diagnosed with ADHD was better after a simple twenty-minute walk in the park, with a natural setting, than it was after a walk through well-kept downtown and residential areas.

### *Chapter III*

#### DESIGN OF THE STUDY

##### My study

A case study is a narrowly focused project on particular people, sites, or scenes. It is an instance drawn from class. By concentrating on using the outdoors for learning, this approach aims to uncover the interaction of significant factors characteristic of students that struggle with achievement in regular classrooms (Merriam, 1991). My case study uses interviews of middle school parents and students to determine time spent outside and learning in the outdoors. During the three weeks of summer school, students are expected to participate in a multi-disciplinary based outdoor- curriculum learning in the outdoors.

My study focused on a group of low achieving middle school children. The students needed to maintain a perfect daily attendance, show a willingness to participate, and turn in the work in order to move on into the next grade level. I concentrated on answering this question: *Does learning in the outdoors increase motivation and enthusiasm of low performance students?*

Based on my research I will share data that shows whether or not students like learning in the outdoors. The surveys will show the preferences of how these children prefer learning. The student information was obtained both before and after the duration of

summer school. In addition, I will share student work from our time while in the outdoors. The student work that I have included is not meant to answer my question of this paper but instead will provide examples of their thoughts and emotions experienced from learning in the outdoors.

### **Summer school schedule**

Students arrive to school at 8:00 and leave at 11:10. There were twenty-five students split among three teachers. Students rotate between each of the three subjects. Each teacher specialized in one of the core disciplines of math, language arts, or science. Teachers had the ability to unify curriculum allowing for us to strengthen the validity of the assignments. For example, students could read ecological succession during language arts before arriving for science class.

Each period was approximately one hour long with a short break in between the second and third hour class. The last day we hiked to the Crow River that lasted for the duration of the entire school day. The three of us teachers thoroughly discussed all objectives to be met by the students, as well as all safety concerns that could arise on one of these field trips.

### Class routine

The summer school schedule was for three weeks, Monday thru Thursday, and lasted from 8:10 am - 11:10 am. The twenty-three students ranged from seventh graders to ninth graders. Students were split up into two groups of eight and one group of seven.

Each group was arranged according to grade level and other teacher concerns of overall dynamics. There were three teachers; language arts, math, and science.

### Subject matter

Teachers designed a schedule that allowed us to spend about fifty-five minutes with every group during the course of each day. The curriculum was designed to provide review of some of the larger concepts during the regular school year. The short amount of time limited complete coverage of intense depth and detail however it did enable us to create a smaller student to teacher ratio allowing for more one on one contact between teacher and student.

We discussed the idea of keeping a larger group for the duration of each day, however decided that smaller groups with a focused subject matter would be the most beneficial for the students. For our last day the entire group of students and teachers took an adventure down to the Crow River for water testing and critter collection. The entire day turned out to be full of fun times and worked out to be a full day of interdisciplinary based investigations.

### **Limitations of learning in the outdoors**

Certain natural events impacted some of the outdoors activities. This summer happened to be particularly hot. Students with class during the morning were comfortable, but by the last hour of class the students were easily fatigued and in some cases disinterested in being outside any longer.

Before beginning summer school I had intended on using curriculum that was based around being in the woods. Unfortunately, the mosquitoes were treacherous! Without bug repellent, we were barely able to step foot much further than into the edge of the woods. Luckily on the other hand, on drier windier days the mosquitoes were not a factor.

Another limitation was whether or not student wore the proper clothing apparel. Many times students were told to wear long pants and shoes. Needless to say, students would show up in shorts and flip-flops when we had planned to go into a wetland or forest. In most instances we still found ways to make the experiences happen.

## **Curriculum**

Students were expected to keep a journal for the duration of summer school. The journals were to stay in the classroom. This was a win-win situation because the students didn't have to have homework and it prevented them from ever being lost or misplaced. Inside the journals students recorded a table of contents. Any additional handouts were placed inside the back of their journal.

I used resources to conduct different observations and activities based on using the outdoors. Some of the activities required that the students spend a small amount of time indoors for preparation or follow up activities. Our experiences in the outdoors enabled the children to take risks and to participate in new events or to encounter something that they may have never experienced before.

## **Communication**

Parents and students were informed of this study on the first day of school by sending home a permission slip and parent survey (see appendix for permission slip used). Most of the surveys were returned back. Surveys that I didn't receive were not counted in the information. Any permission slips that I didn't receive required that I call home for verbal approval for their child to leave the school grounds.

Students were given the Pre-Student Survey almost immediately arriving on the first day of school. The student survey was given out on the first day to prevent any sorts of persuasion. The same survey was given again to each student on the last day of school to compare preferences of traditional learning compared to our learning in the outdoors.

## **Surveys/Data collection**

Different ways that data was collected is listed below. The study was both quantitative and qualitative. Results were based on the views and experiences of students and parents as expressed in the surveys and journals. The bulleted items below are materials that I used as part of my study.

- Students Pre-Study Survey and Results (Included in the results section)
- Students Post-Study Survey and Results (Included in the results section)
- Parents Pre-Study Survey and Results (Included in the results section)
- Last day survey and Results (Included in the results section)

- Student journals (excerpts included in the results section)
- Digital photographs

## Chapter IV

### RESULTS OF THE STUDY

#### Unique situation

I pursued this topic to determine whether or not learning in the outdoors increases motivation and enthusiasm of low performance students? Every year, challenges are undertaken by teachers, for instance most years my classroom has students with learning difficulties. Unlike most experiences I have had, this would be the first experience having the entire group of students that have difficulties getting good grades. Conducting this research during summer school allowed me to partake in discovering challenges of attempting new ways of creating an atmosphere that would meet the needs for these types of children.

The students in this summer school program had an average grade of an F in at least two classes for the duration of an entire school year. Each of the students in this summer school program was referred into summer school for poor grades or by a school counselor's recommendation.

Beginning summer school, each student was given the opportunity to begin with a clean slate. Part of my goals as a teacher was to begin by having no biases. Each student was starting off with a fair chance regardless of any previous mishaps.

The twenty-three students in the summer school program had previously done poorly in the typical classroom setting. I wanted to apply a new situation to find out if they could perform any better than when they are in a typical indoor based learning environment. I set out to answer the question of: *Does learning in the outdoors increase motivation and achievement of low performance students?*

### Classroom investigations

Ten of the twelve days of summer school students spent learning in the outdoors. The curriculum came from a variety of resources that uses learning that takes place beyond the classroom walls. The school grounds provide a wide array of areas for us to focus on. These places are a marsh, The Big Woods, and a weedy field. We varied the amount of time spent in each place to prevent any one area from becoming too repetitious to the students.

One morning while in the Big Woods students were introduced to an area of land that was great big old trees. Part of the assignment asked the students to imagine how this area may have looked going back in time. Students were asked to use their senses to absorb their surroundings and help to reflect on how change occurs. Arriving back at school students were asked to journal about their day.

One piece of information that we used to assess the students was a journal. Inside of their journals students needed to have a table of contents and be sure that everything that was handed out was also kept inside their journal. For one assignment students were asked to reflect on the first week of learning in the outdoors. I asked them to explain what they enjoyed and found interesting. The following quotations are from the student journals. Because of privacy data I have intentionally left out the names of the students:

“At first we went to the valley and I could really imagine how succession works. It was cool being there to actually see that if you leave an area alone long enough that it can change.”

“I learned that you can eat purple clover and dandelion leaves. The purple clover tasted really good!”

“I learned that Milkweed is poisonous! Monarda is a rare plant and it grows on the plains. We have Monarda on our school property and it’s fully bloomed.”

“What I have learned the past few days is that succession is a long process that may take hundreds of years to change. For example, the family farm is in an early stage of succession and the Big Woods is at a late succession stage.”

“I really liked looking up and seeing a canopy that the trees have formed over the years. We picked up tree bark, a stick, some berries, a heart shaped leaf, and some moss. I liked seeing all the moss.”

“The past week I’ve learned a lot that I didn’t know before. I saw so many interesting things. I even saw a plant with berries on it. As I went to pick the berries, a big thorn pricked my finger. There are so many things that we don’t even know about nature and plants.”

My guidelines for the reflection of the first week were open to student imagination. I didn’t want to narrow down their experiences by limiting areas for them to write about. The results of the writing activity demonstrated the student enthusiasm towards using the outdoors for learning in the daily schedule.

### Realizations and Revelations

Another outdoor learning activity was for the students to find a quiet spot in a natural area to write down outdoor observations. I asked the children to listen carefully, look around to gain a feeling of what was happening all around them. Each of the students

was asked to sit alone in their spot and not to move until I called them all back. Here are some samples of what the kids wrote:

“I can hear a hawk screeching for some reason. Maybe I am too close to its nest and she is protecting her young. I can see her circling above The Big Woods.”

“I love the outdoors. It’s so relaxing and quiet that it allows you to get away from any problems that you have. My friends and I have this spot in the woods by a creek where we can just sit and think while listening to the water run beneath our feet and listening to nature.”

“There’s a gardener snake right next to me!”

“I like the fact that everything is so quiet and peaceful it actually inspires me to do well in every situation whether good, bad, or just plain bad!”

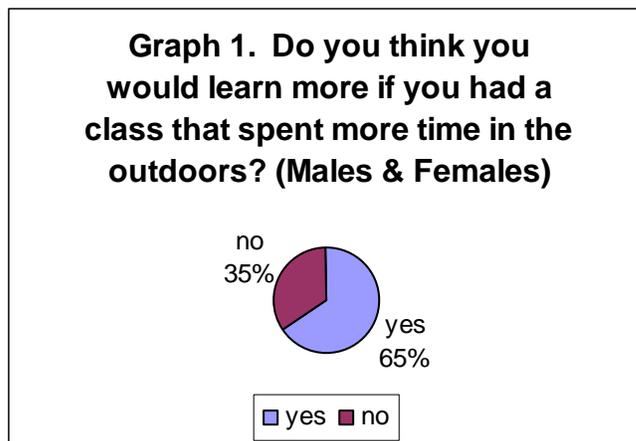
“I like how it’s very calm and your senses expand while in the outdoors.”

“I saw two monarch butterflies almost dancing on the plants. There are two gorgeous plants, one has white flowers and the other one is purple. It smells great, I can’t explain it, but it smells like freedom! It’s very relaxing out here.”

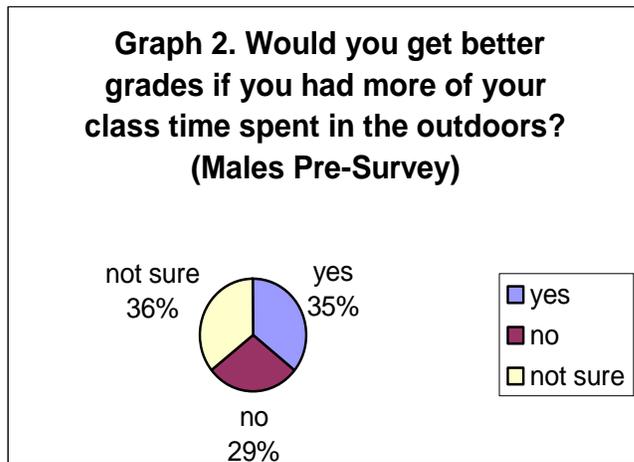
“It feels relaxing where you don’t have any worries where you could be on your own for a bit. You hear the rustling of leaves on the trees and birds chirping. You sense the Mosquito’s and bees flying around while you’re lying in tall brush you can enjoy the nice calm day with a few clouds in the sky and sun shining. You can see ants walking up stems of weeds and see the tree tops in the distance. I can feel the cold dark soil under thick brush.”

#### Data/analysis

Many of the boys in summer school were generally interested in being outdoors. Of the thirteen boys surveyed, only one said that they liked the outdoors just a little bit, six liked it, while six of the boys said that they loved it. The female responses were somewhat similar and only one girl said that she only liked the outdoors just a little bit. Looking at graph number 1 we can see that Sixty-five percent of the students thought that they would learn more with a class that spent more time in the outdoors.

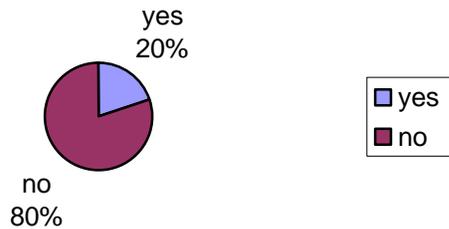


In graph number 2 male students were asked if spending more time in the outdoors would help them get better grades during school, thirty-five percent said yes, twenty-nine percent said no, and thirty six percent were not sure.



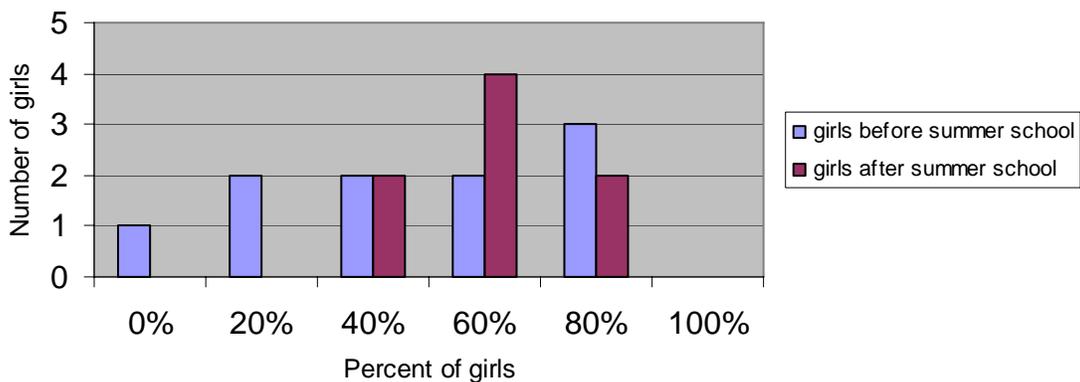
Graph number 3 shares the same question but was asked to the females. Eighty percent of the females didn't think that spending more class time in the outdoors would help them get better grades only twenty percent thought that it would.

**Graph 3. Would you get better grades if you had more of your class time spent in the outdoors? (Females Pre-Survey)**

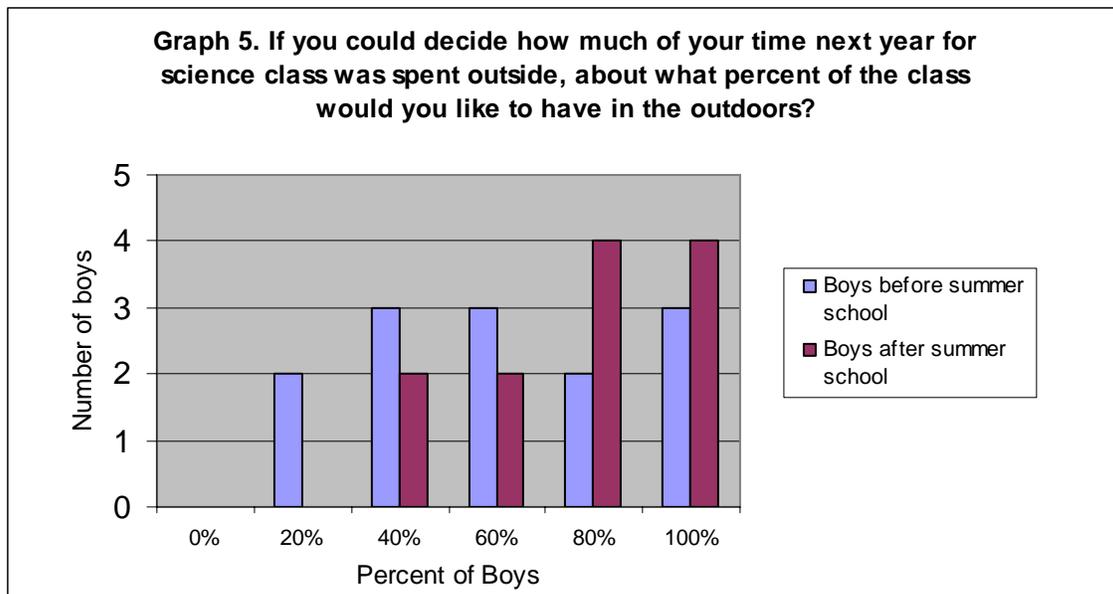


In graph 4 female students were asked how much of their class time that they would like to spend in the outdoors. I asked them the question both before and after their time spent in summer school. The graph shows that a number of girls seemed to change their minds about learning in the outdoors from the first to last day. The overall percentage increased for how much of their future class time that is spent learning in the outdoors.

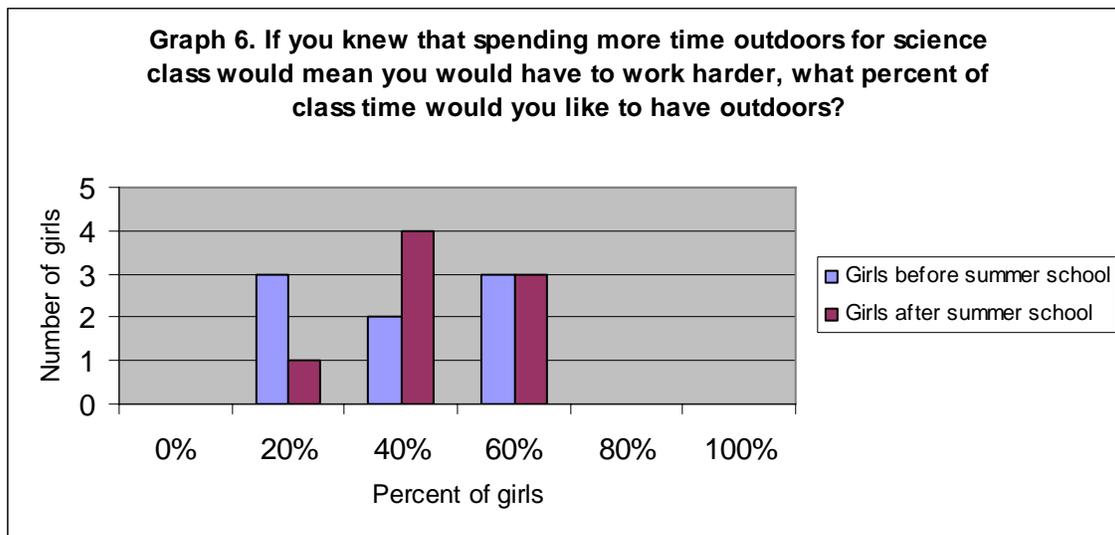
**Graph 4. If you could decide how much of your class time next year for science class was spent outside, about what percent of the class would you like to have in the outdoors?**



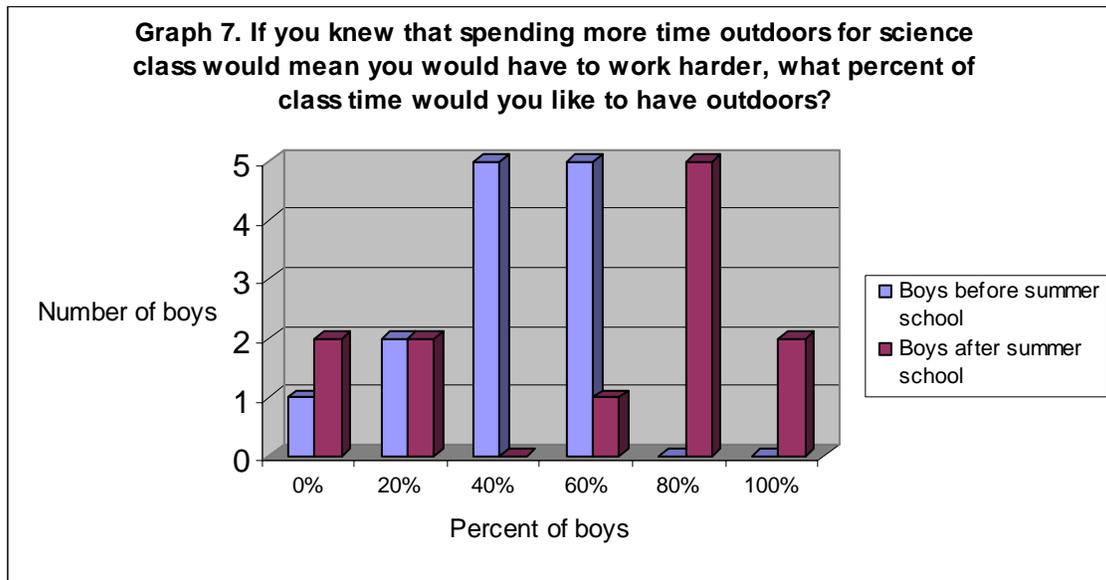
The same situation that applies to the females also applied to the males. By looking at graph 5, overall after taking summer school and learning in the outdoors, a higher percentage of the boys wanted to have their class time spent in the outdoors.



Graph number 6 asked a similar question to female students on the first and last day of summer school but added the additional wording of, *you would have to work harder*. Even so, the overall percentage of girls willing to work harder in an outdoor setting before having to be in a regular classroom was higher from the first day compared to the last day of experiencing outdoor learning.



Graph number 7 shows the same information as graph 6 but for males. I again added the wording of, *you would have to work harder*. Once again, the boys overall percentage of preferring to learn in the outdoors increased from the first day to the last.



## Chapter V

### THE FUTURE OF LEARNING

The results of my study show that learning can take place in the outdoors. Assessing the students on work completion compared to the completion of class work that they would typically experience, shows a depth in the quality of careful thought and consideration for realization of the big picture. Learning needs to happen in a way that allows for us to slow down to prevent the current dissociation we are experiencing with the natural world. Secondly this study suggested that students today are faced with increased usage of technologies that we didn't have before. Young peoples reliance on technology decreases the closeness to nature that previous generations experienced.

Throughout the course of this summer school experience the students seemed to overwhelmingly prefer learning in the outdoors. The amount of work that we completed over the course of three school weeks equaled the amount of work I would have had them complete had our daily lessons been in the indoors. I noticed that learning in the outdoors increased their motivation when students were arriving to class. Motivation was

prevalent regardless of whether or not we had difficult things to do for the day, students were still seen anticipating what they would see that day while learning outside.

If I were to do this study differently, next time I would provide the students with additional information to accompany the ecology-based concepts that we covered. For example, I would try to incorporate more information about the trade offs associated with environmental degradation caused by our actions. This could be achieved in a variety of ways. For example, local landowners and elderly farmers from the area could provide insight as to how the land once looked. Native Americans could help the students to visualize how cultures have taken different actions regarding our treatment of the land. And lastly students could be involved in field trips that take us away from the school grounds. Such places might be a nearby dam on a river, or a local gravel pit.

Material was presented so the students were actively engaged in the coursework and not bogged down with lots of extra writing and recording. Instead students were able to use their senses in deciphering what the answers were by using what surrounded them. As chapter two of the study suggests, students were allowed to discover their own interests while spending time outside the typical classroom. The teachers involved in summer school helped to facilitate this process until students reached a point where they could collaboratively come together to begin working as a team.

Depending upon where one grows up, people are provided with opportunities and experiences in the outdoors that shape what they become. My thoughts seem to closely mirror the beliefs of David Orr (2004) when he says the following:

“The civilization we have built causes us to spend 95% of our lives indoors, isolated from nature. We live stress-filled lives full of traffic jams, busyness, noise, artificiality, and substitutes for the real thing.”

We need to step back and ask ourselves if the current educational system is the one that will help us towards a future where young people become the catalysts that make the planet a better place to live. If not, we need to reconsider how our young are being taught. Providing opportunities in the outdoors for children might be what is needed to reconnect ourselves to the natural world that we think of as home.

Regular classroom learning has its place in the educational institution, but using the outdoors as an alternative classroom must become a more widely used practice to reawaken our ties to the natural world. The disconnection between humans and nature has widened and appears to become more distant as each decade passes by. As my results from this study demonstrate, by allowing for students an opportunity to learn in the outdoors, then they will not only be more willing to learn, but their attitudes and actions about the preservation and protection of the world will become an important part of their livelihoods.

*APPENDIX*

Student Pre –Survey results

13 Males

10 Females

23 Total

**Do you think you would learn more if you had a class that spent more time in the outdoors?**

Males

**Yes** = nine

**No** = four

**Explain:**

Better than indoors

More fun

Because you can interact more with what you're learning about

Because there would be a lot of things on your mind

Because I would actually get to see the stuff

Because you get sunlight and fresh air

Yes, because we could research the wildlife

I can learn more fluently if I'm learning about something fun or if I'm in a fun environment

You would never be all cooped up inside

Well I'm just not an outdoorsy type

Because we get distracted

Cause what would we do out there, work on the white board?

No, because you don't do as much outside

Females

**Yes** six

**No** four

**Explain:**

Because it can be more hands on and a lot of people learn better that way

Because there would be different surroundings

Because it's a lot more fun because we barley ever get to go outside for school

It would be more fun to learn stuff if we spent time outdoors

Because it's more in the open and the fresh air helps me think better

I think its good to get fresh air

I'd be distracted a lot

No because I would get to distracted by things outside

Me, I get distracted very easily and I learn better when boundaries are set for me

I would be distracted

**Do you like learning in the indoors more than learning outside?**

Males

**Yes** = four

**No** = nine

**Explain:**

You can go outside

I like being outside

I'm an outdoorsy type of person

Because it's more fun in the outdoors

Because a boring classroom makes me want to sleep

Because you're stuck in a desk and room

Then we don't get fresh air

It doesn't help at all to be inside but the difference isn't big

Because outdoors has a nice breeze and you are more open to learning

Sometimes I do but not all the time

Because outdoors is a different experience

Because there is stuff on the floor

Well I had to circle one

Females

**Yes** three

**No** seven

**Explain:**

Then I won't be distracted

Because I have boundaries and we have to be quieter and because I'm more focused

That way I just concentrate on what I should be

It depends on how I'm feeling that day

Because you can learn more from seeing the just studying it

Its not as open

-Outside it's just... I don't know. There's so much more you could learn about outdoors than indoors.

Because you get board and you don't get to see what your talking bout up close...only a book!

I like to be able to see more of the stuff outdoors

Because it's easier for me to learn when I actually do what I'm trying to learn

**Would get better grades if you had more of your class time spent in the outdoors?**

Males

**Yes**            five

**No**             four

**Not sure**      five

**Explain:**

It would be funner

Pay more attention

I would actually do more stuff cuz it would be funner

Because I am awake when I'm outside

Depends what class time of day and what everyone is doing

There isn't any difference in grades if I'm in or out doors.

I really don't know

That depends

Because I do not learn better outside

See #1

Because it's the work that you do not where you have to do it

Inside is quitter

Females

**Yes**    two

**No**    eight

**Explain:**

Because I can think better

Cuz you would nowat it spose I would just kinda help

Because it is how you listen and how you do your work that matters

I would maybe buy my grades may slip from loosing papers

Yes it's more fun and there's more to learn. No, others might mess around

Because it's still science

Not really "No" but more "no" than "yes"

Cuz there is too much going on

-I don't thin that it woud've mattered me being inside or outside. But when im outside

my eyes leave the teacher

distracting

**Do you like to be in the outdoors?**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>not at all</b>	<b>just a little</b>	<b>I like it</b>	<b>I really like it</b>	<b>I love it</b>

Males

1=0

2=1

3=4

4=2

5=6

**Explain:**

Because its nicer inside

It's average but indoors would get a two

-I like it sometimes because I like to skateboard so I like to be outside most of the time

I like it

Better than just being in a room

I really like it because I can play with friends

I like to go fishing a lot

-I am an outdoorsy person you'll never catch me watching more than an hour of tv on a nice day

You can do so much outdoor see so much outdoor but not indoors

Because we can get to see the world

Can't stand to sit still

Because it's better than being indoors

-I like playing sports, skateboarding, snowboarding, swimming, fishing, hunting, wake boarding

### Females

1=0

2=1

3=3

4=3

5=3

### **Explain**

Weather is cruel and unpredictable

Yes, but not for doing school

Its warmer out there

Its fun and free, it's spacious!

-It's fun. You can do a lot of things. For example, I like to play softball outside in the summertime

I really like the outdoors

Because there is so much you can do

-I don't think it would have mattered being inside or outside. But when I'm outside my eyes leave the teacher

**If you could decide how much of your class time next year for science class was spent outside, about what percent of the class would you like to have in the outdoors?**

**0%            20%            40%            60%            80%            100%**

Males

0%    zero

20%   two

40%   three

60%   three

80%   two

100%   three

Females

0%    one

20%   two

40%   two

60%   two

80% three

100% zero

**If you knew that spending more time outdoors for science class would mean you would have to work harder, what percent of class time would you like to have outdoors?**

**0%            20%            40%            60%            80%            100%**

Males

0% one

20% two

40% five

60% five

80% zero

100% zero

Females

0% one

20% three

40% two

60% three

80% zero

100% zero

**How many hours a week do you spend in the outdoors?**

**0    2    4    6    8    10**

Males

0= one

2= zero

4= zero

6=one

8=two

10=nine

Females

0= zero

2= one

4= two

6=zero

8=two

10=four

**On a scale from 1-5, how important do you think it is to protect the environment?**

**1**

**2**

**3**

**4**

**5**

**not important**

**very important**

Males

1= one

2=zero

3=one

4=five

5=six

Females

1= zero

2=one

3=one

4=one

5=seven

***Explain your answer. Why did you give it the number you did?***

Males

-As long as I still have air to breath im fine, im not a tree hugger! PETA=People eating tasty animals

-I gave it a three because in the big picture it would change the world but for just me it wouldn't do anything

-As I said I like to fish so we need to keep our lakes cleen, but if we don't need to go over board there's more important things

-How do you think the human race will go on without proper disposal of waste and gas wont last forever

-I did it because if the environment went bad then you wouldn't catch no fish or shoot ducks

because the environment isn't bad yet

-because it's the only planet we have and its where we live it is important

Cause without it protected the environment would be no fun

So it doesn't become a disaster

Because I can get fresh air

Because we need to keep animals healthy

### Females

Only certain parts should be protected

-because I hear people saying don't litter and this and that, but I never listen so, I must not really care about the environment

because we should keep it clean but not spending all our time on it

The environment is special and it needs to be taken care of

Because the environment gave us the air we breath so we need to give something back

B-Cuz itz are home and we don't want it ruend with filth gasses

Because we need to protect, its an important part of life

-So we can keep the wonderful sights. Last year my family and I saw a deer running through our yard. Because we live in a foresty area.

-If we just keep doing what were doing like with all the exhaust from our cars that can do damage if it keeps building up

Because if you don't protect it then it will be polluted

**If you had the choice, would you rather spend an hour watching television or playing outside?**

### **Explain:**

### Males

Outside so I can play with friends

Playing outside because I can get fresh air

Playing outside because if you stay inside you will get lazy and fat

Playing outside cause its funner than watching reruns

Outside you can have more fun

Outside I like to go outside and flag football and stuff

Playing outside, I like to skate so I go outside and hang out with friends and skate

Outside because why would you stay inside when you can go hang out with friends

Ask me, do I want to be in good shape or bad?

Its more fun

Outside cuz more exercise

-I would much rather be outside because I don't like sitting and I like to spend time with friends

Inside, TV because I'm lazy

### Females

Outside because its fun and a good workout

Television because I don't like playing a lot of games and things like that outside

-Playing outside for me I love to be outside, I can't stand it when it rains. It makes me really tired

playing outside, I think we can have more fun

outside, Its better and you have more to do

Playing outside, its fun and a good workout too

Outside, I don't think you learn much from the TV

Playing outside cuz im active and don't wanna mope and walk around

Outside because my tv aint going nowhere and there are some days I cant go outside

**At what age do you think you spent the most time outside Why?**

Males

Five or six, cause I had different friends

-Eight to thirteen, I don't really know but I think it's because I can go anywhere as long as im home on time

Now, cause I ride my bike a lot

Now because I have more freedom to go the places I want

Eleven to present

Now because I like to enjoy the outdoors

Young, I did more than just skate

Five or six because that's what I liked to do play with friends outside

Fourteen you can do more things

Eight or nine

Five til eleven, because I lived in monti.

Two

Twelve, because I go outside for nine hours straight

Females

One to six, to get rid of energy

Fourteen, everbody lives around me

Eleven-twelve because I thought it was boring just sitting inside

Seventh grade because that's when you start sport activities

Nine-ten

Older years

-Eleven-twelve cause I wasn't tied down with homework. We went camping about every weekend

-six or seven because when youre younger its fascinating how much you don't know so you want to learn about the outdoors even more

Nine, me and my friends always played outside

Eleven, lots of fun neighbors and a tramp

**At what age do you think you spent the least amount of time outside,**

**Why?**

Males

Twelve cause that's how old I am

-Seven and lower because then I didn't have much freedom, and I had to stay within a ten house range of my home

Eleven cause I didn't know anybody

Five because I was too young to do much at all

21

Ten-eleven

Two, it was boring

Thirteen because I never felt like doing anything

Super young age because I was really young

Zero to two cause I couldn't do anything

Baby cause I couldn't walk

as a little kid because of less freedom and video games

Females

Baby

Fourteen, I am on the computer a lot and don't like outdoor games

High school years because you are inside doing your homework and not slacking off

Ten-twenty cause you are in school half the time!

**What are some reasons that spending time in the outdoors may be good for you?**

Males

I think it's more relaxing and I can relieve stress

Keep you in good shape, fun

Fresh air, moving around, having fun

Exercise and fresh air

Fresh air and being active

Exercise

Clean air, exercise

You can see your friends

Healthier

Exercise, fun, something to do

I get fresh air and I can socialize a lot more

Fresh air

Females

If you've been sitting inside for forty eight hours straight and haven't moved

It helps me get some fresh air

Because its good experience and get into sports

Well because you wouldn't be freezing unless you went out in the winter or late fall

You can get some fresh air and exercise

Cuz you learn and get good exercise

To get fresh air and to see things happening around you

Exercise, activities, and sports

It can get you active and have you doing more stuff

Good exercise, fun

**What are things that prevent you from spending more time outdoors?**

Males

My website

Parents

Homework and chores

Going to parties

Sleeping

TV, video games

Being fat and lazy

Internet, TV, sleeping, talking on the phone

Weather and injuries

30 degree weather or severe weather

Traveling and jobs

Chores inside the house

Females

Weather, pollution (hard to breath)

Computer, tv, being inside at friends houses. Game devices like ps2 or x-box

Rain, you get hurt, sick

Homework, chores, weather

TV, phone, computer, to lazy

Being sick or a storm

School work

Sports and being active

My tv, good shows always come on when I'm about to go outside

**Are you nervous to spend time outdoors? What are some things that might stop you from going outside?**

Males

No, only when there are storms outside

Lightning and hail

No

Homework

Females

See answers for previous question

**Would you rather spend your time at the Outlet Mall or in the outdoors?**

**Explain:**

Males

Mall. Shopping is my favorite sport

Outdoors because I would rather play sports than go shopping

Outdoors cause it's more fun

Outdoors so that I can get fresh air

Outdoors because you don't spend your money

Outdoors, I don't shop

Outdoors skating a lot

Outdoors cause there are no rules to follow

Depends on what store, how much money I have and where abouts in the outdoors

I hate shopping

### Females

Mall, technically your doing both, this way you get out and shop

Mall, just like being outside except more fun

The outdoors, but I like both

Well, you are outdoors at the outlet mall so it would be the same as outside

Mall because you doing something productive

Mall, I love shopping and you're still outside

Depends on the weather its really rainy ide go to the mall if its not ide go outside

No, im more of an outdoorsy person

Outdoors, like if im camping or something

Mall, I love shopping

**Would you like to have a class during the school day that spent more time learning in the outdoors?**

**Explain:**

Males

No=2

Yes=10

It would help stiff backs from the desks

Its more fun and I would pay more attention

Because we could learn in the fresh air

Because you will get bored in the indoors

Fun

Because then I would be where I like to be

It would just brighten up the whole day and make it funner

Haven't you noticed that the good jobs are inside!

Because at school I like staying indoors more

Females

No=2

Yes=6

Maybe=2

Sure then I could go and have fun learning while being tough!

-Outside. Its boring when you are inside sitting listening to some stupid lecture that you wont remember in an hour

Yes, because I learn outside better

Yes, especially when it's nice outside

Yes, depending on the weather and I learn outside better

No, because we already do

**What is your favorite thing to do in the outdoors?**

Males

Skate and hang with friends

Four wheeling

Fish, play sports

Ride dirt bikes

Skate, bikes, snowboard

Race friends

Camp, four wheel, bike

Play with friends

Wrestle in my pro wrestling ring

Bike and tennis

Baseball

Football

Females

-Sports, swim, volleyball, run for track, jump on my tramp and hang with friends

walk and play with friends, tan and swim

Softball

Camp

Skate and BMX

Volleyball and walk the dog

Go to friends houses

Tan

**What kinds of things do you like to do when you are outside during the school day during recess?**

Males

Talk with friends

Walk around and talk

Play games

Talk

Football

Run around

I don't go out for recess

Females

Talk with friends

Double dutch, kickball

Hang with friends

I don't like to go out for recess

Lay in the grass and talk

**What are some things that you wish they allowed at recess time that aren't allowed now?**

Males

I don't care about recess

Snowball fights

More privileges

Skating

More games

Nothing

Go home and come back

Biking

Females

More space and games, freedom!

Lunch outside

Skating

**What are some learning activities that you would like to see happen outside during your classes?**

Males

No comments

Females

No comments

**What classes might not be that good for students to be outside for? Why not?**

Males & Females

There are none!

Computer class

Home-Economics cause I don't want to wash cloths in a river!

Math and language arts has noting to do with the outdoors

**Student Post-survey Results**

**Tell me what you thought about the last three weeks in science class?**

### Male responses

Okay, I wouldn't choose it over something else though

I thought it was cool going outside

It was so fun cause we were outside

It was fun and I learned a lot

It was fun and easier to learn with hand-on

Awesome for being outside and enjoying the sun

I thought it was really cool

It was really fun because we go to go outside and research

Fun

It was ok

It was pretty fun, there was nothing that wasn't fun

-I thought it was fun to go outside, better than being indoors

### Female responses

I liked going outside, but I messed up and wore a skirt one day

I thought it was great I loved the outdoors and the pond and the big woods

It was fun, I really like going outside a lot

I had more ideas happen while outside and see neat things

It was fun, exciting, and adventurous

-Meaningful and exciting

This week being over and succession

It was awesome

**What was something you learned during science class the last three weeks that stands out in your memory? Something having to do with the outdoors? Explain.**

Male responses

Loosing my shoe

-Succession because I never thought that trees needed a lot of time to grow

The aphids!

The aphids

Pond Marsh Lab, because we caught insects and frogs

Succession because I really never noticed it until then

I learned about pineapple weeds, aphids and what happens to moss

The caterpillars because I like to watch them turn into butterflies

That you can eat clover

What aphids are

Well, I didn't notice how much the ecosystems changed

Succession and how the environment work

Female responses

That milkweed has a sweet smell

Succession, I never know about it before, and I really understand it well now

-Learning about the aphids. I couldn't believe looking at them and how the ants and

aphids work together in order to stay alive

All the things built in the past one hundred years

Succession, how an area changes over time

-I learned about aphids and that they exist and learned about their color and I also know about succession and change over time. Fire helps the forests and sap comes out of the milkweed stem and harmful to most bugs.

How fires help forest's mature

We don't have many trees because people are destroying them

**After three weeks of learning in the outdoors, do you feel that you would like to learn by using the outdoors more often? Explain.**

Male responses

Maybe

Yes, it was cool you could see everything for yourself

Yes, different atmosphere and funner

Yes, it makes science fun

Yes, it is so relaxing and fun

Yes because it's really fun

Yes because we got a lot of fresh air and was able to see wilderness

No, it's boring

Yes cause it's more fun

Yes because I think it helps to learn like when you do more hands on activities

More relaxing and comfortable to learn

Female responses

Yes, it helps me learn

Yes seeing it head on is better than just hearing it

Yes, I think it would be fun

Yes, you see and do a lot of things

-Actually, im not sure. I love working in both, probably not outdoors everyday!

More room to breath

Yes, because you can actually see what you are being taught

**If you could decide how much of your class time next year for science class was spent outside, about what percent of the class would you like to have in the outdoors?**

**0%            20%            40%            60%            80%            100%**

*1 symbolizes male responses*

*2 symbolizes females responses*

0%    =

20%   =

40%   =1122

60%   =112222

80%   =111122

100% =1111

**If you knew that spending more time outdoors for science class would mean you would have to work harder, what percent of class time would you like to have outdoors?**

**0%            20%            40%            60%            80%            100%**

*1 symbolizes male responses*

*2 symbolizes females responses*

0% =11

20% =112

40% =2222

60% =1222

80% =11111

100% =11

**Do you think that learning in the outdoors would help you learn more while you were at school? Explain.**

Male responses

No, too distracting

-Yes because you're in here looking at a book of pictures book, but if you're outside you see it.

Yes, cause the atmosphere is not plain and boring

Yes, because we learn better in fun environments

Yes, it is hands on and fun

Yes, because I'm more awake doing something I like

Yes

Yes because we could sit in the sun and do our work

No, I'm just not the outdoorsy type

Yes cause I'm always outside

-Yes because I think I learn better when im actually doing activities about what we are learning

Yes, more relaxing

Female responses

Yes, it clears my mind and helps me learn

Yes, because I learn more outdoors than indoors

Yes, you get to see things up close

Yes

Outside with the plants and animals

You not only get to hear about them, you also get to see them!

Outdoors you can see and touch it, in a book you can't

Outside where it is warm and sunny and relaxing

**What was the best thing that we did the last three weeks while learning in the outdoors? Explain.**

Male responses

Going to the pond

Going outside

Looking at aphids through the microscope

Marsh lab, it was fun

-Sitting down in the golden rod field writing down what you see and hear because it

reminds me of what I do at my cabin

I liked going down to the pond

The best thing was going to the Big Woods

Big woods, I love that place

The marsh lab cause I had fun

-When we went into the marsh/pond area because I have never been in there before and it was someplace different than the classroom

Marsh

Female responses

Big Woods

-Pond and climbing ladders to get over the fence to explore in the marsh, I felt like I was on a safari.

Sitting in the field journaling independently

Milkweed and aphids

Caterpillars

Marsh

Milkweed and aphids

Journaling in the field

**What was the worst thing that we did the last three weeks while learning in the outdoors?**

Male responses

Pond

Staying inside

The worksheets

Walking

Reading from the book, it was boring

When we had to help you move into your new room while inside

Nothing

Everything was fun

Milkweed

Succession because I thought it was boring

-When we went into the big woods and filled jars with different items

Coloring the land changing worksheets on the rainy day

### Female responses

Being in the field

Doing the maps and coloring, it thought it was boring

The scary red bug!

Journaling in the field

Writing

Big woods, mosquitoes

Coloring the maps inside

Coloring those maps

**If you had to rank this outdoor learning science class with a regular indoor science class, which one would you prefer to be in? Why?**

### Male responses

Indoor, more comfy

Outdoors cause it was more fun

Outdoors cause of the atmosphere

Outdoors cause it is a lot better

Outdoors is more fun

-Outdoors because it's warmer and you have fresh air and you can enjoy learning a lot more

Outdoors with the fresh air

Indoors, I don't like the outdoors

This one cause there isn't as many people

Outdoors, more fun and easier to learn information when we see it

Outdoors because I learn more

#### Female responses

Outdoors, more fun

Outdoors, we discovered more science out rather than in.

Outdoors, fun and relaxing

Outdoors, it helps me focus

Outdoors

Outdoors

Outdoors you can see and feel it!

Outdoors, the kids actually understand what the teacher is trying to say

#### Parent Pre-Study Survey Results

19/23 Surveys returned

#### **How much of your child's free time is spent outside.**

**0-20%      20-40%      40-60%      60-80%      80-100%**

0%-20%      =four

20%-40%      =five

40%-60%      =two

60%-80% =five

80%-100% =two

\*one survey was left unanswered

**If given the choice, would your child rather spend time indoors or outdoors?**

Indoors 5

Outdoors 12

Uncertain 1

**-What activities do they prefer to do there?**

Housework

Watch TV

Internet, reading, watching TV

Reading, TV

Sleeping

Music, TV, computer

Read, bike, b-ball, fishing

Snowmobile, drag racing, yard work, bike, hackysack, sliding, paintball, hunt

Go to the lake, hang out with friends

Play with friends, sports, bike ride

Bike and baseball

Fish, swim, skateboard

Sports and fishing

Swimming and hanging with friends

Play with friends, rollerblade, swim

Skate, ride bike

-All depends upon the weather of course! But fresh air and change of atmosphere can only be a positive thing

**Do you feel that your child would excel in an outdoor based class while at school?**

Possibly 4

No 3

Yes 11

**Overall, do you feel your child would do better in school if he/she was given more time during the regular school day learning in the outdoors?**

Unsure 4

No 2

Yes 12

**In an outdoor science class, do you think your child would learn more or less than if she/he was in an indoor science class?**

Unsure 2

Less 0

More 16

Comments

-I don't know if they would learn more or less-but it would be enjoyable for any student to be outside of the classrooms

-In a science class, depending on the topic, and if the teacher could keep the kids focused they could learn outside

-Learning by hands-on is always better than learning from a book (my opinion)

She would learn more outside (hands-on)

-Probably more outside as he is accustomed to the environment and loves being outdoors especially winter

Letter home to parents

**Dear Parents,**

**I am working on my Masters of Natural Science and Environmental Education this year and I could use your help. If you are willing, please take a moment to respond to the following survey and return it to your child to bring back to school.**

**Thank you**

**Paul Jeffery**

**Summer school teacher**

Permission slip

As part of my Masters Project in Environmental Education I would like to use this anonymous data in my capstone paper. I will also be taking pictures to include while we are in the outdoors. I am requesting permission from you that your child may be included. By signing below you are agreeing to have your student appear in photos taken during class to be included into my research paper. Their survey that they fill out will also be used anonymously in my research (no names will be used).

---

Signature of Parent

---

Date

Photographs



Students hugging an old growth Basswood tree



Students making milkweed observations



Students at the marsh with dip-nets



The entire group at the Crow River

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