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THE VALUE OF OUTDOOR EDUCATION

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Bilingual/Cross-Cultural Education

by
Heriberto Garcia

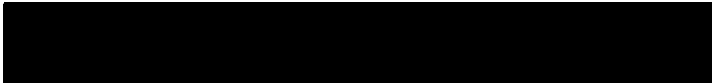
June 2003

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Approved by:


Dr. Barbara Flores, First Reader

5-20-03
Date


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ABSTRACT

Education is a very broad subject for it has many ramifications. We know that we can educate ourselves in countless subjects. We can be educated in biology, literature, behavior, good manners, etc. Nevertheless, we could say that basically we can be educated in two main areas: academic and social.

On the one hand, academic education is traditionally restricted to organized institutions such as schools. Social education, on the other hand, can take place anywhere: at the school, home, work site, etc. But, regardless of the source, education implies some learning on our part. In other words, we have to learn to educate ourselves.

The process of Learning, however, can be easy, difficult, boring, or fun. It depends on the circumstances or setting that surrounds the learning. That's why most people strive as much as they can to have the proper learning environment, especially if we are young.

Unfortunately, when we are young and we feel the urge to know everything and be all over the place, we are restricted for long periods of time, as a tradition, to the enclosed classrooms where most of time we do more theory than practice. Tradition has given precedence to

indoor education over outdoor education, when in fact children need the outdoor to have more room and open space to expand their mind to the world and satisfy their needs to know.

The purpose of this project was to explore the benefits of how students who are exposed to outdoor activities can enhance their attention span, learning, and understanding of the content subjects.

ACKNOWLEDGMENTS

This project is not only the product of my efforts. It is also the product of the supportive people who still care for the realization of my dreams. There is no need to mention names. In reading these lines they will know who they are. Their constant encouragement was my guidance through the halls of the university. I couldn't have done it without them. Thank you!

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CHAPTER ONE

BACKGROUND

Introduction

Learning is a complicated process. Simon Priest (2003) offers some definitions of learning: "Learning is a change in the way we feel, think, or behave. And that all learning is experienced-based." Priest also has a definition for experience-based: "All learning is experience-based. Whether we hear a lecture, watch a video, or read a book, our learning is 'based' on those experiences. Unfortunately, we remember 20% of what we hear, 50% of what we see, but 80% of what we do."

Based on the above definitions, one is tempted right away to take advantage of the 80% of learning, but then again we have to do something practical to complement what our other senses let us perceive. Of course we can do practical things everywhere, indoors or outdoors. Out of these two options, however, it seems to be that outdoor activities have been neglected to a greater extent, when in fact they are also very important to our education. Doing things outdoors play a very important role in the learning of our children. Outdoor activities have the magic of the personal direct experience.

Personal direct experience improves our learning. It is not the same to hear, read, see, and speculate in the enclosed classroom about how things are in the world outside, when we actually can go outdoors and have the personal experience with the world itself. This personal interface with the outside world is outdoor education, which is the subject of this project.

Description of the Project

This project explores and comments on the benefits of how students who are exposed to outdoor activities enhance their attention span, learning, and understanding of the subject matter.

In addition, a case study (performed by a group of students at California State University San Bernardino) involving a lesson plan taught indoors and outdoors is also described in detail.

In Appendices A and B, some web sites are listed as an initial guidance for the readers to do more exploration on the value of outdoors education.

CHAPTER TWO

REVIEW OF THE LITERATURE

History of Outdoor Education

James Neill (2003) shows a conventional timeline that is typically found in education textbooks such as Priest and Gass (1997). The following chronological information is part of these sources:

- 2500 BC - Egyptians explored their surrounding world, making the first recorded traces of planned adventure.
- 1886 - Kurt Hahn is born in German (innovative educator).
- 1920 - First modern, Western school focusing on personal responsibility, equality, social justice, respect, community service, in Germany. This was the first significant involvement of Kurt Hahn as an innovative educator in a school.
- 1930 - Beginning of short-term resident camping programs in the United States.
- 1933-1940 - Kurt Hahn was forced from Germany and exiled in the UK. In 1934, Hahn became the founding headmaster for a second school for

which he was well known for his innovative ideas on education.

- 1941 - The first Outward Bound program was conducted in Aberdovey, Wales. The program was 28-days long because that was the distance between paychecks for the seamen. From this beginning, the modern outdoor education movement was spawned.
- 1950 - Outward Bound Eskdale opened, the second Outward Bound School, sparking the expansion of Outward Bound around the world.
- 1958 - Outward Bound Malaysia opened, in Lumut, the first Outward school outside of the UK. Several other schools were soon to follow.
- 1962 - Outward Bound Colorado was the first Outward Bound School started in the USA, in Marble, Colorado. The program spurred America's interest in outdoor education.
- 1965 - National Outdoor Leadership School: First dedicated school for teaching outdoor leadership skills founded to the USA; later spreads to other countries. Started by Paul Petzoldy.

- 1971 - Project Adventure becomes the second major spin-off from Outward Bound (NOLS was the first). In 1974 Project Adventure received federal funding through the National Diffusion Network, allowing Project Adventure to spread into 400 schools, itself spawning a variety of different experiments with adventure-based learning.
- 1976 - Association for Experiential Education (AEE) was created in the USA top help to foster and spread the world about outdoor and experiential education.
- 1977 - Wilderness Education Association (WEA): Paul Petzoldt left that National Outdoor Leadership School to create the WEA. Petzoldt aimed to bring the training of outdoor leadership into colleges and developed an extensive leader-training curriculum.
- 1997- First International Adventure Therapy Conference. For the first time, this formalized a major professional gathering and focus on the therapeutic potential of outdoor-based and adventure activities.

Outdoor, Experiential, and Environmental Education

As one can see, talking about outdoor education, we also touch on experiential education and environmental education. These three terms for some people, and even educators, have the same connotation, but there is, in fact, some difference. The following information, condensed from an article written by Carol Adkins and Bora Simmons (2000), give us some insight into these three terms.

Outdoor Education

In referring to education, L. B. Sharp (1943) makes this definition: "That which can best be taught inside the school rooms should there be taught, and that which can be best learned through experience dealing directly with native materials and life situation outside the school should there be learned" (p. 363). Hammerman (1980) says, "It is a means of curriculum extension and enrichment through outdoor experiences" (p. 33). According to Priest (1986), outdoor education is "an experiential process of learning by doing, which takes place primarily through exposure to the out-of-doors" (p. 13). Richardson and Simmons (1996) mention that "Originally, outdoors education was used mostly for nature study. Today, it

includes outdoor experiences designed to meet objectives in many areas."

Experiential Education

"It was not until the 1970s that experiential education emerged as a recognized field of education and in 1977 the Association for Experiential Education (AEE) was established" (Hammermann, Hammerman, & Hammerman 2001). Experiential education is defined by Ford (1986) as "learning by doing or experience," and suggested that "outdoor education may be viewed as experiential, especially when learning takes place through experiences" (p. 1). It was in the 1994 when the AEE expanded the understanding: "Experiential education is a process through which a learner constructs knowledge, skill, and value from direct experiences" (AEE, 2002, p. 5).

Environmental Education

Environmental education is also related to outdoor education, and Disinger (2001), denotes that "Although environmental education can trace its lineage, at least partly, to outdoor education, it is considered a distinct field."

Adkins and Simmons (2000) specify that:

It began to take concrete form with the publication of the Journal of Environmental Education in 1969, celebration of the first earth Day in 1970, and passage of the National Environment Education Act in 1970. For many educators, however, environmental education begins with two founding documents: The Belgrade Charter (United National, Scientific and Cultural Organization-United Nations Environment Programme [UNESCO-UNEP], 1976 and the Tbilisi Declaration. (UNESCO-UNEP, 1978)

The Belgrade Chapter provides accepted goal statement: "The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solution of current problems and the prevention of new ones" (p. 2).

Relationship:

As we can see on the above definitions, outdoor, experiential, and environmental education, complement and overlap each other. Perhaps the following Venn diagram can give us a better picture of their relationship:

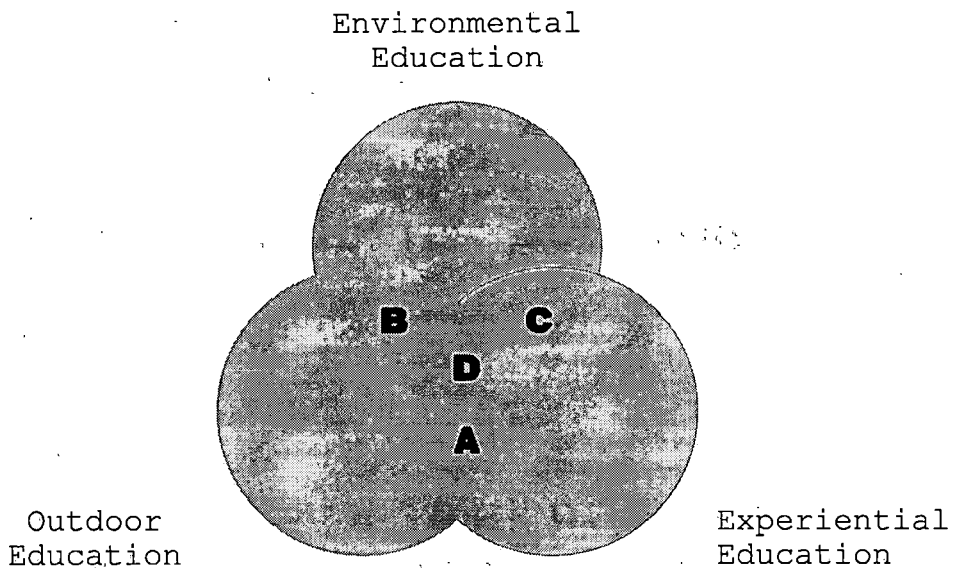


Figure 1. Venn Diagram

In the above chart we have four interfaces: "A," "B," "C," and "D."

- "A" - is the interface between outdoor education and experiential education.
- "B" - is the interface between outdoor education and environmental education.
- "C" - is the interface between environmental education and experiential education.

- "D" - is the interface among the three: outdoor education, experiential education, and environmental education.

Depending on the subject matter to be learned, each one of the interfaces has its own advantages:

- "A" - An outdoor/experiential education, can be a lesson in which learners, with the aid of compasses, draw geometric figures by walking the lines in an open field.
- "B" - An outdoor/environmental education, can be a lesson in which learners participate in a simulation of predator/prey relationships.
- "C" - An experiential/environmental education, can be a lesson in which learners test the pH of aquarium water in their classroom.
- "D" - A combination of the three approaches, can take, for example, a group of learners studying their local stream. They visit the stream; collect samples; interview residents along the stream; take temperatures. The participants are learning by doing: collecting, interviewing, and measuring. Finally, they are investigating their

environment, learning about biophysical, social,
and economic system.

CHAPTER THREE

METHODOLOGY

Curriculum and Instruction

During one of the quarters in 2003 at CSUSB, a group of students performed a case study to determine if in reality teaching outdoors has a bearing in the enhancement of learning.

The team consisted of about 5 students who were taking an education class. The case study was part of their class assignments.

The case study was performed at a local primary school with 3rd grade children. The subject matter covered was on science and language arts.

The case study consisted of teaching the same lesson plan indoors and outdoors to two different groups of children chosen at random; run a test; analyze the results; and then see what environment offered the best possible learning.

The results corroborated previous investigations that the CSUSB students had done during the first weeks of the school quarter: "Outdoors, indeed, enhances learning." It was very noticeable, i.e., with the children taking instruction outdoors, the excitement to work out of the

conventional classroom and, needless to say, at the end of the instruction they were able to get better scores on a test than the children that took the same lesson indoors.

Overall the children taking the lesson outdoors were able to recall the concepts of the lesson more vividly and with more enthusiasm than the children who took the same lesson indoors. The direct personal interface with the sources of knowledge had made a great difference over the theoretical speculations that normally take place in an enclosed facility.

There is a need, however, to clarify that although outdoor activities enhanced the learning in this particular case study, this outcome doesn't hold true in all instances. Outdoor activities actually enhance learning only when the subject matter is more related to the outdoor environment than to the speculation in the classroom.

In other words, the outdoors does not enhance learning in all the academic subjects. There are subjects that are better taught indoors, and there are others that are assimilated better outdoors.

Maybe as a general rule we might say that if the subject to be learned involves open space and direct and personal contact with the world, then it is better to

conduct the teaching outdoors. But on the other hand, if the subject involves the need of an enclosed facility, the classroom is the place to do the teaching. In either case, it would be up to the teacher to investigate the best approach to convey the desired knowledge to the students.

CHAPTER FOUR

RESULTS AND DISCUSSION

Recently commentators have mourned the "disappearance of civic America, saying we are becoming a nation of civic coach potatoes" (Tyack, 1997). By the same token, Harvard educational psychologist Howard Gardner has found that scholastic knowledge "seems strictly bound to school settings" (1991, p. 122). "While outdoor education fosters 'connected knowing,' where education is part of, rather than separate from, life. Unlike classroom learning, outdoor education uses the student's whole environment as a source of knowledge. The community, rather than the classroom, is the context of learning" (Boss, 1999).

In Maryland, for instance, environmental education is mandated in grades K-12. But then, again it seems to be that only knowledge on nature is intended.

Many other schools also show interest on outdoor activities, emphasizing also the environment, but often this interest materializes only on field trips which sadly very often end up in picnics, where the main attraction is playing and having lunch next to the trees. If any outdoor education takes place, this is very little.

Outdoor activities are important, but they should not be restricted only to the learning of nature. We have to get away from the old idea that learning outdoors is to get acquainted only with plants, rivers, mountains, animals, etc. This is a misconception.

This misconception or tendency on the part of the schools is perhaps because the schools want to share a common interest with politicians on environmental issues. But Politicians tend to show sympathy for environmental issues mainly to gain the votes of the people.

Hopefully in the future, educators, as well as politicians, will realize that the outdoors can be the setting for countless learning opportunities in virtually every subject.

The multi-cultures in the United States, for instance, can be shared by engaging the children in folkloric dances wearing their costumes. Dancing is fun, social, and breaks the ice among the children, not to mention the exercise that they do. You can also teach math outdoors by finding geometrical shapes; or counting or subtracting trees and rocks.

Outdoor education, environmental education, and experiential education, can offer other numerous benefits. The following lines tell us more.

"Much professional thought and long-standing tradition emphasize the value of outdoor experiences for young children" (e.g. Bredekamp & Copple, 1997; Moore & Wong, 1997; Cobb, 1977/1993; Wilson, 1999; Rivkin, 1995).

"Most children appear to benefit from being outdoors. They like to see what is going on (traffic construction, water flowing, clouds, moving animals), go someplace, meet and greet people and animals, experience the infinite and diverse sensory qualities of the world (the smells, the feels, the sounds), and the experiments with the 'big behaviors,' such as shouting, running, climbing, and jumping (which are seldom accommodated well indoors)" (Rivkin, 2000).

Not only is being outdoors pleasant, its richness and novelty stimulates brain development and function. Cognition is rooted in perception (e.g., Gleitman & Liberman, 1995).

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The education of our children is in constant evolution. For this reason, day-by-day we have to investigate more innovative ways and tools to teach our students better. This investigation, however, becomes more critical in a multicultural society, such as America.

The United States is the country where different cultures congregate more than in other parts of the world, hence the obligation that we have to constantly find new ways to meet the education needs of so many children of different backgrounds.

This project explored an important avenue that helps to meet the education needs of our multicultural students. This avenue is outdoor education.

Outdoor education is not a new way to teach. We actually could say that it is a neglected good way to teach. Consequently, the intention of this project was to revive the interest in outdoor education.

The literature specifying the benefits of outdoor education is countless. This project only touched few of the sources available. It is, therefore, with hope that

the information contained in this project triggers the inquisitive mind of the teachers to continue seeking more of the advantages of teaching outdoors to satisfy the wondering minds of our children.

Recommendations

We teachers have a special mission. We are perhaps the main persons who can help parents to mold the life of their children in a structured and organized fashion.

Needless to say, being able to influence the life of children in such especial way brings alone many responsibilities. Some of these responsibilities are the following:

Be aware of what education involves. Being an educator doesn't involve just being a facilitator. Be innovative. Create new ideas. Education can be accomplished in many ways. Look for possibilities to accommodate the outdoors in your lesson plans. Teachers have to do more than just coaching a class. Teachers have to participate in the educational activities of the children. Teachers are also in the process of learning more and more.

Know your students. In addition to just getting to know the correct pronunciation of his or her name,

teachers should get acquainted with the students' culture. Once teachers get acquainted with the culture, they will understand much better the reaction of the students to the American way of teaching. In some cultures, for instance, students respect the teachers so much that they don't look at the teachers' eyes when they address them. Many American teachers take this practice as disrespectful and unwillingness to communicate properly. Also be aware that many of the children who come to the United States are familiar with nature. They come from agricultural countries. Take advantage of that previous knowledge to relate and add-on new material.

Investigate your students' needs. If teachers don't know the weak areas of the students, how can they complement their education? Teachers should not be generic in their teaching. In other words, they should not teach the same way to everyone. Instruction has to be tailor to the individual students' needs. Of course this is extra work for the teachers, but that's what teachers have to do if they want their students to excel. In addition teachers should have an open mind to the many opportunities that the world has to offer, being one of them the outdoor activities.

Be humble and seek advice. Observe veteran teachers and learn from them. You will see that many of them like the outdoors to do their teaching. However, I must mention that you have to be aware of old outdoor practices that are not very efficient. Once I went to observe an eighteen-year veteran teacher and I was a little disappointed. This teacher had as a practice to tell, angrily and in a loud voice, to noisy students to go to the front office as a punishment. During a two-hour period, several students were told to go the front office. I noticed, however, that the students didn't take too long to return to class. I was also wondering if in the office they didn't object to such a practice. So, I finally could not resist anymore and asked one of the students very quietly about what they did in the office. And he responded, "I don't know. We never go inside. We just go to the door and then get back."

Always keep the investigating spirit alive. Take the initiative to learn more about new things. I still remember that my mother, in the 1940's, kept on washing the clothes by hand even though she had a new tool called an "automatic washing machine." She was afraid to try it. It took some time before she decided to use it. After she did, she was sorry that she hadn't tried it before.

Teachers should be daring and a role model for investigation and practice of new findings. If teachers neglect to be inquisitive about new ideas, their minds, in no time at all, will be out of date and the students will be the main losers. Hopefully, the books and web sites mentioned in this project will be of benefit for teachers to continue their effort to know more about the value of outdoor education.

Summary

Outdoor education is an open window for more opportunities to learn and have fun, especially here in America where the demographic make up is changing. Here in the United States we have plenty of opportunities to serve students from diverse cultural backgrounds.

"To be successful, it is important to develop an understanding of diverse student needs, attitudes toward the outdoors, and styles of learning as part of an overall effort to acknowledge and appreciate their various cultures" (Kielsmeier, 1989).

Outdoor education gives children the joy of openness and discovery of real things. Have you seen the following statements framed in some stationery stores?

"Children learn what they live"

- If a child lives with criticism, she learns to condemn.
- If a child lives with hostility, he learns to fight.
- If a child lives with ridicule, she learns to be shy.
- If a child lives with shame, he learns to feel guilt.
- If a child lives with tolerance, she learns to be patient.
- If a child lives with encouragement, he learns confidence.
- If a child lives with praise, she learns to appreciate.
- If a child lives with fairness, he learns justice.
- If a child lives with security, she learns to have faith.
- If a child lives with approval, he learns to like.

- If a child lives with acceptance and friendship, he or she learns to find love in the world.

I am sure that to follow the advice in these statements, people still can think of many more to add. Perhaps for or the time being we can include: "If a child lives with restriction, his or her learning will be limited accordingly." If we restrict our children to mostly indoor activities, they will be deprived of the many other opportunities that the outdoor has to offer to enhance their learning.

APPENDIX A
OUTDOOR EDUCATION WEB SITES

Outdoor Education Definitions - Outdoor Education
Research & Evaluation Center

Definitions of outdoor education, adventure education, adventure programming, and related terms.
wilderdom.com/definitions.html

ED425051 1999-01-00 Outdoor Education and the Development
of Civic Responsibility. ERIC Digest.

Both the benefits and responsibilities of being part of
it.

www.ed.gov/databases/ERIC_Digests/ed425051.html

Outdoor education for Behavior Disordered Students

Outdoor education offers special benefits to behavior-
disordered students. This is a review of possible
activities and benefits.

www.kidsource.com/kidsource/content2/outdoor.education.ld.k12.3.html

ED414112 1997-10-00 Outdoor Education and Environmental
Responsibility. ERIC Digest.

Benefits of the Youth Conservation Corps program,
which combines outdoor work opportunities and
environmental education.

www.ed.gov/databases/ERIC_Digests/ed414112.html

Camp Fairbairn Outdoor Education Centre - Outdoor
Education

WHAT IS OUTDOOR EDUCATION? The value and place of outdoor
education can be recognized by its primary goal which is
the development and maintenance of positive and healthy
relationships. Outdoor Education is a dynamic, interactive
style of learning.

www.cfoec.qld.edu.au/about/outdoor_education_cfoec.htm

Meta-analytic Research on the Outcomes of Outdoor
Education - James Neill

Summarizes the empirical research on the outcomes of
outdoor education programs.

wilderdom.com/researchoutcomesmeta-analytic.htm

APPENDIX B
LESSON PLANS WEB SITES

Physical Education Lesson Plans

Lessons submitted by teachers are organized by subjects, including fitness, catching skills, tag games and classroom management. Here are some physical education lesson plans submitted by various DJ's. Funattic Outdoor Games.

schools.eastnet.ecu.edu/pitt/ayden/physed8.htm

Physical Education Lesson Plans

Drills, Coaches Practice Plans. Kids' Outdoor Games.
www.sports-media.org/Lesson.htm

Science Lesson Plans

Science Lesson Plans Science - Elementary (K-5)
www.col-ed.org/cur/science.html

Science - Elementary

SCIENCE Mini-Lessons. Elementary (K-5). Mini-lesson on environmental/outdoor education. Mini-lesson on water. "The Beanstalk" (3). Environmental education: Exploring the playground (4-6).
youth.net/cec/cecsci/sci-elem.html

Frank and Mike's Physical Education Page

Two physical education teachers offer a forum for their colleagues to exchange lesson plans, tips and games.
www.geocities.com/sissio/physical_education.html

Physics and Astronomy Lesson Plans

Series of lessons, designed for specific grades from K through 12 involve experiments that demonstrate principals of physics and other sciences. Elementary School Lesson Plans. Force and Motion. Space Station Lesson Plans (K-5). How Satellites See (3-8). Air Pollution (4-6). Outdoor Education (4-6).
www.physics.rutgers.edu/hex/visit/lesson/lesson_links1.html

Physical Education Lessons - K-8 Canada teachers

Physical education lesson plans and resources for elementary school teachers in Canada. Lesson plans for games, motor skills, gymnastics, outdoor education and team sports.

www.canadateachers.about.com/cs/physicaleducation

Education Planet Education, General, Outdoor Education
Lesson Plans

Search 100,000+ top educational sites, lessons, supplies and more! Found 13 websites and 5 other resources for 'outdoor education.' 13 Web Sites. 5 Lesson Plans.

www.educationplanet.com/search/Education/General/Outdoor_Education

Physical Education Lesson Plans

Ask ERIC Physical Education Lesson Plans Numerous lesson plans in Games, Gymnastics, Motor/movement skills, Outdoor education Skill-related fitness and Team sports covering various grade ranges in K-12.

mcreynoldsms.org/pe_lesson.htm

Physical Education Lesson Plans

Bean Bag Activities. Bean Bag Lessons. Parachute Activities. CATCH Physical Education Lesson Plans. DJ's Physical Education Lesson Plans. Funattic Outdoor Games. schools.eastnet.ecu.edu/pitt/ayden/physed10.htm

Science K-2 lesson plans

Science Lesson Plans that Teach Literacy (K-2). This website is devoted to providing lesson plans and ideas for teachers who want to include science instruction for young children. Four lessons about K-2 geology. An outdoor jumping contest! A Guide to Class Pets and tactile insect lesson plans.

web2.airmail.net/kboyle

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France: UNESCO ED/MD/49
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UNESCO-UNEP Environmental Education Newsletter, 1(1),
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