Using Inquiry-Based Learning and the Environment to Improve Science Education

Encouraging current and future educators to become certified in the Project Learning Tree program

Tag Words: Project Learning Tree, science, education, workshop, environment, nature, American Forest Foundation

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Summary: The focus on testing of math and language arts learning in elementary and middle schools has led to a lack of emphasis on science education. To make learning in many subjects including science, more engaging and memorable, we are proposing that teachers utilize the outdoors as their classroom with lesson plans provided by the Project Learning Tree (PLT) program. A workshop will be held in January 2013 at Rutgers University open to teachers and college students that will provide them with the PLT certification.

Video Link: http://youtu.be/n0UqWia9U3A

How Does the United States Compare Internationally? (SK)

Science affects many aspects found in everyday life, whether it relates to health, recreation, or technology. However, not enough time is spent on teaching science in schools, so children remain oblivious to the influence of science on their lives. In 2009, the Programme for International Student Assessment had released its annual results for how students ranked in academic standing compared to countries all over the world. The United States fifteen-year-old student participants came in “fourteenth in reading, seventeenth in science, and twenty-fifth in math” out of thirty-four countries, meaning that they scored average for reading and science and below average for math. These scores do not reflect the New Jersey Science Education Leadership Association’s goal to have students all across the United States to be ranked number one in mathematics and science achievement by the year 2000 when compared to other countries.

In an ideal world, students would receive a limitless amount of science education. Realistically, they only receive the amount seen as suitable by the Board of Education (which varies among the school districts). Students in Pre-K through 8th grade spend 27.75% of their lives in a formal education environment. This includes whatever subjects are taught during the school day. 27.75% is already a small enough value; now, imagine an even smaller percentage of
that to represent the amount of time that students spend on learning about science in the classroom.

(MF) According to Jack Hassard, author of “The Enigma of High-Stakes Testing in Science,” on the PISA (Programme for International Science Assessment) scale the United States is ranked below average. Hassard and his colleague Professor Yong Zhao, the Presidential Chair and Associate Dean for Global Education, of the University of Oregon, agree that this epidemic could be attributed to the fact that America is “moving toward a centralized reform of education… at a time when other countries are moving in the opposite direction…” In his book “Catching Up or Leading the Way,” cited by Hassard, Professor Zhao compares the education in America to that of the education in China. He suggests that while America is trying to standardize who learns what, when they learn it and how they will be tested on it, China is inspiring its learners to be creative, think differently and be able to thrive in “an innovation-driven knowledge based society,”. He goes on to explain that in an effort to catch up with the rest of the world’s standards, America is raising its standards, rather than reforming its ways of educating students, which would be more effective. By raising standards, the U.S. is actually doing the opposite of what the No Child Left Behind Act sought to do, students’ are again becoming discouraged, and dropping out, thus children are being left behind.

The Consequences of Unequal Exposure to Scientific Lessons (SK)

When entering high school and college, there seems to be a learning gap in the sciences between the incoming students. Some students may consistently have been exposed to science since an early age while others attended one science period per week. Such disparity in exposure to science education early in their education make science that much more difficult to teach in secondary school. In the 2011 summer issue of the Newsletter of the Forum on Education of the American Physical Society, an article discussed the results of a survey involving the United States math and science education. It ranked where each state fell on this education totem pole in order to see which students received the best and worst science and math education. Only ten states earned scores above the national average in how well-tested students are in math and physics education and teacher qualifications.

Stated in an article found on their website’s homepage, NJSELA believes, “…if the performance of American students in science is to improve at the high school level, we must greatly improve elementary science education.”. There is a correlation between how teachers teach and then how students respond to their teaching. For students to effectively learn about science, they should be exposed to meaningful material as early as possible, like in elementary school. This knowledge becomes the foundation for which will built upon in secondary education.
Without the appropriate amount of science education being included into the curriculum, students will continue to show little to no progress in developing a better understanding for science. Students’ poor performances on an exam or homework assignment cannot always be blamed on the intelligence of the student. Instead, the performances may depend on how the material was presented in class. Every student has the ability to learn and understand science concepts, but not when the information lacks meaning.

**Federal Policies Preventing a Real Focus on Science Education: Reform, is it Possible? (MF)**

According to the Educational Psychology textbook, “Reflection For Action,” in the 1920’s standardized testing was originally created to assess the effectiveness of schools, and identify learning disabled students and place them in appropriate classes, or come up with ways to help better their education. This changed when it became evident that the standards that America was being held to may not have been on par with the rest of the industrialized countries but failed to take into account other factors such as poverty, and the inequality in the funding of education in the poverty stricken areas. This is what set the United States apart from the other countries then, and now; according to Hassard, the U.S. has the highest rate of poverty in comparison with the countries that it is competing with academically. This reflects the inefficient amount of science education in U.S. schools that enables students to prepare for test taking.

After the No Child Left Behind Act (NCLB) went into effect in 2002, the federal government became more involved in the education system in an effort to “improve” schooling for the under privileged children of America and, keeping more kids in school by offering an allegedly equal education. In doing so, the federal government has effectively taken teaching and learning out of the hands of those who know it most intimately, the teachers and students, and handed it over to an industry in which the U.S. is competing among the top countries in the world. No Child Left Behind called for annual testing, progress reports, and higher quality teachers, among other things. While the plan was to improve the education system, the approach of standardized testing has limited schools’ curriculums across the country. “The problem is that those aspects that do not appear on the test will disappear from the curriculum,” There is a heavier focus on standardizing education, limiting creativity, and presenting only the materials needed to perform well on these standardized tests. The U.S. has since dropped below most of the rest of the world’s standards in both mathematics and science. In order to improve U.S. education, there needs to be a less standardized method to educate students about science, which will encourage higher level thinking, analysis, and inspire creativity. To engage students, and encourage them to truly learn and appreciate science, educators must take a different approach that allows for more explorative and hands-on activities.
How Can Informed Educators Change The Face of Science Education? (MF)

American teachers are forced to focus their efforts on spoon feeding their students information to be able to pass a test, rather than teaching lessons that would promote scientific inquiry, creativity and higher order thinking. “In its extreme form, [teaching to the test] students are not just taught only the content that will appear on the test, they are taught that content only in the precise form in which it will appear on the test.”¹² Due to this fact, many subjects are stripped down to only outlines of necessary information, which for young children can be boring and difficult to understand; this leads to memorization for a test rather than learning the material that could be used or practiced. Often, teachers tend to rely on this type of lecture-style education because it pertains to the test, and not only are the students’ assessed by these standardized tests, but also how the student’s perform directly reflects on the teacher. This puts pressure on the teacher, as well as the curriculum to stay on track with the test, and try not to stray from materials that may be presented. In many states, testing scores determine potential funding for the following year, or the longevity of a teacher’s career.

Since a child may find the overall subject of science to be mundane to learn in such a structured format as teaching to the test, and being given lists of information to memorize, it is often better to approach science in a less formal way. Having children more involved in their learning will provide for a more positive experience, and effective lesson. Scientific inquiry, a suggested method to effectively teaching this material, can involve children formulating and doing their own experiments. Cooperative learning, which allows children to be able to understand and share with each other the concepts that they have learned, can be an effective way of not only teaching, but also getting them engaged in the lesson. Alternatively, Hassard gave an example of how teachers in Florida are improving standardized testing scores in science by simply presenting PowerPoint slides, in a manner that a college student would be taught, giving the children only information that they may need for the test. While this may have been an effective way of meeting state and nation wide requirements, it lacks the basis of science education altogether, which is inquiry-based and discovery learning. In fact, Hassard applauds these teachers for bringing up these test scores, but he also emphasizes that there are more effective ways of engaging a student in science education, helping them apply what they’ve learned to the state mandated testing, and more importantly, growing an appreciation for the science material.

There are alternate routes to the same destination. George Hein, an educational theorist in support of constructivism, presents a teaching model that allows for different ways of the student constructing their own knowledge base on facts being presented directly; discovery based on “self-directed interactions,” which lead to knowledge; constructivism, in which knowledge is constructed through the “integration of existing and new concepts;” and behaviorism in which “learners build knowledge of an external world by mastering ‘pieces’ of knowledge
incrementally,“\(^3\). From Hein’s model, one can see that there are many ways to teach a subject, but with such a heavy focus on how students perform on standardized testing, teachers have little time to be able to explore these other options. Setting up cooperative learning scenarios and group work help to supplement lecture-based, or teacher-centered learning, and help to better engage students in the subject matter, encouraging scientific inquiry, but it is not an effective way to “teach to the test.”\(^3\) This is where the problem lies. The standardized testing focus takes away from the time that could be spent guiding students to be better learners rather than better test takers.

Science education, if taught properly, can provide skills to students that they may not learn in any other classroom setting, or the typical lecture style classroom. By straying away from the textbooks a bit, and allowing children to have an interactive science education, they can improve their problem solving skills that may benefit them in every other class. While science literacy is important, and also contributes to better understanding of other texts, there needs to be a balance between simply delivering information to children, and their ability to experience and ask questions that lead to their own understanding and knowledge of a subject. Inquiry-based learning has been proven and effective way to have a more student-centered class rather than a teacher centered class. When children feel that they have a say in what they are learning, and how they are learning it, it may also increase their interest in the subject matter. With a focus on the environment, children are presented real life issues that they can propose solutions to, and be more aware of the world around them.

**Science Class Does Not Have to Be Boring (SK)**

Monotonous classwork like answering textbook questions and writing lab reports does not help increase a student’s excitement for science. These types of assignments are often presented by the teacher in a passive manner and are not usually supplemented with activities that entice the learner to want to find out more about the concepts. Science should be a time for students to make discoveries, learn about them, and then reflect on what they found. This causes students to become involved with the scientific process where they can form hypotheses, make predictions, test them through experiments, make observations, and then conclude if the hypothesis has been disproved or not. Science allows for students to develop and work on their problem-solving and analytical-thinking skills. Science education does not have to be boring; encouraging the learning of scientific topics can be done through creative and productive ways. Students can be asked to create models of biological processes or participate in outdoor field trips relating to the lesson plan.
Is Obsession with Technology Detrimental to a Child’s Understanding of the Environment? (MF)

Technological advances have begun to parallel the increasing availability of devices on the market. Society is quickly moving in the direction of dependence on technology which is severely limiting their exposure to the environment. Knowledge of basic socialization and survival skills, once thought to have been common sense, are becoming scarce among younger generations due to their lack of simply being outdoors. According to PLT.org, studies have shown that “American children ages 3 -12 spend 27 percent of their time each week watching television, and only 1 percent outdoors’ (Hofferth & Sadberg, 2001)"12 Sadly, children have lost interest in exploring their environment and become more accustomed to coming home from school in a rush to complete their homework, so that they can jump on the nearest entertainment system.

Not only does this affect their knowledge of the world around them, decreased activity outdoors is negatively impacting their health. A preschool teacher, Mrs. Simmons, writes a blog about how this trend is detrimental to the future of our nation. “Small children don't want to go outside to play anymore because they'd rather be sitting on a gamer chair playing the newest PlayStation 3 or Xbox360 game…This is causing a drop in skills that we learned outside as children such as creativity, how to build things, education about nature, entomology, and people skills,”16. The answer to this increasingly detrimental trend is clear: educating students in school can at least give them the opportunity to learn skills that they may not learn at home, for parental oversight and lack of involvement. It is important that children are exposed to the environment at home, as well as an inquiry based science education in school. This can provide them with a the opportunity to gain knowledge that shows them how to question the world and their surroundings, and a basis for problem solving skills.

How Have Others Addressed This Issue in The Past? (MF)

The lack of science education is not a new issue to the world of education. The National Environmental Education Act of 1990 set forth to create a bridge between the Department of Education and the Environmental Protection Agency that would focus on including more science and environmental education in the curriculum. This Act also mandated that if a school district or teacher were interested in teaching environmental education that the resources be provided to them. Lacking resources, whether it is in an underfunded school district, or well-funded school district, is not the problem. The problem is that many, if not most schools’ curriculum is so tightly packed with state and nation-wide requirements that adhere to state-mandated testing, there is not much room for change or addition of what might be taught in the classroom.
After this Act was passed, many advocate groups for science, wildlife, and the environment have attempted to get involved with such education. With that, students are told how to think and feel about certain issues which gives them a skewed idea of these topics, rather than presenting material in a way that they may be able to form their own ideas. Also, many of these groups do not appear in the classroom, and may not touch every student. The initiative behind this Act was to incorporate such learning into the everyday classroom, and a few organizations have made an attempt at providing an unbiased view of environmental education. Project Wet is an educational organization that aims to educate people about the natural resources found in rivers, lakes and oceans and emphasizes the importance of preserving this abundance of life. Another program, Project Wild, focuses on animals and their environments, and how we impact the everyday lives of wildlife around us. Other groups like the 4-H Club are getting kids back into the environment and their surroundings to teach them during summer camps, field trips with school and family day trips. The problem with how these programs work is that they are not equal opportunity, like incorporating such learning into the classroom, in which everyone has access to the knowledge.

The National Science Teacher Association meets semi-annually to discuss ways to improve science education. Their mission statement is “to promote excellence and innovation in science teaching and learning for all,”11 as quoted from the associations website. According to their 2010 Strategic Plan, over the next five years, they want to “promote active participation of all teachers of science in improving science education; advocate for the central role of science education to benefit students and society; support high-quality science teaching to improve student learning for the 21st century; influence research in science education and promote its wide application to improve science teaching and student learning”11. The National Science Teacher Association has set up an appropriate plan for the next few years, but the plan needs to be put into action and help advocate and promote programs that will get non-science elementary and middle school teachers better acclimated to a more scientific-based learning.

The Problem with Science Fairs (SK)

When schools set up activities and assignments that attempt to liven up science subjects, they can end up being a waste of time because students do not take away the intended message. For instance, science fairs held at elementary schools try to give students the chance to prove their understanding of the scientific method and details about the topic they have chosen to cover. However, these goals are not always met due to poor time management, lack of individualized attention from the teacher, and competition². Since students who are in elementary school are young and still learning about time management, they may not know how to handle a science fair and the rest of their classes. Science fairs are a big-time commitment to handle, especially for a student at such a young age in elementary school.
Fair projects are an even bigger responsibility when worked on outside of school since the teacher is not there to help guide them on material that may be unfamiliar. Students benefit more when the teacher can work alongside them to help correct mistakes in the here and now. When students work outside of class on a project and a parent is not knowledgeable in the material, the teacher cannot help the student with the experiment right away until they present the inaccurate data at the actual fair. Lastly, science fairs evoke a sense of competition, especially if projects are being judged for prizes. Students may become insecure if they feel that their project is “not as good” as someone else’s.

Science on a Budget (SK)

Whether it is an experiment being performed in the laboratory or tracing a picture of a star constellation, there are many opportunities available for students if they are provided with sufficient information and equipment. However, many schools do not have the funds or time to plan elaborate schemes to introduce students to laboratory procedures. However, it is not necessary for schools to designate a large part of their budget to the sciences. School districts have this notion that teaching science requires expensive books and technology. Teachers can educate students about science by simply taking a walk outside or using inexpensive models. They do not have to rely on expensive computer programs to show photosynthesis. While these products are nice to have in the classroom, they are not necessary to help students engage with the topic.

The Importance of Effective Science Education (SK)

Science education is needed to make students well-rounded, functioning members of society and for their own benefit, too. Once students are given the knowledge and tools by instructors and then understand scientific concepts, they can relate this information to their daily lives. For instance, there are events and routines that are taken for granted, which students do not even realize are a part of science. For instance, the weather channel relays information to the television audience based off of data that has been collected from satellites and radar, also known as scientific instruments. Scientific methods had to have been utilized in order to obtain the information about the scientific processes of weather phenomena and atmospheric movements.

Benefits from science education include building a foundation for knowledge to be used in future academics and careers. The earlier science enters the classroom, the longer a student will have been exposed to those concepts and be able to build a greater foundation for scientific material. This increases the student’s confidence in being able to handle the more difficult science subjects as the school year goes on. Elementary and middle schools should work to build up students’ confidence and understanding of the material to further guarantee that they will have a positive experience with science.
Educational Program vs. Advocacy Campaign (SK)

It is important to promote objective and factual material in an unbiased manner in educational programs. Unfortunately, many of these environmental programs intended for educational purposes fall into the trap of becoming an advocacy campaign. When an educational program turns into an advocacy program, this affects the way that material would be presented to a class of impressionable students. An educational program talks about the scientific facts relating to the topic. On the other hand, an advocacy program promotes a cause and only wants the learner to see its benefits and not the full story. By having a program that presents science material from an unbiased perspective, students will be influenced by how to think, not what to think.

Incorporating more science into the curriculum and instilling innovative thinking by using inquiry-based learning is an achievable goal that does not require a complete overhaul of the educational system in the U.S. There are several models of success available to teachers that focus on hands-on activities to engage students. One such program, Project Learning Tree (PLT) helps “young people learn how to think, not what to think, about complex environmental issues.”

Community Action: Project Learning Tree Making a Difference in Science Education

What is Project Learning Tree? (MF)

Project Learning Tree was founded in 1976, and to this day is the leading program in Environmental Education. A group of natural resource managers and educators from the American Forest Foundation, formerly known as the American Forest Institute, and Western Regional Environmental Education Council, which is now known as the Council of Environmental Education, came together to develop a manner in which educators could teach about environmental education in an unbiased way, so as to give children the tools, skills, and knowledge to form their own view of the world. As time went on, this program began to expand across international borders, the materials were translated and other countries became involved in the movement in the 1980’s. By the 1990’s, Project Learning Tree had reached all 50 states, and included Pre-K to 12th grade curriculum, as well as the foundation for Greenworks program, which spread the awareness to the community. By the 2000’s many more concentrated activity kits and specific lesson plan books, for example “Focus on Forests,” and “Biodiversity.”

Project Learning Tree has grown into a popularly used environmental education program that encourages teachers to incorporate knowledge about the environment in their everyday lessons. This program, quite literally, opens doors to the outside world that kids no long explore as willingly as they had in the past. Teachers often fear the words “environmental education,” because one may assume that this subject matter can only be covered during a science lesson,
which many elementary schools do not allocate much time for, amongst the heavy load of mathematics and language arts in the curriculum. While this is a valid concern, the authors of the lesson plan book for Project Learning Tree, “Pre-K-8 Environmental Education Activity Guide,” have already taken this obstacle into consideration for the teachers and school districts interested in using the program. This book “has been correlated to both state and national learning standards,” according to the Project Learning Tree website, where there are lists available providing both state and national educational requirements.

(SK) The textbook associated with the Project Learning Tree program provides teachers with numerous types of lesson plans to be used in Pre-K- 8th grade classroom. The lesson plan consists of the objectives, assessment opportunities, background information about the topic, an in-class activity (or activities) for students to do, and finally, an enrichment exercise like homework to assess the students’ understanding of the material.

(MF) While technology, like video games, mp3 players, televisions and computers, used for entertainment purposes can take away from the time children spend learning about the environment, PLT can connect the two. The Project Learning Tree book indicates how each lesson can have a technological aspect. The use of technology in the classroom can actually improve the quality of their education, using programs and educational tools to allow for a more student centered learning environment. (PLT workbook) In this way, PLT is not disconnecting the advances in technology entirely from the environmental education. Instead, it allows children, who may not have trees and wildlife right outside their classroom, or in their backyard, the opportunity to learn the very same skills and information about the world around them. Technology can be helpful when not used in moderation with regular outdoor activity. If American children can learn that this balance is important, there will be more well-rounded healthy, knowledgeable students.

As stated on their website, the “goal is to teach students how to think, not what to think about complex environmental issues,” which allows children to develop their own thoughts about these issues, and often come up with original solutions to various environmental problems. This way of educating students about the environment is what sets Project Learning Tree apart from many other environmental education Programs, which often appear as though they are advocating one side of an issue or another. According to PLT.org, “Studies show that curricula with outdoor learning components are proven to advance overall student performance, including test scores, particularly in science and math. More than half of all Project Learning Tree activities can be conducted outdoors. Furthermore, independent evaluators confirm PLT increases students' knowledge, reasoning, and academic skills.”

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Implementing a Project Learning Tree Workshop

(SK) Dr. Gallagher has been a long-time facilitator of the Project Learning Tree program and is on the Board of Trustees for the American Forest Foundation which is the host organization for PLT®. He provides more information about his other positions, projects, publications, and research on his website at http://www.gallaghtergreen.com/. After meeting with Dr. Gallagher multiple times, he has agreed to help lead a free PLT workshop for participants to become certified in the program. The workshop entails a tentative agenda in which Dr. Gallagher will present information about forestry, since that topic is his specialty, followed by two demo lesson plans. Shown below, a Facebook event page has been set up to advertise the workshop to potential participants.

During this workshop, two demo lesson plans will be presented and then demonstrated by the participants. One lesson designed for third to sixth graders, Activity 34, is called “Who Works in this Forest?” which focuses on the different types of jobs found in the forest industry. Students learn about forest-related careers like naturalists, loggers, scientists, and foresters which all promote proper forest maintenance for recreation, natural resources, and a healthy environment.

After the instructor recites the background information, like defining forestry, to the workshop class, each participant will be handed a worksheet to complete the correlating activity. On the worksheet, there are descriptions about six different people’s forest-related jobs. Before anyone works on the activity, the participants will have a group discussion about the significance of various occupations associated with the forest. Then, participants write down their answer to the question that comes after each description: “Why is this job important? Explain.” Though it will not be carried out in the workshop due to time constraints, the enrichment portion has the teacher ask students to prepare questions for guest speakers with forest-related careers who come in next class. As an alternate assignment, students can also be told to research other types of forest occupations on the Internet.

Students would be able to focus on environmental concepts and issues affecting the world in which they live. To show support for PLT, the participants can become certified by taking a one-day workshop. This workshop would be a small stepping stone in promoting the importance to more science-related activities and concepts incorporated into the school curriculum. After setting up a date and time for the workshop, Rutgers University students who are interested in the education field (whether it is for formal or informal positions) and current teachers may participate.
The tentative agenda lists information about the time and location, planned activities, and other requirements (see below).

**Tentative *PLT WORKSHOP AGENDA***

**Location:** TBA  
**Time:** 4-6 Hours  
**Dates:** the Week of Jan 7th

**Theme:** Forestry
- What is PLT?
- Short Explanation of Purpose of Workshop
- Ice Breaker / Intro -> related to activities
- Content Portion (Dr. Gallagher) Forestry in NJ
- Present our Activities: Sari (15-30 min demo) & Megan (15-30 min demo)
- Split into groups & explain next activity (everyone is going to present a lesson plan 15-20 min)
- Working Break (1.5 hours depending on location, and resources/ lunch provided or not)
- Run Through Presentations
- Complete workshop and Distribute Materials

References


Appendices

Cover Letter and Letters to the Editor

Sent to the American Forest Foundation (11/14/12)

Our names are Megan Funk and Sari Katzen and we are Rutgers University Students, studying the sciences as well as education, pursuing careers in Science Education. We are currently attempting to tackle the issue of the severe lack of science education in schools, by spreading awareness and suggesting a potential solution to the problem. We are writing to you in hopes that you will publish our letter promoting the environmental education program, Project Learning Tree, which funded by this foundation (the American Forrest Foundation). Project Learning Tree will help to improve children’s understanding and awareness about their environment and encourage healthy outdoor activity. Through a workshop, teachers are taught to incorporate pre-planned lessons into their curriculum, that not only reflect the material they
chose to cover, but also many different environmental ideas, that children need to be exposed to. We want to reach out to as many people as possible, like parents and educators, to explain the impact that this program will have on not only their child’s education, but also their lives. We need the support of parents, teachers, and school administrators to increase teacher certification and use of the unique program. We appreciate the time you have taken in reading this letter concerning this education issue, and our plan for the Project Learning Tree program.

To Whom It May Concern,

With the increased interest in technological advances, children are losing interest in outdoor activities and exploring the world around them; this is not only due to America’s obsession with technology but also the severe lack of environmental education in the classroom. As future educators in the science field, we want to be able to find a solution to improve the quality of science education taught in the classroom without taking away from the current school curriculum. Since children are not exposed to science in their classroom as often as they should be, we would like to endorse a program called the Project Learning Tree. This program is an environmental education program funded by the American Forest Foundation. While many programs of its kind tend to be advocacy programs, this is unique in that it provides teachers with lesson plans and activities that teach their students about topics relating to the environment in an unbiased way. The program incorporates material that can be taught from preschool to eighth grade and abide by state and national science educational standards.

The Project Learning Tree provides children with knowledge about environmental topics and issues. By becoming more aware of these topics, students develop an interest in their own natural surroundings. This newfound interest can lead to children taking a break from playing video games and experiencing outdoor activities, which promotes a healthy lifestyle. Good health and increased knowledge about the environment helps to improve self-confidence, which can impact every aspect of a child’s life.

We want to find ways to encourage teachers to become certified in the program to incorporate it into their daily curriculum. By going to your township’s Board of Education and showing your support for the incorporation of Project Learning Tree into the daily school curriculum. With combined support from teachers, education administrators, and parents, together, we can help children develop an appreciation for the environment and ultimately, improve their overall educational and life experiences.

Sincerely,

Megan Funk and Sari Katzen
Our names are Megan Funk and Sari Katzen, we are Rutgers University Students, studying the sciences as well as education, pursuing careers in Science Education. We are currently attempting to tackle the issue of the severe lack of science education in schools, by spreading awareness and suggesting a potential solution to the problem. We are writing to you in hopes that you will publish our letter promoting an environmental education program called Project Learning Tree, funded by the American Forrest Foundation, which will help to improve children’s understanding and awareness about their environment and encourage healthy outdoor activity. Through a workshop, teachers are taught to incorporate pre-planned lessons into their curriculum, that not only reflect the material they chose to cover, but also many different environmental ideas, that children need to be exposed to. We want to reach out to parents, to explain the impact that this program will have on not on their child’s education, but also their lives. We need the support of parents, teachers, and school administrators to increase teacher certification and use of the unique program. We appreciate the time you have taken in reading this letter concerning this education issue, and the Project Learning Tree program.

Dear Parents,

With the increased interest in technological advances, children are losing interest in outdoor activities and exploring the world around them; this is not only due to America’s obsession with technology but also the severe lack of environmental education in the classroom. As future educators in the science field, we want to be able to find a solution to improve the quality of science education taught in the classroom without taking away from the current school curriculum. Since children are not exposed to science in their classroom as often as they should be, we would like to endorse a program called the Project Learning Tree. This program is an environmental education program funded by the American Forest Foundation. While many programs of its kind tend to be advocacy programs, this is unique in that it provides teachers with lesson plans and activities that teach their students about topics relating to the environment in an unbiased way. The program incorporates material that can be taught from preschool to eighth grade and abide by state and national science educational standards.

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Sincerely,
Megan Funk and Sari Katzen

Contact Information: Megan- no1megan@gmail.com
Sari- skatzen710@gmail.com

Sent to Yes! Magazine (11/13/12)

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Dear Educators,

With the increased interest in technological advances, children are losing interest in outdoor activities and exploring the world around them; this is not only due to America’s
obsession with technology but also the severe lack of environmental education in the classroom. As future educators in the science field, we want to be able to find a solution to improve the quality of science education taught in the classroom without taking away from the current school curriculum. Since children are not exposed to science in their classroom as often as they should be, we would like to endorse a program called the Project Learning Tree. This program is an environmental education program funded by the American Forest Foundation. While many programs of its kind tend to be advocacy programs, this is unique in that it provides teachers with lesson plans and activities that teach their students about topics relating to the environment in an unbiased way. The program incorporates material that can be taught from preschool to eighth grade and abide by state and national science educational standards.

Project Learning Tree presents the opportunity to expose young students to environmental issues at an appropriate speed. This program seems to be one possible solution to David Sobel’s theory of ecophobia (in regards to the article “Beyond Ecophobia” he had written for Yes! magazine), where children develop a fear of ecological problems and the natural world when presented an overwhelming amount of information describing how the environment is “doomed.” While students should not be kept in the dark about environmental issues, this information can be relayed to them in a more presentable way. According to Project Learning Tree’s website, the program meets the state and national standards for education through “the constructivist approach to learning, whole language learning, cooperative learning, problems solving, and authentic assessments.” The authentic assessments strongly correlate with Sobel’s philosophy on exposing students to the environment one step at a time. Students interact with the environment on a local level by assessing their surroundings. After these classroom and outdoor activities, students eventually come to the conclusion that their neighboring environment is the foundation for global environmental issues.

We want to find ways to encourage teachers like you to become certified in the program to incorporate it into your daily curriculum. By simply visiting Project Learning Tree’s website, plt.org, you can search for your local PLT representative to find out more information about coordinating a workshop for your school district. Also, you can go to your Board of Education and your supervisors to show your support for the incorporation of Project Learning Tree into the daily school curriculum. With combined support from teachers, education administrators, and parents, together, we can help children develop an appreciation for the environment and ultimately, improve their overall educational and life experiences.

Sincerely,
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