Standard Practice:
Aligning EE Resources to National and State Curriculum Standards

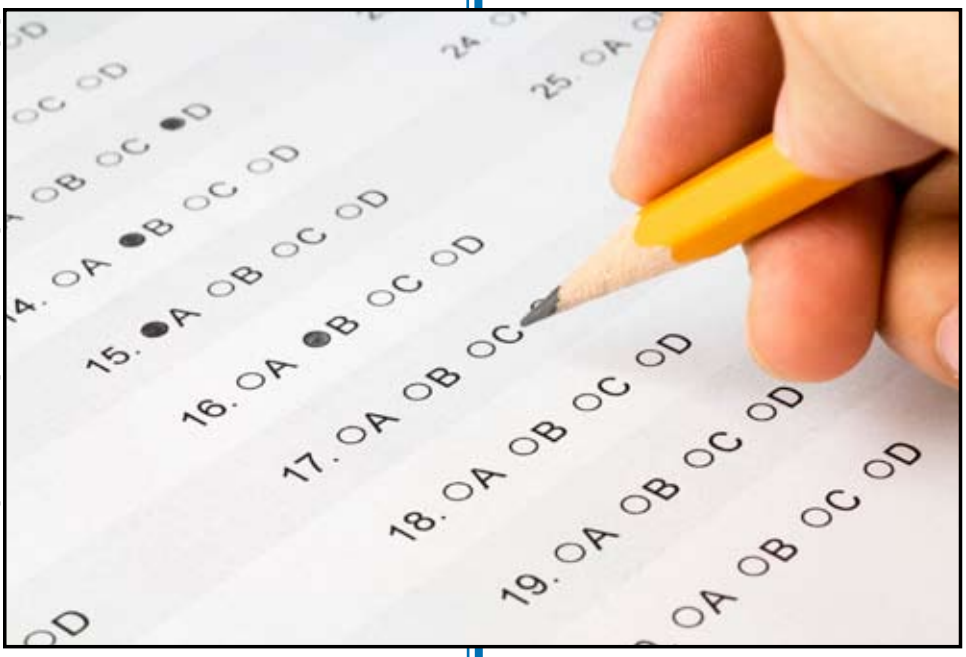
by Christy Merrick

"Standards-based reform is by far the biggest deal in American K-12 education today."

- Fordham Foundation

Every year, millions of students in American public schools file into testing rooms, pick up their number-two pencils, and begin. When time is called and they put their pencils down, the answers they have given on their standardized exams will determine not just their own standing in the public school system, but also how their teachers and schools are evaluated.

Preparing students for standardized tests is now the central focus of most teachers in American schools. And increasingly, environmental educators are ensuring that their materials conform to and support the educational standards that these tests evaluate. Determining the long-term impact of this strategy has been challenging, but new research suggests that teachers use more environmental education materials when they are connected to educational standards.



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The No Child Left Behind Act has made standardized testing a central feature in American public schools.

Standards-Based Reform

America's educational system has long provided teachers with guidance about the kinds of knowledge and skills their students should be developing each year. But in 1983, when the National Commission on Excellence in Education published its landmark report on the state of American schools, *A Nation at Risk*, America began to question whether that system was working.

Students were not performing as well as their counterparts in other industrialized countries, achievement on standardized tests was declining, illiteracy rates were alarmingly high, and other indicators suggested that America was not producing citizens that would be able to compete

in the global economy. The commission found that our schools were drowning in "a rising tide of mediocrity" that the commission claimed threatened not just the future of America's young people, but "our very future as a Nation."

A wave of reforms followed. The biggest, most enduring effort at reform has been that of standardization. Hoping to raise the bar for students by setting clear goals for learning across the grades, and then requiring standardized tests to demonstrate competency, education leaders ushered in the era of standards-based reform.

"Standards drive the teaching. It's the heart."

- Netosh Jones

Today, as American students still score below their international counterparts, standards-based reforms continue. According to the Fordham Foundation, which publishes the *State of State Standards* report, "Standards-based reform is by far the biggest deal in American K-12 education today."

In an effort to increase accountability for meeting standards, President Bush signed into law the No Child Left Behind Act in 2002. No Child Left Behind has raised the stakes in standards-based education by spelling out clear expectations for how students and schools should perform on standardized tests, and meting out consequences when benchmarks are not met.

For better or worse, standards-based reform has created a major emphasis on standardized testing. Teachers' jobs, school funding, and even the future of schools themselves rest on how students perform on tests. In response, teachers have had to develop a razor-sharp focus on test preparation, and in this climate, environmental education (EE) can seem like a diversion.

EE Is a Natural Fit

Netosh Jones, a third grade teacher at Washington D.C.'s Martin Luther King, Jr. Elementary, knows how important standards are for teachers today. "Standards drive the teaching. It's the heart," she explains. But standards are just the beginning. "Then you have all the different strategies you use" to help kids master the standards.

And when it comes to teaching strategies, Jones searches far and wide for ideas, and has her students working inside and outside the classroom. "We're now seeing that the classroom alone is not enough for students. That's why environmental studies are so important."

Jones and her school's principal, Dr. Valoria Baylor, have partnered with Project Learning Tree (PLT) to plant trees and create a variety of gardens to green their otherwise cement-filled, urban school yard, providing innovative learning spaces for students. The students get outside often to use inquiry-based learning to build the literacy skills

The schoolyard gardens at Martin Luther King, Jr. Elementary provide students with innovative opportunities for standards-based learning.

Photos courtesy of Netosh Jones

the standards require. Jones says activities like working in their recently completed butterfly garden help the students build skills in reading, questioning, observing, and "using all the steps of the scientific method." She says, "We use the environment as an outdoor laboratory."

Jones is using environmental education in ways that most EE providers dream their programs will be used: as a natural extension of the curriculum, providing engaging opportunities to learn required concepts and skills. With its emphasis on inquiry-based approaches, hands-on learning, real-world problem solving, and multi-disciplinary approaches, EE has much to offer teachers looking for ways to engage their students in the standards-based curriculum.

Recognizing that the natural connections between EE and the standards-based curriculum were not always obvious to teachers

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and administrators, in 1999 the North American Association for Environmental Education (NAAEE) formally entered the era of standards-based reform with the publication of a set of guidelines designed specifically for EE. The document, *Excellence in Environmental Education Guidelines for Learning (Pre K-12)*, defines what students should know and be able to do to be environmentally literate.

Dr. Bora Simmons, Director of the National Project for Excellence in Environmental Education, led the effort to develop the guidelines. She explains, "We felt it was important to develop a widely agreed upon framework for environmental literacy that linked directly to the national (and state) standards movement. By referencing the traditional subject area standards in our guidelines, we demonstrate that environmental education is standards-based and can be used to teach a standards-based curriculum."

Still, environmental education providers have heard it over and over again: teachers can't use environmental education materials, can't attend workshops, and can't schedule field trips unless they can demonstrate that the materials, training, and experiences will help them address their state standards. The need for EE materials and programs to clearly and plainly show how they connect to standards has become so central to the field that the Environmental Education and Training Partnership (EETAP)[1] made curriculum connections one of the priority activities in its efforts to advance environmental education.

Making Connections with Correlations

The main tool that EE providers use to demonstrate how their materials support learning standards is correlations. At their most simple, correlations are nothing more than a statement of the specific learning standards that an activity (including curriculum materials, field trips, or other materials) helps address.

EE activities can be correlated to national or state standards. National organizations have outlined national standards for almost every subject area; state standards may mirror these national standards to some extent. But in each state, teachers and students are held accountable for standards that their own state has developed, and each state's standards are different. While correlations to national standards can provide some benefits, most educators agree that correlations of EE activities to their own state's standards are what they need most.

Photo courtesy of Netosh Jones

Correlations are always specific to a subject area and grade level or range of grade levels. For example, "Oh Deer!" a Project WILD activity in which students graph changes in a simulated deer population over time, addresses several Texas state standards, including the fifth grade math standard, "Solve problems by collecting, organizing, displaying and interpreting data."

http://www.istockphoto.com/stock-photo-6719898-preschool-children-series.php

Standards for learning have been developed even for preschoolers. Two EETAP partners—Project WILD and Project Learning Tree—are introducing new preschool curriculum materials that are tied to national standards for preschool education.

In some cases, correlations can distinguish how closely an activity aligns with a particular learning standard, noting whether a particular activity directly addresses a standard, indirectly addresses it, addresses a part of it, or connects to a standard in some other way.

In most cases, correlating materials is not particularly difficult, but it does take time and expertise in understanding standards. National organizations that produce EE materials for use across the U.S. face the added challenge of having to correlate their materials to multiple standards in fifty states.

Since time and expertise often can be significant barriers, and considering the size of the task at hand, EETAP provides funding to project training partners—Project Learning Tree (PLT), Project WILD, and Project WET—to correlate their materials to state standards. Through this initiative, funds are provided to the EETAP partners to support teams who correlate the materials to standards in their states. To date, the effort has produced multiple correlations in 45 states. When factoring in the different curriculum modules and the different subject areas in participating states, the states have produced over 1,000 unique correlations documents.

Correlations can be presented in many different ways. One approach is to organize the correlations by activity, listing all of the specific standards each activity in a guide addresses. Or correlations can take the opposite approach, organizing by standards and listing the activities that help address each standard. Some EE providers offer both of these approaches, so teachers can find what they need, whether they're looking for activities that can support a particular standard, or want to know what standards a particular activity will help address.

Some groups have taken the extra technological step of developing a searchable database that allows users to search either by activity or standard. And some groups have even gone a step farther: recognizing that standards are statements of the concepts and skills that are evaluated in standardized tests, and that, ultimately, tests, not standards, are the measure of students' and teachers' performance, educators in Florida have adapted Project WILD activities with extensions that mirror the questions on the state's standardized test, the FCAT. Not only does this approach help address standards, but it also uses environmental education materials to help students develop test-taking skills.

By no means are the efforts to correlate materials restricted to EETAP partners. In fact, the efforts are not even unique to the EE field. Curriculum providers of all kinds, including textbook publishers, corporations that provide classroom materials, and non-profit organizations in a range of sectors, are correlating their materials to national and state standards for the same reasons that correlations have become standard practice in EE.

Correlations in Practice

With so many groups now committing resources to developing correlations, many are beginning to wonder what kinds of returns they can expect for their investments. To date, there has been little information available about how correlations are used in practice, with many groups putting a higher priority on developing correlations than on evaluating them.

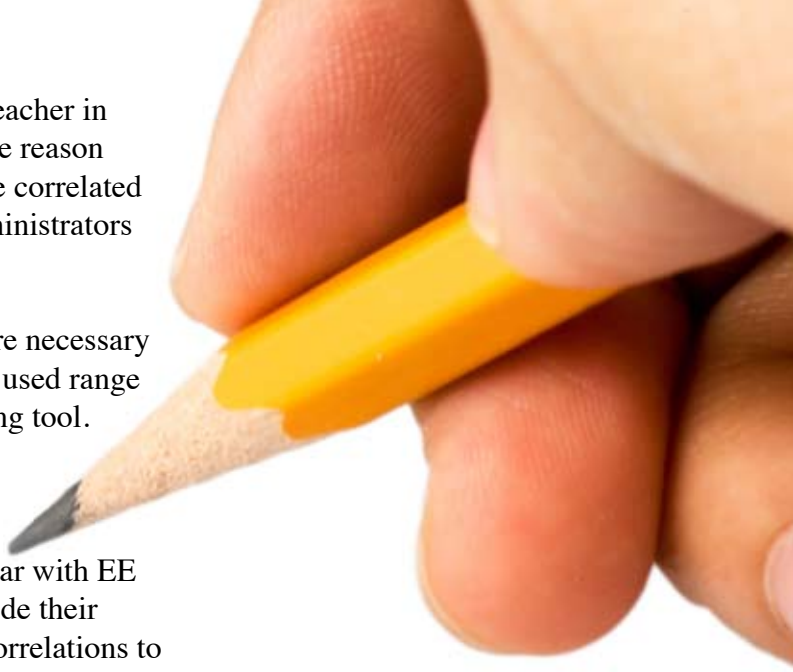
"One reason people come to my workshops is because the materials are correlated and they know that they will not have a problem with administrators above them."

- Marcia Bisnett

At least one large-scale evaluation of correlations efforts has been completed, and the results are helping to clarify the impact of the correlations. EETAP partners PLT, Project WILD, and Project WET used post-workshop and follow-up surveys one to three months after their workshops to track the impact of the correlations work they've done in Florida, New Hampshire, and Oregon.

The research they've done, together with anecdotal information from teachers, reveals that correlations play an important role in getting materials into the classroom. According to the EETAP research, over 70 percent of participants agreed that they had used more PLT, Project WET, or Project WILD activities because they were correlated to state standards. This encouraging news suggests that the effort that environmental educators are making to correlate their materials is paying off with increased use of their materials in classrooms.

The research also confirms what many groups suspected from their interactions with teachers: making connections between the curriculum and the standards is now a near-universal requirement for teachers. Almost all the respondents, 96.5 percent, said that their principal or supervisor required them to connect classroom activities to state



standards. Marcia Bisnett, a veteran high school science teacher in Miami, FL, and a Project WILD facilitator, confirms, "One reason people come to my workshops is because the materials are correlated and they know that they will not have a problem with administrators above them."

While the research reveals a consensus that correlations are necessary to get EE into classrooms, the ways those correlations are used range from what amounts to a technicality to an in-depth planning tool.

For some teachers, correlations simply lend credibility to materials or programs that they already plan to use. Teachers who are dedicated to the principles of EE, familiar with EE curriculum or programs, or who particularly want to provide their students with access to a field trip destination, often use correlations to get the go-ahead to pursue their passion. When asked in a survey how he or she planned to use the correlations in the classroom, one teacher revealed, "To justify my lessons!"

At the other end of the spectrum are teachers who use the correlations to help plan and build lessons and other activities. Florida teacher Marcia Bisnett not only uses the standardized test prompts that Project WILD has developed as warm-up activities when she begins her classes, but she says, "The prompts help me find activities that are appropriate for the lesson I am teaching on a particular day." Other teachers use correlations for longer-range planning. A teacher who participated in the EETAP evaluation indicated that the correlations were useful in "Searching for activities that cover benchmarks I have not covered this year."

New Hampshire English Language Arts Reading Correlations PLT Focus on Forests Guide

	Literary Texts			***Informational Texts***					***Breadth of Reading***				
PLT Focus on Forests	2.3	2.5	4.1	1.1	1.2	1.3	2.1	2.2	2.2	3.1	3.2	3.3	3.4
1. What's a Forest to You?													
2. Case Study: Old Growth Forests					*	*	*	*	*	*	*	*	*
3. Tough Choices	*		*		*		*	*					
4. Who Owns America's Forests?				*	*	*					*	*	*
5. Balancing America's Forests													
6. Squirrels vs. Scopes					*		*	*	*				
7. Words to Live By		*							*		*	*	*
8. Take Action!					*						*	*	*

Providing correlations as cross-referencing chart, such as the charts that New Hampshire Project Learning Tree (PLT) provides, allows teachers to search by activity or standard at a glance. The chart above lists the PLT: Focus on Forests *activities and indicates their correlations to New Hampshire's reading standards.*

The Future of EE Materials

Virtually everyone now agrees that standards-based teaching is the heart of the modern American education system, and EE materials must support this approach if they're going to be used in schools. Correlations have become the method of choice for most EE groups to support standards-based teaching, but at least one project in California is taking the standards-based approach to EE much farther.

A wide partnership of state agencies—led by the California Environmental Protection Agency, Integrated Waste Management Board, State Department of Education, and State Board of Education—have come together under a 2003 law to implement the Education and the Environment Initiative (EEI). They intend to make California a leader in environmental literacy, and have established an official set of environmental principles and concepts (EP&C) that reflect the state's academic standards and define the connection between natural systems and human social systems. They also have completed a K-12 curriculum consisting of 85 instructional units designed to teach the state's academic content standards in conjunction with the EP&C. An advisory committee to the State Board of Education has reviewed these units and determined that they teach the state standards to mastery. In early 2010, the State Board of Education will review the advisory committee's recommendations, and is expected to approve the EEI Curriculum for use in all California schools.

For most EE groups, the California approach is out of reach over the short term. The EEI Curriculum reflects a long-term strategy, a wide partnership of state agencies, and goes far beyond more traditional approaches that offer EE materials as a supplement to state-sanctioned, standards-driven materials. Once the curriculum is accepted by the State Board of Education and teachers and students begin using the curriculum, evaluation results may suggest that California's approach can serve as a model for a more integrated approach to EE that other states can follow.

In the meantime, all the information now available suggests that connecting EE materials to state standards provides the best chance for materials to be used in classrooms. The more they can connect to standards, the more EE materials support teachers, who are under enormous pressure for their students to perform on tests. Washington, D.C. teacher Netosh Jones is thankful for EE providers whose materials help her address education standards. She says, "It takes the pressure off teachers." According to Jones, when EE groups provide high-quality, standards-based materials, "They say, 'We can help you. We can relieve you of some of that pressure.'"

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http://www.calepa.ca.gov/Education/EEI/Curriculum/GradeK/K3a/Cover.JPG

California's Education and the Environment Initiative is producing a variety of curriculum guides that directly tie to both the state's academic standards and environmental literacy guidelines.

Expert Tips for Effective Correlations

Veterans of the correlations process—including teachers, education consultants, EE providers, and others—have found that effectively correlating EE materials to education standards requires that you create a qualified team, keep the needs of teachers first, and carefully plan how you'll design, deliver, and update your correlations:

Assemble the Right Team

Marc LeFebre, who oversees the correlations process for Project WILD, suggests having on the team at least one person who is very familiar with state standards who can develop the initial draft. He also suggests having at least one person on the team who is very familiar with the materials or programs to be correlated. And finally, one or more educators should review the correlations for accuracy.

Don't Over-Correlate

Lori Mann, a consultant in EE who provides training on correlations, asks participants in her workshops to ask themselves about their activities, "Did we or could we support a standard?" Is the standard supported by the activity as it is written, or could it be supported by a very enthusiastic teacher?

Dr. Bora Simmons explains, "We often read into an activity how we or a great teacher would teach the activity—completing all of the extensions and going even further. The correlations need to stick to how a typical teacher would use the materials and then determine how or if they address various standards."

Think Beyond Correlations

D.C. teacher Netosh Jones says that correlations are only one way that teachers can see how an activity or program connects to their curriculum. Cues such the activity's summary, objectives, vocabulary, assessments, and any planning tools you provide also give teachers information about how they can use the activity to connect with what they're teaching.

Give Yourself Plenty of Time

Marc LeFebre offers this advice to anyone planning to correlate their materials: "Figure out how long it will take, and multiply that by two." He explains, "It's not that hard to do, but it takes time." For most groups, connecting their materials to their state standards is a process that takes months, not weeks.

(Continued on page 10)

Expert Tips for Effective Correlations (cont.)

Have a Dissemination Strategy

When the EETAP partners select teams to receive funding for correlations, they carefully consider how the team plans to disseminate the materials. Successful teams have a clear and effective plan in place to get the correlations into the hands of teachers.

Carefully consider how you'll present your correlations. Will they be available in print or on the web? If they're available online, will they be available as a PDF, a searchable database, or some other format? Marc LeFebre of Project WILD recommends offering both a PDF and a searchable database, a combination that's "unbeatable" for covering the bases of what teachers might need for planning.

Plan for Change

"Change is the challenge for our coordinators," says Al Stenstrup, Director of Education Programs at PLT. Unfortunately, state standards change. For a variety of reasons, states can overhaul their standards every few years, and they tend not to make changes to different subject areas in the same year. For PLT, keeping their correlations up to date, and then keeping facilitators up to date on the latest versions, requires constant vigilance.

Staying current with what's happening in your state with regard to its education standards might help you avoid correlating materials to standards that are likely to change within the next year or two. However, even if there are no immediate plans to change standards, know that it's likely that they will eventually change.

Rachel Bayer, who oversees the EETAP correlations project for PLT, suggests that as a field, EE needs to shift its thinking about correlations. It's not a project that you complete and then move on from. Instead, keeping materials up to date with state standards should be a permanent way of thinking. She says, "It's a job that will never be done."

Resources

Advancing Education through Environmental Literacy and *Meeting Standards Naturally* are a booklet and CD-ROM developed by ASCD (formerly the Association for Supervision and Curriculum Development) and the University of Wisconsin-Stevens Point that describe how environmental education can boost student achievement.
http://eetap.org/html/free_booklet_cd.php

NAAEE *Guidelines for Excellence in Environmental Education*
http://www.naaee.org/programs-and-initiatives/guidelines-for-excellence/

Project Learning Tree Standards Correlations
http://www.plt.org/cms/pages/33_43_29.html

Project WILD Standards Correlations
http://www.projectwild.org/CorrelationstotheNationalScienceStandards.htm

Project WET Standards Correlations
http://projectwet.org/water-education-project-wet/project-wet-publications/curriculum-standards/

California's Education and Environment Initiative
http://www.calepa.ca.gov/education/eei/

About the Author

Christy Merrick is a freelance writer and consultant in environmental education and communications.

[1] EETAP is a national leader in delivering environmental education training for education professionals. EETAP is funded by the U.S. Environmental Protection Agency's Environmental Education Division through a cooperative agreement with the University of Wisconsin-Stevens Point. For more information about EETAP visit www.eetap.org.