

ties disguised to honor requests for privacy, all activities detailed have actually been tried with real kids in real places. Natural or historic, officially designated or not, in everyone's educational backyard there is some place that holds a story waiting to be shared. This book is about finding ways, and using a range of tools, to understand that story.

Krishnaswami, U. (2002). *Beyond the field trip: Teaching and learning in public places*. North Haven, CT: Linnet Professional Publications.

CHAPTER ONE

Teaching Across the Curriculum in Authentic Contexts

Education, like every other profession, has developed its own language, shared by those within the field and mostly mystifying to the outsider. Unfortunately, professional jargon sometimes serves to obscure meaning instead of clarifying it. An example of this are student performance standards, now ubiquitous in just about every state. Standards of student performance, grounded in multiple sources of learning, and on tangible outcomes for students, can spark rich and varied educational programs and experiences. Instead, they are often in danger of being reduced to meaningless arrays of assessment rubrics, task lists, traits and outcomes, and quality benchmarks.

This is a loss to us all, especially to children. The idea of performance standards is really quite simple. It is the notion that we ought to be assessing students based on what they know how to do. Can Cara translate a relationship between quantities from a numerical to an algebraic to a graphic representation? Can Brett write a paragraph on a subject of his choice? These are things we want young people to be able to do—not just in the abstract, but in real contexts, to solve real problems.

Traditional systems of education tend generally to assess the child in a zero-sum way: Is Joe intelligent? Can Jennifer carry a tune? The

answers are either yes or no, and they are often thought to carry predictive value. Performance-based instruction on the other hand, assesses children not on the basis of what they *are*, but on what they can *do* now. It also assumes that skills are on a continuum and that students will master them sequentially in order to progress towards changing goals. Public places like parks and museums offer space for children to demonstrate such real skills, by studying real material in context and offering their conclusions back to a real audience. That is the purpose of authentic instruction in a real context, something I will refer to as place-based instruction. It can be used effectively to support the standards toward which almost all teachers are now required to teach.

You will find some assumptions recurring in this book: learning should involve inquiry; it can be driven by place to generate its own inquiry; and it should be interdisciplinary. These assumptions underlie what I call place-based and others have called “site-specific” education. Marc Joel Levitt, storyteller and community activist, directs a project that has resulted in the transformation of an entire school into a museum for the research and display of material concerning working culture, immigration, and technology. Levitt applies to education the concepts and ideas framed by urban architect and professor Dolores Hayden (*The Power of Place*, 1995) who urges us to pay attention to cultural landscape—the combination of natural land forms and human interventions (including buildings) that defines a particular place. In education, says Levitt, it also means paying attention to the everyday history and use of a place, and finding a way to integrate curricular needs into the study of that place. Levitt directs the Charles Fortes Magnet Academy Elementary School project. The school was opened by the Providence, Rhode Island school system in 1997, in a building originally constructed as a factory in 1866. The simple question, “I wonder what was made in this building when it was a factory?” led to the idea of creating a museum within the school. The story of the building, and of the community in which it is located, have become the subject of study. All curriculum areas are approached through thematic

study of various aspects of the place. With this project, Levitt and the school staff and administration hope to turn all children into curators. They are building a community garden; developing a postcard project; painting murals; setting up an art gallery of urban and factory-oriented art; creating a chorus to sing songs of working class people and immigrants; creating a virtual tour of the building; and researching and conducting oral histories with people who worked in the factory when it was still open.

Not all place-based instruction is as ambitious or as focused as this, of course, but the approaches I suggest in this book have some characteristics in common with the Charles Fortes project. They result in students being actively engaged as learners, framing questions and working toward greater levels of understanding. They connect students in collaborative endeavors with the larger community, as school reform movements all around the country are seeking to do. And they remind us all that in these days of high stakes testing and global competition, it is possible (even perhaps imperative) that we take the time to create exciting, authentic ways to learn—including some that might even be fun!

The field trip is an obvious point to begin developing a place-based instructional focus. Thinking of it in this way—as part of a broader instructional program—helps turn these selected community sites into real world classrooms. Additionally, this way of thinking diverges sharply from the “bell curve” approach, where you take for granted there will be kids who will “get it” and those who won’t, and towards a performance approach where “it” is not a singular nugget of information to be “gotten,” but multiple sets of knowledge to be built. Here are some suggestions for the creative use of field trips.

1. Remove the field trip from center stage as a free-standing event. Make it instead only one part of a longer process, in which the same sets of knowledge will be explored from many different angles, both in the classroom and in the field. The learning will have begun before you visit the site, and it will continue after you

- return. The focus is no longer on getting permission slips and counting noses.
2. Visit the site on your own before you take students there. Know the place. Study the terrain. Read the history. Try the science. You would hardly do less in your own classroom. Begin to think of the site as an extension of your classroom. Begin to think of what questions the place will generate for your students.
 3. Plan backwards. Figure out what the ultimate product of the study will be. Then work back to find all the activities you will need to use to get there. What you are doing is building bridges between what students know already, and what you anticipate they will know when you have completed the sequence of activities. The place you visit is one ingredient in this process. The visit is not in itself the objective.
 4. Present the place, and let students raise the questions. Adults, after all, are driven to find answers to questions that are of burning importance to them. Children sometimes need the process of generating such questions to be modeled for them, but they too will seek answers more consistently when the questions are their own.
 5. Allow choice in study. Rather than expect everyone to gain a certain amount of information about many aspects of the experience, allow the surroundings to soak in, then let children focus on what is of interest to them.
 6. Whenever possible, you, the teacher, must join in the process of inquiry, modeling its various facets. If the outcome is to be a piece of writing, the teacher writes along with the students. If it is a science investigation, he or she picks a project to work on. Then when the students share their work, the teacher shares as well. When this shared examination of work is repeated over time it also demonstrates that a task worth doing is also worth revisiting and rethinking.

7. Expect and work toward a product—something tangible, something *real*, whatever the medium selected. Examples are a piece of writing, a set of questions, a story line, an exhibit, a letter, an experiment. These should be generated by the children and shaped by them to reflect their own interests and express their own voices.
8. Present the findings or product to an audience—parents, other classes, the local library, the school board, the county government, the Park Service. That, after all, is what people in the “real world” do. Most meaningful creative projects are generated with potential audiences in mind. Even those that are purely investigative in nature, following a question without regard to application of the findings, are usually shared at some point with both general and specialized audiences.

There are three ways to go about organizing projects like this, if you wish to extend your classroom to a park or museum or historic site or other place that is meaningful in your community:

USING THE RESOURCES OF THE SITE

This is the simplest way to enhance your teaching. Call the local planetarium for a list of programs. Get on the museum’s mailing list. Find out if the park nearby has an outreach program for teachers. See if any of the sites you’re considering has a traveling educational kit, or even a traveling presenter. Perhaps the museum offers teacher in-service programs, so you can acquire behind-the-scenes knowledge. An hour’s worth of phone calls can yield a wealth of information, and open up all kinds of possibilities. All of this preliminary material can be used to put together a sequence of activities prior to the actual visit, so that students will be prepared to receive and use the further riches the site itself has to offer.

The kinds of resources and materials public places hold for teachers run a very wide gamut. The National Park Foundation, for example, offers grants to local park units to develop curriculum materials, col-

laborate with teachers, and even offer direct programming to students. Many state park facilities have developed educational materials that they make accessible to teachers and homeschooling parents.

Some private nonprofit organizations offer a range of residential and daytime field programs for students and adults, in which they provide content and instructional expertise in a particular area. These groups generally operate under an agreement with a federal land partner (National Forest Service, National Park Service, or Bureau of Land Management). Each provides learning opportunities, sometimes for a fee, in a non-advocacy environment. Appendix 5 lists a sample of private nonprofit groups that offer educational programs in public places. The offerings from these and similar organizations range from formal school-year and summer institutes for students and teachers, to teacher in-service training, resource materials, and content-specific curricular support.

Parks and museums can often provide curriculum-related materials in connection with special exhibits or events. The Palm Springs Desert Museum, for instance, offered a comprehensive teacher packet related to a traveling exhibit hosted by the museum, *Recycled Re-Seen: Folk Art from the Global Scrap Heap*. The packet included a vocabulary list, a selection of photographs of objects from the exhibit, information about each object selected, and samplers of student activities and curriculum links (see appendix 2). Note that this museum-developed packet focuses on California standards. Most museum education staff are cognizant of their state educational performance standards and either have or are developing materials to meet those standards.

COLLABORATE WITH INTERPRETATION STAFF AT THE SITE

Interpretation is an overwhelming part of the mission of the kinds of public places considered in this book. Freeman Tilden, in 1957, defined interpretation as “an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.” Museum docents offer interpretation. Park

and forest rangers offer interpretation. For the most part they are eager to collaborate with teachers or other leaders of youth groups. Find out who your interpretive staff are in the places you are considering visiting. Then ask how they can help you develop curriculum ideas and materials that will involve their site.

In order to collaborate effectively with site staff, you must learn to understand the language of curatorial and interpretive staff. This is especially important at a time when historic and natural sites are actually in the position of reaching out to schools and teachers, and beginning to learn the language of curriculum and instruction. You will be far ahead of most in this process if you can understand the goals and objectives of the site you will teach in and their relationship to the community. One good way to understand this perspective is to approach a decision maker on-site (staff titles will vary depending on the size and location of the site) not just with a list of your needs but with an interest in an open-ended discussion of possible collaborations. As many of the programs detailed in this book demonstrate, this is precisely the kind of conversation that has led to dynamic, effective programs enriching the lives of the people they touch.

OFFER YOUR EXPERTISE TO THE SITE

You know some things the on-site folks don't. You know your students. You know what's developmentally appropriate for a given age-range of students. You know the standards and benchmarks for your state, the ones you are expected to teach toward.

You can help interpretive staff in a myriad ways. You can offer feedback on their materials as they are developing them. You can field-test any curriculum materials they might be working on and trying to pilot. You might even be able to help them write grants to fund a program that will involve your students. Interpretive staff and teachers working together can make a formidable team! And it is far more rewarding being a partner in a program than merely a consumer of services.

Successful collaborative projects involving public places and local school systems are extremely diverse in nature. Each is crafted to meet

the needs of local teachers and students, and to use local talent in implementation. Each results in forging links between groups and people, people and place.

Sam H. Ham, in his book, *Environmental Interpretation* (1992) suggests one way to arouse interest in parks and historic places is to capitalize on traditional celebrations in an area. Almost every town has some kind of historical or cultural celebration linked to place. The "Return of the Salmon" festival is an example, held annually in Leavenworth, Washington. There are festivals throughout the country dedicated to music, chili, dance, art, history, peace, justice, and even garlic! Maple festivals abound in northeastern regions of the United States and many parts of Canada. Fiesta days and Heritage days are other examples of local events offering a combination of education and entertainment to the general public. While Ham's suggestions for creating local happenings are aimed at interpretive staff in public places, such celebrations provide many opportunities (poster contests, music and drama performances, and booths with local goods for sale are a few examples) for local schools to become involved as more than observers of the event.

In Arizona's Glen Canyon National Recreation Area, high school advanced biology students conduct "real" science in a national park setting as part of their coursework. Students have worked on growing endangered razorback suckers in ponds on the Lake Powell Golf Course, for release into the San Juan River inflow tributaries. They have also carried out wintertime testing of Lake Powell water for the presence of *E.coli*, or fecal coliform, bacteria.

In all these instances the point of departure from "the field trip" was the seeking out of essential questions to study. What was the forest like before we began managing fire? What is the bacterial presence in lake water during months when the administering agency does not carry out water testing? In California, in the Santa Monica Mountains National Recreation Area, children get to try on costumes of the *Ranchero* period and process, through a sequence of activities, what it must have been like to live at that time in that place. Through a differ-

ent set of experiences, they learn about the legacy of the Shumash people and the meaning of this place to them. They drill holes in abalone shells using replica tools. They ask questions about the use of the land, and its significance to all the people who have ever passed through there.

In Missouri, the Arch of St. Louis is the setting of exciting educational activities. Developed in collaboration with local educators, outreach programs include both trips to the museum and visits to schools by park interpreters. At the museum, children engage in learning about the overland trail experience of pioneers heading West through journaling and dramatic presentations of their travel. The resources of the parks can enhance education both in the classrooms and on-site.

In each of these examples, children worked on a product, whether that was a data set or a piece of art or a journal. This raises the issue of how these outcomes are to be evaluated. Assessing performance of real tasks is considerably more complicated than grading a test. Many elementary school teachers use a TOW assessment model: Terrific/OK/Needs Work. This is an easy way for both student and teacher to judge tasks. The teacher, in consultation with the students, decides on a list of tasks that will be accomplished during a given project. Then after the tasks are done, each is referenced to that original list, and can be assessed by both students and teacher on this three-point scale.

But TOW is still an external evaluation system, reflective of the teacher's judgment. The very use of terms such as "Terrific" or "OK" is subjective. How does one rate art, for example, on such a scale? There is no way it can be used by adults to critique each other's work, to promote higher quality and greater professionalism. For that, the scale has to be geared toward establishing greater and greater self-evaluation.

A more natural way of looking at the tasks developed in a place-based learning activity is to use what my students sometimes call the "punctuation scale." It uses symbols instead of words, and they are referenced, not to an abstract rating of the good or poor quality of work, but to what has been achieved, and what remains to be accomplished.

“PUNCTUATION SCALE” FOR SELF- AND TEACHER EVALUATION

<i>Symbol</i>	<i>Meaning</i>
+	What works in this product (story, poem, model, experimental setup)?
?	What raises questions?
*	What needs to be fixed, now or when the project is shared with an audience?

This is so simple a format it seems obvious. It translates easily to assessment by self, other, and teacher. Many teachers prefer not to grade work that emerges from so rich an experience as place-based learning. If you must grade, however, using this format can initiate a process directly comparable to the critical reflection that adult professionals use when reviewing their own work or that of others in real processes of inquiry.

CHAPTER TWO*Writing in Special Places*

Parks, museums, nature trails, forests all have story in common. Sometimes that story lies in historical narrative; sometimes within the cycles of nature; at other times behind a particular exhibit, or type of art or artifact. Writing, of course, offers the perfect set of tools for finding, uncovering, and relating story. So using the tools and processes of writing is a natural way to help young people access and process the story behind these special places.

When I first moved to northwestern New Mexico I had the good fortune to cross paths with Judyth Hill, a poet who has spent the last twenty years working with young people through writing in parks, museums, and on natural and historic trails. Judyth holds that just as adult writers write out of their real life experiences, out of their response to place and story, so too must children. (See appendix 3 for samples from the poetry curriculum she developed for the Georgia O’Keeffe Museum in Santa Fe.) “When you work with children,” she says, “you have to affirm that their experience has value. Exposing children to beautiful, powerful places and to writing gives them a way to make these connections.”

As a result of my conversations with Judyth, the Aztec Ruins

Oregon Public Education Network

<http://www.open.k12.or.us/start/visual/featured/artbook/index.html>.

This site describes book art projects developed to meet Oregon standards. It is aimed at teachers, and offers directions for making simple books, plus good ideas for writing and illustrating stories. Directions are clear and simple and there are good diagrams. Includes instructions for making paste papers.

PUMAS (Practical Uses of Math and Science)

<http://pumas.jpl.nasa.gov/>
Described as the online journal of math and science examples for pre-college education, this site hosts plans on topics as diverse as hypothermia in a Laura Ingalls Wilder book and mathematical estimation of the global consequences of everyday actions. Additions to the database are welcomed.

Rivers & Trails/National Park Service

<http://www.ncrc.nps.gov/rtca/rtca-we.htm>

Rivers & Trails helps carry out the

National Park Service mission by working with local citizen groups to revitalize nearby rivers, preserve valuable open spaces, and develop local trail and greenway networks. NPS offers resources and linkages, not funding.

Smithsonian Institution

<http://www.si.edu/>
Links to Smithsonian without Walls, a downloadable interactive series of virtual exhibitions created especially for Internet use. Still in prototype stage but available for public review and comment.

Teaching with Historic Places

<http://www.cr.nps.gov/nr/twhp/>
Online lesson plans are available from this educational site maintained by the National Register of Historic Places.

WordRunner

<http://www.wordrunner.com>
Home-office/publishing small business in the San Francisco area with an internet presence. Manuscripts can be submitted electronically and prices vary with quantities ordered.

APPENDIX TWO

Art from the Global Scrap-Heap: Sample Material from a Museum-Developed Teacher Guide

This teacher guide was developed for use with an exhibition of folk art underscoring the aesthetics of recycled objects. Curriculum connections are clear from these excerpted examples, and can be easily replicated, using a museum exhibition near you, and connecting a visit to it with your state performance standards.

RECYCLED, RE-SEEN: FOLK ART FROM THE GLOBAL SCRAP-HEAP

HOW THIS EXHIBITION CAN FIT INTO THE CALIFORNIA VISUAL AND PERFORMING ARTS FRAMEWORK

Example 1: Artistic Perception Component

Goal 1. Students use their senses to perceive works of art, objects in nature, events, and their environment.

Pre-visit activity: Using the color images provided, ask students what they perceive an object might be made of (what is the material?). Have students discuss where the artist might have found the material. How could the material have been used differently?

Is there another reusable material that might work better? Why or why not?

Post-visit activity: Using your choice of available media, ask the students to remember their favorite object from the exhibition. There are over 800 objects in the exhibition. Ask them to focus on one. Have them discuss their observations about the object. Discuss the materials, the texture, the size, the shape, and any other physical properties of the object. Assign the students to draw their object, paying close attention to the physical properties they just discussed.

Example 2: Artistic Perception Component

Goal 2. Students identify visual structures and functions of art, using the language of the visual arts.

Pre-visit activity: Select an image from the color images provided. Ask the students, “Can you find line in this work?” How does the artist use line? Are the lines straight?

Post-visit activity: Have students think of an object in the exhibition that used many lines. How are lines important to this object? Do they have a function? Why or why not?

Example 3: Historic and Cultural Context Component

Goal 3. Students explore the role of the visual arts in culture and human history.

Pre-visit activity: Select a color image. Ask students what country the object is from. Could it have been made hundreds of years ago? (The discarded materials are very modern). Why might the artist have made the item? Is it important to a ceremony? Is it utilitarian?

Post-visit activity: There are 800 objects from over fifty-two coun-

tries. What were the differences and similarities that could be seen?

This exhibition and the associated teacher packet also offered an array of facts about recycling—steps taken locally and regionally, and the negative facts about accumulating garbage and consumer waste. Curriculum links suggest activities such as writing letters to toy, food, or mail order companies about their packaging practices; developing a practical way to separate recyclable articles using a fan, water, and a magnet; and comparison-shopping by breaking down the cost of bulk packaging versus individual packaging, comparing price to weight/volume, etc.