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"Sense of Place," Special Education and Environmental Study

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Discussion of Objectives and Strategies

Introduction

This unit presents "the sense of place" as a central concept of environmental study and special education teaching. It is related to urban landscape and the context of learning in and out of buildings. What this means for the productive learning of students is taken up. Particular attention is also paid to the relationship of teacher and student and how a curriculum gets implemented. Examples are given for elementary school students. Programs involving the study of place are discussed. The need for collegiality is also a very important part of our environment and ought to be considered in the implementation and development of any new curriculum. This is designed for Barnard Environmental Studies Magnet School in New Haven, CT.

"The learning issue" is singularly important and not given much attention in the literature on environmental study and sense of place. What we mean by learning is significant, obviously! What we don't learn is what others mean by it until it is too late. The issue is not put on the table. You may as well throw out the baby with the bathwater if you don't consider this, in my opinion. I do not merely mean "learning style", I do mean one's conception of learning and what it obviously implies for teaching. What we allow and what we don't allow becomes important. What we take for granted and what we don't do. *My greatest concern is that this paper won't take into account the context of learning.*

What Is Meant By "Sense of Place"?

Most frequently mentioned in writings I have read about the sense of place are the relationship, connection, a feeling at home with a prescribed place, in terms of both the human and the natural content. Identity with it is probably the most frequent. We see it throughout literature, the arts, and music and more recently in the educational arena. Basic to this is an understanding of the place, a feeling of safety or security in that relationship even if it is risky or scary, and again a feeling of at home. The qualities that go into that relationship, whether it is one's personal space, an office, a classroom, a school, its property, neighborhood or larger reflect on the fundamental capacity to learn any subject matter and be connected with the place in tangible ways such as monuments, ceremonies or celebrations, gatherings or even regular pathways and the human and natural interactions and connections that are coincident with that. We are going to learn at home,

and in our neighborhood, but we also want to expand the community of resources our students may have access to with increased involvement, so as to broaden their horizons and deepen their contact. It means more than habitat. It entails belonging, understanding relationships, where it is "home", and gets connected directly with conservation of places. It refers to an increasing sense of the land and its history, memories that are personal and cultural and giving people a unity in a place with which they identify, that can lead to better stewardship of their history and environment. Psychological comfort is also indicated, defining oneself in terms of a land. Landscape can contribute to shaping our perceptions of it. The feeling of family often becomes associated with the natural and human aspects of an environment to make it a whole place. Richard Wilbur, the second poet laureate of the United States concludes his introduction to A Sense of Place, a collection of landscape paintings and texts, "Regarding Places" by saying, "- a place being a fusion of human and natural order, and a peculiar window on the whole."

Special Education Teaching

This unit is prepared for students who receive special education instruction both in regular classes and in resource room activities. I have referred to some of the dilemmas this poses in my last Yale-New Haven Teachers Institute unit on teaching writing in the context of "inclusion". The students range in age from kindergarten level to fourth grade with some who have been retained in a grade once or twice, creating quite an age range, although, I can see this as an opportunity, too. Some advantages of multi age grouping have been reported elsewhere. The "one room school house" concept offers some potential benefits that could be considered in a community approach. The students are eligible as one of the following: "emotionally disturbed, attention deficit hyperactive disorder, learning disabled, speech and language impaired, autistic, and intellectually disabled". Their range of needs and abilities is far larger than the labels describe. The students receive 2-10 hours per week instruction in reading, writing, math and/or "behavior", along with their specially identified "processing deficits". I pay particular attention to their assets for creative learning that I have identified with what they do. You may refer to my Yale-New Haven Teachers Institute unit on "Working With Children's Powers, Not Their Handicaps" for this discussion.

Barnard School Is In Transition To An Environmental Magnet School

Last year Barnard School formally was given status by Connecticut as a magnet school with the theme of environmental study. It is temporarily housed at a school building that is one block from the Quinnipiac River in the Fair Haven section of the city. It is currently a kindergarten through fourth grade school, which will become a pre-kindergarten through eighth grade school when we move into our redesigned and expanded building and site next school year. A lesson that has been learned in educational reform is that the introduction of new curricula should always be with the expectation that changes will have to be made. The "new math, new physics, new biology and new social studies" in the 1960s made that clear. Introducing new curricula for environmental study has to be viewed in that way. We may be asking a change in sensibility and a need to approach it creatively. It has meant many new trials, new learning by staff, new staff, new partnerships, and learning with a wider community than just the immediate school. While it is testing our abilities it is offering us new ones. We have made many new relationships, and many of our relationships are also changing in accord with our new charge. None of the staff were experts in the environmental study field, and a new environmental study "instructional coach" and consultants have been added. Also, we have a new principal this year.

Moving To A New Building

The connection between architecture and environment could not be made more explicitly than our rebuilding project. Designed by two architectural firms, Roberta Washington of New York, NY and David Thompson of New Haven, CT. It has tried to take into account what we know about environmental education. It has included first hand advice from The Sound School, a state of the art facility for aquaculture in New Haven Public Schools, including visits to their facility. New Haven is in the midst of a one billion dollar rebuilding of its schools, with the leadership of Mayor John DeStefano. Barnard School is located at the gateway to New Haven coming on Connecticut Route 34 from the northwest. The Yale University football, baseball and tennis stadiums are within two blocks of the school. It is also near a beautiful wooded area and Edgewood Park, a 120-acre park designed by Frederick Law Olmsted, Jr. in 1910. (He also designed Central Park in New York City). It has two memorials: the Holocaust memorial monument is the site of an annual Jewish community remembrance, and the Spanish American War Veterans Memorial, which is directly across the street from Barnard School. This is a bronze statue of a soldier. The metal for it was cast from the U.S.S. Maine, which was sunk in Havana Harbor on February 15th, 1898. What was originally a spring of cold pure water at the corner of Stanley Street and Ella T. Grasso Boulevard was later made into a drinking fountain, three very short blocks from the school. There are many other important features, including playgrounds, and a pond. The site can also be traced to the early history of New Haven that was founded April 24, 1638. It is considered the first planned city in the United States. The school is named for Henry Barnard the first United States Commissioner of Education, the first Connecticut Commissioner of Education and the key person introducing and legislating for public education in Connecticut. His work is ranked next to Horace Mann in this regard to educational reform. He was also notably editor of the American Journal of Education from 1855-1881. He was educated at Yale as a lawyer, and it is reported that he used up most of his personal wealth in his endeavor to have a public school system.

Our school building is being expanded and renovated to enhance the opportunities for this environmental magnet school. The site includes a separate laboratory structure in the West River Park that borders and is associated with our school, which are connected by a bridge over the Ella T. Grasso Boulevard, a main thoroughfare renamed after our state's first female governor. The school is temporarily housed in another school building during the two-year construction period. The building was designed with the input of a committee representing the school and the neighboring community plus other immediately involved organizations such as the park service. The design is attempting to reach full "green LEED certification" as an environmentally sound and friendly building. Its design is also meant to facilitate instruction to our students in the field of environmental study. This is a 30 million dollar reconstruction. We are a couple miles from the Sound School, an aquaculture regional high school on Long Island. The transition to a new building will pose many opportunities to consider the differences between the old and the new school building to study the environmental reasons for making those changes. As an extremely rich place it concerns our immediate grounds and the neighboring park, too. Our field of study has expanded. Almost needless to say, the architecture of the building will be in the forefront of the minds of our students as they learn what it means for them on a daily and real basis. It will be something to see and study. It is an extremely rich opportunity for the study of an urban landscape.

Objectives

Unique Problems of Special Education

There are many challenges encountered by special education teachers that are unique to their position. There

are pros and cons that make each an opportunity as well as an obstacle. The differences between a regular classroom and when these children are in a resource classroom for a restricted period of time are many. The difficulties a special education teacher has by virtue of variations, handicap, etc, do not figure into requirements for a regular education teacher. For instance, all of these students know that in some way they have failed in school.

The place of special education in schools has been one of last one considered on the totem pole. At one time students in need of special education were merely excluded from school. At other times they were isolated from everyone else. Even after the 1974 legislation that assured everyone an evaluation, a planning and placement team with the power to make decisions of programming, the requirement for an individual education plan and its implementation with supportive services, it has not been unusual to see special education classes located in basements or in closets until fairly recently. Now with federal oversight of civil rights the "inclusion" of students in regular education classes has almost thrown out the baby with the bathwater by interfering with individualization of instruction that is so fundamental to reaching these children who have failed. Recent efforts to make sure they don't get watered down curricula have often oversimplified the process and confused it with "regular education" (which incidentally is what has failed them in the first place). One cannot talk about a curriculum in special education unless you understand this history. The President Bush program has failed to accommodate those needs, so that students are not tested on their level, but on the level of their peers.

· There is *significantly* greater variation within groupings.

1. Age
2. Skill
3. Emotional needs
4. Behavioral demands
5. Tested IQ
6. Memory

· Resistance to wanting to learn, or at least trying.
· Fears of committing mistakes among their peers.
· More frequent medication issues.
· A much higher degree of parental issues that require involvement by the special education teacher.
· Instruction is much more individualized.

· Often they have bad habits for learning that have to be unlearned, and are resistant to change.
· They seem to have a greater need for physical movement, with a higher degree of stress and tension from regular class demands
· Scheduling is done after all other scheduling that does not take into account the special education service. All regular education schedules are done first, and they are required to attend all non-academic specialists, too.
· The special education teacher does a lot of their regular education mandated testing.
· New students may enter service at any time during the year, thereby affecting grouping and scheduling.
· They demand a greater degree of privacy to admit their mistakes often.
· A higher degree of one to one instruction when they could get my full attention without any distractions of any one else in the room.

The Objective To Enhance Special Education Instruction And Learning By Utilizing Teaching That Emphasizes Environmental Factors (Physical and Personal)

The teacher is the vehicle for implementation of a curriculum and the quality of his or her relationship to students is absolutely crucial. There are studies, some recent, that indicate that as children go through the grades their interest in school goes downhill. One indication that learning is very often a passive experience, is best illustrated by studies in which they asked how many questions students ask in contrast with how many teachers ask. It is a ridiculously large difference.

I will make a serious attempt at Barnard to arrange for at least monthly meetings of teachers who are implementing an environmental program. They will be teachers of different grades. The point is that teachers have something to learn from each other and the worst thing is that each teacher keeps separate what they do and they don't learn from each other.

I want to get my students to identify their life with their environment and take an interest and involvement in changes that might be happening to their natural/built environment. I also want them to increase their appreciation of their connection with their "places" in their environment, whether a street corner or wherever. Their places are as legitimate and valuable as those of economically wealthy or more natural settings *to them* . We are immersed in human resources. That is, by what values will we decide to give our necessarily limited time, attention and resources? What is most valuable to us in the field of environmental study? What do we

look for in selection, and identification with resources in our "place"? I want to increase my students' awareness of their own value in the school and elsewhere in their environment. One theme I explore is building that value in my students and our school community. Another theme is reducing their isolation from peers while meeting their individual needs. So for instance, *one* of the ways to address these two themes is to allow them to invite "regular" education students to our room, which benefits all of them. This has been seen time and again, when it is arranged with their respective "regular classroom" teachers. It fosters the sense of community and the goals of an increased sense of social responsibility, an obligation to produce ones work and understand lessons in the midst of higher-level skill students. They are in fact being taught these things that are necessary for them in their regular classes. So we can even have mutual benefit when students of different ages work together and learn together productively, almost as brothers and sisters. After all, a great deal of our learning comes with those of slightly older, or younger age. This is typical of our environments outside of school. Another theme will be to relate our environmental study to the constructing of the new Barnard School (to be completed August 2006) at West River Park. So teaching and studying landscapes may explicitly include environmental studies of the area surrounding Barnard School. This could include monuments, plantings, walkways as well as the river.

Knowing our self as a community is a sophisticated task, and this entire curriculum unit speaks to that. We need to look at that generally and specifically. One avenue of that is increasing awareness of our resources and not wasting them. That is included in any environmental study that is sensitive today. School is a relationship, one of the deepest and most profound we go through at our elementary school age. It is a life-changing experience. That's why it requires care, sensibility and intelligence. The extent to which we find this in our society, such as with people in our school's nearby community brings resources closer to our students. Communication is a miracle. It is impossible if one gets ignored. We need to include sensibility. The mayor said a few years ago that schools are the centerpiece of a sense of community in our neighborhoods. Few things are more important to a school-community. It is real, and it is live. One part of making a community stay in order is to communicate through contact. We need to adopt vehicles for regular and frequent communication, among school-community members.

We take for granted that children look at insects in their natural *habitat* . Looking at the respective habitat as our own. They stop to environmentally experience, sense and come to know it. They see the leaves, feel the wind and the sun, walk the heights of hill forms, ascending and descending; seeing our place and knowing aspects of it can be done right outside one's home, environmentally speaking and slowly field watching. This is natural and normal to field biologists, ecologists, etc. What we need to point out is that our students have the mental tools, abilities and fundamental sense as well as inclination to sensitively study their "environment". Children actually might be more open to this than their adults, who often move from place to place with little regard for the place we find ourselves. School is not only indoors. When looking at a beach we see natural as well as man made relating. I am reminded of the statement from science, that the observer is the observed. When we restrict ourselves to the straight lines and corners of built curbs and buildings we deprive ourselves of opportunities. There is an emotional-affective bond with nature that does not get full attention until adolescence. Our students will relate to it in terms of the intelligence of action by virtue of their age. Nowadays most of the environment we play in is not natural. Children, our students need to get this experience and speak of it.

Security is a primary thing, and this is particularly pronounced in the case of many students in special education service, for one or more "environmental" issues that could be of the home, school or neighborhood. I have seen and dealt with all of these, and even with parents and agencies in other districts now that we are a regional magnet school and have students coming from several neighboring towns. A student being bullied

at a bus stop out of New Haven is still my concern, and opportunity in my relationship with that student and responsibility to their parents. The same is true for teachers and parents, and students may be worried about their safety. Patience is also a requirement. This is even more the case with students who are in special education service and the ideas behind this curriculum unit may be helpful in that regard.

Strategies

Over the past year I have spent time visiting various sites, which have the potential of widening a child's conception and understanding of what exists in the community. The purpose of using these resources raises questions. One is how can a student's experience in any of these settings be arranged so that it is not a passive experience? They should be prepared to ask questions in these sites. How do you make a visit interesting for kids? Being passive and silent visitors is not a way. Walking and looking around can be a very passive and puzzling experience. It would be my responsibility in connection with personnel in these sites to stimulate interest and questions and they will be told ahead of time that each student will be given the time to put into words the degree of their interest, the questions that linger and whether they would like to go back again. Part of that responsibility is that they know that that experience is going to be discussed in detail by them when they come back to home base in the school. In each of these sites I have discussed with relevant personnel whether they would be willing to discuss with me how the visit can be made a source of stimulation to the students.

Studies That Have Discussed "Sense of Place" As A Tool In Education Generally

The sense of place gets discussed in many places, often in the arts, and sometimes in urban renewal projects (such as in east St. Louis, and in Dolores Hayden's work in Los Angeles). There are regional centers that take it up, such as the Catskill Center for Conservation and Development. The Foundation for Global Community also discusses it in reference to bioregions. More seems to have been written in the last several years on this topic by David Sobel, an education professor at Antioch New England Graduate School than anyone else. He has looked at its application widely, especially among 6-12 year old children. While not explicitly referred to as a "sense of place" we find concerns with it in the work of the schools of Reggio Emilia, Italy in regard to "particular" places. It is inferred in the work of others, such as the National building Museum and very notably the Brooklyn Center for the Urban Environment, but they don't explicitly speak of it as a concept, although they come very close it.

I do not want to oversimplify the difficulties of implementing or even getting considered seriously new ideas in a large public school system. My colleagues are extremely hard working, for long hours, with professional qualities that I deeply respect, appreciate and value. The values and goals I have for students I also have for their educators. This is in an effort to reduce a learned "powerlessness" through increasing learning. This is one problem with many of the studies, they don't take up very fully the obstacles teachers encounter in introducing new curricula in a school system that gets orders from the country's capital, the state capital, the district central office, and the school main office.

Instances In Which "Sense of Place" Is Already Being Utilized To Enhance Education Generally In the New Haven School System

These are opportunities we can take advantage of that already take place. New Haven is extremely rich in resources both institutionally and naturally, and the New Haven Public Schools actively seek to make connections that allow our students to realize what they have available nearby and ways they might include

them for purposes of their education in school, family and community life. Although not formally designated as sense of place education, it includes nationally recognized museums of natural history, and art, and scientific field stations, among a wide variety of other places.

The real humanity is in the nature of relating in the school system as in everywhere else. Our correspondences with each other need to reflect that. In New Haven as I suppose in any large school system there are a large number of long time relationships, in which we have come to know each other. These are important, no less for our staff than for our students and their parents. The extent to which we can call upon the quality of relationship the better we work. These can come about anywhere.

How Might A "Sense of Place" Be Utilized to Aid In "Special Education"

A. Adopting and/or modifying examples suggested for education generally.

· Brooklyn Center for the Urban Environment (BCUE)

While I was visiting the National Building Museum (NBM) I was introduced to their Vice President for Education. He said to me that the Brooklyn Center was doing what Barnard is trying to do. It "explores the built and natural environments of the metropolitan area, uses outdoor sites and hands-on learning techniques to enhance school classroom studies, combines school-based activities with learning experiences in project-based programs, and complements New York State and New York city learning standards." Their Early Childhood Direct Services "provides Pre-K through third grade children with innovative, engaging, hands-on programming focusing on natural and built environments. I also want to point out their Parental Involvement and Community Literacy initiatives. I have yet to visit the center or speak with its personnel. I look forward to that. It has been in existence 25 years and offers a wide and deep variety of programs for youth. It combines many of the elements I speak of in this unit, but without seeing it, it is difficult to tell what I might learn from there. Their materials indicate a lot.

· CO-SEED

At the Antioch New England Institute it is a "place-based" initiative to bring together schools and communities for the education of ecological literacy. It has built a network of schools engaged in "home-based" ecological literacy. David Sobel's work is closely associated with it. Identified as a "community-based school environmental education" project, it uses local natural and cultural resources for hands-on service projects to make school-community connections. It is also related with an outdoor learning laboratory, a nature preserve in Keene, New Hampshire, and a web magazine, "Wild New England" aimed at 6-8 grade students.

· "What We Owe Children"

Caleb Gattegno, the distinguished developer of Cuisenaire rods, inventor of geoboards in 1952, The Silent Way of foreign language education and many other notable contributions, wrote a chapter, "The Teaching of Social Studies" (1969) in which he takes into account and gives explicit recommendations for curricula appropriate to and needed by students at their different ages. It is a wonderful book. It is difficult to do it justice or summarize it. It is very concise and without excess. In this chapter he takes up the environment in relation to social studies. He points out that before adolescence we secure the world of action through games to master relating to our natural environment. Not only in games of action, but in dreams of action, also. At this age he is concerned with "forms that foreshadow social living or will be able to be transmuted into social experience",

the awareness of what one might have done if living in other times or places. Social living at this stage is part of natural living. He takes up what environment and landscape mean for children of this age. So he poses to have children re-enact actually or virtually selected forms of social living, shelter, habits of dressing, feeding, moving from place to place, and defending oneself from attacks, etc., as done in different times and places, and having them make the things they use, in order to know one's soma as capable of acting as any of all people who do or did.

B. Additional examples for "special education" in particular.

It is not uncommon for students in special education to be lacking in relationships. In part they need to have a connection with their subject matter and a very important part of that involves their relationships with their teachers and their peers, but also especially with the environment that they feel is the subject of study, the classroom in many cases. Sincerity is one feature that matters and it comes across in palpable ways. Calling someone "my (their name)" is one way to convey a connection. A 2-year old demonstrated that to me, but it took me a few years to realize the profundity of that and its implications for teaching. Saying the right thing is a relationship, the thing that makes an impact with a student, and it might not be in words, it might be a gesture, or a smile, but in the case of children mostly they remember actions. It is usual for any student to recall and mention to me something I did with them or their class even years ago that was done in action. They recall it in detail. The right thing takes place in space and time, too. It contributes to the making of a place that has a relationship, a correspondence with what they're doing, a connection that they could learn from. When a student feels they don't belong because they are having difficulty that conveys that they are an "outsider". They need a place through which to be included in the school curriculum and environment as a whole with their assets being more fully realized. We are speaking about environmental study that tries to bring together the most resources possible in the most educationally productive way we can manage. Our social relationships need to be ones of caring and active attention. Seeing someone in need and sweeping it under the rug does the place no good. The special education resource office/classroom provides such a place, not only for students in special education service, but especially them. It also can serve other students and staff depending on the quality of relationship the special education teacher establishes with them, that gets transferred to the place by virtue of its facilities (microscope, computer, fish tank, magnifying glass, telescope, mirrors and so forth), with the quality of relationship that allows, permits and educates the natural vital interests of children their age. Education of all subject areas gets connected this way, and learning from one can easily transfer to learning another.

It is important to point out that a significant part of instruction in special education is made in an effort to include and infuse it into regular classrooms and accommodate the least restrictive environment mandate of the law. While it can be done to a certain extent also means development of co-teaching with several regular teachers, doing various things. Also, it means that the regular class might be scheduled to do something different than the skills in a students Individual Education Plan at the time, and students with special education service usually learn slower, need to have more explained to them, more demonstrated to them in an active way that makes inclusion in this way somewhat limited, but all efforts are made to integrate all students learning together. The real and potential benefits of special education teaching for our regular education students has been barely discussed and not given high regard by most school systems.

C. Unique facilities of Barnard Environmental Magnet School

Barnard's new facility will include discovery rooms for the younger students (prek-4) and more sophisticated laboratories for the older students (5-8). It includes a teaching garden, a greenhouse, display cases, exposures

of internal workings of the building to show environmental principles at work, a field, an area for an arboretum (yet to be developed), a two-story nature lab and classroom in the West River Park across the street connected by an enclosed pedestrian bridge, a gymnasium, a cafeteria, a stage area for productions, rooms for music, and art, classrooms for all grades including ones for special education, two playgrounds with one dedicated to the preschool, it will have one of the largest solar panel projects on a public building in the Northeast United States, its roof will be covered with grass, its windows, furniture, lighting, air systems, traffic ways, landscaping, all have been designed with the environmental study context in mind. Its proximity to the West River park area is a particularly significant factor. Also, this will include numerous partnerships including Peabody Museum, the Sound School, Yale School of Forestry and Environmental Study, St. Raphael's Hospital, the New Haven Parks Department and others too numerous to mention at this time. This also means we have opportunities to use each other's physical and human facilities. This is extremely important.

Classroom Activities

1."Let's Plan a Trip"

This lesson concerns field trips to selected buildings and outdoor places in New Haven. For instance, it will include a trip to two art galleries, Yale Art Gallery and the British Art Center. They are across the street from each other, and both were designed by the architect Louis Kahn, one his first building and the other one of his last. It is a chance to experience with them architecture, space, line and drawing. We can look for differences and similarities and ask why are they different and in what ways. Upon return to the school we will construct models, draw and write about the places, outside, such as the benches we sat on, the different surfaces we walked on, the different paths we walked around. The actual constructions and drawings will vary according to the student's age, corresponding with the developmental levels pointed out in David Sobel's "Mapmaking" book. These trips can all be related to the literacy, math, social and science goals, along with their needs for "specially designed instruction".

Another trip will be to two libraries at Yale that are virtually next to each other, the Sterling Memorial Library, a large gothic structure, and the Beinecke Rare Book Library, that has some unusual features that correspond with its purpose. Students will be asked to identify, speak of, model, draw, map and write about these places, including the courtyards, monuments, ramps, and decoration. Also, the activities of other people there will be noted and reported. Photographs will also be taken, by students to record the trip.

Another trip will be to Yale's Old Campus and the New Haven "Green". This corresponds with a unit being written by a colleague in this seminar, Ralph Russo. In this trip we will contrast and be able to experience some of New Haven's oldest places along with its relating of natural and built surround, right in the heart of town. This will include actual rubbings of materials used, including bricks of Connecticut Hall the oldest building on the Yale campus (a texture far different and rougher than what we usually see and touch as bricks), tombstones of some of New Haven's earliest and famous residents (the crypt in the center church houses some), the pathways and walkways and the places to walk to on the green (monuments, etc.).

I also want to take them on an environmental study field trip to a small village with nature preserves. Stony Creek is the nearest one I know well. It has many features of an environmental nature and is steeped in history. It is on a harbor, like New Haven, it has natural settings (bird sanctuaries, a famous rock quarry, etc.),

like New Haven (East Rock and West Rock, as well as rivers). I want them to be able to contrast these two places, both rich in features and qualities that are different (one is quieter, traffic moves slower, etc.). I want them to know that not all environmental study sites are formal. It is the nature we see in a place that makes it vital. Again, they can take pictures, make drawings, make maps, write about it and create a presentation to tell others about it, as in the examples of other trips.

2. "Go To Work"

This includes visits to natural places of work. We will visit an architect to see their work in their office and in the field. Students can help with taking measurements at sites, and making pictures of the place. Special attention will be given to our new building. I want them to see the features of building and studying sites that architects and builders do. I will transfer this to study skills and schoolwork back at our base. I also want them to know what it would have been like to be an architect or a builder in other times or other places. The history and securing of tools and/or artifacts of those places will be done with an architect. Knowing how people live and work in very different places and times is very important for students this age.

I will also plan to bring them on a trip to a historical site where they can see in action and put into their own action what it means, and what it's like to live as other people in other places and/or times. One trip I plan is to take them to Old Sturbridge Village. I want to bring them with their parents, if possible. We of course may also include any other students on any of the trips mentioned in this "curriculum unit". I can imagine students actually wanting to do things they see enacted, trying to do them in programs they have for kids and bringing back this experience to display and present to others in a play about our trips. I will also look for other sites that are closer to bring them similar experience.

One place I consider is The Whitney Museum. I have met with Bill Brown the director and we have tentatively planned some activities for my students. One would include the use of their computer lab. At this time, until we move to our new facility, students have limited access to computers. Also, at the museum they regularly do children's craft-construction projects to realize scientific principles. The site of the museum is historically important to the history of industry (Eli Whitney had his factory here, and he is famous for significant contributions), and it utilizes the large waterfall there for power. It can also be related to A. C. Gilbert's Erector Set toy that was invented in New Haven (Antique sets are seen on display there).

3. Peabody Museum is a well-known natural history museum at Yale University.

Our school has a partnership with them. It has extraordinary resources from a "great hall" of dinosaur skeletons to an extensive geological collection including a very large meteorite. Among my favorite things are its displays of artifacts from Indians, its taxonomic displays of birds and its large dioramas that depict different environments with their respective animals and plants. They also have a laboratory for teaching. I would like to develop this with our museum consultant because presently the lab is not used with students and I think it is important to give them experience of what it is like to do what scientists do in a laboratory and in a field trip. This is a potentially vital place with opportunities for studying its architecture, its spaces, its displays, perhaps seeing some of the behind the scenes (literally) work as well as the structured studies of its displays and its museum guides who give educational tours and talks. Again, some of the reporting, recalling and presentation techniques I have discussed elsewhere in this paper will be employed.

4. "Map and Go, Bring It Back"

A place they want to tell me about, and show me. Students frequently have a place they want to tell me about, a new home, a facility where they go to play basketball with their friends, or somewhere else, but they all have a place and a story to go with it. I will have them make a three-dimensional model of it, a sequence of drawings to show me the place (a virtual tour), and write about it. This may include field trips they go on with their class to an environmental study site. I will also provide them with a camera to take photos of the place. This will involve spatial placement of things in relation to each other as they recall and place them. They will also be invited to act out or demonstrate what they saw. Special attention will be given to our immediate surrounding environment of the school, which is currently near a river and park, with a bridge one block away that is of the "erector set" type of construction and on a turnstile when tall boats come up the river. There are many other environmentally interesting features at this, our temporary school site.

5. "Letters From Home"

We write in order to communicate with others. Where would you like to be writing from this time? Pick a place, start writing to a friend or cousin or any one else. We may actually use email for this. Start describing where you are and see if they can figure it out from what you convey. You can describe the temperature or any features that make it a place you like. It could be real, or it could be imaginary. The job of the reader is to find out where you are, or draw a picture of what you say. The feedback to the writer is in the drawing or statements of the reader. Implied in this is learning to correspond through language and writing.

Resources

Annotated Bibliography for Teachers

"City by Design", Educator's Resource Packet, Grades Kindergarten-Six. Washington, D.C.: National Building Museum, 2002. A booklet with activities, references, drawings and website related information. http://www.nbm.org.

"Brooklyn Center for the Urban Environment: School Programs 2005 Pre-K-8th Grade". Reported to be one of the most developed programs in the United States, it offers student direct services in early childhood, urban design and urban ecology; parental involvement; and professional development. It explores the built and natural environments of the metropolitan area.

Gandini, Lella. "Not Just Anywhere: Making Child Care Centers into "Particular" Places. Reprinted from "Designing Indoor Spaces" (Beginnings, Summer 1984).

Gattegno, Caleb. Know Your Children As They Are. New York: Educational Solutions, 1988. One of the distinguished educationists of the twentieth century, he was known worldwide for his contributions to math education. His psychology works are less known, but are profound. He translated two of Jean Piaget's books into English, but had a profound difference in his view of childhood learning and severed that relationship. This book presents his lifetime understanding of early childhood, boys and girls and adolescents.

Gattegno, Caleb. The Science of Education: Theoretical Considerations. New York: Educational Solutions, 1987. This is the first of two parts (the other being "Practical Considerations" in which he takes up mathematics, foreign languages and literacy), of a treatise on which he had been working for the better part of three decades. Particular attention for this paper is given to the chapter on

"Affectivity and Learning".

Gattegno, Caleb. What We Owe Children: The Subordination of Teaching To Learning. New York: Outerbridge & Dienstfrey, 1970. This was written for the general public and was his second most popular book, after Towards A Visual Culture: Educating Through Television. New York: Outerbridge & Dienstfrey, 1969. Unfortunately this book is now out of print, but it is available in many libraries. I strongly encourage the reader to read the chapter, "The Teaching of Social Science" and the book.

Gerhardt, Lydia A. Moving and Knowing: the young child orients himself in space. Englewood Cliffs, NJ: Prentice-Hall, 1973. She gives an extensive and detailed description of examples from teaching and informal play. She has a dancer's background with a lot of references to psychology.

Hayden, Dolores. The Power of Place: Urban Landscapes as Public History. Cambridge, MA: The MIT Press, 1997. She relates the sense of place to urban history with examples of projects she conducted in social history education. She gives examples of mapping the context of a setting from the perspectives of its inhabitants.

Sarason, Seymour B. And What Do YOU Mean by Learning? Portsmouth, NH: Heinemann, 2004. He takes up the "context of productive learning" and its relation to home and school, critical thinking, and the relation between school administration and classroom learning. Distinguished for the Yale Psycho-educational Clinic (of the 1960s), and his book on "The Culture of School and the Problem of Change", he is able to bring together many aspects of schooling in the decade that are topical today. Highly recommended.

Sobel, David. Place-Based Education. Great Barrington, MA: The Orion Society, 2005. The most recent of his expositions he gives an overview of projects and developments under this title in recent years with practical suggestions for system wide introduction.

Sobel, David. Mapmaking With Children: Sense of Place Education for the Elementary Years. Portsmouth, NH: Heinemann, 1998. He gives a systematic treatment with examples of mapmaking for pretty specific ages of the elementary years.

Sobel, David. Children's Special Places. Detroit: Wayne State University Press, 1993. This is so interesting. It has a well-detailed "Contents", and it presents living examples with many references to teachers that are easily understood and clear.

Wilbur, Richard. "Regarding Places", in Responses. New York: Harcourt Brace Jovanovich, 1976. The second poet laureate of the United States (he gave the commencement address at my college graduation, and he made a lasting impression on me), he presents with sensitivity, learning and literacy the unity of nature and human in a revealing way.

Woodward, Sarah Day. Early New Haven. New Haven: Price, Lee & Adkins, 1912. This book gives short concise treatments of aspects of early New Haven's history, from the relative perspective of what exists there "now" (in 1912). It is interesting to read and touch for students, as it relates the environmental history in descriptive objective terms with its social history.

Xu. Yan. "Sense of Place and Identity". East St. Louis Action Research Project, Background Research Reports, LA 437/465 Fall 1995. University of Illinois at Urbana-Champaign. They have references to several projects dealing with regional open space, urban open space reclamation, restoration of urban fabric, and neighborhood image development.

Annotated Reading List for Students

Arthus-Bertrand, Yann. The Future of the Earth: An introduction to sustainable development for young readers. New York: Harry N. Abrams, 2004. With aerial views, drawings and text, gives examples and descriptions of major environmental issues around the world. This has a lot of potential for discussion of environmental issues with students as they relate built and natural environments with our responsibilities.

Appendix: District Academic Standards Addressed

Content Standard 5.0

TECHNOLOGICAL SCIENCE

Students will develop abilities necessary to distinguish between naturally occurring objects and those of human design, and they will develop understanding of the roles of science and technology in contemporary society.

Content Standard 6.0

ECOLOGY

Students will develop an understanding of personal and community health, of the characteristics of changing populations, of the ecology of and uses of natural resources, of changes in environments, and of the use of science and technology in addressing

present-day local and global challenges.

Content Standard 6.0

ECOLOGY

Students will develop an understanding of personal and community health, of the characteristics of changing populations, of the ecology of and uses of natural resources, of changes in environments, and of the use of science and technology in addressing

present-day local and global challenges.

Content Standard 1.0

SOCIAL AND EMOTIONAL SKILLS:

Students will develop skills such as stress management, problem solving, impulse control, anger management, conflict resolution, decision-making, peer pressure resistance, and communication skills to avoid destructive behaviors such as substance abuse, high risk sexual activity, school dropout, violence and negative peer pressure.

Content Standard 2.0

PROMOTION OF EMOTIONAL AND MENTAL HEALTH:

Students will develop pro-social attitudes and values about themselves and their peers, families, school, and the community, develop an effective approach to their work and responsibilities, and will understand how to obtain support from individuals and formal service providers.

Performance Standard 2.1

Students will work with many types of geometric figures and their properties, including angles (right, obtuse, acute), triangles, squares, rectangles, rhombi, parallelograms, polygons, prisms, pyramids, cubes, circles and spheres.

a. Students will identify by name many different geometric shapes.

b. Students will recognize geometric shapes by their specific shape properties (e.g. symmetry).

c. Students will identify and recognize the different types of angles as component parts of geometric shapes.

d. Students will solve problems by showing relationships between and among figures, e.g. using congruence and similarity and using

transformations, including flips, slides, and rotations.

e. Students will extend and create geometric patterns using concrete and pictorial models.

Performance Standard 2.2

Students will use basic ways of measuring the size of figures, including length, width, perimeter and area.

a. Students will select and use appropriate units for measuring quantities such as weight, length, area, volume and time.

b. Students will carry out simple unit conversions, such as between centimeters and meters and between hours and minutes.

c. Students will measure and create a scale in maps or scale drawings using the idea of constant ratio.

Performance Standard 2.3

Students will use models to reason about the relationship between the perimeter and the area of rectangles in simple situations.

Content Standard 5.0

PROBLEM SOLVING AND MATHEMATICAL REASONING:

Problem solving concepts and strategies lie at the heart of mathematics. Students will utilize them in the formulation of problems and the solution of problems. They will appropriately test problem conclusions against conditions. They will reason mathematically.

Content Standard 1.0

READING:

Students will demonstrate developmentally appropriate, strategic reading behaviors in order to construct meaning, retell and

read fluently

Content Standard 2.0

WRITING

Students will progress along a developmental continuum as they become skilled writers.

Content Standard 5.0

VIEWING:

Students will develop strategic viewing skills by interpreting and constructing meaning from visual resources.

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