

Excerpted from:

***Renaissance in the Classroom: Arts Integration and Meaningful Learning***

edited by Gail Burnaford, Arnold Aprill, and Cynthia Weiss

Chicago Arts Partnerships in Education

Lawrence Erlbaum and Associates, Publishers 2001 Mahwah, New Jersey

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from the **Foreword** by Ken Robinson:

In most developed countries, the arts are at the margins of formal education. There are three reasons: they are seen as leisure activities, non-academic and not relevant to employment or the economy. They are seen as separate from the main concerns of formal schooling where the emphasis is on academic ability and especially on literacy and numeracy. CAPE offers a powerful alternative vision of the arts – and of education. This book says what this vision is and how it can be put into practice.

Education should be a social process. It must help young people to engage with the cultural universes where they live and must make their way. It is through the arts that cultural values are most vividly expressed. Conventional academic education develops certain sorts of intellectual ability, especially verbal and mathematical reasoning and particular forms of critical thinking. These are very important, but they are not the whole of human intelligence. If they were, most of human culture would not have happened. There would be no music, no design, no feelings, dance, poetry, architecture, no love, relationships or innovation. We often do need to think logically, but our deepest thoughts and judgements are also touched by values and feelings, by intuition and rapport and by the very sensuousness of living. These are what the arts are about.

Education must enable young people to engage with themselves. It should help them recognise and develop their own unique capabilities. Human culture is so rich and diverse because human intelligence is so complex and dynamic. We can think about our experiences in all the ways we have them - visually, in sound, in movement and in touch as well as through words and numbers. All young people have academic abilities; for some this is their real strength. But they also have other abilities, which may be expressed through music, art, sport, design, dance and in other ways. The arts offer many different ways to think and communicate - ways that have been the drivers of human culture and creativity down the ages. Too many young people never discover these abilities because education doesn't value or look hard enough for them. As a result, they often turn away from or against education altogether. CAPE has an impressive record of re-engaging young people in education by rekindling their confidence in themselves and their real abilities.

The arts are important in themselves; they are also essential elements of a broad and dynamic curriculum. Motivation is born out of success. When young people find what they're good at in education, they tend to improve overall. Schools everywhere are under pressure to raise academic standards. Too often they think this means working within tightly defined subject boundaries, dropping the arts and humanities and focusing only on conventional academic learning. This is entirely wrong. The sure way to undermine achievement is to focus on it in the wrong way.

The philosopher Michael Polanyi talks about two levels of awareness: focal and subsidiary. If you are driving a nail in to a piece of wood with a hammer, you are aware of your actions on at least two levels. The focus of your attention is on the head of the nail. But you are also conscious in a subsidiary way of many other things - the weight of the hammer, the arc of your arm, the force of the drive. You must be aware of these in the right way to complete the task. If you focus on what your arm is doing, you're likely to miss the nail altogether. A pianist will be focally aware of the music and only tangentially aware of the movement of her hands in producing it. If she becomes focused on her hands, the music is likely to stop.

Similarly, in education, children often learn best by being absorbed in tasks that require the *incidental* use of skills and ideas, rather than by *focusing* on them in a detached way. The arts provide powerful ways of doing this. There is growing evidence that standards of achievement rise through a broad and balanced curriculum that includes the arts, in which children are able to play to their strengths and to make connections with what they know.

CAPE illustrates these principles in practice. It is a vivid example of the educational power of the arts and of the arts in education. The tasks that face education are growing more complex and daunting

by the day. They are compounded by the rate of social, economic and technological change. Too often the arts are now being pushed to the edges of education at the very moment when what they offer is urgently needed at the centre of it. CAPE is a beacon for all those who want to move forward. This book tells of its successes, and its failures and its long-term hopes. It is written for practitioners and carries the tang of real people and real achievements in every chapter.

The example of CAPE is now being taken up in a growing number of cities beyond Chicago and beyond the United States and deservedly so. Archbishop Temple once said that the real challenge for education is 'to help children to feel together and to think for themselves, instead of thinking together and feeling alone.' I believe that task is becoming ever more urgent.

*Ken Robinson, Professor of Arts Education at the University of Warwick, England, is internationally recognized as an advocate for creative approaches to education and professional development. He recently chaired the British government's National Advisory Committee on Creative and Cultural Education, whose report, All Our Futures: Creativity, Culture, and Education, presented recommendations on new approaches to education and training in the context of rapid economic, technological, and social change.*

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from the **Introduction:**

**Chicago Arts Partnerships in Education: History and Context for Learning about Arts Integration**

The ideas and practices described in this book were developed inside a school improvement network called the Chicago Arts Partnerships in Education, or CAPE. CAPE was created in response to an identified need for a more coherent model for access to the arts in Chicago Public Schools. In the early 1990's, there was a high level of interest in the arts in Chicago schools, but the system of delivery could only be described as patchwork at best. Some schools had no arts teachers; most had a music teacher or a visual arts teacher, but not both, and almost none had access to dance, drama, or media arts. Arts specialists, where they existed, were often sorely over extended, serving as many as 1,400 students weekly, often having no regular work space, little equipment, few materials, and very little contact with the rest of the faculty- certainly no shared planning time. It was "art on a cart."

At the same time, professional arts organizations were providing exposure programs (like student matinees and gallery tours), and organizations dedicated specifically to arts education were vending residencies to schools. There was very little assessment of how well these programs were actually serving schools, and access was inequitable and disorganized, both at the district level and inside individual schools. And while the quality of these exposure and residency programs was often quite high, there was something missing. They didn't "take" as part of school culture, and they didn't "catch" as curriculum.

The CAPE network was formulated as a model for making culture a true part of school culture by forging a clear connection between arts learning and the rest of the academic curriculum, by insisting on the on-going participation of classroom teachers and arts teachers in planning the role of the arts and visiting artists in CAPE schools, and by facilitating long term partnership relationships between individual schools and arts organizations. CAPE was created to assist arts organizations in co-planning rigorous, innovative, sustainable curriculum with schools, rather than in delivering prepackaged and enjoyable, but transient programs. CAPE provided technical assistance, professional development and grants to jump-start school change.

There are six assumptions that the CAPE partnerships are built upon, which also provide ways of looking at the projects described in this book. You will see evidence of these tenets throughout Renaissance in the Classroom. We believe in:

- The integration of the arts (dance, theater, music, literary arts, media arts, visual arts) into all the other curricular areas (mathematics, science, social studies, language arts, physical education, foreign languages, etc.).
- The commitment of time for co-planning meaningful connections between arts learning and the rest of the curriculum.
- Long term relationships among schools, arts organizations, and community organizations to form an on-going professional community that reflects upon and deepens the quality of instruction over time.
- A focus on the long term professional development of teachers rather than the short term provision of services to students.
- Attention to the development of arts education policy in whole schools.
- Democratic access to arts learning for all students- not just for the gifted and talented or just for students interested in the arts as a career choice.

CAPE was conceived of as a model for school improvement in which artists and educators co-plan integrated instruction, weaving exciting and challenging visual and performing arts learning into other academic disciplines in order to create more meaningful curriculum. The CAPE network supports whole schools in becoming places for artistic expression and creativity, involving and transforming parents, communities, and school leaders, as well as students, teachers, and artists. But arts

integration can also occur in just one classroom, with just one teacher and one group of students.

For six years, CAPE functioned as a demonstration project, a living laboratory for generating new and innovative approaches to school improvement through arts integration. During this time, nine long-term partnerships were created involving 23 Chicago Public Schools, 33 professional arts organizations, and 11 community organizations. (See Preface and Appendix B for partnership overviews) These partnerships have pioneered a body of work and a set of relationships demonstrating the feasibility of on-going co-planning between artists and teachers and the value of integrating the arts across the curriculum. Partnerships like CAPE have slowly been making their mark in other urban areas. They have also begun to appear in midsize cities and small towns. Partnerships are a way of connecting communities to schools as they work together toward better educational opportunities for young people.

CAPE schools are culturally diverse; the arts organizations that have worked with them range from large regional institutions, such as a symphony orchestra, to small grass-roots organizations grounded in specific neighborhoods. They are assisted by community organizations that coordinate after-school and neighborhood-based programming that relates directly to in-school instruction. The partnerships are small enough to maintain a human scale of discourse. They are large enough to be inclusive of parents, children, and communities.

CAPE builds on the history of 'artist-in residence' programs, but actively seeks to move arts learning beyond those time-limited encounters that are usually isolated from the rest of instruction in schools. The work we describe in this book investigates how the presence of an artist or arts specialist in the classroom can suggest new ways for both the teacher and the students to interact with science, social studies, math, and the language arts curriculums.

The Chicago Arts Partnerships in Education not only supports the notion that arts organizations and community organizations have a civic duty to our schools, but also, that schools need to take more initiative in accessing the cultural riches right there in their communities. The arts organizations have become informed enough about schools to be of real service. The classroom teachers have become comfortable enough with the arts to actually integrate the arts into their own teaching. Schools need to develop their own internal infrastructure for the arts. "Outreach" programs from arts organizations don't work if the schools don't know how to reach back and do "In-reach" into the arts organizations. This is a dialogue, not a lecture.

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from the **Preface:**

Renaissance in the Classroom is, as its title suggests, a book about renewal. It is intended to provide a means for looking at how children learn through exploration that incorporates the arts

**Overview of the Book**

This book is intended to be a guide to the nuts and bolts of arts integration. We do this by presenting a structure for planning and engaging students in arts integration and then surrounding this 'how to' explanation with rich curriculum examples and comments from people who have participated in this work. The Introduction and Chapter One discuss a working structure for doing arts integration. Chapters Two through Four are the heart of that "how to" explanation. Chapter Two, titled Getting Started With Arts Integration: Finding the Elegant Fit, describes how teachers examine their curriculum and find meaningful teaching themes or "big ideas". The process continues in Chapter Three, Moving Through the Curriculum: Doing The Work in Arts Integration, which highlights what happens in and out of classrooms as arts integration is underway. Then, artists explain how they engage with teachers and classrooms to "warm up" students for the work of getting started. Chapter Four, Beyond the Unit: Assessment and the Learning Cycle, provides illustrations of activities that engage students in collaborative projects and connect them to the larger community. Chapter Four also includes some concrete examples of how arts integration can be an essential part of authentic assessment, and it describes evidence linking study of the arts with increased student achievement. These three chapters demonstrate how arts integration moves *Into, Through, and Beyond* the classroom curriculum. (See Figure One) Chapter Five illustrates the *into, through, and beyond* by telling the stories of three science teachers who have integrated the arts in their curriculum. This chapter, Science and Art: Lessons from Leonardo da Vinci reminds us how the text got its name; arts integration is an opportunity for a Renaissance in the Classroom.

The title of Chapter Six, You Don't Have to Do It Alone: Initiating and Sustaining Collaboration, explains its context; there are strategies in this chapter to help individual teachers connect to others who are interested in learning through the arts. This chapter also demonstrates how whole schools can look at arts integration development over time, planning arts experiences for all children. Chapter Six helps teachers see how they can explore the arts with the help of students and parents, even when they do not have access to an artist or an arts teacher. It describes how you can begin an arts integration approach in your classroom and, eventually, your school.

**Figure One: Getting Started, Moving Through, and Going Beyond the Unit**

<b>Getting Started: Finding the Elegant Fit</b>	<b>Moving Through the Curriculum</b>	<b>Going Beyond the Unit</b>
<ul style="list-style-type: none"><li>❖ Building a team and a vision to do elegant work</li><li>❖ Learning from each other: the vocabulary of the arts</li><li>❖ Trying new skills: learning to dance and sing in class</li><li>❖ Finding problems and questions</li><li>❖ Brainstorming and</li></ul>	<ul style="list-style-type: none"><li>❖ Breaking ground: moving desks and opening minds</li><li>❖ Building teams of students</li><li>❖ Playing and exploring with art forms</li><li>❖ Warm-up exercises</li><li>❖ Deepening instruction: weaving parallel processes</li><li>❖ Translating across</li></ul>	<ul style="list-style-type: none"><li>❖ Traditional achievement measures</li><li>❖ Planning and doing as assessment</li><li>❖ Collaboration in assessment</li><li>❖ Revising</li><li>❖ Using rubrics</li><li>❖ Performance</li><li>❖ Exhibition</li><li>❖ Self-evaluation</li></ul>

<ul style="list-style-type: none"> <li>❖ planning together</li> <li>❖ Planning shifts in teacher and artist roles</li> <li>❖ Taking the time to do good work</li> <li>❖ Finding and using access points</li> </ul>	<ul style="list-style-type: none"> <li>media</li> <li>❖ Shedding new light on old material</li> <li>❖ Co-teaching and co-learning</li> <li>❖ Connecting to the community</li> </ul>	
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The description of how arts integration can happen is one that transcends any particular structure. The stories and curricular examples in this text illustrate how teaching-learning processes in schools can move from the linear instruction modes appropriate for a manufacturing economy to the "hyper-linked," problem-based, project-based approaches appropriate for an information economy. When well planned and implemented, arts integration is one of the most effective ways for a wide range of students with a wide range of interests, aptitudes, styles, and experiences to form a community of active learners taking responsibility for and ownership of their own learning.

### **A Hundred Voices**

When we decided to write a book that people could use to guide arts integration in other settings, we called together a group of representative teachers and artists from a network of arts education partnerships called the Chicago Arts Partnerships in Education to form a "Publications Advisory Board." These dedicated artists, teachers, and parents helped us to begin thinking about what such a book would look like and how it could be most useful to readers. We used a process of recording over 100 voices to tell the CAPE story and to write this book. We conducted individual interviews with artists, teachers, and principals. We held focus group sessions with students and parents. We also invited participants in arts integration in Chicago to write their own stories for this book.

Then we had the task of reading hours of transcribed interviews, looking at photographs and student work samples, and poring over written curriculum materials. We looked for broad themes, processes, and concerns that cut across the individual perspectives of teachers, artists, principals, parents, and students. Finally, we developed a design for arts integration that seemed to capture much of what teachers, arts teachers in schools, and artists have actually experienced. We outlined a model that we believe is flexible enough to include the rich and welcome variability that we have tried to illustrate through the wonderful individual stories.

We know that this process can be anything but neat and tidy, so we felt it was essential to include the voices of real artists and teachers who express their own learning about the process and describe the work that their students and their whole school communities have produced. Those stories, called Arts Integration Snapshots, are inserted throughout the book. Although all of the book is based upon the comments, suggestions, and passions of students, parents, teachers, artists, and school leaders, the snapshots are focused on a particular element of integration worth noting.

It is fitting that we tell this story in many voices because one of the arts' strengths and gifts to education is a special ability to unearth multiple perspectives on a given theme. Time and again, artists and teachers have talked about developing curriculum that uses multiple points of view as a way to get inside a text, or as a means to open windows to another world, another culture, another person's life.

Within the individual strands of stories, we found many common conclusions, each arrived at through separate processes of trial and error, experimentation and revision, across nine different arts partnerships. What has emerged is a theory of practice crafted through six years of dedication and hard work.

The resources and helpful hints in the Appendices at the end of the book provide an ongoing source of support for you. There are ideas for you to try, whether you work in one classroom by yourself, or whether you have formed a community of artists, teachers, parents, and students interested in arts integration. The voices in this book will help you find your own voice and bolster your own determination to bring the arts to educational communities in a meaningful way.

We as editors have combined our perspectives to bring together these 100 voices. Gail Burnaford is a teacher educator and former teacher who has worked with teachers and artists to explore how teaching and learning occurs in arts integration classrooms. Her voice has helped us

clarify how the curriculum becomes renewed through a process that engages the arts. Arnold Aprill is the executive director of the Chicago Arts Partnerships in Education and the former artistic director of a theater company. His voice has helped us structure the organizational outline and see the big picture in this partnership work. Cynthia Weiss is a visual artist who has articulated what arts integration looks like from an artist's point of view. Her voice has opened up the possibilities for creativity and new ways of talking about school learning. We think the combination of our perspectives provides the reader with a rich portrait of this work.

### **Acknowledgments**

This book is about meaningful learning through the arts and the kinds of partnerships that help make this learning possible. It is also a testament to the individual teachers, artists, parents, principals, partnership organizers, school liaisons, technical assistance providers, community leaders, and students who have invested their brains, their bodies, and their spirits in an ambitious experiment in making learning more meaningful. This book represents endless hours of their planning, dreaming, taking risks, arguing, laughing, writing, rewriting, researching, refining, rehearsing, dancing, singing, painting, cleaning up, moving desks, transporting materials, reporting, assessing, documenting, presenting, remembering, and reflecting.

The partners in the CAPE Partnerships have been true collaborative learners, exhibiting all the teamwork, integrity, perseverance, vision, and mutual respect we hope to see in our most effective classrooms. They have walked the walk.

<b>Chicago Arts Partnerships in Education: Partner Schools and Arts/Community Organizations</b>
<b>Bridgeport, Armour Square, Near North Friends of the Arts</b> Healy School, Mark Sheridan Math and Science Academy, Chicago Moving company, Creative Directions, Art Resources in Teaching, Hyde Park Art Center, Jackie of All Trades (Jackie Samuel), Terra Museum of American Art, Chicago Dance Medium, Pros Arts Studios, Donna Mandel/Dancer, Street Level Youth Media, Art and Design Department (Chicago State University)
<b>ETA/Muntu Arts In Education Consortium</b> Brownell Elementary School, McCosh Elementary School, O'Keefe Elementary School, Metro/Crane High School, Parkside Academy, ETA Creative Arts Foundation, Muntu Dance Theatre, Community Film Workshop
<b>Hawthorne/Agassiz Arts Partnership</b> Agassiz Elementary School, Hawthorne Scholastic Academy, Lookingglass Theatre Company, Pool of Dancers and Visual Artists
<b>Lakeview Education and Arts Partnerships (LEAP)</b> Audubon Elementary School, Lake View High School, Blaine Elementary School, Ravenswood Elementary School, Chicago Teachers Center (Northeastern Illinois University), Beacon Street Gallery and Theatre, Lakeview Chamber of Commerce, Sulzer Regional Library
<b>Lincoln Park High School</b> Lincoln Park High School, Art Encounter, Hedwig Dances, Lookingglass Theater, IMPAACT, Old Town School of Folk Music, Betty Sitbon, Muralist, Textile Arts Center, Victory Gardens Theater
<b>Tlahui Mexican Fine Arts Center Museum</b> Orozco Academy, Telpochcalli School, Mexican Fine Arts Center Museum
<b>Pilsen Arts Partnership</b> Walsh School, Pros Arts Studio, Casa Aztlan, Dvorak Park
<b>Southside Arts Partnership</b> Ray School, Murray School, Hyde Park Art Center, The Goodman Theatre, The Smart Museum of Art, The Chicago Children's Choir
<b>West Town Arts Partnership</b> James Otis Elementary School, Elizabeth Peabody Elementary School, William H. Wells Community Academy, Sherwood Conservatory of Music, Northwestern University

Settlement Association, Chicago Symphony Orchestra, The Goodman Theatre, Mordine Company Dance Theatre, The Marwen Foundation, Partners in Mime, Inc.

**Arts Centered Educators (A.C.E.S.) Partnership**

Pulaski Community Academy, Banneker Elementary School, Whirlwind Performance Company, Glenda Baker/Singer, Cynthia Weiss/Artist, Donna Mandel/Dancer, Coalition of Essential Schools.



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from **Chapter One / Arts Integration: What Is It and Why Do It?**

*Second grade students at Pulaski Elementary had been studying ecology. They used recycled milk cartons to create a scale model of their school and its surrounding neighborhood. The students photographed actual homes in the area, reproduced accurate scale models, and designed communities on the computer program, "Sim City". Because the neighborhood is being gentrified, the homes were changing during the course of the project. This led to lengthy discussions about neighborhood planning and how to create communities that were the right scale for children. The project culminated in the presentation of the scale model to the principal, and a discussion about the need for a school playground. Six months later the school did indeed build a playground. (See photo.)*

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*Sophomores, Juniors and Seniors in the Metro Program at Crane High School worked with filmmakers and video artists from the Community Film Workshop to dissect characters on TV. They analyzed African-American stereotypes in the media, examined what messages an image communicates through point of view, framing, lighting, focus, and color, determined their own messages, and then created their own story boards for filming. (See photo.)*

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*Third graders at Murray Language Academy studied birds, but they did much more than that. They took part in a multi-dimensional learning process that consisted of experiments (e.g., "what is inside an uncooked chicken egg?"); movement, dance, and role-playing (e.g., moving like penguins and eagles); origami and other visual arts; a visit to the zoo; research on migration patterns; reading both fiction and non-fiction books dealing with birds; and descriptive writing. Using the knowledge they gained through this multi-faceted curriculum, the students created original illustrations of birds that were then laminated for bookmarks.*

How is learning happening in each of the classrooms and schools described in these vignettes? How are children engaged? What seems to be the role of curiosity and imagination in each of these classroom stories? In other words, what's going on here?

For starters, each of these classrooms, as part of the Chicago Arts Partnerships in Education network, has access to painters, dancers, musicians, filmmakers, videographers, and others who think about the world as artists do. They also have day-to-day access to teachers who think creatively about how learning in their classrooms can go beyond the textbook and dip right into the real world. Their teachers and the artists who work with them have been engaging in **arts integration**. These teachers believe that children not only need the arts in their daily lives, but also can benefit from arts learning that is deeply immersed in other curricular areas.

The teachers in those classroom stories are faced with the same challenge of meeting state goals and district standards as other teachers throughout the country. They are held accountable for students' test scores on a regular basis and they feel the pressure of time to 'cover' everything that a child should know by the time he/she moves on to the next grade level. And yet, they have seen first hand that none of those external goals can happen unless children participate actively, use their hands as well as their minds, and make connections between what they are learning and what they are living. These teachers see **arts integration** as one avenue for making these laudable goals into practical realities.

This chapter will introduce the idea of **integration** as many of the teachers and artists in the CAPE network have come to know it. We will describe how arts integration is embedded in the larger context of curriculum integration, which has a history in the field of education. The chapter will also explore how arts integration is compatible with other engaged learning strategies such as problem based learning and teaching with awareness of the multiple intelligences. Arts integration is not an

island; this approach builds on the work of many other initiatives dedicated to making schooling more rigorous, real, and creative for young people.

Arts integration is a way of thinking about learning and teaching; it is not a formula and it is not a strict structure that requires specific resources. Arts integration encourages individuals and groups of school people to stretch out a hand to community resources, whatever they may be, and make connections to the school curriculum. It encourages leaders of young learners to see the connections between knowledge in one area to another, between a unit in mathematics and a unit in social studies, or between a unit in science and a unit in language arts. This process shows students that such thinking is possible and actually done in the real world. That's what arts integration is all about.

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from Chapter 3: **Moving Through the Curriculum: Doing the Work in Arts Integration**

**The School Bus Saga: A Classroom Story of Connecting the Self and the Larger Community**

Picture this. Up in the observation tower of the John Hancock Building, there are twenty-five kindergartners, craning their necks to see the city of Chicago far below. They are armed with sketchpads and pencils. Each of them is searching - searching for the bright yellow schoolbus that brought them to the John Hancock right by Lake Michigan. They also see the lake, of course, and many, many buildings in the big city below. Their teacher, Wendee DeSent describes what happened: *It was goosebumpy to walk around and hear the different children talking about what they were seeing and recognizing.*

*"Hey! There's our school bus!"*

*"That's not the same bus!"*

*"Sure it is. It's the same color, the same shape."*

*"But you can't see the windows. How do you know it's a school bus?"*

*"Well, I can tell because it's a rectangle. And that's what it would look like if you were on top of the school bus, standing on top of it looking down."*

*We knew they were going to see the lake. We discussed how they would see swimming pools on top of buildings. We knew we were going to show them all those kinds of shapes. But the idea that our school bus, the one that we rode, was the connection - the ah-ha.... That I would never have been able to plan for. It happened, and it proved to me that what we were doing was working. That school bus taught what we wanted to teach.*

Twenty-five kindergarten children have just made a big discovery about their world. They have just made the connection between what they have been studying about maps, geography and space with the real world. They have learned that drawing representations of the world requires a shift in perspective; maps typically make shapes of things the way they are seen from above.

For the past few weeks, Wendee's class had been studying this phenomenon in their own smaller worlds. They did Shape Hunts in their classroom; they drew corners of the classroom, complete with the multiple shapes that were naturally found there. They looked at photographs, searching for shapes. (See Appendix D: Making Shape of Our Environment)

They had been standing on desks, looking at books, recognizing shapes in the school, and mapping their bedrooms at home. (See Photos) Working with a dancer, they had been using their bodies to make shapes, too. They were beginning to understand shapes in different ways - painting them, representing them in mathematics, and dancing them.

Wendee: *By representing a concept in multiple ways, at different times during the week, I have a better chance of getting it inside them, of getting it internalized.* This challenge of internalizing learning real stuff of working *through* an arts integrated curriculum. How can we know what children are learning while they are in the process of learning it? How can we understand what they perceive? Wendee's kindergarten unit seems to move us closer to the means of capturing their conceptions and misconceptions. If teachers and artists have more of a sense of what children are learning and knowing, they can continue to adapt, reteach, reinforce, and move students forward.

The teachers and artists at Hawthorne School went through such a process to plan their work with shapes in the kindergarten classrooms. The children learned first about different levels they could use when looking at their environment. The visual artist taught them how to paint on paper at high, medium, and low levels. The dancer had the children dance at high, medium, and low levels. They worked with the attribute blocks in mathematics, making basic and complex shapes using the blocks, and eliminating the blocks that were not useful to make a given shape. They learned words such as high, medium, low, as well as attributes such as open, closed, smooth, and angular. For example, the children were asked to dance a high-level, open circle shape. In other words, the task required them to

transfer what they had learned with the math blocks and represent that learning in their physical movements.

The children moved back and forth from the outside physical world to their own bodies and their own artistic creations. They learned about permanent and nonpermanent shapes in their worlds. They began to think about mapping those shapes and how such maps might look. Maps in dance are called choreography, and the students ventured there next. They learned that a floor plan could be acted out.

They created a dance that had to contain two shapes. They then had to connect the two shapes with either a smooth or a sharp line. Then they had to exit from the dance somehow. The children had to write this movement plan - this choreography - on a card, then dance the shapes and the lines in the appropriate area of the room. Wendee: *We asked the children when we presented this challenge, "Can you do this?" And they would just do it, no hesitation.*

*It's a basic kindergarten unit - shapes. Every teacher does it. But this is taking it to another level. I used to use books to do this unit. I used to use books that have shapes in them. But they have shapes all over their environment and they can make shapes with their bodies! We are teaching them to represent shapes they have actually observed. It's no longer just a worksheet picture of a circle that says, "What am I?" Instead, we used the ME Syndrome. It's perfect for kindergarten. Children know best what they feel and what they do with their own minds and their own bodies.*

This Shapes Unit does indeed 'take learning to another level.' Wendee DeSent's kindergarten experience demonstrates how an integrative approach begins and ends, ultimately with how individual students connect to the subject. That connection to self extends to a wider look at the concept or theme in the larger world. Looking at shapes in one's body through dance, in one's bedroom through visual art, and then on the top of a skyscraper deepens the concept of shape in these children's thinking.

Working *through* the curriculum is a process of doing. It involves an ongoing cycle of research, planning, collaboration, connecting, and balancing. Teachers - and their artist partners - are engaged with students in the learning of both skills and concepts. Arts integration is action; it is also thinking. One parent helps us see just how this looks in this letter to Ms. DeSent, the kindergarten teacher who worked with Shapes and the Environment:

*Dear Ms. DeSent,*

*We were a little confused on the visual arts project, so sorry it's late. Nevertheless, what a great project. Jake knew exactly how to approach the medium level concept and seemed to understand the difference between angles. He told me about ovals, rectangles, and he explained that his racecar bed was a free-form shape. This is a thought process and appreciation never taught to me and I'm sure my perspective of certain things or, more appropriately, my lack thereof reflects it! Great job. Keep up the creativity. You're teaching some parents too.*