

Learning is a Participatory Experience

RON SASS, CO-DIRECTOR OF THE CENTER FOR EDUCATION

“Most learning is not the result of instruction. It is rather the result of unhampered participation in a meaningful setting.”

Ivan Illich, *Deschooling Society*

Learning must be an intimate personal experience for the student and not an abstract set of facts unattached to anything of purpose.

I can clearly remember my disbelief when first being taught geography in the third grade. What struck me most was the unfamiliar clothing worn by certain groups of people such as the Eskimos or Laplanders. These people never became real to me—I guess because they were so different from my experiences with the people of Iowa where I was growing up. I made no connections between the activities of raising reindeer and tending cows or pigs. Nobody that I ever knew went about in hand-sewn hide garments or hunted with a long harpoon. Consequently, these people did not really exist for me. As I progressed through my formal education, in classes such as sociology or anthropology, I would learn more about different peoples. But they remained abstract or virtual rather than real, and it was not until I actually lived and worked with them that I learned to personally relate to them. Unfortunately, that experience is difficult to obtain in any school subject and poses a real challenge for a teacher to bring a subject alive in the classroom.

I am sure that “learning” science is viewed much like that for most people. There is no awareness of the usefulness of science or of how it governs our very physical existence. More often than not when people find out that I am a scientist, they “confess” that science is too hard for them or they cannot possibly understand what it is all about. For most, learning science is associated with learning mathematics, and mathematics is not a useful language for them.

For me, learning science was a joy and an exciting pleasure, even though it was extremely difficult at times. I took several different courses in college and graduate school before I felt comfortable with thermodynamics, for example. But, I trace my scientific epiphany to one teacher that I had in elementary school. I had her for science and art in fourth, fifth, and sixth grades, and she taught me all that was necessary for me to know about science. That was not so much through learning lists of facts or being able to memorize theorems or laws. It was through my acquiring from her the meaningful importance of observation before understanding—and to sense and to internalize the physical world around me through art as well as science. She has always been my role model.

The goal of the teacher is one of providing the setting for meaningful learning. I believe that a teacher accomplishes this goal most successfully by creating a situation in which students are led to observe the world and to discover for themselves the importance of informed thought and expression. The primary objective of the several projects of the Center for Education is to help teachers to do just that. As you read through this issue of the Centerpiece, discover for yourself how this goal is accomplished.



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Lee Students Head for the Coast: Learning in a Meaningful Setting

How could a trip to the Gulf Coast be a novelty to Houston students who live just an hour from its shores? Many city children have never seen the beach or known that the worlds of water, plants, and people interact in so many ways along the stretch of land that meets the Gulf. Lee High School students from the pH Lab come to Houston from Texas, Mexico, and countries as far-flung as the Sudan, Afghanistan, Israel, Palestine, Bosnia, and Vietnam. But even the world travelers among them have had little opportunity to explore the environment beyond our city, and even fewer have had the chance to connect classroom learning—the diagrams and formulas and charts—to the natural world. “Science” will never be the same for this group of Lee students after they found themselves wading, slogging, fishing, scooping along the shore, then stepping into a mockup control room of a nuclear power plant.



DR. ELNORA HARCOTMBE
DIRECTOR, MODEL SCIENCE LABS

Sixty-five teenagers overnight on the Gulf coast—are you crazy? No, we were not crazy, and the trip was an outstanding success. We took two busloads of students and chaperones from the Rice/HISD pH Model Science Lab at Lee High School in Houston to Rockport, Texas, last spring, May 5 and 6, 2005.

The main objective was to compare water quality, landform, and resident organisms in locations that received different amounts of wave action and that varied between salt water, brackish water, and fresh water. The students first disembarked at Port Aransas on the far side of the barrier island where the Gulf of Mexico had sizeable waves washing onto the sandy beach. The enthusiasm was palpable as the students examined the shells, jellyfish, seaweed, and other items washed onto the shore. The group quickly formed into teams of four to collect water and perform the requisite testing of pH, conductivity, dissolved oxygen, dissolved carbon dioxide, and turbidity. Then they eagerly manned the seining net to snare small fish in the shallow water. They were

aided by resident biologist Jim Kee and by William Harcombe from UT Austin. “Miss, Miss—look at this pretty shell. What is it?” The students were reluctant to reboard the bus when it was time to move on.

The next stop was just after the ferry returned us to the mainland. The shoreline was more mucky and had tall grasses growing near the water. It was not as appealing for swimming, but the fish catch was plentiful and had interesting pipefish and flounders. The students carefully recorded water tests into notebooks.



The rocky edge of the Rockport Bay offered further contrast, with its lack of a sandy shore. The quieter waters of the bay provided nesting areas for many birds, including a protected area for the Black Skimmer. The large pink roseate spoonbill was a favorite student sighting.

The students collected and tested water also at a small fresh water pond in a park in the city

of Rockport. There, they found several frogs, a snake, and many dragonflies. Of course, the water chemistry was very different. Several students commented that in the classroom, the water tests had just been numbers, but that now the numbers correlated with different locations, and all that was involved in the environments.

We all felt like special guests on this trip, and the students acted accordingly. The Chamber of Commerce of Rockport was very helpful when we were making our plans. Hunt’s Castle hotel on the waterfront in Rockport offered us fabulous accommodations with kitchenettes in each room, a pool, and a long fishing pier. Hunt’s Castle also served us a delicious supper in the pavilion on the Blue Wave Beach so that the students could play volleyball, swim in shallow water, or do other beach activities. However, many of the students preferred to return to the hotel to swim in the pool and to fish on the pier. A number of students were out on the pier by 5:00 the next morning. It was the first time that many of them had ever gone fishing. George Reyes and Stephen Estrada, volunteer chaperones, supplied the fishing equipment and instruction.

A trip to Rockport would not be complete without a stop at the Aransas National Wildlife Refuge. The students walked the paths there, spotting alligators, birds, and even a spider eating a butterfly. Unfortunately the whooping cranes had already flown north for the summer.

There was one other major event on the trip—a visit to the South Texas Project Nuclear Power Plant. We were the first





student visitors since 9/11. It was intriguing to hear all the back-up systems that exist in the emergency control room. It was more fascinating to observe all the dials and valves in a mock-up training center for the actual control room. Students were permitted to change settings to see what happened to pressures and bells. Students received much information about the safety and low cost of nuclear energy, as an alternative source for our electricity needs.



This trip combined concepts taught in chemistry, biology, and integrated physics and chemistry. For me, the best part of the trip was seeing students become so excited about new experiences and sharing in their eager questions and inquiry. **Science is a process of understanding the world around us, but first we must see that world and ask questions.** This trip was definitely a science learning experience. Thanks go to the Lee science teachers under the leadership of Mila Bersabal, the resident teachers of the pH Model Lab, Lee High School for the bus, and The Mary and Gordon Cain Foundation for the lodging. Most valuable of all was the curiosity, enthusiasm, responsible behavior, and active learning of the students.

The pH Lab at Lee High School, patterned after the Rice Model Lab at Lanier Middle School, was established to address the quality of teaching in the critical 9th grade science year, often a barrier to students' promotion to 10th grade and to progress toward graduation, especially for at-risk students. To update teachers' knowledge and to give them indepth experience in creating engaging hands-on lessons that integrate chemistry and physics, the Center for Education, with funding from the Cain Foundation and cooperation with HISD and with Lee High School Principal Steve Amstutz, created the pH Lab to provide 9th grade science teachers from across the city a year of residency at Lee, to work with Dr. Nonie Harcombe. For more on the pH Lab, and the accomplishments of teachers from its first three years, see <http://centerforeducation.rice.edu/MSL>

Model Science Lab Teachers' Summer Travel Enriches Classroom for Students

NEDARO BELLAMY, ASSOCIATE DIRECTOR, MSL

From Ghana to Greece, from the Serengeti to Singapore, teachers from the Rice/HISD Model Science Lab explored the globe for new discoveries and ancient traditions to make science — the understanding of the natural world — come alive for their students. Nedaro Bellamy and Rosalind Russell went to Africa. Kristi Shanks explored Greece. Lisa Webber experienced Tanzania by safari, while Diann Valentine gathered sand samples in Southeast Asia. Their summer ventures were made possible by the Fund for Teachers, a unique foundation whose mission is to enrich the lives of students by providing recognition and learning opportunities to excite the minds of their teachers. Aimed at making a difference one teacher at a time, Fund for Teachers is exceptional in making grants directly to teachers for professional development opportunities of their own design.

Having completed year-long residencies in the Model Lab, these teachers were poised to venture into unknown territory on behalf of their students. The creativity and complexity of their projects will bring new knowledge into their classrooms; even more vital is their modeling for students how exciting learning can be. This issue describes the adventures of two of the five teachers; for more news on how the trips impacted Houston students, see our next issue.

Rosalind Russell and I, Nedaro Bellamy, explored the innovative field of ethnobotany from field experiences within Kakum National Park, Aburi Botanical Gardens, and the Center for Research in Plant Medicine. This experience provided team members with examples of ethnobotanical relationships and the opportunity to investigate man's impact on the environment.

Walking the ethnobotanical trails, we learned about the hidden properties of various plant species. In traditional Ghanan medicinal practices, plants serve to fight infections, heal wounds, increase lactation, ease muscle strains, relieve stomach ailments, and eliminate fevers. For example, a chewing sponge containing medicinal properties

is still used by the Akan tribe as a tooth-brush. Additionally, structure and function features of plants were also investigated as we observed the Kuntan tree, which has roots above the ground that extend out and down from its trunk. This characteristic makes it look as if it has been pulled 12 to 15 feet out of the soil with the roots forming a visible stand for the tree. Not only is the Kuntan tree unique in appearance, but the leaves are used as natural, healing bandages. Herbal remedies and herbalists were as abundant in Ghana as pharmacies are in the United States. This experience provided an excellent opportunity to combine science, culture, and traditions.



We taught students in grades 6-8 at the Prince of Peace International School and the Ghana Christian School in Accra. This experience was rewarding for both the students and the teachers, as the students and staff enthusiastically responded to hands-on instruction. To promote more hands-on activities, we left gifts of school supplies, texts, and science materials with each of the schools, and plan to start a book drive to assist the schools with their minimal educational resources for both the students and the teachers. Providing resources for both teachers and students will assist in developing a global sense of community for both educators and students. We also have a goal of creating a website with science activities and lessons on plants and structure and function relationships to share their insights and learning experience worldwide. As for me, this experience has provided a renewed interest in becoming a more global science teacher and integrating cultural experiences into a more global curriculum to promote education from a multicultural perspective.

School Science and Technology Continues to Grow

SS&T now serves all 30 Aldine ISD elementary and 9 intermediate campuses through the Rice/Aldine Science Specialist program. Twenty full-time, campus-based specialists facilitate science instruction in these 39 Aldine campuses and are supported by SST personnel. The Rice/Aldine Science Specialists provide many ways that teachers, through hands-on experience, can create meaningful learning environments for children. The program enables students to make connections for themselves with the world of science and technology.



Pam Srinivasan (center) assists teachers Nina Nkem and Donald Toledo during SST Chemistry Training.

Inquiry Learning for Elementary Teachers.

The inquiry learning workshop focused on the Bridging II TAKS curriculum: "Teaching about matter using tools," developed by Region IV Education Service Center and funded by the Texas Regional Collaboratives for Excellence in Science Teaching. Aldine Science Specialists C. J. Thompson and Sharon Kennedy led the session in which teachers explored a wide variety of tools useful for making

TEKS and inquiry-based instructional methods. Drs. Alison Henning, David Heroy, Gerald Dickens, Carrie Masiello, Dale Sawyer, and Wallace Dominey of Rice provided content instruction and Paula Burke, Pam Jones, Mark Malo, Jason Chadwick, Janis Brunner, Dorcie Wides, Brandi Pence, and Lavanta Williams, all Aldine Science Specialists, facilitated. The Earth Science Institutes covered natural disasters, plate boundaries, hurricanes, and other geologic and environmental topics and was supported by Texas Higher Education Coordinating Board Teacher Quality grants.

SS&T Summer 2005 Workshops

Chemistry Training for High School Teachers.

On August 4-5, the School Science and Technology program provided a "Case Studies in Chemistry Workshop" for high school chemistry teachers. The workshop focused on the ideas developed by Rice's Dr. John Hutchinson. Dr. Susan Wiediger, Assistant Professor at Southern Illinois University Edwardsville and a recent Rice PhD, facilitated the workshop with the assistance of Dr. Wallace Dominey and Pam Srinivasan, HISD secondary science program director (see photo above).

The Concept Development Approach designed by Dr. Hutchinson uses Socratic teaching and other active teaching practices to develop major fundamental chemical concepts. Each concept development study starts with observations then follows scientific reasoning to develop an explanatory model. During the two day institute, 21 teachers were exposed to over 15 chemistry concepts that will aid in classroom instruction. This workshop was supported by a grant from the Brown Foundation.

observations and taking measurements.

The training was further enhanced by focusing on the concepts and techniques outlined by Douglas Llewellyn in his book *Inquire Within: Implementing Inquiry-based Science*. Whether this was their first introduction to inquiry learning or not, participants were excited about the methodology presented to produce a deeper and more robust understanding of concepts and skills.

Earth Science Workshops for K-8.

For two weeks this past June over 80 teachers from the Houston area participated in Earth Science Summer Institutes for grades K-5 and 6-8 focusing on the Earth Science



Aldine teachers Faiber Zora and Melissa Breda explore inquiry learning and science tools.

SS&T Staff Update

New Faces:

- Rachel Graham, new program coordinator, began in June to meet SST's increasing demands for administrative support. She has been at Rice for over four years and is excited to be a part of the Center and SST.
- C.J. Thompson is an Aldine ISD employee working with SST; he trained in the Rice Model Science Lab and worked as an Aldine Science Specialist for the past 7 years.
- Alison Henning, SST Associate Director and Lecturer in the Rice Earth Science Department, provides earth science teacher professional development.
- Dr. Dale Sawyer, Professor of Earth Science, is co-principal investigator on two new grants with Dr. Dominey and provides teacher professional development.

Existing Staff:

- Eddie Heard, SST's Educational Technology Specialist, continues to develop <http://Learn.Rice.edu/>; he is also creating flash animations as instructional tools.
- Wallace Dominey, Director, was recently appointed Director of K-12 Science Outreach for the Center and a Senior Research Scientist in the Department of Ecology & Evolutionary Biology. He is currently serving on Rice's Educational Outreach Council representing the Center for Education.



First-Year Teachers Describe Life in Schools

Rice students who decide to enter the teacher education program bring with them a wealth of knowledge in their major field of study. As they take part in Rice's nationally-recognized program, they benefit from its deep focus on children and on urban schools (through courses taught by researchers from the Center for Education), and from their experience teaching in Rice's Summer School for High School Students. Under the guidance of master teachers, many of whom received training through Center teacher-development programs, teacher education students create their own summer courses and take full responsibility for teaching. As the new teachers take jobs in local schools, they are supported by mentors and Dr. Lissa Heckelman, director of Rice's Education Certification program.

BY DR. LISSA HECKELMAN AND DR. JUDY RADIGAN

Nine young, first-year teachers sat in a semicircle in front of a group of Rice education students who came to hear about the challenging first weeks of teaching in local high schools and junior high schools. On that October evening, the waiting audience was not sure what to expect. What they saw and heard was a dedicated group of young teachers who felt confident about their teaching, their preparation, and their workplaces.



Beginning with accounts of how they had secured their jobs and impressions of their schools so far, the new teachers shared the plethora of ways teachers find positions in Houston. Several were hired as a result of contacts, especially through mentor teachers they had met through the Education Certification program, but others, like Mark Johnson, currently at Tomball High School, shared their stories of making connections at an alternative-certification job fair (even though not an ACP candidate) or of being offered a job over the phone without so much as an application or interview.

The training these young instructors had received in their certification program at Rice was repeatedly referenced as they told their school stories. Mentor teachers from

all over the city who worked with them in Summer School had shared their expertise (and their materials) generously as student teachers created and taught their first thematic units.

After the summer student teaching they felt confident about establishing their own routines and voices in the classroom. They knew how to write plans, though one wondered aloud how she would find time to integrate all of the useful resources she had accumulated. Misty Menger, now at Episcopal High School, voiced the thoughts of several when she mused on how to adjust plans for time lost to the unexpected, like hurricanes and for additional students who had enrolled in classes as a result.

Now that they were teaching full time, the new teachers were finding similarly helpful mentors in their own new schools. For example, Ashley Harris, now at Waller Junior High, reported on the resources the school mentors provide in dealing with standardized tests.

These young teachers were prepared to teach with or without texts and most found that they could use those skills in their schools regularly. While they were not bound by the lesson plans provided by the district or the team of teachers with whom they worked, they recognized that they had much to learn from their colleagues and even found that the other teachers in their schools were interested in learning from them, as well.

There seemed to be a general consensus among the teachers that high school and junior high school students were energetic and rambunctious. As one put it, "It's like watching the nature channel!" Yet these



teachers appreciated the enthusiasm that these students shared with them, as teachers and students alike worked to fit in at new schools and grade levels.

Most of the novice teachers talked about the importance of contact with parents. Many emailed parents but just as many had face-to-face parent conferences. Open houses at the beginning of the school year were valuable ways to meet many parents. These teachers seemed comfortable and prepared for this important aspect of their work.

A positive relationship with administration also matters. Amy Benford, now at Cy-Falls High School, said that it was a critical factor when she considered positions. The teachers expressed appreciation for administrators who had a shared mission for the school, and they praised the day-to-day support they receive for discipline and curriculum.

In closing, the new teachers shared snapshot impressions of their schools along with invitations to observe them in their new classrooms. "Cool, smart kids are there." "Students are amusing; you will laugh!" "It is very diverse; we have very wealthy kids and kids who ride Metro to school." These connections with the new teachers will help the Rice education students as they make their required classroom observations and look ahead to careers in teaching.

For more on Rice Teacher Education programs visit <http://education.rice.edu/>



School Literacy and Culture Project Connects Children's

By following one child's growth as a storyteller, **Debbie Lingrey**, Literacy Consultant and Mentor Teacher, allows us to see the remarkable progress young children can make when teachers are trained by School Literacy and Culture Project's mentors.

September 8 - Teel's first story

It's the third week of school in my pre-K class at Chapelwood School for Young Children. Since the first day of school, the class has been acting out adult-authored stories; some, like Lorinda Bryan Cauley's *Clap Your Hands*, have encouraged creative movement while others, like Denise Fleming's *Mama Cat Has Three Kittens*, have had real characters to portray. A book basket with a stuffed Mama Cat and kittens has been in our classroom library for a week so that the children can re-tell and reenact the story. During the previous day's circle time, the children have helped me create an individual story from an experience I told them about my dog in a rainstorm. My students now understand that stories can be told and acted out, so it's time for them to begin telling their own stories.

Although I usually choose an older child to tell the first story, I have several reasons for choosing Teel, who turned four in May, to be the first storyteller. Having taught Teel's brother Cole the previous year, I know that Teel comes from a family that enjoys books, encourages creative expression, and values curiosity. Also, Teel and her best friend, Molly, have been daily visitors to the book baskets. Teel has been confident and uninhibited during our group drama. Moreover, she likes playing many roles in our dramatic play area and has been making gentle suggestions to other students when they are in the center with her.

Teel comes willingly to the Writing Center, enjoys testing out the carbon paper which is used to create a copy of the story for her to take home, and after thinking for a minute, focuses on an imaginary point in the air. Teel tells, as is common for a first attempt, a "real life" story about her sister's birth the previous year. When finished, she checks to make sure the carbon paper has really worked and then happily assigns roles, making sure that Molly has the plum role of baby Eliza.

I Went to the Hospital

One time when Eliza got born, I went to the hospital to see her. When I got to the hospital, my brother and Mary Caroline went, too. Then Daddy brought Mommy and Eliza home when we were asleep. The End.



October 27 - Teel's third story

The class continues to dramatize adult authored stories each week and, during a recent circle time, dictated a group story with each child contributing a sentence in response to my opening line. Because of this group dictation as well as discussions during the daily dictation of their news, the children are becoming aware of the conventions of print (capital letters, punctuation, the separation of words, etc.) They are, as a result, much more interested in the actual act of writing stories and will comment on some of these details while I am taking their dictation.

Most of the children have told 3 stories. They are now venturing into the realm of make-believe with the girls telling unicorn stories and the boys talking about rescue heroes. A few have included dialog and I have been encouraging children to improvise dialog during dramatization in hopes it will start appearing more often during actual storytelling. After each child's story, I invite members of the audience to tell something they liked about the story; the improvised dialog is often complimented.

Teel is always among the first to try a new book basket or unusual stationery at the writing center but she spends a majority of her time at the free art center or at the drama center with Molly. Our drama center, recently a "farm", is now a "fall campout" and both girls have been creat-

ing imaginative scenarios there. Teel has known for a couple of days that today will be her turn to tell a story — she's learned to predict each day's storytellers by looking at our storytelling chart — and comes eagerly to the writing table. She sits perfectly still for nearly a minute, as she will do for all of her stories, to think about what she is going to say. Teel tells a story with both farm and campsite characters; she uses dialog without any prompting and changes her voice as she speaks each character's part. While she still looks into space as she talks, she glances at the paper several times during the dictation process and has already learned how often she needs to pause so that my

writing can catch up. Once finished, she announces that she and Molly will be the two lizards and then checks the list of actors before choosing one of the boys to portray the cow.

The Lizard Had Scales

One time a lizard met another lizard and the other lizard had scales. The first lizard only had one scale. A cow stepped on the lizard that didn't have scales and the lizard said, "I feel like I'm sick because I am sick." The lizard died but then she came back alive. Then they were friends together and even friends with the cow because they said, "Do you want to be friends forever?" and the cow said, "Sure." The End.

April 15 - Teel's tenth story

April is our last productive month of the year for stories. May will be filled with special activities plus the anticipation of summer vacation so I treasure the relaxed time I am spending with the class this month. The children have now dramatized almost two-dozen adult authored stories; copies of each book cover (with the cast of characters) decorate one of our walls and the children often reminisce about their favorites. They have collaborated on eight group stories, made many class books, and dictated countless captions for their artwork. They enjoy the writing table and come to write letters, create books, and make signs; sometimes they come just to listen to the day's storytellers. *(continued next page)*



Stories and Play to Early Success in Reading and Writing

(continued)

Most have told ten individual stories and all have shown growth. They have used dialog, shown an increase in sentence length, refined their use of verbs, and experimented with the effects of adjectives and adverbs. Most importantly, they have developed true writer's voices, and their stories have added to my understanding of who they are.

I've discovered that Teel is a detail-oriented child. Her artwork is always intricately planned and executed, the scenes she sets up in drama center have many props (often made by her at the free art center), and she will give very specific instructions to the actors she chooses to be in her stories. During storytelling, she no longer stares into space but instead watches every word

I write, sometimes counting the number of times a certain word is used, occasionally making editorial changes, and always reminding me to include quotation marks.

I have also discovered Teel is as unfailingly upbeat in her storytelling as she is in her interactions with classmates. Lost characters are always found. Characters have conflicts (for she has learned that conflict makes for an exciting story) but always resolve them amicably. A difficult or unruly character is always ultimately welcomed into the group. Every story has a happy ending.

Play, the Profession of Children

Judy Rolke, Associate Director of the School Literacy and Culture Project, has written an article on the value of play. Published in the Advocate by the Houston Area Association for the Education of Young Children, her essay, excerpted below, expands our understanding of "meaningful settings" for children's learning.

Children rise above their average behavior in play, says Vivian Paley. She, Vygotsky, and so many others believe that play is one of the richest and most natural ways for children to learn. Play encourages children to develop their oral language and listening skills, to take risks with something new, to practice problem solving skills, and to develop a sense of community, of friendship. In a well planned and supervised environment children can take the active roles of readers and writers, beginning their growth toward a fully literate adulthood.



"Which comments of ours supported the play and extended the conversation? Which of our interventions dampened the spirit and spoiled the drama? What could we learn about fantasy play that had been unknown to us before?" These are the questions Vivian Paley, the MacArthur Genius award recipient, asks herself. When we, teachers, ask ourselves these questions and the additional ones that develop as we study play, we can develop the art of our teaching. When teachers share with each other their questions, their inquiry into play, that community of teachers and their school become more effective for children.

The ability to play in a sustained manner over a block of time makes sense to children and permits them to be open to new and more complex ideas. A listening teacher then can ask the children questions that can extend their play. Helping children plan their play can enrich their play. For example, a teacher sets up theme props, such as a garden shop. This is particularly important for second language learners. Communication is easier for them when there's a context for the words they are learning. When a teacher takes the care to provide time and structure for children's play, the children will become actively and joyfully involved in their learning.

8 Ways to Enrich Play

- 1) provide uninterrupted time for play
- 2) help children plan play
- 3) monitor play activity
- 4) provide props and toys
- 5) provide broad themes
- 6) coach children who need help
- 7) model thematic play behavior
- 8) model problem solving

From *Tools of the Mind*, by Bedrova & Leong

Because the drama center theme is "Ocean Life", several stories have featured sea creatures with the girls favoring mermaids, and the boys favoring sharks. Molly's inclusion of an octopus in her previous day's story was met with many compliments, so I predict Teel will have an octopus in her story as well. Teel comes to the writing table with an idea clearly already in mind but still takes time to sit quietly and think about how she'll start. She tells a mermaid story (complete with octopus) and makes the movements of the characters as she describes their actions. And, of course, she decides that she and Molly will portray the flying mermaids.

The Mermaids Went to the Ball

Two mermaids could fly in the water. They were magic. They found their friend that was a mermaid and said, "Do you want to play with us?" They met two goldfishes that were gathering food for their babies like squirrels gather nuts. The mermaids got caught by an octopus and said, "Oh no, I wish I could get out of here." One of the mermaid cousins came to help because she saw they were in trouble. First, she sneaked away the keys to the jail. Then she unlocked the door and then their boy cousin came and he showed the mermaids where that door was and they said, "Thank you." Then the octopus came to their house because he wanted to be friends and he said, "I want to be friends with you." Then they all went to the Mermaid Ball. They danced and the octopus knocked down the cake. It was an accident and he said, "I will make you another one." They ate the cake and said, "I love your cake." The End.

To learn more about the ways teachers can encourage children's play, see full text of article in the Advocate, available through their website: <http://www.haaeyc.org/advocate.html> or read online at the Center website: <http://centerforeducation.rice.edu/SLC/play.htm>



•Upcoming Events•

**Saturday
January 14, 2006** “In No More than Five Minutes...” How to Get the Most from Your Teaching Day: A Workshop for Parents and Teachers of Young Children, *School Literacy & Culture Project*: Half-day mini-conference on the Rice University Campus. Featuring keynote speaker, Patsy Cooper, Professor of Education at New York University, and founder of the Classroom Storytelling Project.

•Come Join the Center•

Teachers, teacher groups, principals, and parents who would like to bring Center for Education's proven teacher development programs to their schools for Spring 2006 are invited to contact the Center at 713-348-5145. Or call us when you are planning for the 2006-2007 year.

To learn more about the Center's teacher development programs, its publications, its research activities, and for additional upcoming events, please visit our website at <http://centerforeducation.rice.edu>

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