

# Informally Speaking

A Seasonal Newsletter

Issue N° 12 — Spring 2010



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[www.texasinformalscience.org](http://www.texasinformalscience.org)

## Post Conference Reflections

The theme of this Spring *IS* newsletter centers on our members' experiences and reflections of ISEA's 13th Annual Conference.

As a professional learning community, the annual conference serves as an integral meeting place where we can share our learning and then act on what we learn. We hope this collection of stories will highlight meaningful moments at the conference, as well as enlighten those members that were unable to attend this year's event.

Held at the [UT Marine Science Institute](#) in Port Aransas, TX from March 3 - 5, 2010, the ISEA conference was a wonderful success. The theme was "Science for All: Engaging Diverse Populations." We focused on

issues dealing with the under-served and under-represented populations in our communities, within both the informal and formal science education realms.

Informal Science Educators from zoos, aquariums, nature centers and museums across the state of Texas came together and collectively shared their professional experiences reaching under-served and under-represented populations in one way or another.

We hope you enjoy reading this Spring issue, and, if you missed this past conference, we'll see you next year at [The Retreat at Balcones Springs!](#)



**Smokey and Woody join in on the conference fun at the UTMSI**



## A WORD FROM OUR PRESIDENT

The 2010 ISEA Annual Conference is over. What an amazing accomplishment for our organization! Over 30 percent of the attendees were first timers, our silent auction set new records and every person with whom I spoke was excited about the potential opportunities they had found.

During our social and icebreaker, at the very beginning of the conference, there were sparks of discovery. Members old and new began unravelling attributes and qualities of the people with whom they'd spend the next several days.

Our keynote speaker, Ms. Cecilia Garibay, provided an invigorating discussion that challenged and motivated our membership. Her research and presentation caused us to stretch the bounds of our personal and organizational thinking in terms of truly reaching diverse audiences.

Her talk helped many to see opportunities where they had only seen challenges before; opportunities that were there all along, yet for some reason had remained hidden, or had been considered unattainable. She energized our group and there was a tangible excitement and energy to the rest of the conference.

The collection of presentations that followed can best be described as diverse and relevant. Our presenters delivered pertinent and powerful sessions ranging from hands on science, to methods, to the philosophy behind various approaches to diversity. Mostly, presenters showed the attributes of their most successful

ventures. I continue to be impressed by the open, sharing nature of our membership.

None of this would've been possible without the dedicated and tireless efforts of a very talented board of directors. The ease with which we completed conference tasks and coordination directly correlated to the involvement of our fantastic board. Thank you all!

So you might ask yourself, where do we go from here? Our mission in ISEA is to support partnerships among informal and formal science educators to improve science education in Texas.

In the coming months, we will be discussing many possible avenues on the way towards our goals. Several opportunities have piqued our desire to provide more for our membership and help us to strengthen those partnerships between formal and informal science educators.

We have plans to give our web presence a new look and feel, make it more navigable, and improve membership access to resources and media. In addition to this, we'll be discussing how we may offer our membership pathways to regional professional development opportunities.

These may turn into mini-institutes that allow members from across a region to travel to one of our member organizations where they will see and hear best practices, from staff recruitment, to training, retention, even program and exhibit design and development.

We can't yet fully envision what may be the best solution, we can only perceive the need at this point, but that's the exciting part! You may hold the best idea yet, the one we've not yet thought of... Contact your board members with ideas, suggestions or concerns ([johnnie.smith2@hotmail.com](mailto:johnnie.smith2@hotmail.com)).

Attend board meetings; they are open to all members. Discuss possible solutions with your own staff, or the role your institution may play in helping to provide these staff development opportunities.

Finally, we plan to open a dialogue about pursuing funding from the National Science Foundation's Informal Science Education program grants. While this would definitely be a high mark for our group, I'm confident that the talent and ingenuity of our membership and board will get the ball rolling and propel ISEA further towards our goal of improving science education in Texas.

I encourage you to be involved, stay in touch, and do your part. We make a difference each on our own, and even more so, altogether. The opportunities for science education are plentiful, the stakes are high, but the difficulty of the challenge only makes the fruit of success taste sweeter.

*Johnnie E. Smith*  
1st/2nd Grade Teacher  
Eden Park Academy  
President, Informal Science Education  
Association

## Join us for ISEA's 2011 14th Annual Conference at The Retreat

Located in Marble Falls, TX, *The Retreat at Balcones Springs* will be the site of next year's conference. "The Retreat combines the necessities and capabilities of a first class business retreat and conference center with the serenity, beauty and wonder of nature's own environment."



*The Retreat* offers extensive meeting facilities, charming accommodations, their own private lake, a mile of Lake Travis waterfront and 250 acres of fun and adventure.

*The Retreat* is the best retreat value in the Texas Hill Country, located 40 minutes outside of Austin on the north shore of Lake Travis near Marble Falls and within hours of Houston, Dallas & San Antonio.

For more information, visit: <http://www.texasretreat.com/>



## ISEA Mission

The Informal Science Education Action Team was formed in the summer of 1996, bringing together informal science educators - representing museums, zoos and aquariums, state parks, and nature centers - with members from the formal education arena - including classroom teachers, school administrators, regional education service centers, university systems, and parent-family organizations.

The mission of the Informal Science Education Association is to support partnerships among informal and formal science educators to improve science education in Texas. It is a learning community that represents the state's regional and cultural diversity.

We are an affiliate organization of the Science Teachers Association of Texas and we recognize that many challenges exist in our state, which pose potential threats to science education, but these challenges also represent opportunities for excellence and achievement in the advancement of science education across Texas.





## Fish Out of Water

### Conference Reflections from First Time Attendee, Kristin Vogt

Having recently finished my Master's in Public Administration with a focus on museums, I approached the ISEA conference not knowing what to expect. Though I had been in both formal and informal classroom settings before, my graduate degree is more akin to bureaucratic government work, rather than directly teaching both children and adults in an informal setting. So, I suppose that the setting of coastal Port Aransas and the UTMSI campus for my first informal teaching conference was appropriate for a 'fish-out-of-water' like me!

The classes were extraordinarily invigorating for me, especially since meeting multiple professionals in the field, which ranged from charter school teachers to state park coordinators, highly invigorated my imagination regarding creative curriculum development. This was especially useful with such classes as 'Bees, Bugs, and Butterflies', which was partially lecture within the Pier Lab, but also involved a sampling of the hands-on activity geared towards children.

After introducing themselves, the lecturers took us outside, where we looked for small models of animals assigned to us. After finding our animals, we were asked to get into line regarding which animal we were, and to find ourselves on the food chain. Finally, after creating a food chain, we dressed

up one of the 'teachers' as a bumblebee, naming off the parts of the bee and how it has adapted to its environment. We concluded the class by having a short lecture regarding how this application has been worked in the past, and how informal students have reacted to it in multiple educational settings.



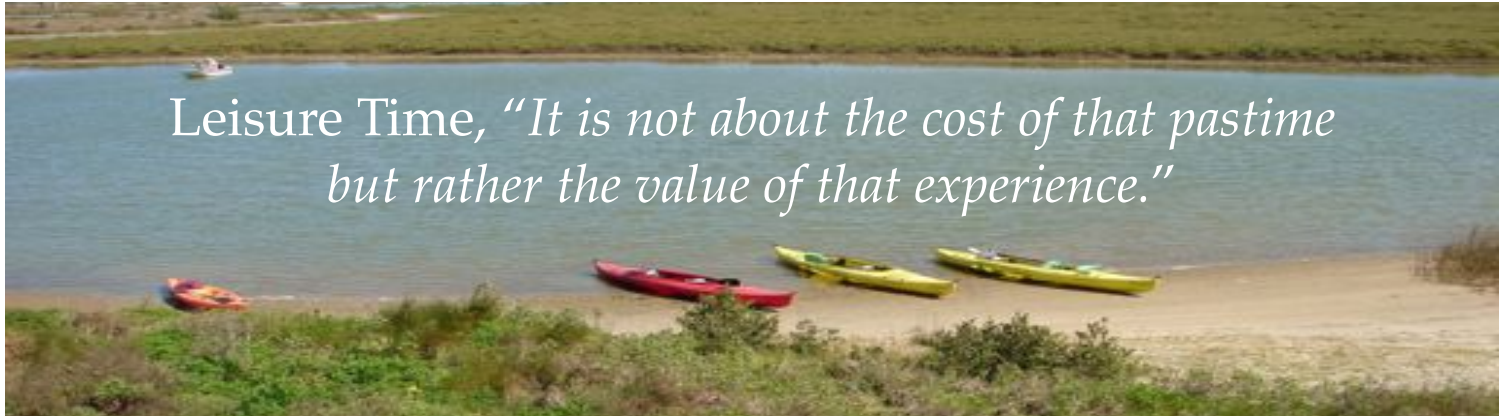
*UTMSI's pier lab area*

It felt different to experience the same classes that we would teach to our potential students, and for someone previously grounded within museum administration, this was a well-needed series of activities for me. While informal class ideas and curriculums can be written down and developed, ultimately a hands-on experience can give a better idea and conclusion as to how potential students might react.

As a result, attending the ISEA conference was a great experience for me, as I, as well as other professionals, had the experience of not only learning about a class, but having the opportunity to practice it as well. Combining this with the opportunity of meeting and congregating with other educational professionals in the background of the UTMSI facility made this conference an especially useful boon to an educational intern such as myself. I very much hope to include what I have learned in my spring and summer classes this summer.

*Kristen Vogt is an education intern at Lubbock Lake Landmark & was awarded an ISEA scholarship to attend the 2010 conference in Port Aransas, TX.*

Leisure Time, *“It is not about the cost of that pastime but rather the value of that experience.”*



### Conference Reflections from First-Time Attendee, Marcela Ramos

As a first time attendee to this year’s ISEA Conference, I knew there would be several factors that I would benefit

from; nevertheless, there was one in particular that I was looking forward to the keynote speaker’s lecture. Dr. Cecilia Garibay’s topic focused on leisure values among Latino families and their perceptions of science and museum plus the barriers to visitation and engagement.

One of my key roles at the Austin Children’s Museum (ACM), is to identify the needs of the Spanish speaking community and provide them with a warmer welcome to the museum. A year ago, I conducted my own mini evaluation to provide a better understanding of what the

museum can do to increase the number of attendees among Spanish speaking families. Due to my lack of experience conducting evaluations, I decided that the best route was to conduct surveys during outreach events. The results concluded that the majority did not know of the museum’s existence, which was not surprising. At that time the results were clear; however, determining the museum’s next steps was not.

The overall take-home message from Dr. Garibay’s presentation was that leisure time is

seen as an investment. It is not about the cost of that pastime but rather the value of that experience. This was an eye opener as it made me reflect my own approaches with the Latino

families in my community. I understood the importance of family interactions from my own personal experience as a Latina, but I forgot the need to articulate this every time I made a personal invitation to these families to the museum during outreach events.

I struggled to identify their needs, yet the information shared by Dr. Garibay both validated some of ACM’s efforts so far as well as provided new information to continue forth with this initiative. The general objective of this presentation was to understand Latino families’ view of leisure activities to better facilitate institutions to provide meaningful experience to Latino families when developing programming events.

The ISEA Conference provided me with an immense sense of knowledge as well as confidence as a young professional in the field. I recommend colleagues who have never attended an ISEA conference, to experience it. I promise you, it is worth the investment.

*Marcela Ramos is the Gallery Education Manager/Bienvenidos Initiative Leader at the Austin Children’s Museum & was awarded an ISEA scholarship to attend the 2010 conference in Port Aransas, TX.*





### Conference Reflections from First-Time Attendee, Brittany Chunn

This was my first ISEA Conference and it was such a great experience! As a future museum educator, I really enjoyed this conference because it was a great opportunity to meet with other science educators.

One of the sessions I attended was titled "The Magic of Interpretation." I was very excited and inspired by the Heard Museum's presentation of a creative way of interpretation, which involved creating informative cards on

a keychain. These cards could be used by a docent or interpreter giving a tour or by a visitor to the museum. This unique set of cards also contained a paint chip where the kids could go out in the nature center and try and match the same color in nature to the paint chip.

I was so inspired by this unique idea that I also shared it with my coworkers when I returned to work. One of my coworkers plans on using this in a Girl Scout workshop about art and colors. The kids will be given paint chips and will be challenged to find the same color in a work of art.

I also plan on using this same activity for one of my summer camps involving art. Overall, this conference has helped me to integrate new ideas into my science programming, specifically combining science and art.

*Brittany Chunn is the Education Intern at the Museum of Texas Tech University & was awarded an ISEA scholarship to attend the 2010 conference in Port Aransas, TX.*



### Reflections from a First Time Conference Presenter, William McKenna

Awake in my top bunk at UTMSI, I felt that a portion of my life had come full circle. I had spent six years in noise control engineering and now five years as a graduate student without a single conference presentation and no conferences attended in education. Now, eleven years later, I was giving a talk on engineering in high school education. As I peered through the blinds, I saw my colleagues walking through campus on their way to attend the keynote address for the ISEA, 2010 annual conference. My presentation was ready, and so were my clothes: boots, jeans, collared shirt and sport coat. Peering again through the blinds I noticed how everyone was dressed—casual. I knew then that I was among friends. OK. No collar, black T-shirt, jeans, boots. Keep the sport coat. Dressing the part is important to me and reflects my upbringing.

Later that morning, I found myself in a familiar technical role checking to see that all the presentation equipment was ready. Power, check. Video, check. Audio, check. Gum, check. Carl Sagan videos, double check. I was glad to be in the pier lab, and I felt at home, having spent many hours there over the past few years on UTeach field trips with pre-service teachers.

*Cont'd page 7*

# Equity's Back Door - Perspectives Do Matter

*Cont'd from page 6*

How might I incorporate my location into my talk? How can I bring my past into now? Soon enough the conference-goers arrived. There were some twelve classroom teachers, museum personnel and other non-formal science educators. They were all women. I wonder if this sample represented a much larger group of women interested in engineering education or if they were representative of the population of ISEA participants. Having no way to know for sure, I decided that they must be the former and were eager to learn how engineering education might look within our public schools.

Although I represented my talk as one about engineering education, it was truly about perspective and communication. We all see the world a bit differently. Our world views come from deeply personal interpretations of our environment, both built and naturally occurring. Our interpretations are molded from personal experience,

cultural situation, language and knowledge.

As we wander through the nexus of self and environment, I believe it important that we attempt to reckon why we see things the way we do, why we think the way we think and to try to communicate our perceptions respectfully to others who might see things differently.

I wanted for the participants to have a present, first-hand experience navigating the boundaries of perception. To do this I showed them excerpts of Carl Sagan's *Cosmos* in which he describes how the first Greek scientists, craftsmen, engineers, philosophers communicated with each other and were often the same man.

We conversed about differences between science and engineering. Then I asked them to investigate and describe some chosen items from both a scientific and an engineering perspective. I also asked them why, given the common ancestry, has the science/engineering perspective on the world become bifurcated.

Great conversation ensued! Several participants described how approaching things from an engineering perspective could be a fruitful way to engage their students in scientific ideas and the nature of the world around them.

We then stepped out onto the pier, and I asked them to consider the estuary from both a scientific and an engineering perspective. Although not everyone spoke, I felt a severity descend upon the crowd. Playing with toys, mostly manufactured, was one thing, but perceiving an entire ecosystem was another.

All of a sudden personal, cultural, and educational realities came to the fore. Personal world views heavily influenced perceptions. The stakes were higher. The environment was far and away too complex to describe from any perspective without somehow diminishing it, and our voices became smaller.

Here we find ourselves at the back door of equity in education. The front door is to address cultural differences head-on which is a fine and worthwhile endeavor. The

back door is to recognize that the relationship between ourselves and our built and natural environments is complex. Perspectives do matter.

In fact, the diversity of perspectives can be a vast and rich resource for everyone if we can learn to understand and embrace them. I believe that communicating about the world from both scientific and engineering perspectives is one way by which people of different cultures and backgrounds can find common ground upon which to build mutual understanding and appreciation for one another.



*William "Bill" McKenna is a doctoral graduate student in Science and Mathematics Education at The University of Texas at Austin.*



## Views from the Host

by: John Williams



Being able to host and attend the annual ISEA meeting this year at The University of Texas Marine Science Institute was a great pleasure for me. As usual, I learned many things - starting with the keynote speaker Dr. Cecilia Garibay. Her work on co-created research in educational learning was fascinating and something that I need to explore more, especially in light of our new B-Wet grant working with teachers and their students, and combining that with real research.

By attending the session put on by the Heard Natural Science Museum and Wildlife Sanctuary in partnership with the Blackland Prairie Chapter of the Texas Master Naturalists, I learned how to make a simple trail kit that will be very beneficial for our volunteer program

at the Marine Science Institute. I plan to develop one for our next workshop so that our volunteers go away with something to help them with learning and leading groups in our Wetlands Education Center; great simple idea!

ISEA provided an opportunity for me to tout our new Wetlands Education Center (WEC), but I'll provide some of that information again here:

The WEC occupies 3.5 acres between the Visitors Center and the South Jetty. It is a marsh/seagrass pond landscaped and planted with various seagrasses and appropriate coastal vegetation nourished by water from the Aransas Pass Ship Channel. The public is invited to stroll the surrounding boardwalk to observe migratory waterfowl and resident marsh birds. Interior board walks with access limited to guided tour groups. Opened in



August of 2008, we are very excited about this new teaching facility on our campus. The idea to make a marsh on campus and the tenacity to see it thru to completion came from Dr. Rick Tinnin.

Visitors to the Wetlands Education Center - known as Windows to the Sea - will gain an understanding and appreciation for the role each facet of a wetland plays in supporting and maintaining the productivity of the coastal zone. Preservation of coastal wetlands and estuaries is vital to the health of area bays and the Gulf of Mexico. The grasses and shallow waters dissipate storm surges and prevent erosion, acting as natural buffers between land and sea. Educating school children and visitors about the importance of wetlands to both nature and man is the objective of the Wetlands Education Center.

*John Williams is the Naturalist on board the RV/Katy at the UT Marine Science Institute in Port Aransas, TX.*

# Tools for Teachers

## Groundwater to the Gulf Summer Institute trains Central Texas educators in aquatic curriculum.

by: Karen Marks

Water. It's on everyone's mind these days, especially during the drought-stricken summer of 2009, when the lake levels dropped and the home lawn turned brown and crunchy. Thankfully, water is also on the minds of local teachers and their students as a result of a summer teacher institute entitled "Groundwater to the Gulf."

Each summer for the past four years, more than a dozen organizations, including TPWD, collaborate and pull their resources together to host a free three-day institute for 50 fourth- through eighth-grade teachers from central Texas. Topics include hydrogeology, groundwater, watersheds and water quality.

Post-workshop comments conveyed the enthusiasm: "This was an eye-opening experience. ... "I will definitely use them [lessons] with my students. ... " ... you taught so much about water that I needed to know. ... "Extremely effective, I've already started conserving water at home and I'm spreading the message!"

Staff from the TPWD, along with partners from Barton Springs Edwards Aquifer Conservation District, Bureau of Economic Geology, City of Austin Water Utility, Parks and Recreation and Watershed Departments, City of Sunset Valley, Colorado River Foundation, Keep Austin Beautiful, Lady Bird Johnson Wildflower Center, LCRA, and the Texas Water Development Board, provided valuable resources, staff and field trip destinations for the institute.

During the institute, teachers climb down into a cave to view groundwater at its source. They get their feet wet in Onion Creek while learning how to survey for macro-invertebrates to test for water quality. River, reservoir and dam systems are examined at LCRA's Redbud Center and ROC (River Operations Centers),

otherwise known as the Dam Control Room.

During their visit to McKinney Falls State Park, they learn about the geology of the area. Using a Project WILD activity entitled Wetland Metaphors, participants learn the importance of wetlands and their vital functions, and how to identify plants indicative of a wetland using a Wetland Plant ID Wheel from WOW!, the Wonder of Wetlands curriculum guide.

If you're looking for resources for your wetland outreach education activities, look no further. Activities like those mentioned above are available in TPWD's education trunks: Wetland Discovery Trunk or Dip Into Texas Waters Trunk. The education trunks are available for loan to formal and informal educators and youth leaders FREE of charge.



The Wetland Discovery trunk includes lesson plans, books, posters, videos, Texas Amphibian Watch materials (including a frog and toad calls CD) and field equipment to guide students in their investigations of wetland habitats.

A variety of fun, hands-on activities, resources (posters, videos and curriculum guides) and field investigation equipment have been collected in The Dip Into Texas Waters trunk. The purpose of this trunk is to help educators (formal or informal) and students of all ages to learn about freshwater in Texas, water basics, aquatic ecosystems, and water stewardship and conservation principles.

Many water education resources and activities have also been consolidated into a Water Education CD produced by TPWD's Outdoor Learning Programs. The recently released "Texas: The State of Water" Educational Resources CD includes presentations on water issues for use in community presentations; posters; a "library" complete with downloadable publications; and reference materials.

You'll also find Web links, a "media room" with podcasts and video transcripts, and an image library on the CD.

Texas Treasures: Wetlands is a colorful and informative 11-page booklet ideal for youth or adults. Contact the Outdoor Learning Programs to order a free set. An electronic version is also available online if you prefer to download a copy at [www.tpwd.state.tx.us/publications/](http://www.tpwd.state.tx.us/publications/)

When World Wetlands Day (February 2) or Earth Day (April 22) rolls around and you're looking for tools to use in a school or community presentation, remember that these wonderful resources are available through the Outdoor Learning Programs at TPWD.



## Next Institute:

**June 22, 23, and 24th 2010**  
*Registration Now Open!*

For more information contact Karen Marks, Outdoor Learning Programs, TPWD, at (512)389-8833 or [Karen.Marks@tpwd.state.tx.us](mailto:Karen.Marks@tpwd.state.tx.us). To find an educational trunk near you, visit our Web site: <http://www.tpwd.state.tx.us/learning/resources/trunks/>

For information on the next Groundwater to the Gulf Summer Institute for Central Texas Educators, visit Keep Austin Beautiful's Web site at <http://www.KeepAustinBeautiful.org/groundwatertogulf>

*Karen Marks is the Outdoor Learning Training Specialist with the Texas Parks and Wildlife Department.*

# How Can Members Get Involved?



UTMSI's new wetland area



Session in Pier Lab, UTMSI 2010



2010 Keynote Cecelia Garibay



Hangin' around the Beach Bonfire, Pt. Aransas

A Seasonal Newsletter

Issue N° 12 — Spring 2010

## Want to Submit an Article to Informally Speaking?

Interested in contributing to our wonderful organization? We are seeking article submissions for the next "Informally Speaking" newsletter.

### General Article Submission Requirements:

- ❖ Please submit and attach your article to:  
[amy\\_moreland@mail.utexas.edu](mailto:amy_moreland@mail.utexas.edu) and [Cappy.Smith@ci.austin.tx.us](mailto:Cappy.Smith@ci.austin.tx.us)
- ❖ Use Word (.doc or .docx) or a Text editor (.txt) to submit text.
- ❖ Word limits: 250 to 400 words; please use a spell checker before submitting.
- ❖ If at all possible, please include a high resolution digital photo (about 1 MB - .tiff or .jpg).
- ❖ Please stay within the context of the current theme (TBA)
- ❖ If we get inundated with articles for a particular issue, we may need to be selective as to which articles we can include. In either case, we will notify you before the publication is finalized.

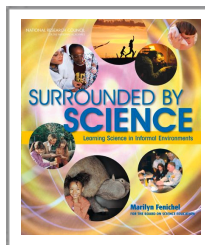
## STAT Affiliate Journal - The Texas Science Teacher (TST)

The TST is the professional peer reviewed journal of the Science Teacher Association of Texas.

If you have conducted research please consider having it published in the TST. Go to <http://www.statweb.org/publications/guidelines.php>

## Surrounded By Science!

Based on the National Academies Press publication, Learning Science in Informal Environments: People, Places, & Pursuits, the practitioner's version, *Surrounded By Science!*, is available to us at a discounted rate! Order personal copies for a discount of 25% using the code **SURSCI**. Order online at [www.nap.edu](http://www.nap.edu) or call 800-624-6242.



ISEA is on

facebook

❖ Friend us at:  
<http://www.facebook.com/group.php?gid=176401233408&ref=ts>

## ISEA Historical Archives

Attention all ISEA members, especially former Board Members and officers, we are currently gathering information to archive for ISEA.

If you have pictures, old newsletters, conference brochures or information, CAST info on ISEA - even old files - from the humble beginnings of ISEA to current, please email Jerrel Geisler, [jerrelgeisler@sbcglobal.net](mailto:jerrelgeisler@sbcglobal.net), for information as to where to take or send the "stuff".

We want to gather the history of ISEA and put it into electronic form. If your items are in digital format, that is great. If not, we'll take care of it. Please e-mail Jerrel today and do your part for ISEA history!

### 2010 - 2011 Executive Officers

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Chip Lindsey - President-Elect  
Linda Kunze - Past President  
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Tara Schultz - Treasurer

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### Informally Speaking Newsletter

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