

# Informally Speaking



A Seasonal Newsletter

Issue N° 11 — Winter 2009

## 2010 ISEA Conference

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## CAST 2009

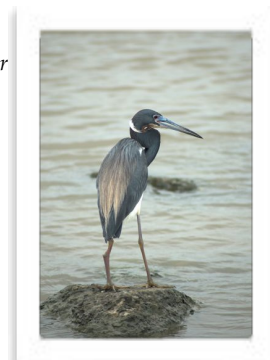
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[www.texasinformalscience.org](http://www.texasinformalscience.org)

## ISEA 13<sup>th</sup> Annual Conference March 3 - 5, 2010

**Where:** [UT Marine Science Institute](#) Port Aransas, TX

**Theme:** "Science for All: Engaging Diverse Populations"

**Keynote:** Cecilia Garibay of the Garibay Group, Chicago IL:

Ms. Garibay's lecture is titled: "Examining leisure values in Latino families and implications for informal learning organizations." The decision to participate in specific leisure pastimes, including informal learning activities, involves a number of factors that go beyond simply creating awareness about available leisure options. Recent research suggests that an individual's or group's values play a significant role in the leisure choices they make.

Mr. Bob Russell will present our pre-conference session. Bob works with Acceso Hispano/Self-Reliance Foundation, developing and directing projects designed to engage the Latino general public—adults and kids—in science and health. Bob's session will be on evaluation. He will focus on evaluating exhibit design, interpretation that accompanies exhibits with hands on evaluation and emphasis on how you can plan to be as inclusive of under-served and under-represented populations as possible.

### Call For Proposals

The theme of our 2010 Informal Science Education Association of Texas conference is "Science for All: Engaging Diverse Populations." Our group is concerned about reaching the under served and under represented populations in our communities with science education.

Please consider presenting a session at our conference in March at the UT Marine Science Institute in Port Aransas.

Informal Science Educators from Zoos, Aquariums, Nature Centers and Museums from across the state of Texas, and each institution they represent have struggled with reaching under-served and under-represented populations in one way or another. Please consider presenting or recommending other individuals who may!



The deadline for submitting a presentation proposal is **January 1, 2010**. To submit a proposal, download the form at the [ISEA website](#).



## A WORD FROM OUR PRESIDENT

*Hello, ISEA Members:*

*I feel so very privileged to be able to greet you through our newly re-created ISEA newsletter, "Informally Speaking." Isn't this a beautiful publication? Thank you, Amy Moreland, for getting our newsletter going again! We certainly do hope that you find it newsworthy as well.*

*It is almost the end of my year as your ISEA president and I feel so fortunate to have been able to be a part of this organization for a number of years. I know the organization has certainly given me more than I could ever hope to give in return. I remember when I had just moved to Texas and the Caldwell Zoo ten years ago—never been a Texan before. One of the very first state conferences I went to was ISEA. Here I found a group of people who were dedicated to informal science education—my folks!! Being a brand new Texan, I learned so much about what was going on in the state, about the organizations providing informal science education and the possibilities of networking and collaborating with others in my area or around the state.*

*And so, the big question—what can ISEA do for YOU? We certainly do welcome any comments and/or suggestions concerning your informal science organization. Please feel free to contact me at [kunze@caldwellzoo.org](mailto:kunze@caldwellzoo.org) or call: 903-593-0121 X260. Also, please take our latest Member Survey, coming soon! We would truly appreciate your opinions.*

*And please—join us at our annual conference March 3-5, 2010, at the University of Texas Marine Science Institute in Port Aransas.*



*Not only is this near the beach (always a good thing!) but the conference will be jam packed with useful information you can take back to wherever you might provide science education. See you in Port A!*

Linda Kunze  
Education Curator  
Caldwell Zoo, Tyler, TX

## 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.



## Join us at CAST

Join us Nov. 5-7, 2009 in Galveston, TX at the Science Teachers Association of Texas' Conference for the Advancement of Science Teaching.

### "Cruising the Currents of Science"

This year, ISEA is offering an exciting strand to science teachers across the state. Sessions include:

- *Project E<sup>3</sup> Expanding Energy Education* (Offshore Energy Center)
- *Exploring the Native Plant World* (Lady Bird Johnson Wildflower Center)
- *Changing the Conversation - Best Practices Promoting STEM in K-12* (Tricia Berry - UT-Austin)
- *Beyond Field Trips - What Informal Science Organizations Can Do for You* (ISEA)
- *Roaches in Your Room!* (Caldwell Zoo)
- *Modeling the Night Sky* (McDonald Observatory)
- *No Teacher Left Inside* (Texas Parks and Wildlife)
- *Linking Formal Education to a Dinosaur Garden Exhibit* (Austin Nature & Science Center)
- *Wild About Life Science* Caldwell Zoo
- *Think Inside the Bubble* (Alan Sowards, Stephen F. Austin State University)
- *After-school Science Projects with Dragonfly TV Bilingual Program Materials* (The Imaginarium of South Texas)





## Celebrating 50 Years of Children & Families in Nature

by: *Janice Sturrock*

*Where can I go to see over 50 live animals representative of Central Texas, a Dino Pit exhibit, several ponds, the Naturalist Workshop and beautiful gardens of native Texas plants?*

The Austin Nature and Science Center!

Established in 1960 by a group of citizens who wanted to offer astronomy programs for children, the "Natural Science Center" has had several names and changed sites from north of the river to south.

Fifty years later, the mission of the center remains the same and the site still offers programming and exhibits to encourage hands on exploration of the outdoors. The purpose of the Austin Nature and Science Center is to increase awareness of and appreciation for the natural world of Central Texas and how it relates to the rest of the earth. School children from across Central Texas visit the Nature and Science Center while on field trips from their schools. They may read about mammals in books at school, but at the nature center they can meet a mouse and her babies up close. They can smell a ferret and touch a rabbit. They can feel differentiated teeth on a javalina skull. Outside in the animal enclosures, they can observe gray foxes and listen to a coyote howl.



*Touch table in the Naturalist Workshop*



*Austin Nature and Science Center's Dino Pit exhibit*

Nature's Way Preschool is one of about 20 preschools in the country that boasts a curriculum of nature immersion. Weekly themes include *Birds of a Feather*, *Incredible Insects*, *Urban Naturalists*, *How Does Your Garden Grow?*, and *Endangered Species*.

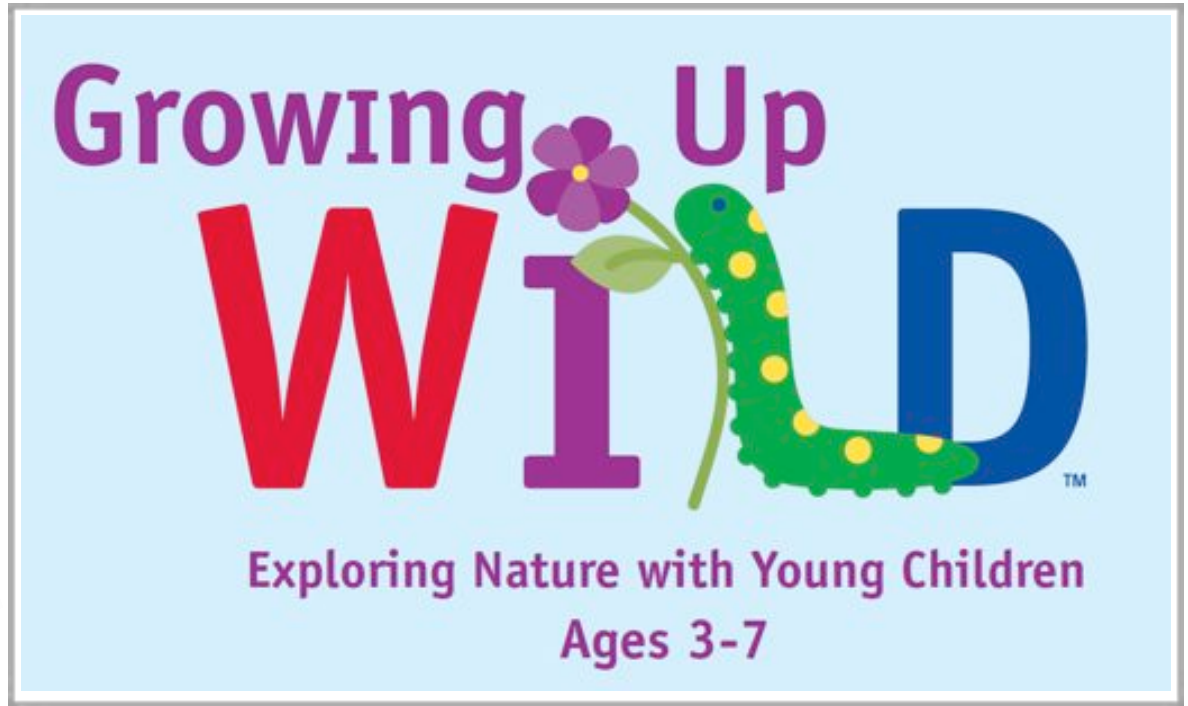
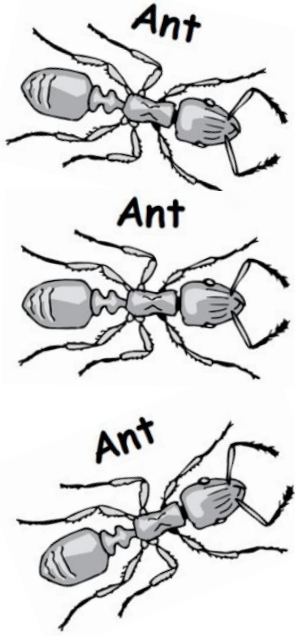
Children ages 3-5 attend from one to four mornings a week and explore the outdoors while hiking, making art, observing, predicting, gathering data and going on field trips to nearby parks.

Public programs include a wonderfully rich and diverse summer day camp for ages 3-16 year olds. Younger children explore the nature center site and preserve and older children engage in adventure activities like caving, kayaking, climbing and camping.

In addition to programming, the center offers fun family events like Halloween Howl and Austin Nature Day.

So, next time you are in Austin, visit Conan the Bobcat in west Zilker Park! For hours and directions call 512-327-8181 or go online at [www.ci.austin.tx.us/ansc](http://www.ci.austin.tx.us/ansc)

*Janice Sturrock is the Supervisor of Education and Programs at the Austin Nature and Science Center in Austin, TX.*



## Welcome the Newest Member of the Project WILD Family: *Growing Up WILD*

Information and Photos from:

<http://projectwild.org/GrowingUpWILD.htm>

Growing Up WILD is an early childhood education program that builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them.

Through a wide range of activities and experiences, Growing Up WILD provides an early foundation for developing positive impressions about the natural world and lifelong social and academic skills.

Growing Up WILD guides are distributed to participants at professional development workshops and offered by certified Growing Up WILD facilitators. Workshops are free or have a minimal workshop fee.

Growing Up WILD's facilitators can tailor a workshop especially for you - whether you work at a public or private school, day care center or Head Start center, museum or zoo - in a large urban setting or small, rural town.

The activity guide, Growing Up WILD - *Exploring Nature with Young Children*:

- ☀ Is written especially for early childhood educators of children ages 3-7.
- ☀ Features 27 field-tested, hands-on, nature based activities in a full-color 11"x17" activity guide.
- ☀ Includes crafts, art projects, music, conservation activities, reading and math connections and much more.
- ☀ Involves social, emotional, physical, language, and cognitive domains to help foster learning and development in all areas.
- ☀ Supports developmentally appropriate practice allowing children to learn at levels that are individually, socially, and culturally appropriate.
- ☀ Is correlated to the National Association for the Education of Young Children (NAEYC) Standards and the Head Start Domains.

For more information, contact the Texas Project WILD state coordinator and ISEA Board member:

**Kiki Corry**

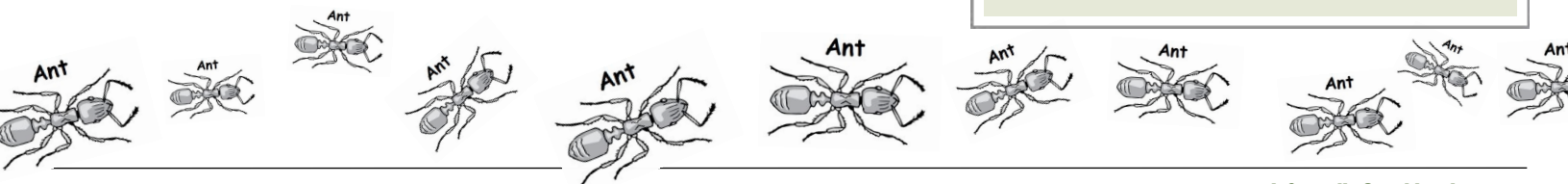
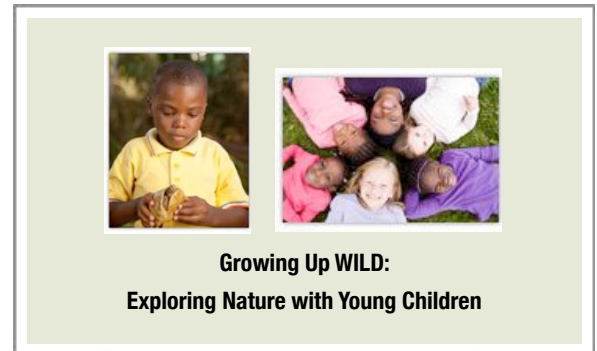
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## Bien Venidos to Community Science Nights!

*Amarillo's Family Science Night*  
by: **Chip Lindsey**

Bien Venidos to Informal Science

It felt great to be out on a warm fall evening. The yellow school bus roared and bounced down Amarillo Boulevard, slowly grinding its way around the park to the Discovery Center. On the bus, mothers, fathers, children and a scattering of grandparents, cousins and aunts from Sanborn Elementary School paused their conversations as they lurched and hissed to a stop.

"I haven't been here since I was in elementary school" one dad quietly confided to his wife. Many other adults were thinking, "I've never been here before. What is this place?" The children eagerly grabbed their adults' hands, recognizing the Center from their last school visit. A broken stream of adults towing, and towed by excited children streamed into the front entrance.

"Welcome to Family Science Night!"

"Bien venidos!"

"It's so good to see you!"

Principal Margaret Mehringer and her teachers greeted each family, as they blinked their way in the brightly lit foyer. Some avoided the initial eye contact with convenient cell phone distractions. Concerns quickly melted away with the warm welcome and familiar faces of their

school's faculty. The parents relaxed despite the science museum's strange and wonderful halls.

Family Science Nights are hardly a new notion. Often schools create science evenings at their campus, recruiting local volunteers to lead science demonstrations and build makeshift exhibits. Linking after-school, family time with school science events deepens children's understanding of, and attitudes about science.

The Fort Worth Museum of Science and History began offering a new variation of the concept by creating a "sweet spot" between schools, students' families and the informal science exhibits and programs of the Museum. For over a decade, The Fort Worth Museum teams with individual campuses for a specific night to celebrate science learning at the Museum. The schools communicate with the students to bring their families to the after-hours event and arrange for transportation to the museum.

Everyone benefits. Teachers enjoy the evening. It is an opportunity to see their students and families in a neutral, relaxed location. Students love guiding their inexperienced parents through the Museum and seeing their favorite teachers. Apprehensive parents who typically shy away from school functions are

more inclined to come to a free off-site event.

Science museums, zoos, nature centers, aquaria and science centers inspire families to discover science, technology and mathematics. These institutions' survival depends on engaging learners who literally vote with their feet and their dollars. However, informal science providers typically attract affluent Anglo families with advanced degrees. Typically these families have traditions of being "museum-goers." The avenues to attract the burgeoning non-white, less affluent populations to informal science providers are obscure or yield limited results.

The non-traditional families in our communities typically spend leisure time and money at sporting events, movies, amusement parks, sport tournaments and church functions. Although money and access certainly influence decisions to avoid informal science providers, perceived barriers are often the primary reason that families stay away. Uncertainty about location, cost, and ease of access, keeps family decision-makers away from a science provider in favor of the routine - malls, theaters, and local markets.

Public schools have unfettered access to the majority of our community's children and strive to enrich their family learning habits after school as well. Schools and

school districts invest in making these connections each year to encourage new family traditions of academic learning. Unfortunately, many families who might benefit most find it unattractive to return to school for an evening event. Family Science Night fills a niche by providing opportunities for schools to connect with their families, science providers to find new audiences, and families to learn together in a new way.

The Fort Worth Family Science Night program has taken root in Amarillo. This year, forty-five Family Science Nights at the DHDC will serve every campus in the Amarillo ISD and see over 14,000 students, family members and faculty. This strategic alignment of school and informal science provider promises to shift visitation patterns for the Center for this year, perhaps for years in the future.

For the schools, family learning may be difficult to measure. Or it could be as simple as the words drifting back at the end of the Sanborn Elementary Family Science Night.

"Thanks for letting us come! We are coming back!"

"Buenas Noches!"

*R.L. "Chip" Lindsey is the Associate Director of the Don Harrington Discovery Center in Amarillo, TX.*



## Whitewater Kayaking, Downhill Skiing, and Learning

by: *Charlie Walter*

I learned how to kayak in college. A small group of friends and I would sit around in the student center talking about equipment, rivers, and the courage we would need to become accomplished kayakers. We learned together how to paddle straight, how to read rivers, and how to do the Eskimo roll. We started out paddling on relatively easy rivers, but our eyes were always on the big water runs of the West. We would sit in the outdoor program cubical at Texas A&M and read excerpts from guide books describing monster rapids and remote sections of river designated "expert only." And we would think, "One day..."

Over four years of college my friends and I grew in confidence and experience. We learned different skills at different times and shared what we knew with each other. We helped each other make it through increasingly difficult rapids. We helped each other repair our kayaks when we failed. We learned about new boat designs that would help us make it through even more difficult rapids. Our knowledge, skill and experience improved with each season.

One day I was scouting a section of the Rio Grande in New Mexico. It was Spring, which meant that the water was high. I pulled off the road to scout a rapid and was excited to see the fast water drop over a rock ledge and into a garden of boulders. The fast water pushing past and over the boulders created many eddies and shoots and a few holes through a hundred yard section of river. All that I could think of was, "What fun!"

Then another car pulled over at the same rapid. Two boaters walked up to the over-look and gasped. "My god, we'll get killed," said one. "Look at all those boulders. The water slams right into them. There's no way through..." Their comments struck

me. Where I saw an incredibly fun section of river, they saw boulders and holes: danger. It was right then that I realized that I had achieved some degree of mastery.

Ten years later I was riding up a ski lift with an instructor. It was my first time on the mountain. The day before I had stayed on the beginner hill trying to learn the basics of downhill skiing. According to my instructor I was ready for the mountain. I wasn't so sure. On our long ride up, I noticed a black flag marking the start of an "experts only" run. I could see that the trail dropped steeply beyond the flag and then raced through a section of trees at an impossibly angle. "I can't believe people actually do that," I muttered nervously to my instructor. He looked at the run and said, "Are you kidding, that's a great run." "But what about all those trees," I stated. The instructor turned to me and said, "I really don't even see them any more."

My mind immediately connected back to that day in New Mexico, standing on the banks of the Rio Grande. On that particular day years earlier, I was the master. Riding on the ski lift ten years later I was the novice, and I saw trees and danger where the master that day saw only an incredibly fun run. This role reversal not only taught me, once again, the fundamentals of being humble, it taught me an important lesson about learning.

Now I work in the museum business. I develop programs and exhibitions designed to be powerful, first-hand learning opportunities (just like whitewater kayaking and downhill skiing). It is my job to introduce visitors to the worlds of science, art, and history. I work with scientists, artists, and historians. I also have my personal relationship with the disciplines I work with, and over time I have become better acquainted with them. But I have begun to wonder about the relationship of the visitor with the exhibitions and programs I develop. I wonder if I have lost the ability to see the boulders and rocks and trees that lie along the path of learning for the visitors to my institution.

When visitors are standing at an interactive exhibit at my museum, are they truly relating to the experience I have crafted, or is there a "rock" in the way that keeps them from even trying the experience? The "rock" could be a jargony label, plain bad directions, or an experience that assumes a base of understanding that just isn't there. Does an exhibition come across like a monster rapid, a huge cataract of information too complex to contemplate or even attempt? Are there "black flags" in my museum which keep a visitor from even walking up to a gallery because it is obviously an "experts only" run?

I have begun to take a serious look at how I can do a better job helping my visitors learn. Sure, that has always been my job at the museum, but in the past it was enough to have an attractive design along with accurate information. There was little attention given to the level of information presented in relationship to what the visitors were bringing along with them. And as far as design is concerned, I have seen many a great looking river lure a kayaker into a run that they later regretted.

Now I think of visitors to my museum in terms of what I have learned about whitewater kayaking. It is a skill best developed over time. It is better to start in slow moving water before taking on the big water of the American West. It is better learned with friends - sharing insights, learning from each other, and knowing that we each have a different base level of knowledge and experience that will effect what we learn. So how can I design an exhibit that encourages similar learning in my museum? Front-end and formative evaluation are good places to start: I need to talk with my visitors, and have them point out the rocks and the holes and the trees that I no longer see.

*Charlie Walter is the Vice President of Programs at the Fort Worth Museum of Science and History in Ft. Worth, TX.*

# Family Science Festivals

*A way to connect to schools, parents and kids through the expertise of the Informal Science Center.*

*by: Melissa Cigarroa*

One of the ways our informal science center looks to extend its reach in our community is to offer a fairly new outreach program (for us): the Family Science Festival. This program is hosted at a school after hours, in their gym and/or cafeteria, and involves the science center setting up 8-10 hands-on activities and demonstrations for the invited parents and children of the school.

We have seen an increased interest this year in this program, due to the poor performance of the schools in Texas Assessment of Knowledge and Skills (TAKS) science scores. As a partner in the local chapter of the Texas Regional Collaborative (at TAMU), we have earned a reputation for programs that increase motivation and interest in science. Like it or not, formal educators are bound by federal legislation to a performance standard measured by the TAKS. This is tied to campus performance and individual student success. If we, as informal educators, are to provide quality science programming for the formal education sector, we must show them how our programs are connected to potential increased success on the TAKS, even if we only succeed in creating renewed interest or engagement in science learning.

These Festivals are a great environment to engage parents with their children in hands-on projects and demonstrations, presented by staff and by school volunteers. Activities represent the everyday and the sublime – marble runs with air conditioning duct wraps, good ol' slime making, building with different kinds of blocks, circuit building, static electricity demonstrations, and painting with light. I am amazed at the interest both parents and children have in the simplest of exercises, things that use the most common of household products but are designed in a way that most parents and teachers have never considered.

The challenges we face are not new: how to support overwhelmed staff as large groups of visitors are attracted to the same activity, how to encourage the volunteers from the host site to present the activities in a manner consistent with inquiry-based learning, how to cart the supplies necessary for 8-10 activities without losing your mind, how to get a decent diet-soda-Mentos demo going, and how to console children unwilling to leave behind materials that are not "take-home" items.

While these Festivals are not designed to provide the content to increase a test score directly, our activities give the children experiences in the very content they are learning in the classroom to enhance the retention of instruction. In addition, we share science-based activities that promote higher-order thinking skills. Research shows this is a concrete way to improve test preparation. We feel our biggest impacts are the engagement of parents with their children, the interest in the simple pleasure of finding out about things, and the ability to be creative with both unfamiliar and familiar materials in new and interesting ways. We also provide passes to every child to visit the museum to encourage parents to continue this unique experience with their children at our facility.

The best part from the presenters' perspective is simply having an excuse to share our enthusiasm about a cool investigation that is fun and engaging. As presenters, we don't have to worry about test scores; we focus on getting kids and parents to spend quality time doing something together. We need to make sure we present worthwhile activities that promote the inquiry that inspires the curiosity of the learner to remain true to our mission as an informal science center.

When you think about children's natural curiosity, this isn't really such a high standard to reach. And I want to thank the Fort Worth Museum of Science and History for sharing the particulars of this



*How high can kids' creations fly from a Wind Tunnel?*

program. Outreach programming has been a part of our mission since our inception in 1991.

This program has broadened our appeal and increased our professionalism in a substantial way, and for that we are grateful.

Through TexNET, the Texas Network of Exhibit-based learning and Teaching, we have developed the programs that we offer and have raised the bar on quality through support, training and through the mantra of most small centers – jump right in and get started!

*Melissa Cigarroa is the Executive Director of the Imaginarium of South Texas in Laredo, TX.*



*Making Doodle-Bots with circuits and small motors.*

# How Can Members Get Involved?

*Join a dedicated group of individuals and contribute your talents to the ISEA leadership! The ISEA Board of Directors consists of At-large Members and the Executive Committee (President, Past President, President-elect, Secretary, and Treasurer).*



Ropes Course, Sky Ranch



Sky Ranch Conference Attendees, Van, TX



2009 Keynote Dr. John Falk



Sky Ranch Wagon Tour

A Seasonal Newsletter

Issue N° 11 — Winter 2009

## Call for ISEA Board Nominations

The Nominating Committee is now accepting nominations for At-large seats. At-large Members will serve a three-year term starting on January 1, 2010 through 2013. Only At-Large Members are eligible to be nominated for Executive Committee positions. All nominees will be asked to commit to the following to the best of their ability if elected:

- Attend at least two of three regular Board meetings in a calendar year. Meetings are generally held in January, May, and September. Board meetings for 2010 will be January 9, 2010; May 22, 2010 and September 17-18, 2010 (Board Retreat). Board meetings are usually held in Austin.
- Fully attend the annual conference. The 2010 conference is March 3-5, 2010 at the UT Marine Science Institute in Port Aransas.
- Actively participate in committees or volunteer for specific tasks. Currently we are seeking individuals who have an interest in securing sponsorships and/or writing small grants.

- Actively participate in CAST (Conference for the Advancement of Science Teaching) via one or more of the following: assisting the CAST chair with preparations, assisting with the ISEA/TSELA reception, presenting an ISEA strand workshop or short course, and/or helping in the ISEA exhibit booth.

If you are interested in serving on the Board, please submit the nomination form (you should have recently received this via email) by mail, email, or fax to:

Janice Sturrock  
Nominating Committee Chair  
Austin Nature and Science Center, 301  
Nature Center Drive  
Austin, Texas 78746  
[janice.sturrock@ci.austin.tx.us](mailto:janice.sturrock@ci.austin.tx.us)  
Fax 512-327-8745  
Phone 512-327-8181

**Deadline for nominations is November 15, 2009.** You may also nominate fellow colleagues — please be certain the nominee is interested in serving. ISEA rotates members

off each year and is committed to maintaining diversity in site representation and geographic location.

## Want to Submit an Article to *Informally Speaking*?

Easy! Simply submit a relevant-to-informal-science idea to Amy Moreland at [amy\\_moreland@mail.utexas.edu](mailto:amy_moreland@mail.utexas.edu) and she'll work with you to publish an interesting piece in our seasonal newsletter. Features submissions can include anything from news about your informal institution, recent research in the field, formal education connections, hands-on science curricula,...you name it! Please also attach high resolution photos with your submission.

## ISEA is on Facebook!

- Find us there and join the group!

## Coming Soon:

- Online Member Survey - How are we doing?

### 2009 - 2010 Executive Officers

Linda Kunze - President  
Johnnie Smith - President-Elect  
Charlie Walter - Past President  
Melissa Cigarroa - Secretary  
Tara Schultz - Treasurer

### Board of Directors

Sigrid Clift  
Kiki Corry  
Jerrold Geisler  
Eunice Hefty  
Chip Lindsey

Amy Moreland  
Cappy Smith  
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Julie Tuason  
Christy Youker

### Newsletter

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