

Engaging Bilingual Audiences



Agenda—Morning Day 1

- 9:00 Welcome
- 9:15 GROUP ACTIVITY— Zip, Zap, Zop
- 9:45 Equity of Effort
- 10:15 Social Break
- 10:30 Audience Engagement & Inclusion Strategies
- 12:00 Lunch

Year 8 NISE Network Teams

Network Community

Community

RISE

Website

Public Engagement

NanoDays

Programs

Exhibits

Building Capacity

Online Brown-Bags

Team-Based Inquiry
Professional
Development

Inclusive Audiences

Universal Design
Workshop

Bilingual Workshop

Knowledge for the Field

Evaluation

Research

Network Leadership

NEG NOG

Administration

Project Coordination

Inclusive Audience Goals



To increase professional and institutional capacity to effectively engage underserved and underrepresented audiences in nano topics

Strategies

- Help define target public audiences
- Serve as a resource and audience advocate
- Identify, create, and share resources, tools, and guides
- Provide diversity and audience engagement PD opportunities
- Share successful efforts to reach underserved audiences
- Foster partnerships with other ISE's & CBO's

Workshop Goals

Overarching Goal:

To inspire confidence and build capacity for partners to engage bilingual audiences in nanoscale science, engineering, and technology (nano).

As a result of participating in the workshop, professionals will:

1. Develop a rationale for engaging bilingual audiences in nano, and see bilingual work as an emerging practice.
2. Build awareness of and facility with educational and professional tools and strategies (both NISE Net and outside resources), to better engage bilingual audiences.
3. Connect with other professionals engaged in bilingual work by sharing personal experiences and learning together.
4. Identify opportunities for action by problem solving challenges and articulating next steps.

Our work is a journey...



Group Activity: Zip, Zap, Zop





Equity of Effort: Serving Underserved Audiences

Exploring Terms

Pair Share Activity:

Turn to the person on your right/
left and take some time to define
the following terms.

Equality/Equity



A Question of Equity

- Acting Equitably implies taking actions
 - that differentiate needs and
 - that apply policies and practices according to the different needs of groups
- Equity of Effort to reach underserved audiences

Equality



Equity



Social Break



Audience Engagement & Inclusion



Overview

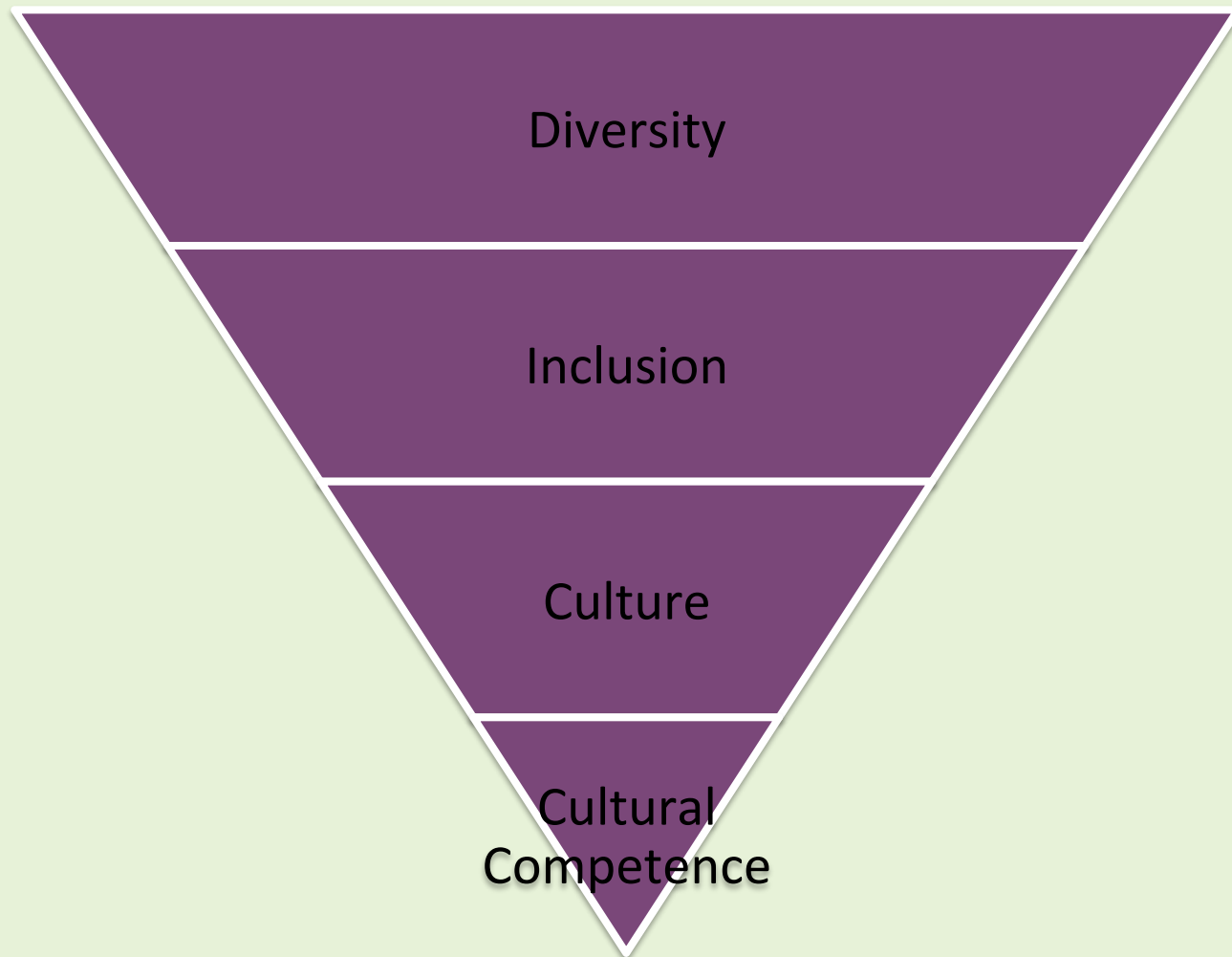
- What is audience engagement/inclusion?
- Building an Audience Rationale
- Focus on Audience & Demographics
- Using Research to Engage Diverse Audiences
- Exploratorium Case Study
- Resources
- Case Study Activity

Audience Engagement/Inclusion: What does it mean to you?

- What?
- Why?
- How?
- Motivations?



Inclusion to Cultural Competence – Working Definitions



Opportunity for Reaching Diverse Audiences



Why use an Inclusive Audiences approach?

- ISE's are uniquely situated to educate the public, inspire youth, and provide access to learning experiences.
- Inclusive approaches help reach all audiences more effectively.
- NISE Net seeks to address the information gap and inspire future STEM leaders.
- It allows us to go beyond education and inspiration to **equity**, empowerment and social justice.

NISE Network Audiences



Network Audiences

- Family groups
- Adult-only groups
- Younger children (8 and younger)
- Out-of-school time program participants
- School groups

NISE Network Audiences



Priority Underrepresented Audiences

- Spanish language preferred
- People with disabilities
- Girls
- Ethnic minorities underrepresented in STEM (African Americans, Latinos, Native Americans)

Rationale



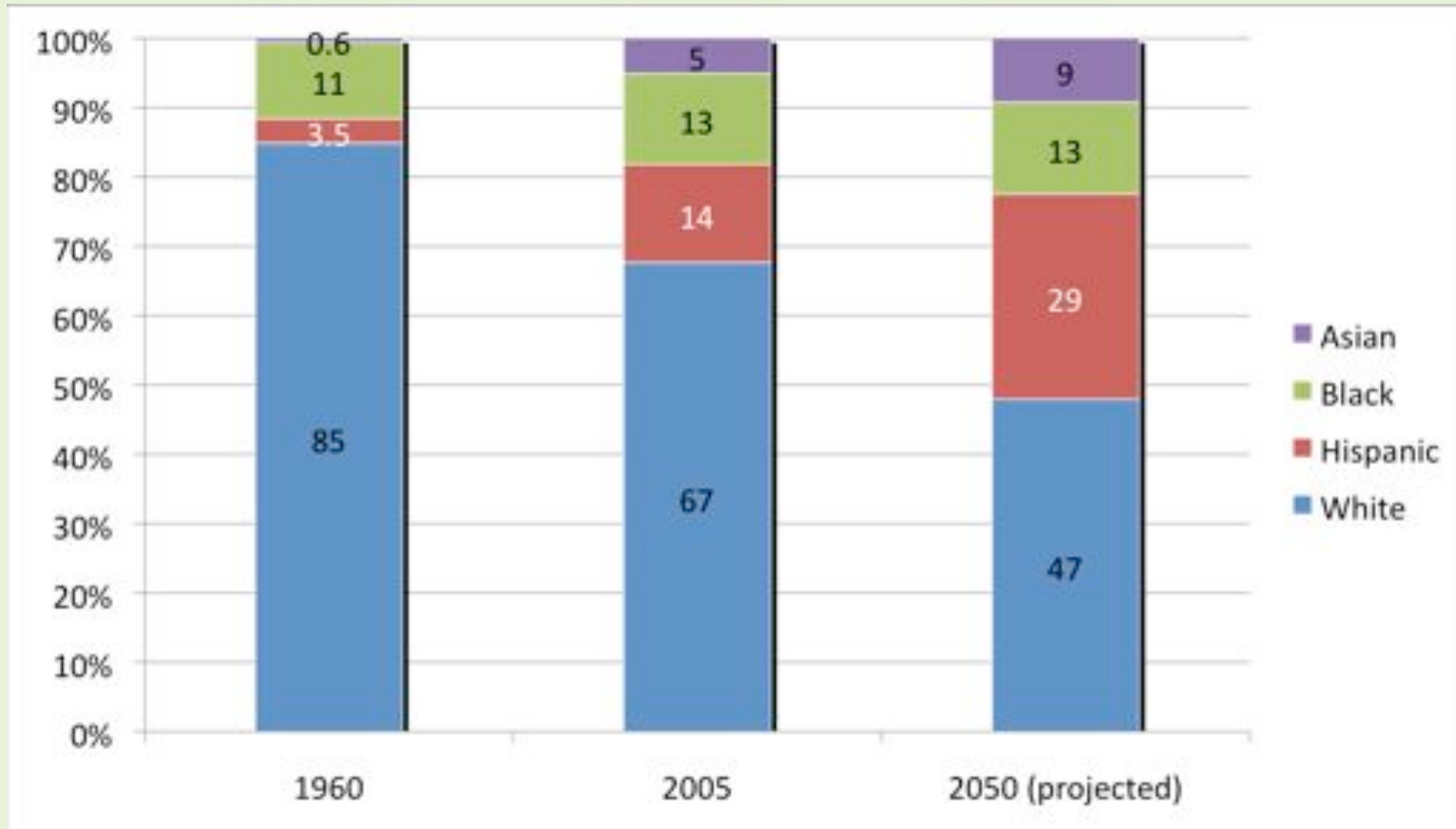
Nanotechnologies are likely to open gaps by gender, ethnicity, race, and ability status, as well as between developed and developing countries, unless steps are taken now to create a different outcome.

Some groups in our society have been systematically relegated to the margins of society and therefore have limited opportunities to make informed choices about new technologies.

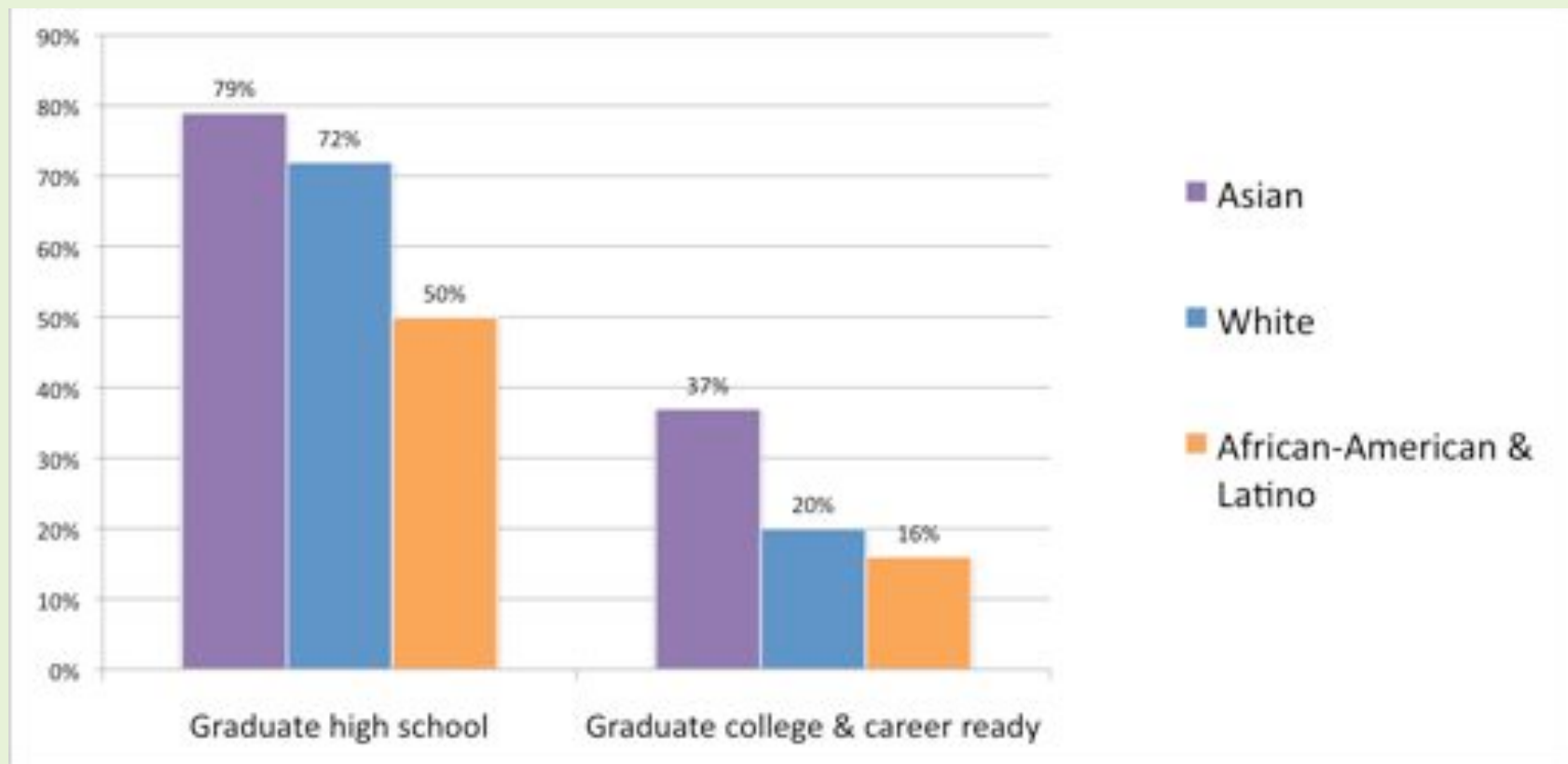
These groups often bear the brunt of unintended negative consequences occasioned by the development and application of new technologies.

Changing Demographics in U.S.

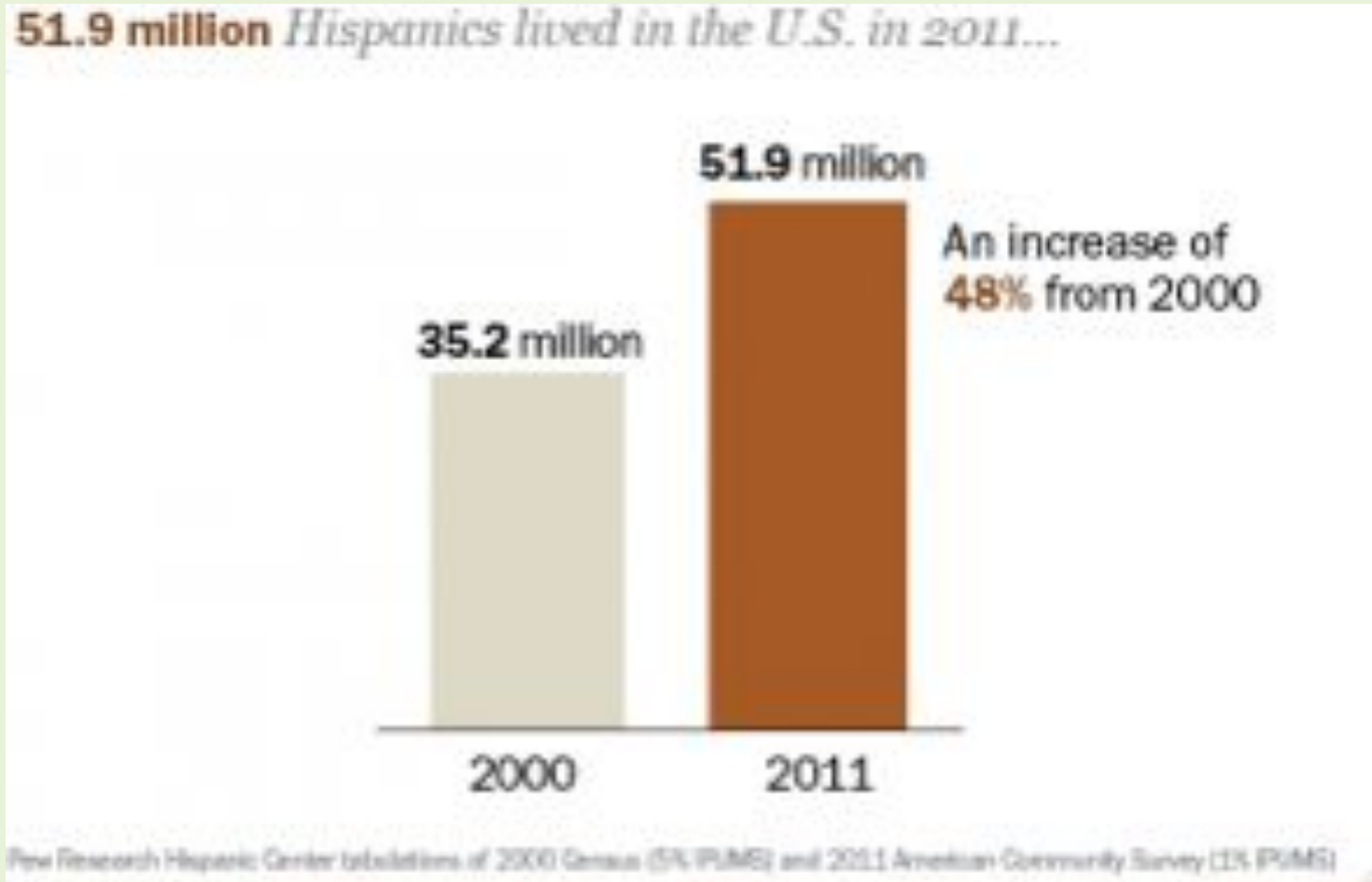
U.S. Population 1960-2050
% of total



Workforce Readiness



Growing Hispanic Population in U.S



Changing Demographics in Museums



Source: Museums and Society 2034, Center for the Future of Museums, AAM

What's Your Audience Engagement Elevator Pitch?



Break



NISENet

HOUSTON • June 6, 2013

garibaygroup



Using Visitors Research to Better Engage Diverse Cultural Communities

Cecilia Garibay, PhD

Culture

- **Complex**
- **Socially constructed**
- **Dynamic**



General Research Focus

Leisure values & decisions

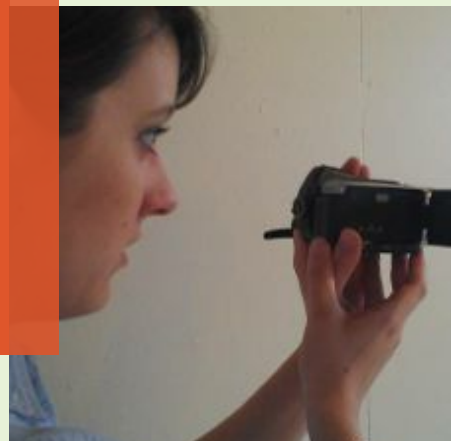
Perceptions of museums

**Barriers to museum
visitation**

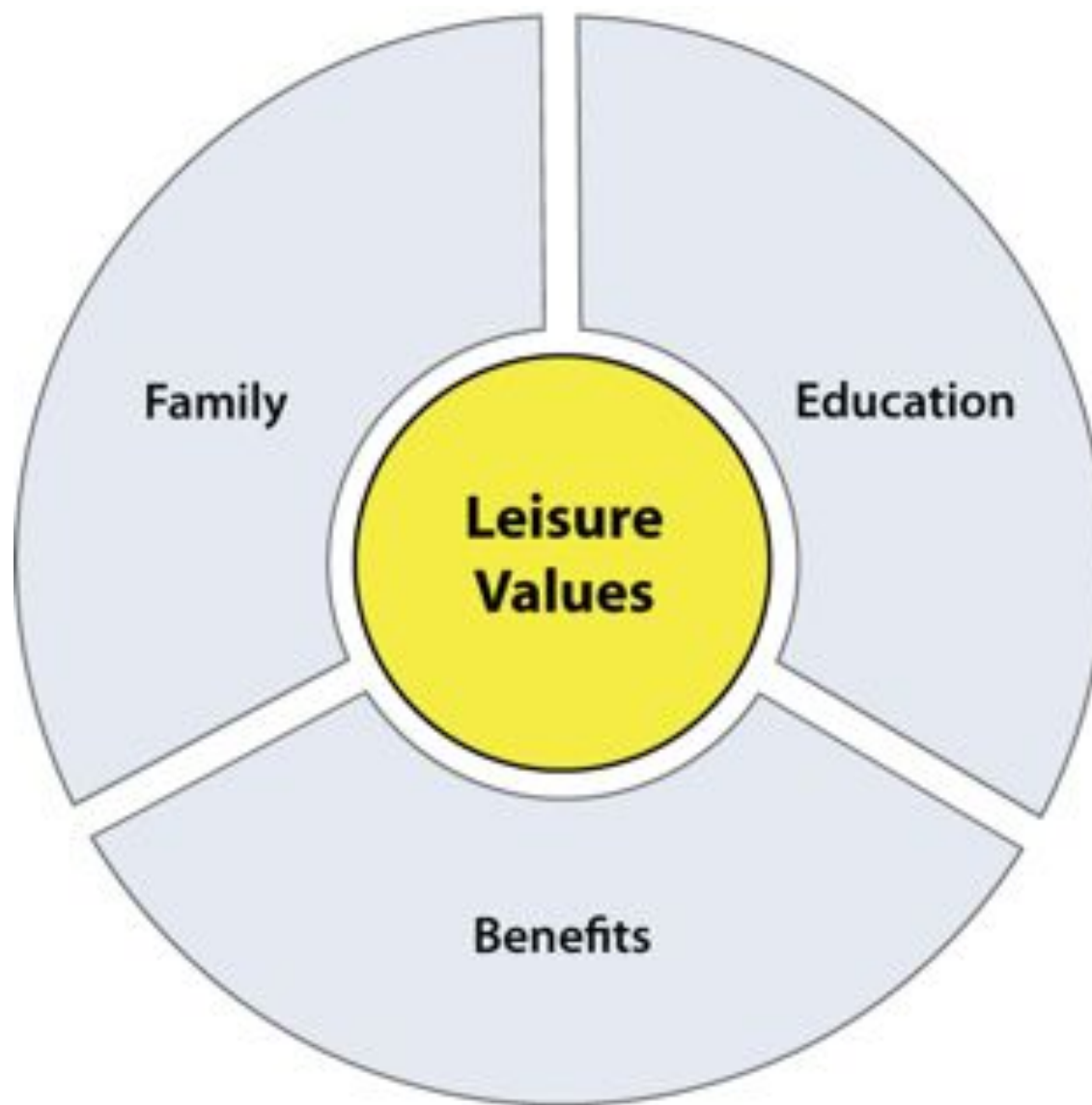
**Potential opportunities
for engagement**



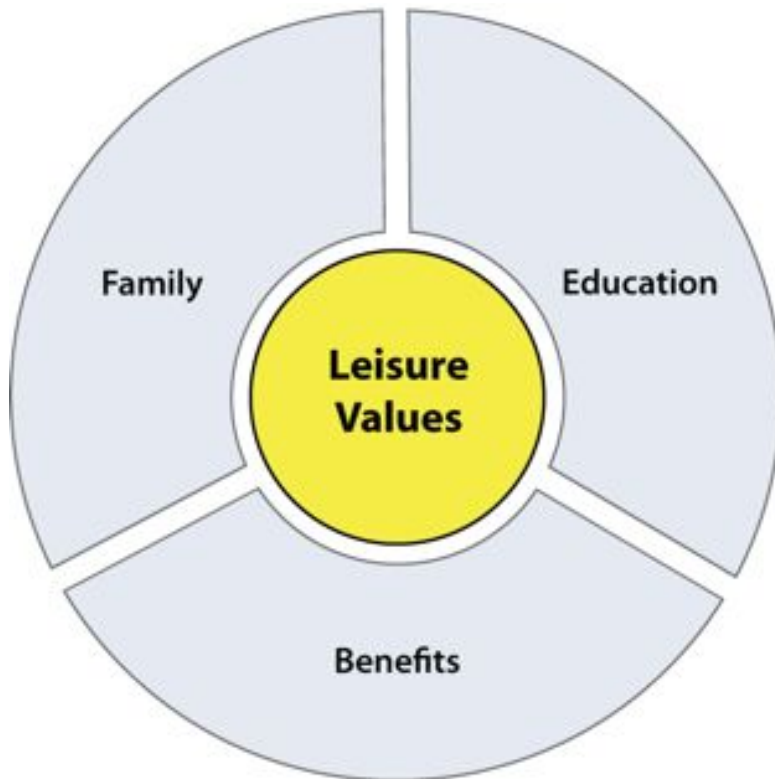
Methods



Leisure Values

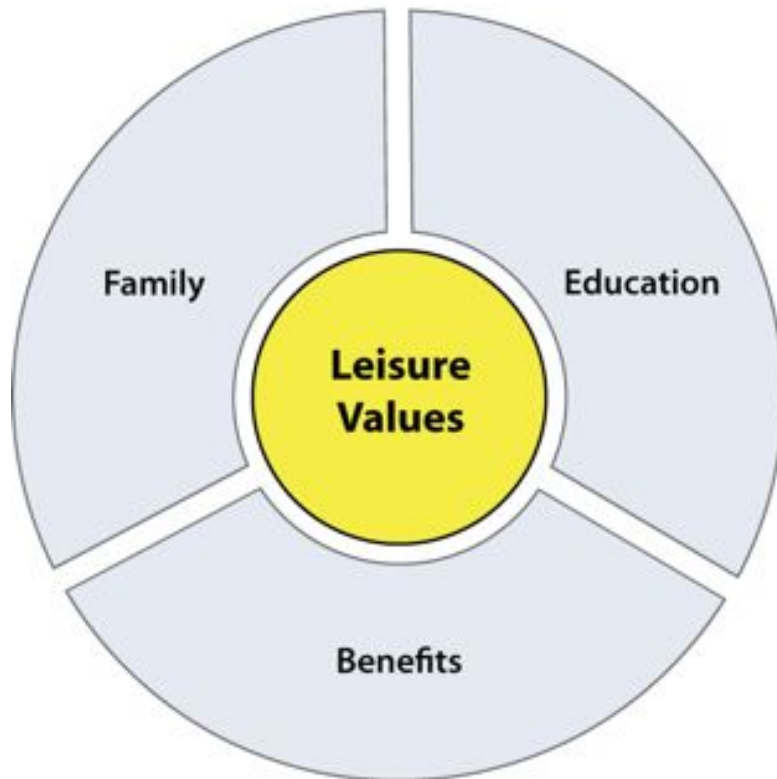


Leisure Values: Family



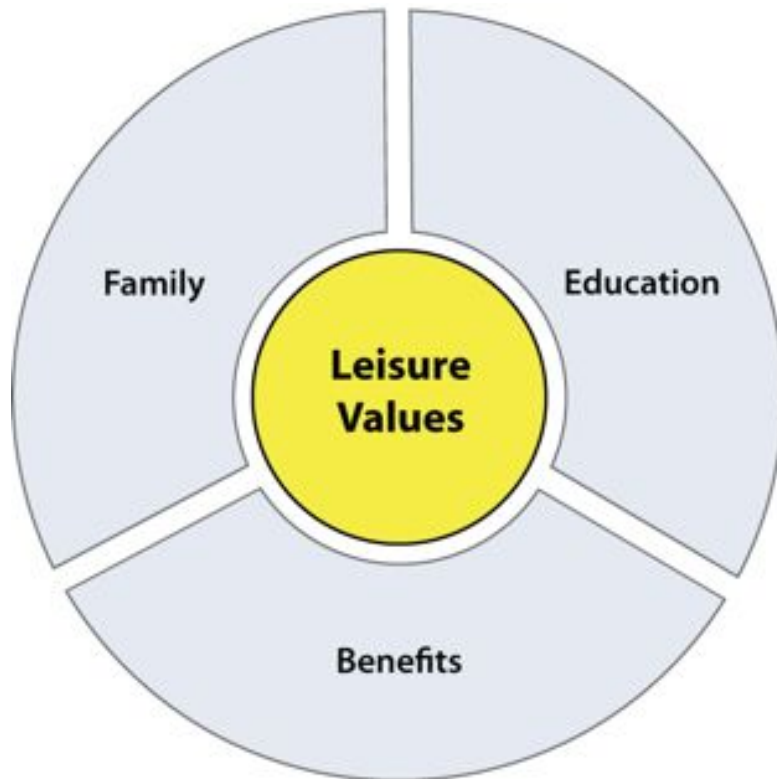
- Participate as a family unit
- Entire group can engage
- Particularly prevalent among participants in lower socio-economic situations

Leisure Values: Benefits



- Relaxation and enjoyment
 - To some use/benefit
- “Aprovechar”***
- Physical
 - Mental
 - Emotional
 - Spiritual

Leisure Values: Education



- Education is highly valued
Reese et al., 1995
- Conceptions of education may differ

Educación

- Conceptions of parental involvement may differ
Zarate, 2007

Museums Perceptions: Positive

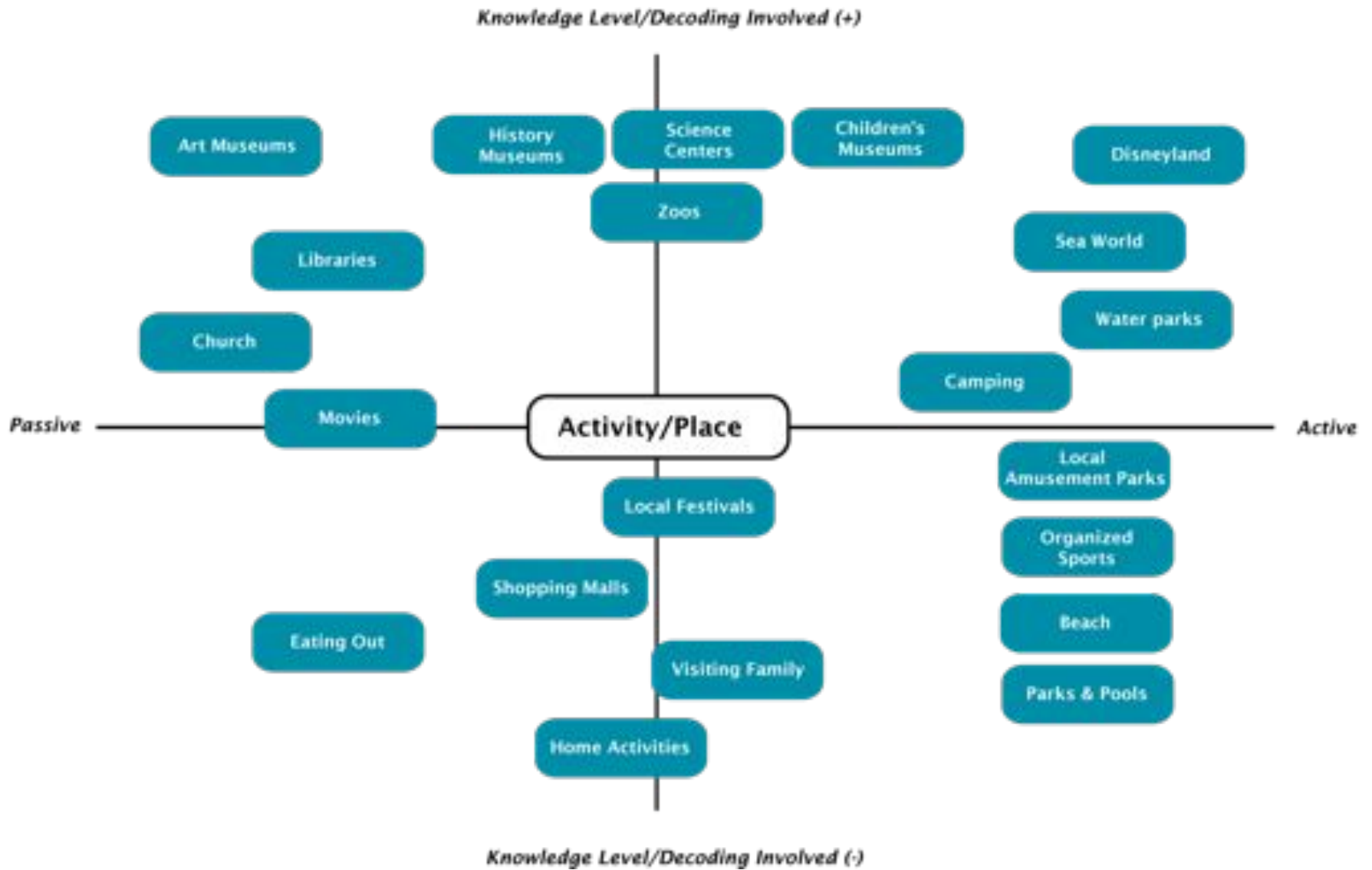
- Preserves the past
- Cares for important objects
- Educational
- Can be inspirational



Museums: Barriers

- Lack of awareness
- Not feeling welcome and represented
- Lack of cultural relevance
- Language





garibaygroup

culturally responsive / contextually relevant /

research + evaluation /

Contact:

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Demographic Resources

- US Census Bureau
<http://www.census.gov/main/www/access.html>
- Pew Research Center
<http://pewresearch.org>
- Pew Research Hispanic Center
<http://www.pewhispanic.org/>
- Center for the Future of Museums
<http://www.aam-us.org/resources/center-for-the-future-of-museums>
- Local United Ways, School District Planning and Evaluation (school population data)

Additional Resources

- SciGirls Working with Latino Families Guide
<http://scigirlsconnect.org/page/work-w-latino-families>
- ASTC Diversity and Equity Resource Center
<http://www.astc.org/resource/equity/index.htm>
- ASTC Multilingual Landscape Study pdf
- Bilingual Exhibits Research Initiative (BERI) Project pdf
- NISE Translation Process and Bilingual Graphics Guides
- NISE Partnership Strategies Guide

Summary

- Be focused and clear about which audience(s) you're engaging
- Develop your audience rationale and align with mission
- Gather research on your visiting audiences and the audience you're trying to engage
- Build strategic partnerships
- Prototype offerings so you can figure out what works and what doesn't (get feedback!)

Lunch



Agenda—Afternoon Day 1

- 1:00 GROUP ACTIVITY -- Scavenger Hunt around CMH
- 2:20 Partner Share out: Bilingual Projects
- 3:30 Social Break
- 3:45 GROUP ACTIVITY= Bilingual PSA's
- 4:15 NISE Net Bilingual Resources
- 4:55 Closing remarks
- 5:00 End for day

Group Activity- Scavenger Hunt



Group Activity—Scavenger Hunt



Explore Children’s Museum of Houston

Explore CMH with an eye for how information can be presented to bilingual audiences.

- Use the Scavenger Hunt list to find examples of bilingual signage and programming.
- Use the iPads provided to document your examples.

(Note: not all items on the list necessarily have examples in CMH)

Meet back here at 1:45pm

Group Activity—Scavenger Hunt

1. What was surprising/unexpected about your visit?
2. Share something that got you inspired and would like to see happen in your institution
3. Something you didn't find here but you have in your institution



Part 1: Partner Share Out of Bilingual Projects

Partner Presentations



Overview

Introduction

- Children's Museum of Houston, TX
 - Aaron Guerrero

Partner Presenters:

- Saint Louis Science Center
 - Paul Freilin
- Imaginarium of South Texas, TX
 - Alejandra Ovando
- Informal Science Learning Associates, TX
 - Jose Perez
- Children's Museum of Houston, TX
 - Tiffany Espinosa
- Miami Science Museum, FL
 - Karlisa Callwood



Saint Louis Science Center

Cultural Events and Community Partnerships



Paul Freiling
Director, Engineering Education
pfreilin@slsc.org
www.slsc.org



Society of Hispanic Professional Engineers (SHPE)

A partnership focused on connecting the SLSC more deeply with the St. Louis area Hispanic community.



North American Taiwanese Engineers Association (NATEA) Symposium

A one-day public symposium on renewable energy and sustainable living. The symposium provided an opportunity for NATEA to share scientific information with public audiences, and gave an opportunity for visitors to talk with local scientists.



Pulse St. Louis: The Science of Music

An annual event that showcases performers expressing their ethnicity by way of dance, song, instruments and/or plays.



FIRST Robotics International Friendship Day

An event that brings together International FIRST robotics teams competing in the FIRST Robotics Championships with St. Louis area robotics teams.



Cultural Events and Community Partnership Successes

- Increased relevance to local and international communities
- Increased public and institutional awareness and understanding of cultural communities located in the St. Louis area
- Community and School Outreach support



Working with Bilingual Audiences



Laredo, Texas,
lies on the Texas-Mexico border,
approx. 150 miles southwest of
San Antonio.

95% of its inhabitants are Hispanic;
approx. 29% of them live in poverty.

Our guiding principles:

Provide authentic experiences













Provide family activities









Invite positive role models



(Female engineers)



Including college-bound youth volunteers











Provide sensory experiences









Go where people are: Outreach



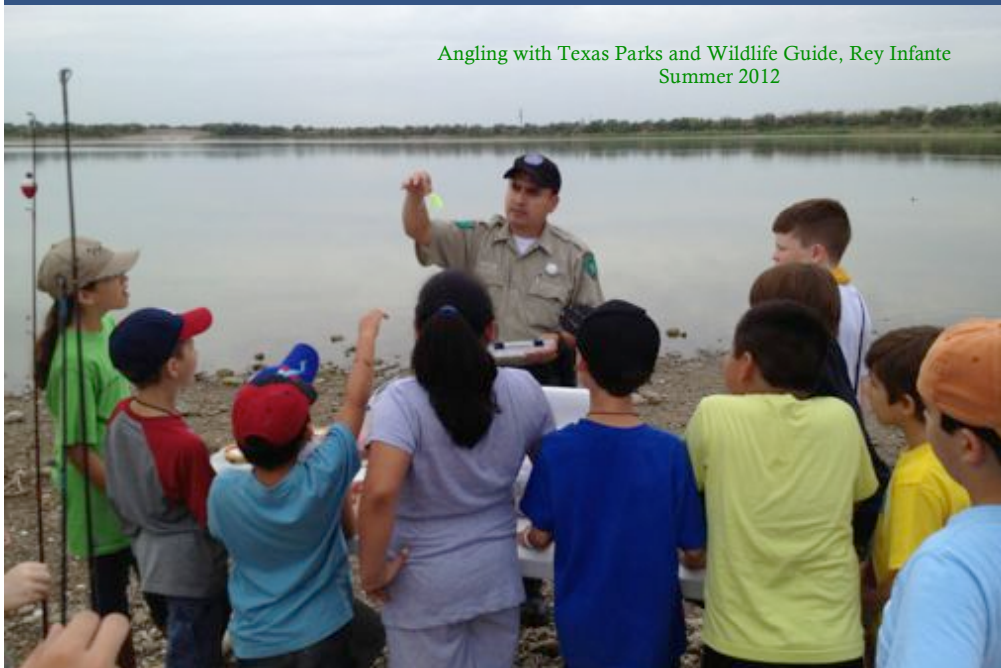






Informal Science Learning Associates of Laredo (ISLA) Summer Camps!
Register online at www.wowsciencelaredo.org

Angling with Texas Parks and Wildlife Guide, Rey Infante
Summer 2012



ISLA Camps at Lake Casa Blanca

- Nature Safari June 17-21 6y-12y
- Engineer It! July 8-12 8y-13y



Laredo's awesome & coolest place
to beat the heat this summer!



\$140/camp – Mon. thru Fri., 9am-3pm (early drop off at 8am)

Explore the natural wonders at the Lake, find out about Habitats, Plants, and Bugs, of course!
Or be the Engineer! Create, design, build contraptions on the shores!
Morning hikes only - Sack Lunch, Closed-toe shoes & Sunscreen required - Snacks & water provided
Texas Parks & Wildlife Park Interpreter Holly Reinhard joins our explorations!



Social discourse in native language





Our staff is bilingual

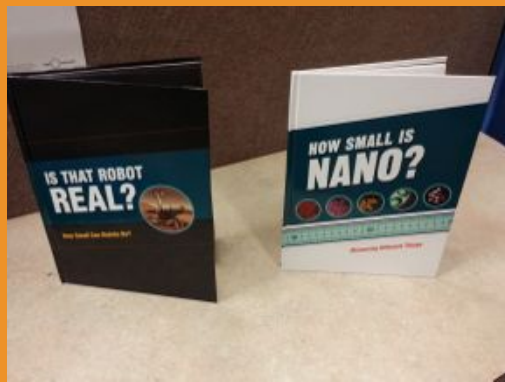
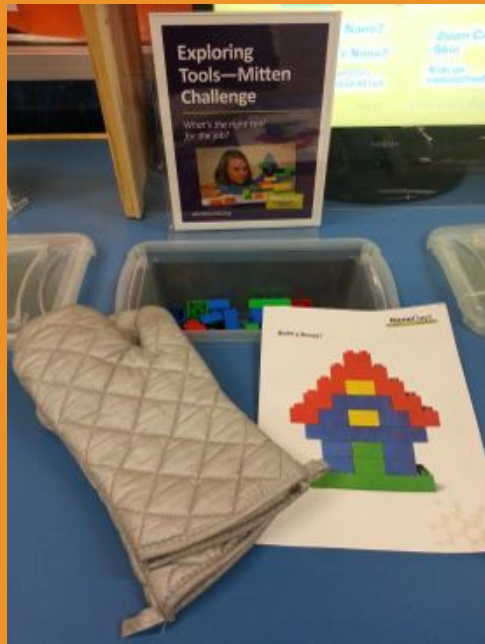


Interesting and engaging activities respect all kinds of learners and speak in a universal language



5300 San Dario, Ste. 505
Mall Del Norte
Laredo, Texas 78041

NanoDays



Nano Science Kits



Bilingual Audience



Children's Museum of Houston



Tiffany Espinosa
Para Los Niños Coordinator
tfontenot@cmhouston.org
www.cmhouston.org

Signage

- 100% of all exhibit text is English/Spanish bilingual
- 45% of Museum's public contact staff is English-Spanish bilingual including staff who manage and facilitate outreach programs
- 20% of Museum's Parent Resource Library collection is in Spanish
- Each of the Museum's 13 English-Spanish bilingual Family Learning Guides contain on average 50 pages of activities that families can do together at home to help children build academic skills and knowledge



Bilingual Story Time



Parent Stars

- Each family receives a special Museum-created guide filled with ideas for at-home learning activities
 - Distributed 8,567 of these last year
- Served 25,220 parents and children at 93 Family Learning Events and 80 Parent Workshops in and around Houston last year



Para Los Niños



- Provides facilitators with free materials via our website
- Served 10,049 children and parents at 41 community sites

Family Adventures

- Served 10,638 children and adults from 40 community sites



Family Literacy Involvement Program

- FLIP is a city-wide system for increasing family learning through the circulation of 2,040 literacy kits loaned through 35 public library branches.
- Each Kit includes a book and a related activity with all of the needed materials. All are available in English and Spanish. A portion is available in Chinese and Vietnamese.



NanoDays at CMH

- Bilingual Activities throughout Museum
- Bilingual Museum Nano signs posted throughout Museum
- Bilingual flyers handed out at outreach events weeks before



Social Break



Group Activity: Bilingual PSA's



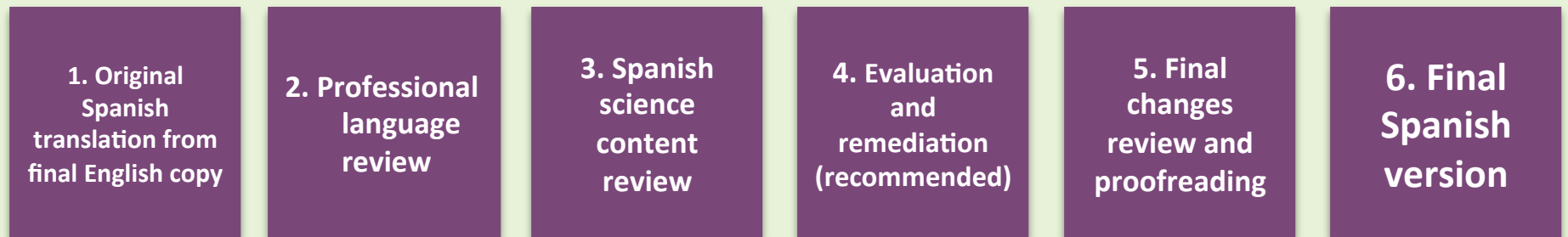
Bilingual PSA's Conversation

1. What things did you notice were different between the videos? (Spanish and English)
2. What considerations do you think we had to make when we recorded the Spanish versions?
3. How can you use these videos in your institution?



NISE Net Bilingual Resources

Translation Process



Where can you

find nano?



Bilingual
Educational
Products

Website for educators - nisenet.org

The screenshot shows the NISE Network website homepage. At the top left is the NISE Network logo with the tagline 'ADVANCING INFORMAL SCIENCE EDUCATION'. A search bar is located at the top right. The main navigation menu includes 'HOME', 'COMMUNITY', 'CATALOG', 'ABOUT', and 'WHAT IS NANO'. Below the navigation, there is a header section for 'Nanoscale Informal Science Education Network' with a sub-header 'Become a partner of the NISE Network. Learn how to get involved or sign up now.' A prominent purple banner for 'NanoDays' (March 30 - April 7, 2013) is featured. The main content area is divided into several sections: 'Image Collection' with a photo of human red blood cells, 'NISE Net News' with a post about NanoDays 2013 applications, 'New in the Catalog' with a 'Featured' section, 'Nano Future Tellers', and 'Scientist Speed Dating'. A purple callout box on the right points to the 'New in the Catalog' section.

Catalog in Spanish

- Programs
- Exhibits
- Tools and guides
- Media
- Graphics

Search the Catalog

The screenshot shows the NISE Network Catalog website. The header includes the NISE Network logo and a search bar. The main navigation menu includes HOME, COMMUNITY, CATALOG, ABOUT, and WHAT IS NANO. The left sidebar contains links for Programs & Activities, Exhibits, Forums, Tools & Guides, Media, Research & Evaluation, and Table of Contents. The main content area is titled 'Spanish Language Translations' and features a green 'Español' button. Below the button, there is a text block stating that selected NISE Network educational products are now available in Spanish. A list of products with Spanish translations of public materials is provided, including links to the RESOURCE list and the SPANISH list. There are also sections for Tools, Webinars, Videos, and Programs and Activities, each with a list of links.

The sidebar menu is titled 'Browse by' and is organized into several sections:

- Audience:** All ages (109), 7 and up (39), 11 and up (38), 15 and up (17), 19 and up (3), Informal science educators (26), scientists (14).
- Nano topics:** Art and nature (71), Bio and medicine (73), Energy and environment (50), Fundamentals (132), Information Technology (47), Materials, tools, and applications (148), Society, policy, and economics (64).
- Programs:** Classroom activity (25), Display (2), Facilitated activity (46), Gems (4), Museum theater (4), Stage presentation (16).
- Available translations:** Spanish (61) (circled in red).
- Nano throughout the year!** Browse products by season. (with a circular arrow icon).
- Español:** Select NISE Network educational products are now available in Spanish! Find answers to your questions about the catalog on our FAQ page. (with a green 'Español' button).

Search the catalog by audience, topic, or season.

Programs



Bilingual guides

Translation Process Guide

Download all files (zip)

Overview **Resources** Comments



Checklist

- Scientist reviewed?
- Peer reviewed?
- Editor evaluated?

Audience

All ages

Tags

Science, History, Translation

Permissions

 Creative Commons Attribution Non-Commercial 3.0 license

Description:

The NISE Network translation process guide is intended to help you navigate through the process of creating quality translated educational products. It includes a suggested process model that will help to ensure that your translations maintain an appropriate interactive tone and a high level of scientific accuracy. Additionally, you will find helpful tips and considerations that will assist you in planning for translation work in terms of timeline, budget, and future resource requirements. This guide also includes a Spanish Style Guide and a nomenclature/terminology reference guide. The translation process guide is complemented by the NISE Network

Bilingual Design Guide

Download all files (zip)

Overview **Resources** Comments



Checklist

- Scientist reviewed?
- Peer reviewed?
- Editor evaluated?

Audience

Offshore science specialists

Tags

Science, History, Design, Architecture, Accessibility

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Description:

The NISE Network Bilingual Design Guide presents the variety of integrative and design strategies the Network has used for different bilingual products, including exhibits, programs, and media. The guide focuses on NISE Net educational products offered in English and Spanish, but the considerations and solutions presented are more generally applicable to bilingual and multilingual museum experiences. The guide is complemented by the Translation Process Guide.

Bilingual Videos

Intro to Nano



Nano and Me



What Happens In A Nano Lab?



How Small Is Nano?



Products in Catalog

NISE NET PRODUCT



NISE Net Products

- Created with NISE Network funding
- Development process:
 - scientist review, peer review, & evaluation
- Standards and templates
- Encourage free sharing and adaption

LINKED RESOURCE ►

Linked resources

- Created with other funding
- Vetting process
- Different rights ownership/attribution



Creative Commons license clarifies use

Website for the Public



- Videos, podcasts, activities, links
- List of mini-exhibition locations
- Audio Description in English and Spanish

whatisnano.org

Closing Day Announcements

Museum is open until 8:00pm

Meet at 6:15 pm in the hotel lobby for dinner at Mia Bella Trattoria

If you're checking out of the hotel tomorrow, you can bring your luggage