Welcome
NISE Network Partners !

NISE network™
NANOSCALE INFORMAL SCIENCE EDUCATION

NSF

www.nisenet.org

How to Host a Bilingual NanoDays

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Today's Conversation

How to Host a Bilingual NanoDays

Join us for a conversation on how institutions can offer bilingual programming and reach underserved audiences with NISE Net resources. We will highlight past and upcoming bilingual NanoDays events with a focus on methods for recruiting floor facilitators and marketing techniques that aim to welcome new visitors.

Reaching Diverse Audiences

Inclusive Audiences
Raising our capacity to effectively engage underserved and underrepresented audiences

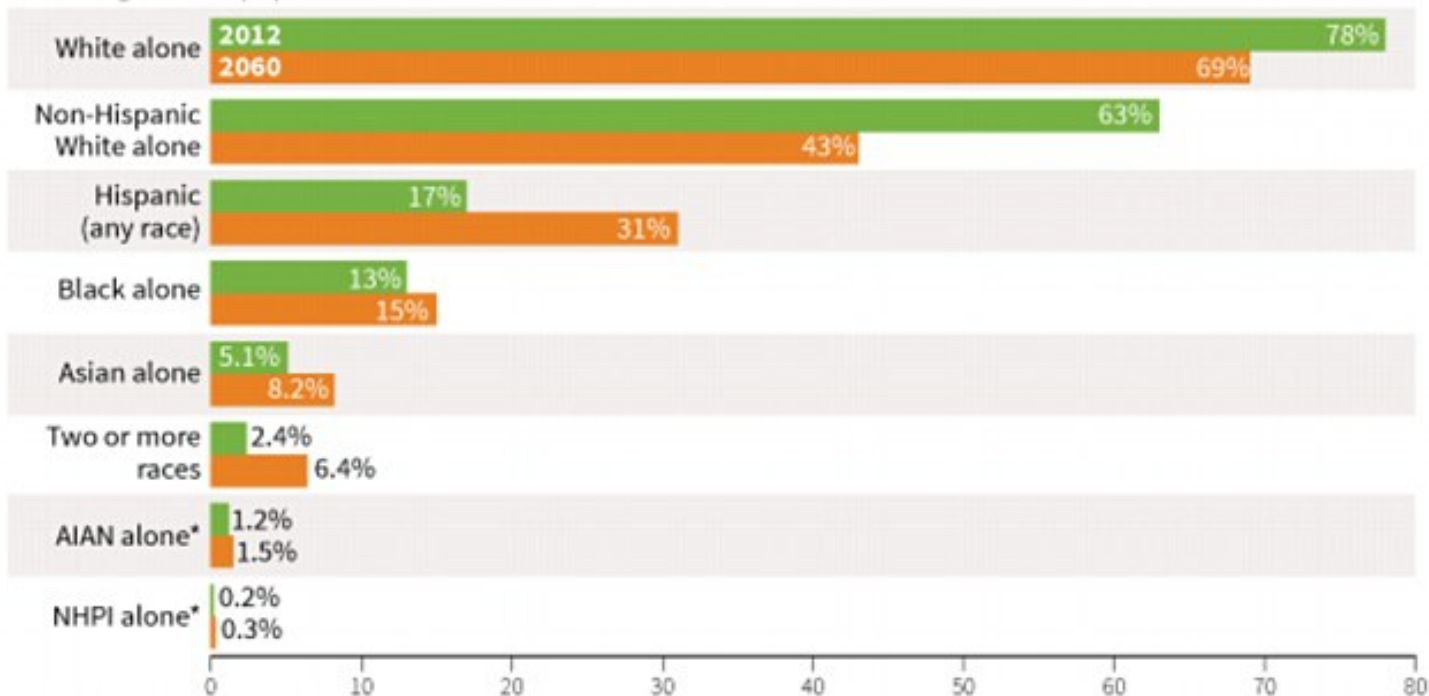**Why use an Inclusive Audiences approach?**

- Museums are uniquely situated to educate the public, inspire youth, and provide access to learning experiences.

- Inclusive approaches help reach all audiences more effectively.

- It allows us to go beyond education and inspiration to empowerment and social justice.

NISE
network

The U.S. Census Bureau sees racial, ethnic demographic shift

By 2060, non-whites will make up 57 percent of the U.S. population.

POPULATION BY RACE AND HISPANIC ORIGIN
Percentage of total population

Race/Origin	2012	2060
White alone	78%	69%
Non-Hispanic White alone	63%	43%
Hispanic (any race)	17%	31%
Black alone	13%	15%
Asian alone	5.1%	8.2%
Two or more races	2.4%	6.4%
AIAN alone*	1.2%	1.5%
NHPI alone*	0.2%	0.3%

(Axis: 0, 10, 20, 30, 40, 50, 60, 70, 80)

* AIAN = American Indian and Alaskan Native; NHPI = Native Hawaiian and Other Pacific Islander
Source: U.S. Census Bureau

1900s - 1970s
10-13% minority population

25 years ago
20% minority population

Now
34% minority population

25 years ahead
46% minority population

Core museum visitors today
9% minority
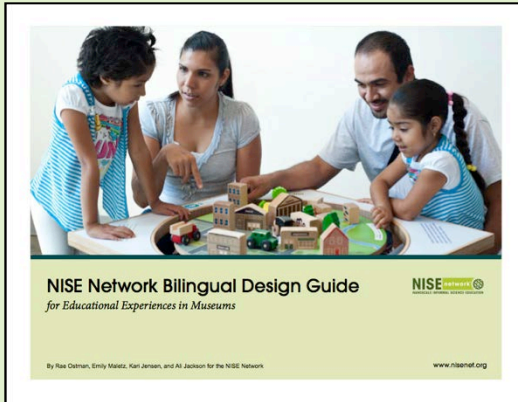
Changing composition of America (U.S. Census Bureau/Reach Advisors).

American Association of Museums (2008). *Museums & Society 2034: Trends and Potential Futures.* Center for the Future of Museums.
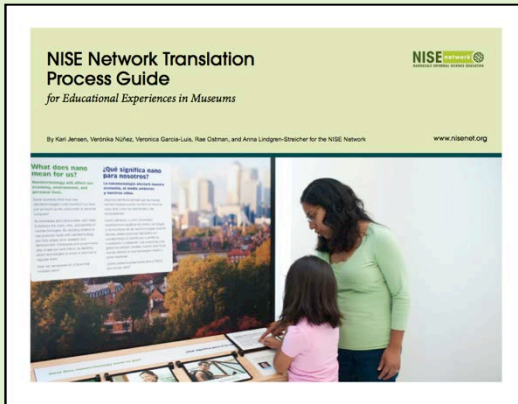
Inclusive Audiences - Bilingual Audience Tools

Bilingual Design Guide

Spanish Language Translations for many educational materials

Translation Process Guide

Bilingual Audience Workshop Resources

More info: nisenet.org/catalog/spanish

nisenet.org/catalog/tools_guides/bilingual_audience_workshop_resources

Inclusive Audiences - Bilingual Audience Tools

Spanish Language Translations

✉ Email   🖨 Print

Select NISE Network educational products are now available in Spanish!

Español

Based on input from NISE Network partners, we have adapted our most popular programs for Spanish-speaking audiences! Follow the links below to explore Spanish versions of several NISE Network public programs, as well as other selected resources. We have placed the highest priority on translating products that directly serve public audiences. Professional resources, such as instructional materials and educator's guides are only available in English at this time.

Below are a set of products with Spanish translations of public materials

- Click on the **RESOURCE** tab
- Scroll down to the **SPANISH** files

Tools

- **Translation Process Guide**
- **Bilingual Design Guide**
- **NISE Net Bilingual Audiences Workshop**

Website

- Public website Whatisnano.org

Videos

- Intro to Nano Video: "Nanotechnology: What's the Big Deal?"
- NanoLab Video: "How Small Is Nano?"
- NanoLab Video: "What Happens in a NanoLab?"
- "Nano and Me" videos: Aluminum, Gold, Gravity, Latex, Pants, and Silver

Programs and Activities

- Intro to Nano Cart Demo
- Sizing Things Down

Browse by

Audience
- All ages (109)
- 7 and up (39)
- 11 and up (38)
- 15 and up (17)
- 19 and up (3)
- informal science educators (25)
- 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 economy (64)

Programs
- Classroom activity
- Display (2)
- Facilitated activity (46)
- Game (4)
- Museum theater (4)
- Stage presentation (16)

Available translations
- Spanish (61)

Nano throughout the year! Browse products by season.

Español Select NISE Network educational products are now available in Spanish!

Find answers to your questions about the catalog on our FAQ page.

More info: nisenet.org/catalog/spanish

Inclusive Audiences - Bilingual Audience Workshop

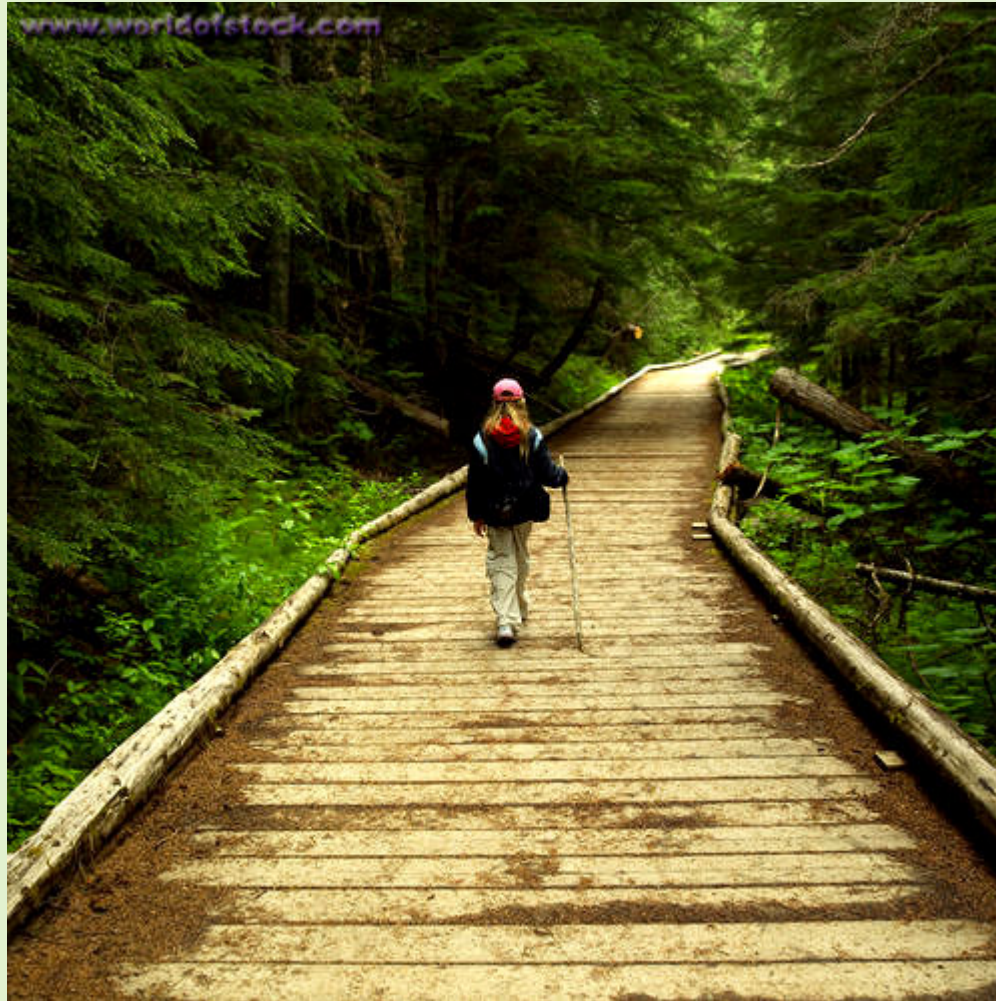

Workshop held in June 2013 in Houston

- Explored importance of engaging bilingual audiences in nanoscale science, engineering and technology

- Strategies to better engage Spanish speakers by building capacity, using techniques like:
  - sheltered instruction
  - team-based inquiry
  - marketing strategies

More info:

nisenet.org/catalog/spanish

nisenet.org/catalog/tools_guides/bilingual_audience_workshop_resources

Our work is a journey…

Bilingual NanoDays Materials

All materials follow a systematic translation process. Products are reviewed by editors and Spanish speaking scientists to ensure a consistent tone and accurate content.

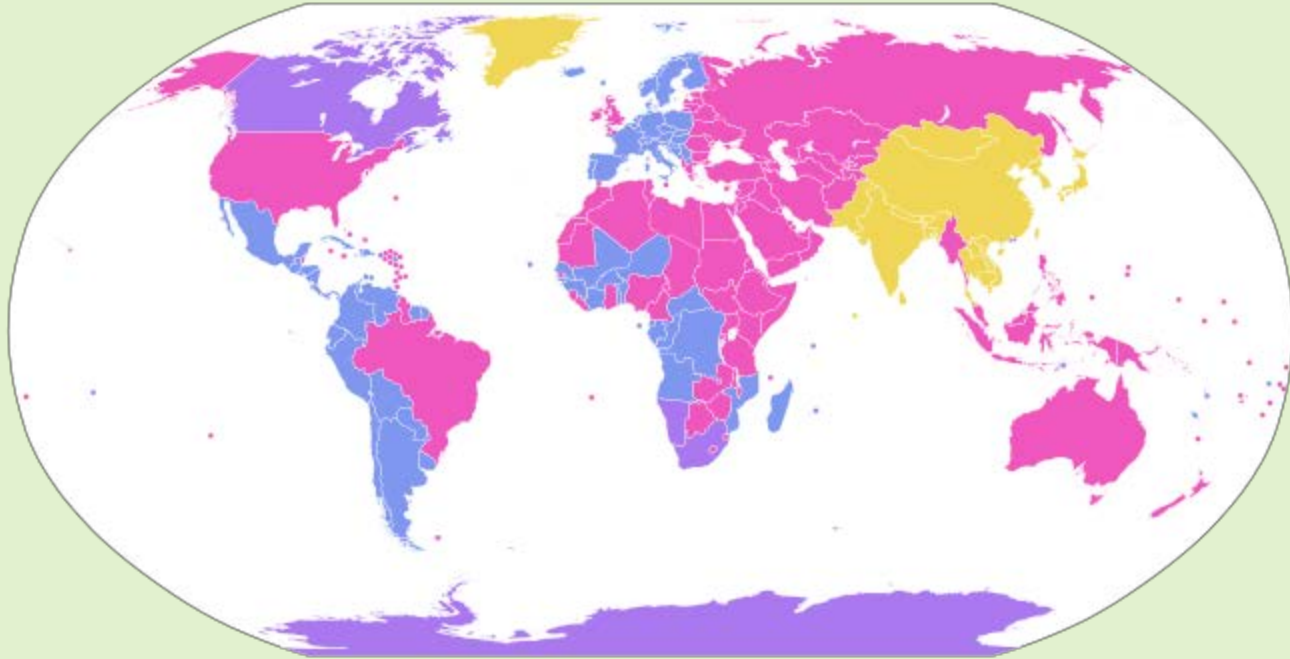# Billion vs. Billón

Short scale (used by the US)
Billion: 1,000,000,000

Long Scale (used by)
Billón: 1,000,000,000,000

Correct translation for billion: **mil millones**

Usage of Scales Around the Globe

Pink: Short scale
Blue: Long scale
Purple: Both scales
Yellow: Other naming system

NanoDays Materials

All the materials are bilingual and are easy to display side by side during the events.

Activities are hands-on to encourage interactions

OMSI Outreach Efforts

OMSI partnered with *Fusion Arte* (radio show) and *El Centinela* (newspaper) to share our projects with more Spanish speakers.

OMSI Outreach Efforts

In 2013, KBOO had an OMSI segment the first Tuesday of the month

OMSI Outreach Efforts

El Centinela

In 2013 published stories about our
Local Voices project

Tips to Create Bilingual Events

- Choose themes that are appealing and fun!

- Mix demos with entertainment.

- First investment: Bilingual volunteers and staff.

- Hands-on activities.

- Combine programs.

- Provide food!

Create Bilingual Signs and Materials

Demos that are Simple and Visual

Grupo Lol-be Yucatán

Entertainment and cultural expressions are important

Hands-on Activities

The knitting station
was very successful

Hands-on Activities

A match from heaven

- A need and a strength

Nurture the relationship

- Continue the dialogue

Find new endeavors

- What else we can do together?

Find a partner that will help you bridge your science center with the community

- Partner with universities, companies and churches that have affinity groups, centers or activities dedicated to Latinos such as *the Centro Chicano of the University of Southern California*

- Partner with associations that were created by Latinos or Hispanics such as *Latinos in Science and Engineering*

- Partner with agencies that already serve these audiences such as *Somos Mayfair www.somosmayfair.org*

- Partner with non-profits and foundations that are interested in reaching Latinos such as *The Latino Community Foundation* and *Education Bases Latino Outreach*

- Partner with a museum located in a Spanish speaking country such as *Papalote Museo del Niño* and *Laberinto de las Ciencias y las Artes* both of them organizes their own Nano Days

Saint Louis Science Center

NanoDays Community Partnerships

Paul Freiling
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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.

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North American Taiwanese Engineers Association (NATEA)

NATEA-STL is committed to the exchange of scientific and engineering knowledge, networking among different communities, and the promotion science and technology for the public good.

Community Partnership Successes at NanoDays

- Gives our institution an ability engage with a multilingual audience attending the event

- Ability to promote the event to these communities to help engage new audiences in Science and Nano

- Community and cultural bridging

Community Partnership Successes beyond NanoDays

- 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

Questions from the Audience

Please either type a question in the chat box or "raise your hand" to ask a question through audio for any of the presenters.

THANK YOU!

To all our partners - we could not do this work without you!