EFFECTIVE COLLABORATION MODELS BETWEEN LIBRARIES AND STEM ORGANIZATIONS

PRESENTERS

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THE RATIONALE(S) FOR STEM ORGANIZATIONS TO COLLABORATE WITH LIBRARIES

Robert Mac West

Informal Learning Experiences

Denver, Colorado

BASICS

- A successful relationship must be mutually rewarding/beneficial/justifiable to all concerned
- There is a truly broad array of STEM organizations and staffs with varied missions, budgets, staff expectations, economic and political circumstances, etc.

ORGANIZATIONS AND STAFFS

- Government research laboratories
- Corporate R&D laboratories
- Private R&D laboratories
- University academic departments
- Science centers
- Natural history museums
- Children's museums
- Biological centers (zoos, aquariums, botanical gardens)
- National and state parks
- Individual scientists

ADVANTAGES FOR INDIVIDUALS

- Individual satisfaction
- Contribute to community
- Federal grants dissemination requirement/expectation
- Demonstration of public value of research (also for organizations)

ADVANTAGES FOR ORGANIZATIONS

- For-Profit
- Nonprofit
- Academic
- Educational

IMAGE OF THE ORGANIZATION

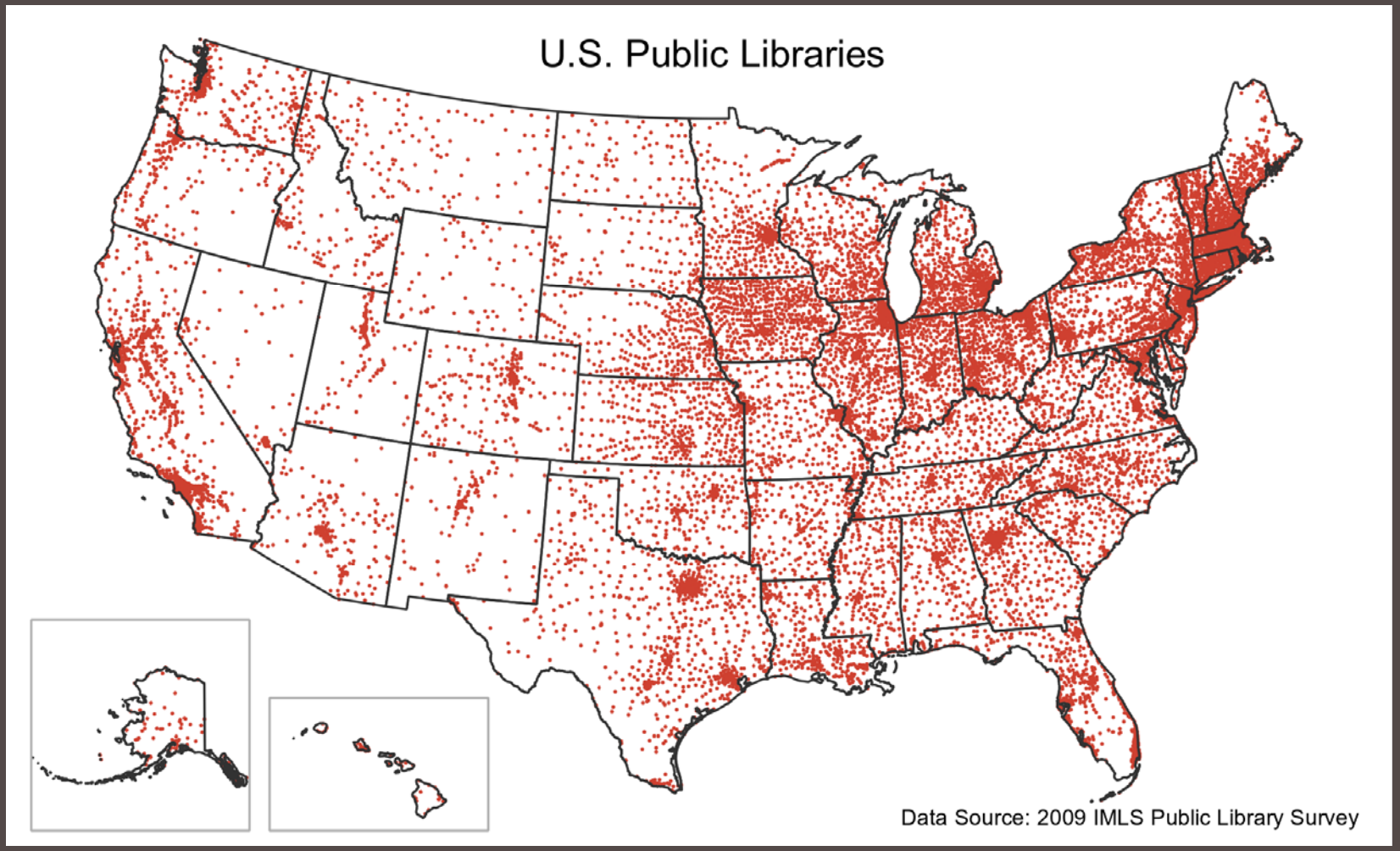
- Especially for corporate and government (but works for all)
  - Good community citizen
  - Cheap marketing and positioning
  - Use of products/logos
  - Staff recruitment
  - In lieu of financial contributions
  - Effective use of resources

ACCESS TO THE PUBLIC

- Most research laboratories/facilities have no public access
- Off-site is easier, no security, safety, etc.
- Look at the library public(s)

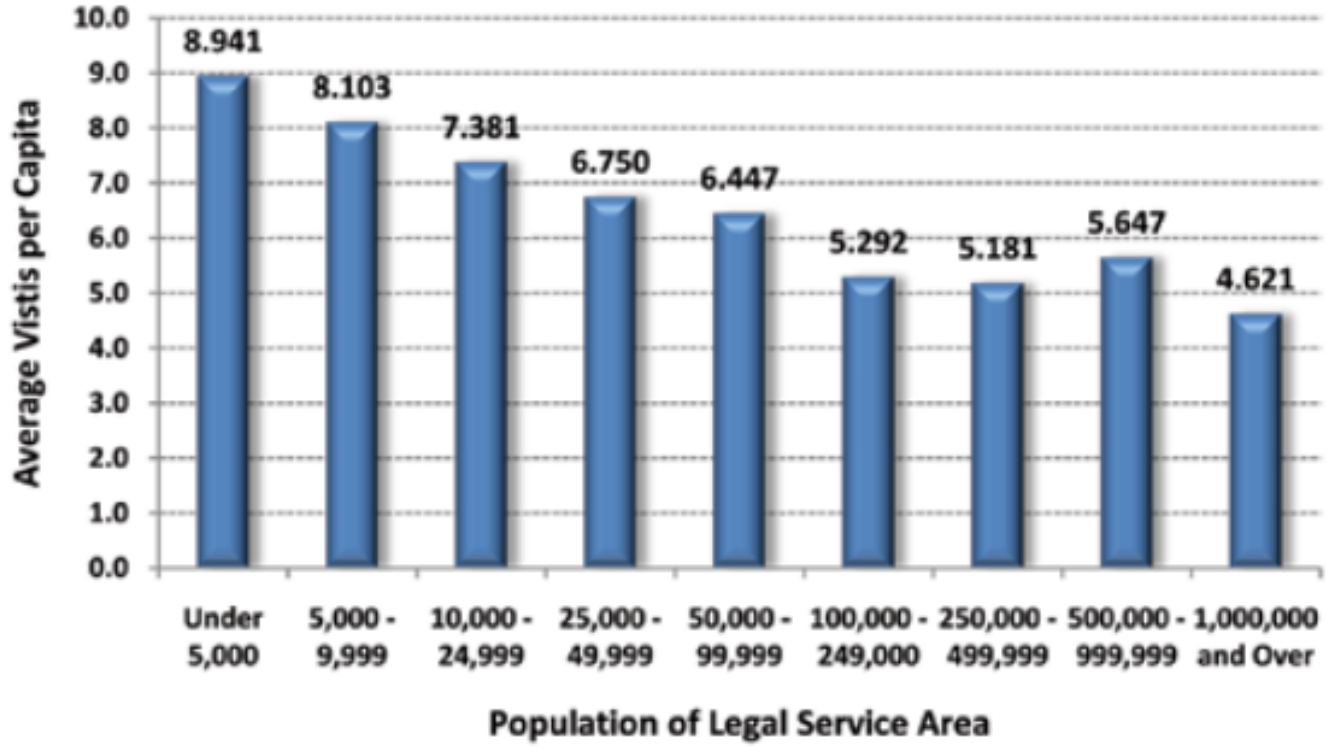
MUSEUMS, SCIENCE CENTERS/MUSEUMS, BIOLOGICALS

- Often perceived of as impenetrable, unwelcoming
- Locations in center cities
- Distance, cost, inconvenient
- “Not for us” as libraries are for us
- Way to reach diverse audience that is not on-site



Distribution of U.S. public libraries

FIGURE 4. Average Library Visits per Capita by Population of Legal Service Area



Smaller, often rural, libraries are better used than those in larger cities

	2010 to 2020
White (non Hispanic)	-7%
Hispanic	26%
Black (alone or in combination)	10%
Asian (alone or in combination)	24%

Changes in U.S. demographics

History of museum attendance

NEW OPPORTUNITY

- Placement of traveling exhibits
- My ICEE presentation in November

CONCLUSION

There are solid benefits for STEM organizations and individuals of a great variety of sorts

Scientists, researchers and educators can come into contact with new and stimulating audiences and participants

Effective Collaboration Models

Between Libraries and STEM Organizations

Denver, Colorado

August 20-22, 2015

Dale McCreedy, Ph.D.

The Franklin Institute

Mission: to inspire a passion for learning about science and technology

Three Collaborations Involving Libraries

1. GSK Science in the Summer™
2. & Neighborhood Science
3.

Start of Library/Museum Partnership

1. Noticing Opportunities
2. Establishing Connections
3. Cultivating Collaboration
4. Building Capacity
5. Identifying Models for Expanding & Sustaining

PARENT PARTNERS IN SCHOOL SCIENCE

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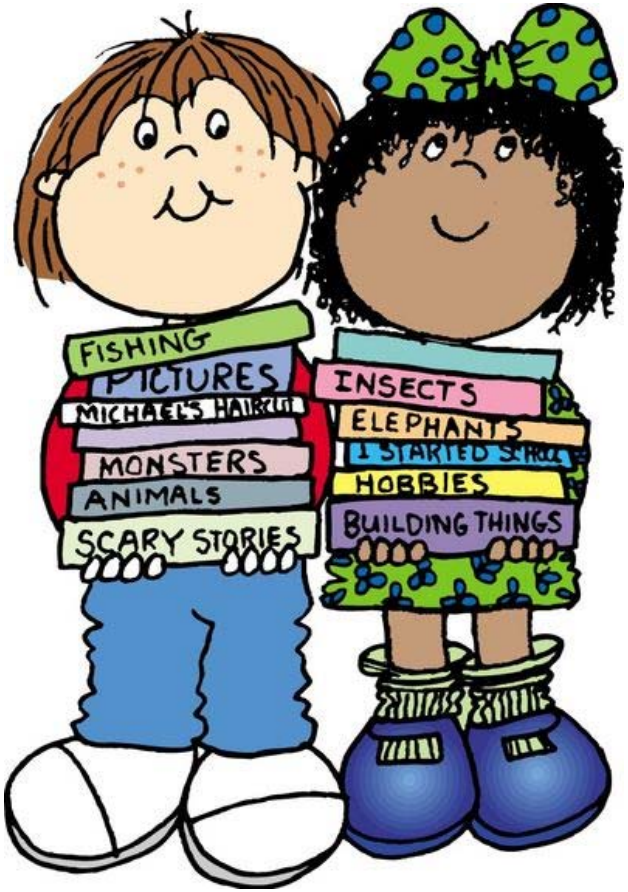

Creation of *LEAP into Science*

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STEM
Expertise

Free LIBRARY PHILADELPHIA

Literacy
Enrichment
Afterschool
Program

LEAP INTO SCIENCE
Free LIBRARY PHILADELPHIA
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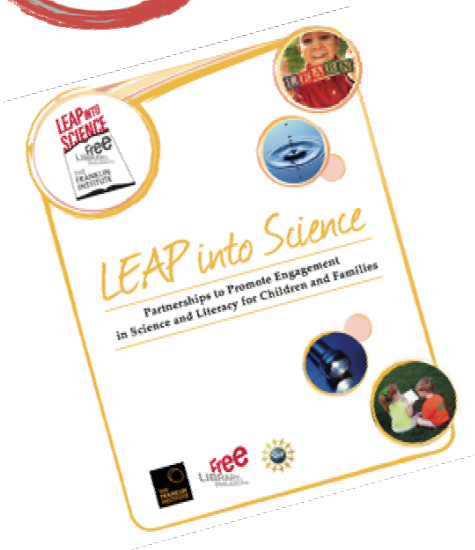
Program Goals



- **Engage underserved** children & families in science & literacy.
- **Enhance capacity:** libraries to engage in science; science institutions to embrace literacy.
- **Demonstrate potential** of community partnerships

Program Components

Curriculum Resources

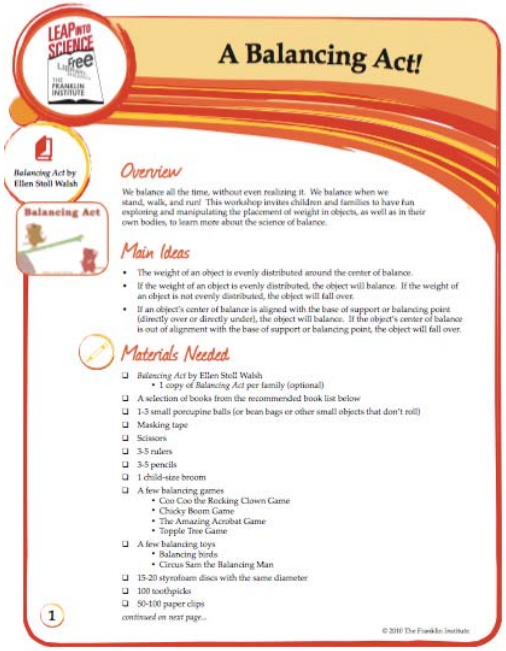
- Afterschool, family, PreK

Professional Development

- Videos, webinars, wiki

Inquiry-based Approach

- Open-ended, flexible, process-oriented



A Balancing Act!

Overview

We balance all the time, without even realizing it. We balance when we stand, walk, and run! This workshop invites children and families to have fun exploring and manipulating the placement of weight in objects, as well as in their own bodies, to learn more about the science of balance.

Main Ideas

- The weight of an object is evenly distributed around the center of balance.
- If the weight of an object is evenly distributed, the object will balance. If the weight of an object is not evenly distributed, the object will fall over.
- If an object's center of balance is aligned with the base of support or balancing point (directly over or directly under), the object will balance. If the object's center of balance is out of alignment with the base of support or balancing point, the object will fall over.

Materials Needed

- *Balancing Act* by Ellen Stoll Walsh
  - 1 copy of *Balancing Act* per family (optional)
- A selection of books from the recommended book list below
- 1-3 small porcupine balls (or bean bags or other small objects that don't roll)
- Masking tape
- Scissors
- 3-5 rulers
- 3-5 pencils
- 1 child-size broom
- A few balancing games
  - Coo Coo the Rocking Clown Game
  - Chicky Boom Game
  - The Amazing Acrobat Game
  - Topple Tree Game
- A few balancing toys
  - Balancing birds
  - Circus Sam the Balancing Man
- 15-20 styrofoam discs with the same diameter
- 100 toothpicks
- 50-100 paper clips

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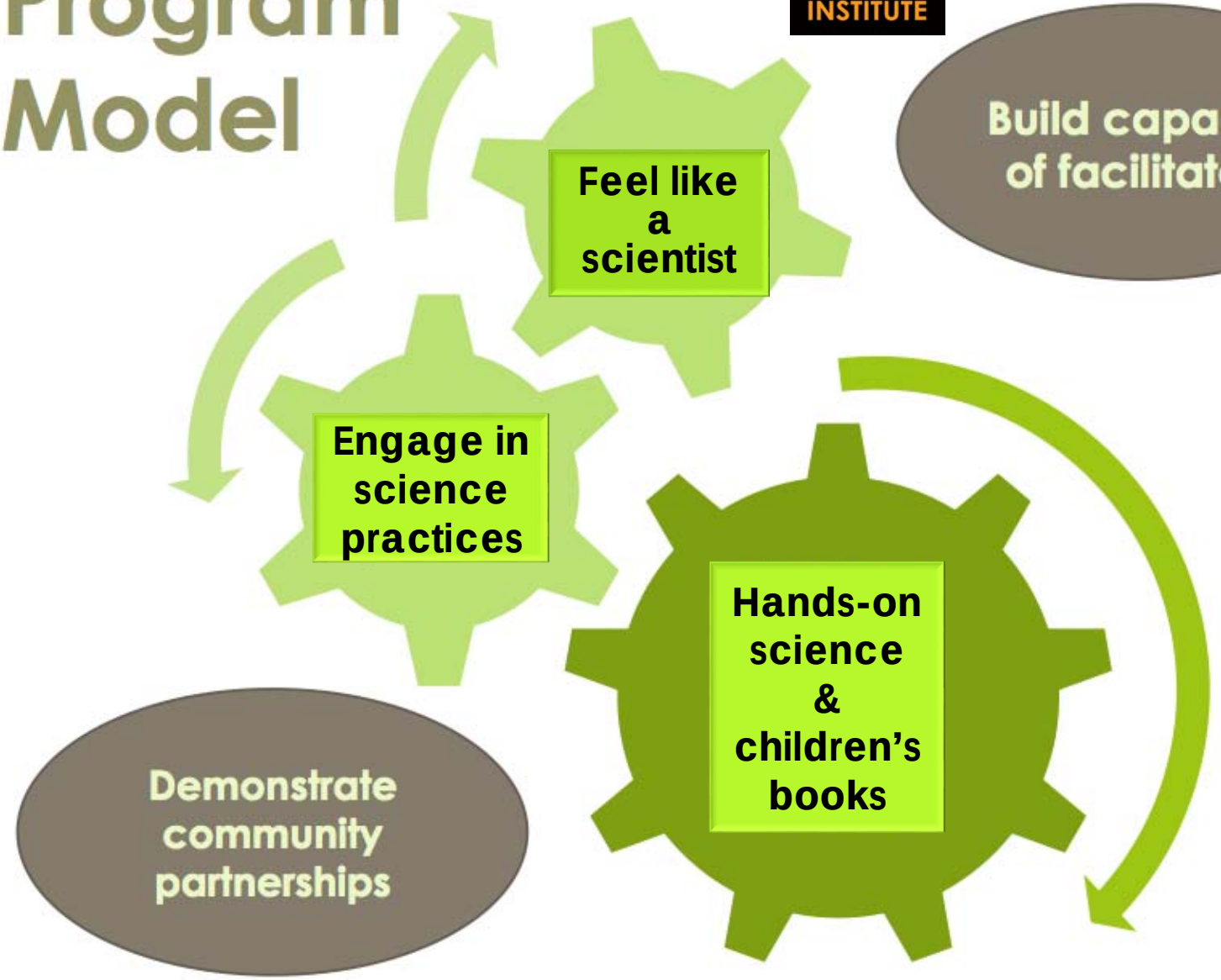
Program Model



Build capacity of facilitators

Demonstrate community partnerships

Expansion 2011

- Libraries
- Universities
- School Districts
- Afterschool Networks

- Science Centers
- Children's Museums
- Public Television

LEAP INTO SCIENCE
free LIBRARY PHILADELPHIA
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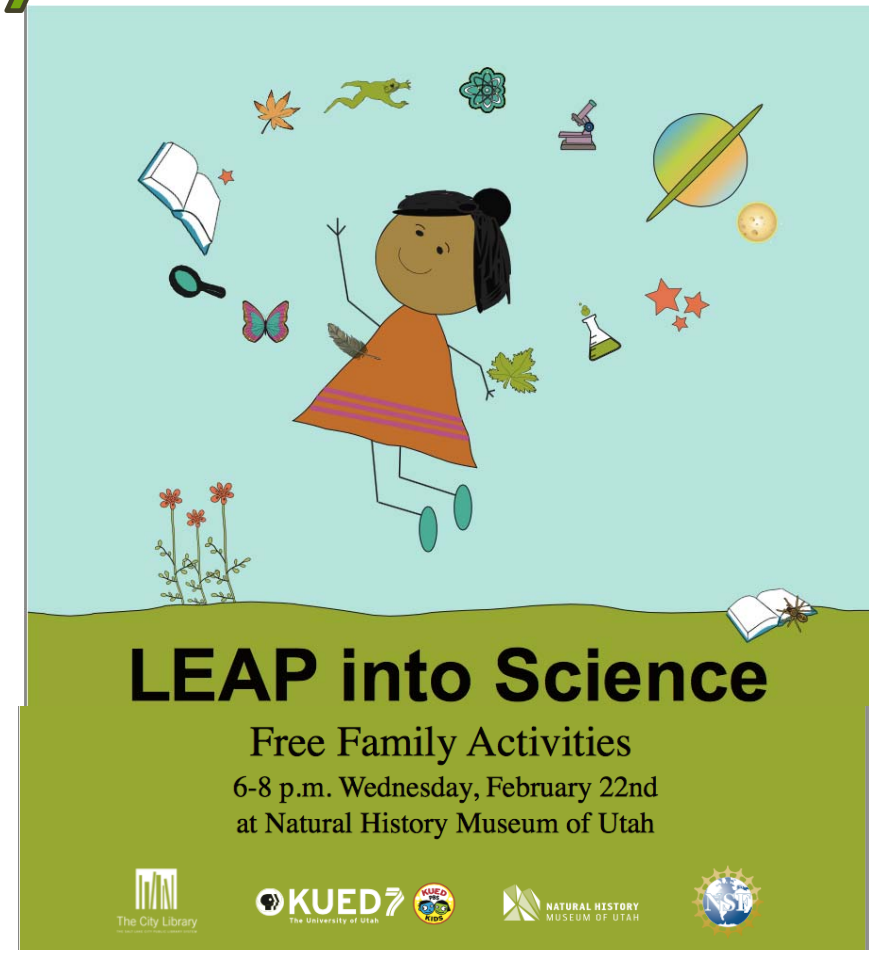
ABC
ALBUQUERQUE BERNALILLO COUNTY
LIBRARY

NEW MEXICO
MUSEUM OF
NATURAL HISTORY
& SCIENCE

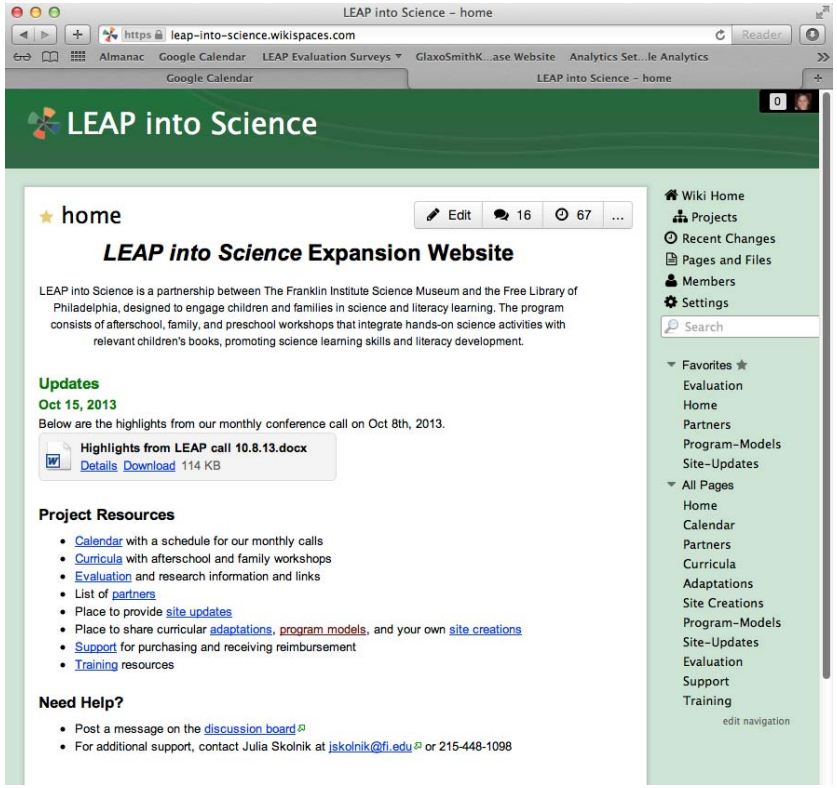
The New Mexico Site

Rio Rancho
Public Libraries

Utah Partnership: Library + Museum + Public TV



Community Collaboration Strategies



- Monthly calls & webinars
- Wiki (*Resources, site updates, adaptations*)
- Materials & Books
- Co-present @ conferences
- Research & evaluation

Program Impacts

- 25 active partner institutions
- Over 1000 programs offered
- Over 52,000 children, families, and facilitators touched