



# BUILDING IDAHO MAKERS A STATEWIDE APPROACH

Erica Compton and Sue Walker, Idaho Commission for Libraries

Morgan Chevalley, Community Library Network

[libraries.idaho.gov/make-it-at-the-library](http://libraries.idaho.gov/make-it-at-the-library)



Idaho  
Commission  
for Libraries



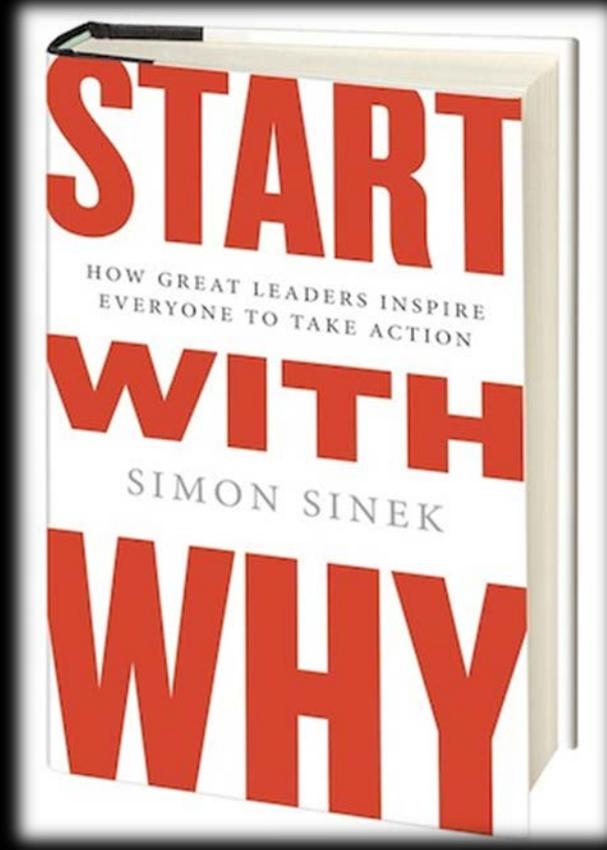
INSTITUTE of  
Museum and Library  
SERVICES

# WHAT'S YOUR EXPERIENCE?



WHAT'S  
OUR

Why?



# THE REALITY

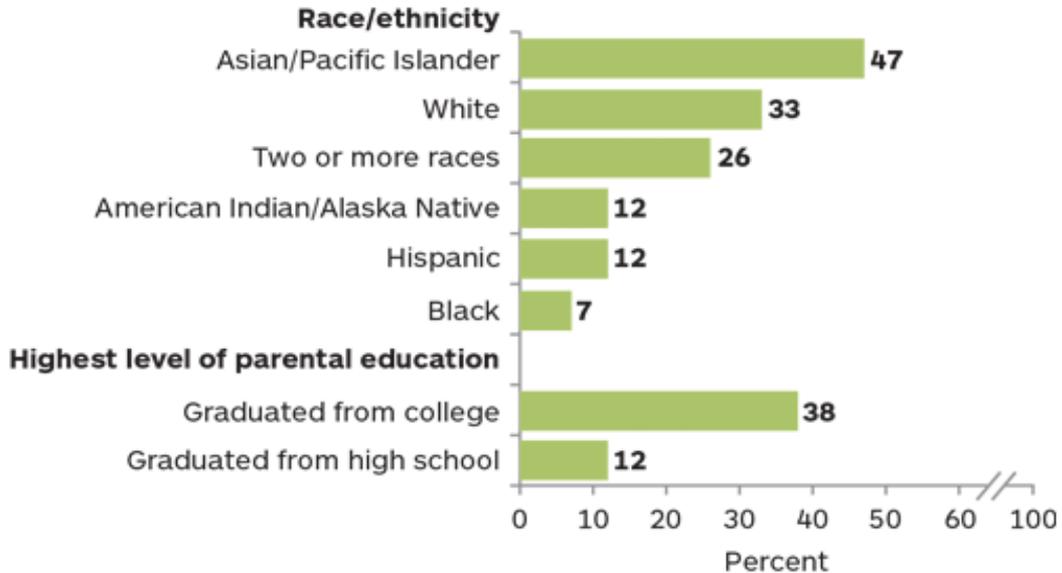
Percentage of students at or above the *Proficient* level in 2013

## OVERALL



## SELECTED STUDENT GROUPS

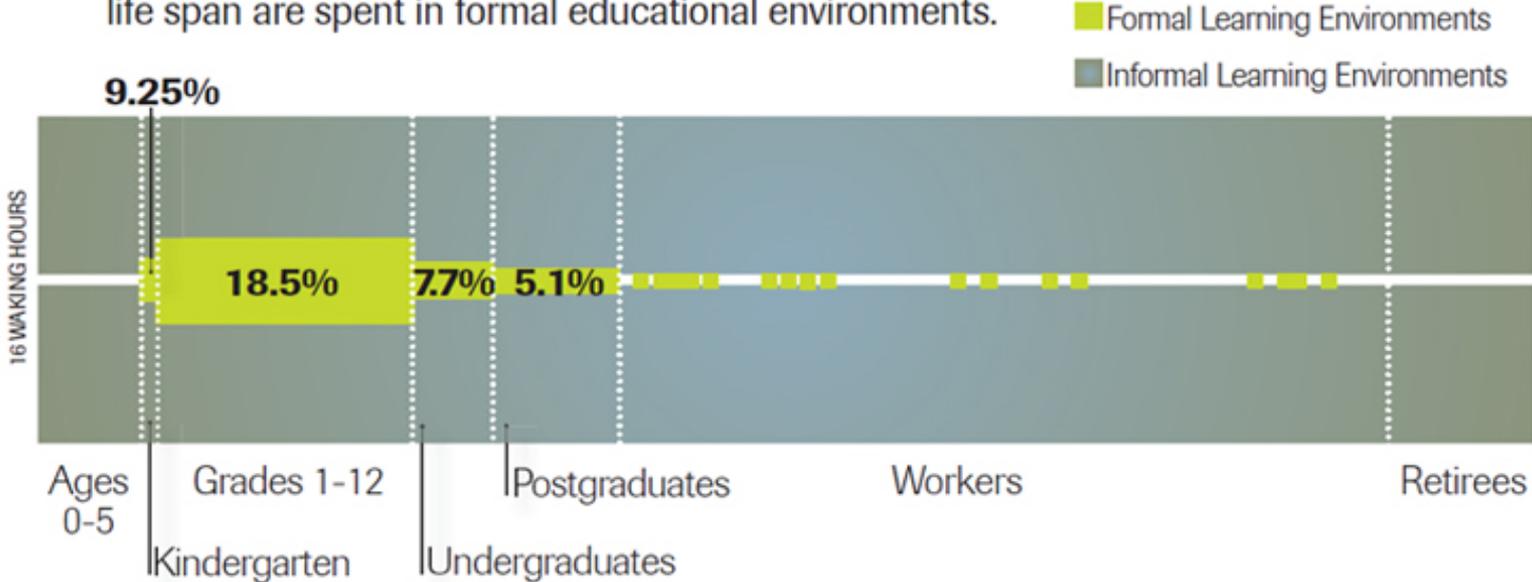
### Mathematics



# OUT-OF-SCHOOL TIME

## LIFELONG LEARNING

A relatively small percentage of waking hours across the life span are spent in formal educational environments.



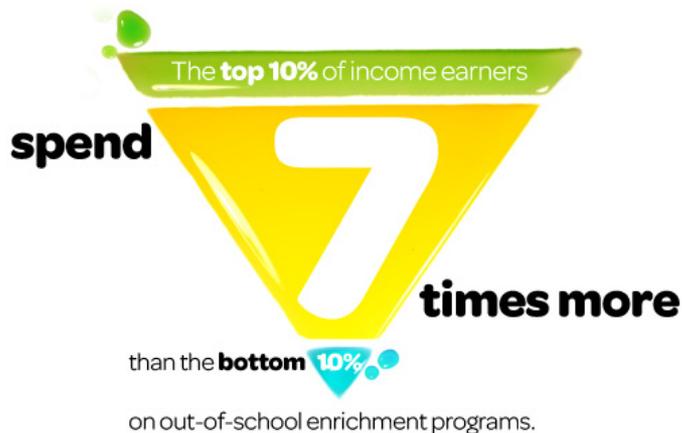
SOURCE: Learning in Informal and Formal Environments Center

## Only 8.4 million K-12 children

participate in after school programs.  
18.5 million would participate if  
a quality program were available  
in their community. (Afterschool Alliance, 2009)

## Over 15 million school-age children

are on their own after school.  
Among them, more than 1 million  
are in grades K-5. (Afterschool Alliance, 2009)



**CLAlliance.org**

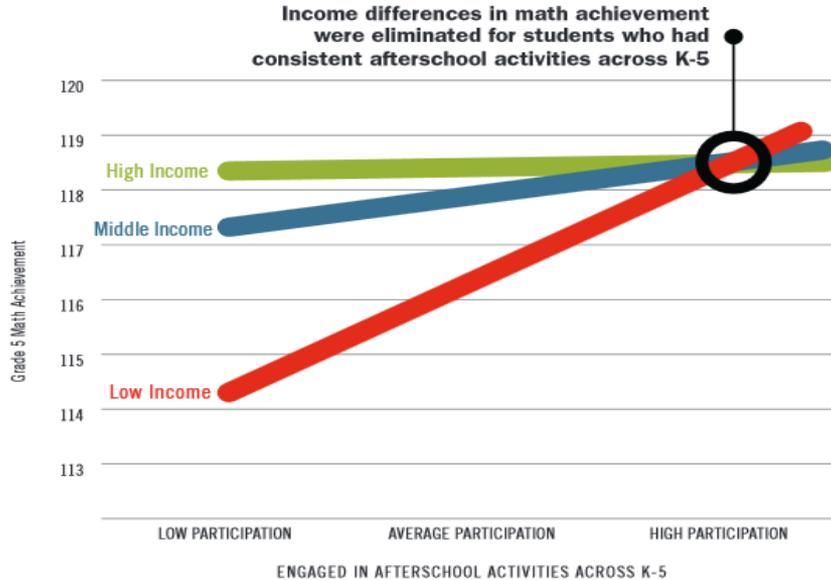


PRACTICE  
MAKES  
PERFECT

NEW RESEARCH SHOWS

# Afterschool Is a Real Solution Linked to Closing the Gap

## Afterschool Participation Narrows the Math Achievement Gap<sup>1</sup>



New research demonstrates that more consistent time spent in afterschool activities during the elementary school years is linked to narrowing the gap in math achievement at grade 5.

### What the data indicate:

- » When afterschool participation is highly consistent, there is no gap in low-income and high-income children's math achievement at grade 5
- » The more consistent the afterschool participation, the narrower the gap in math achievement
- » The more rarely students participate in afterschool activities, the wider the achievement gap

1. Pierce, K. M., Auger, A. and Vandell, D. L. (April, 2013). *Narrowing the Achievement Gap: Consistency and Intensity of Structured Activities During Elementary School*. Unpublished paper presented at the Society for Research in Child Development Biennial Meeting, Seattle, WA.

**WE NEED TO COOK!**



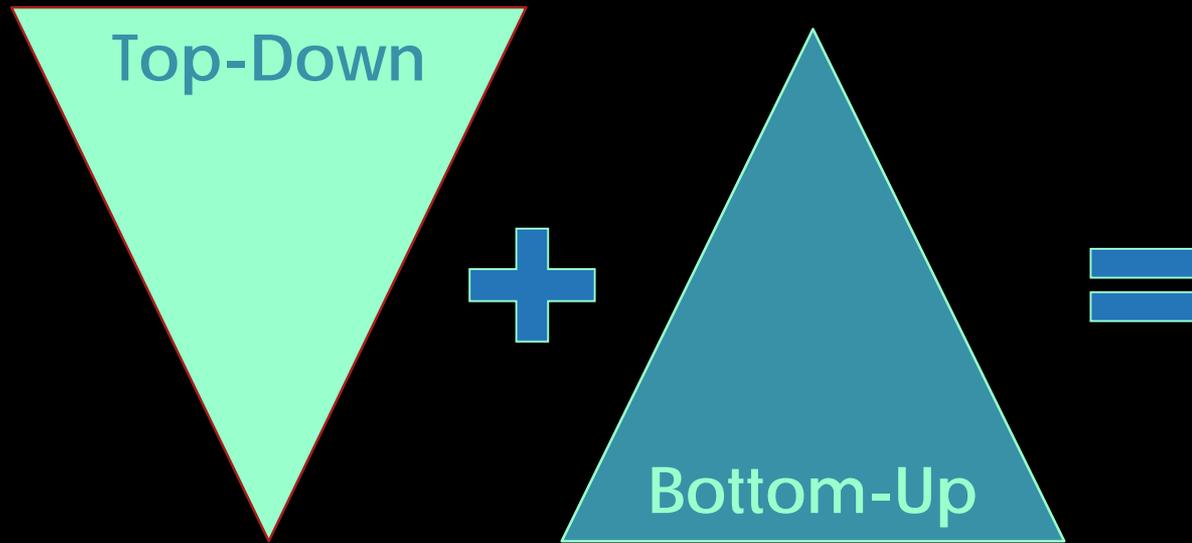


★  
Year 1  
★  
Year 2

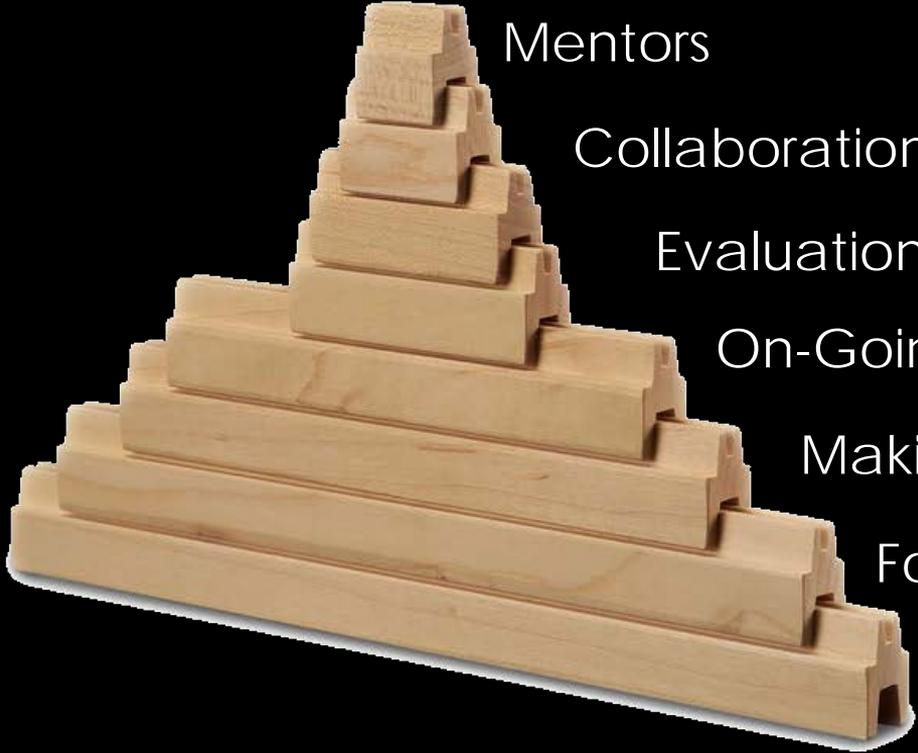




# A DUAL APPROACH



# BUILDING BLOCKS



Mentors

Collaboration

Evaluation Tools

On-Going Support

Making Kits & Materials

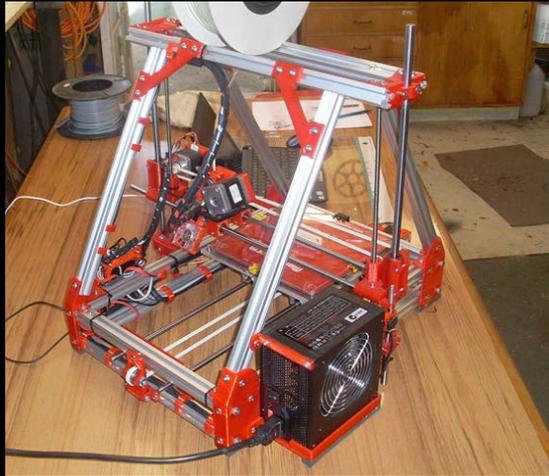
Focused, Hands-On Training

# START WITH TEENS

## ELECTRONICS KITS



## E-TEXTILES



## 3D PRINTING & DESIGN

## EDVENTURES! ROBOTICS

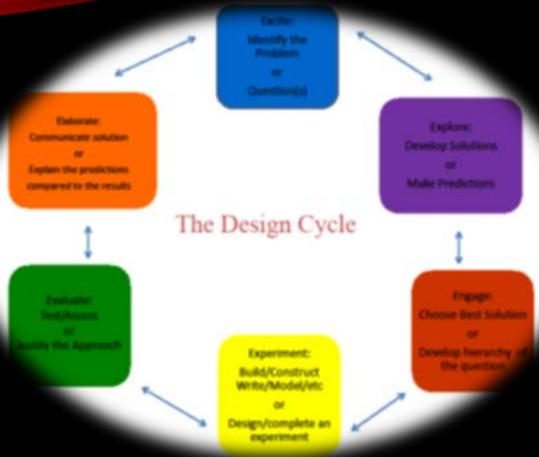


## FISCHERTECHNIK®



# TRAINING IS KEY!

- Foundational work
- Hands-on with real tools
- Responsive to needs
- Relevant to outcomes





# WHO DO YOU HAVE?



Small communities are often a wealth of individuals with special interests and skills.

# WHAT DO YOU HAVE?

## Two libraries, same program: Recycled Art

- Post Falls – population of 28,000
- Library is approximately 22,000 square feet
- Spirit Lake – population of 2,000
- Library is approximately 5,000 square feet



Meeting room  
at Post Falls:  
capacity 88



Meeting room  
at Spirit Lake:  
capacity 23

# BUILD IT!

- Weekly after school program targeting elementary-age children.
- Offers a place to free-build and create with a variety of materials.
- LEGO drive, donations, ICfL, and Friends' grants made this program happen!



# POST FALLS PROGRAMS



Cooking with Chef Guido



Outreach at high school with 3D printer



Woodland Fairy Houses



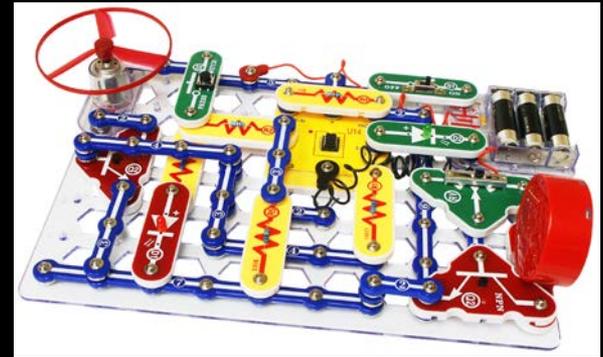
# SPIRIT LAKE PROGRAMS

- Science Saturdays
- Cardboard Challenge
- Pottery Making



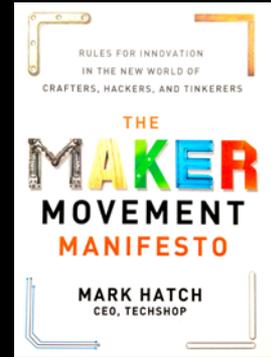
# LOOKING AHEAD

- *Maker Teens* - monthly program
- Stealth programming
- Additions to *Build It!*



# RESOURCES

Start a Young Makers Club  
<http://youngmakers.org/>

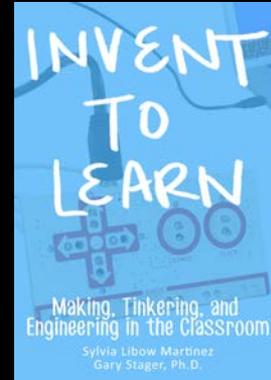


PBS Design Squad  
<http://pbskids.org/designsquad/parentseducators/index.html>

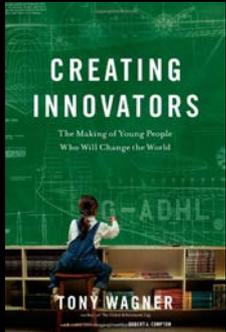


Make Magazine: Great Resource, Great Ideas!!

Steve Spangler Science Experiments and Explanations  
<http://www.stevespanglerscience.com/lab/experiments>



Instructables Build Nights  
<http://www.instructables.com/howto/build+nights/>



Pinterest Make it @ your Library  
<http://www.pinterest.com/makeitlib/>

# FORMAL PROGRAMS



**Bridge Challenge**  
Structural Engineering & Critical Thinking

**LEGO® Pinball**  
Machines Use Levers



**Life-Size Angry Birds**  
Fosters Creativity!



**Zhu-Zhu Pet Battles**  
Involved Problem Solving

**Fischertechnik® Carnival Ride**  
Explores Force & Gravity



# NOT JUST TECHNOLOGY!



Meet the Sheep!



Washing wool



All about shearing



Final product!

# RE-CYCLE AND RE-USE!

## Boat Race Challenge



Problem-Solving, Innovation, & Creativity

# MORE IDEAS...

Get started faster through organization



Think outside the box!

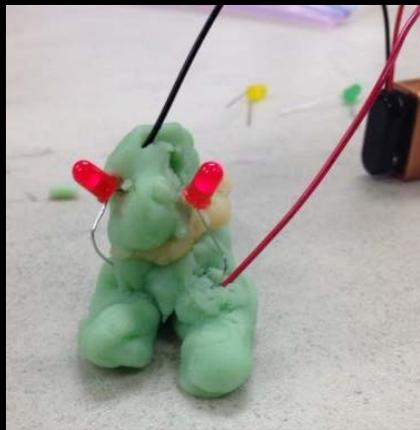


Seek out mentors and community partners



Generate interest through displays

# MORE IDEAS...





Young Makers  
in N. Idaho



## Star Wars Cardboard Challenge for the Whole Family!



## Maker Kits for Check-Out

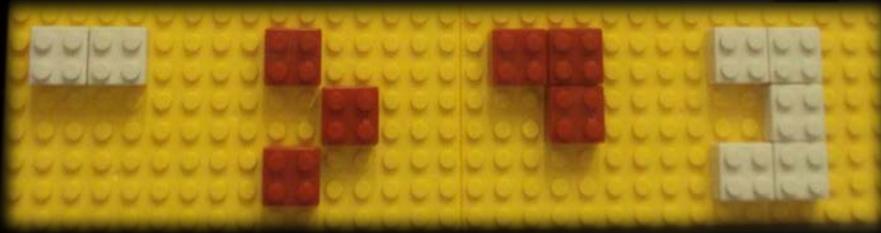


**RESPOND TO COMMUNITY NEEDS**

# STEALTH PROGRAMMING



Build a hedgehog!



Write your name in Braille using bricks...



Challenge: Build model, snap a picture, post information, be entered to win!

# STEALTHIER...



# MAKERS NOT SPACES...

Any place can be a  
maker space!



Develop makers...the space  
will come!



# TEMPORARY MAKERSPACES



Check out this video on youtube to see a timewarp of a Meridian Maker program.

<https://www.youtube.com/watch?v=3iZP7Eujgjk&feature=youtu.be>

# EVALUATION & RESULTS

- Pre & post survey for teen participants
  - Skill acquisition, attitudinal and behavioral changes
- Reports from libraries
  - Program details, attendance, partnerships, marketing, attitudinal changes, space planning, next steps

## Impact in 2013 Year One...

- 4,650 teens and tweens engaged through outreach
- 3,585 attended library programs
- 18 partnerships through 66 events

# HIGH POINTS

- Staff gained confidence
- Encouraged new thinking about:
  - Space
  - Collections
  - Programming



- Expanding beyond the library walls
- Developing our "brand"
- Embracing innovation
- Building strong partnerships

# YEAR TWO PLAN

## Replicate Year One Format

- Same Tools
- Same Training
- Same Expectations & Requirements

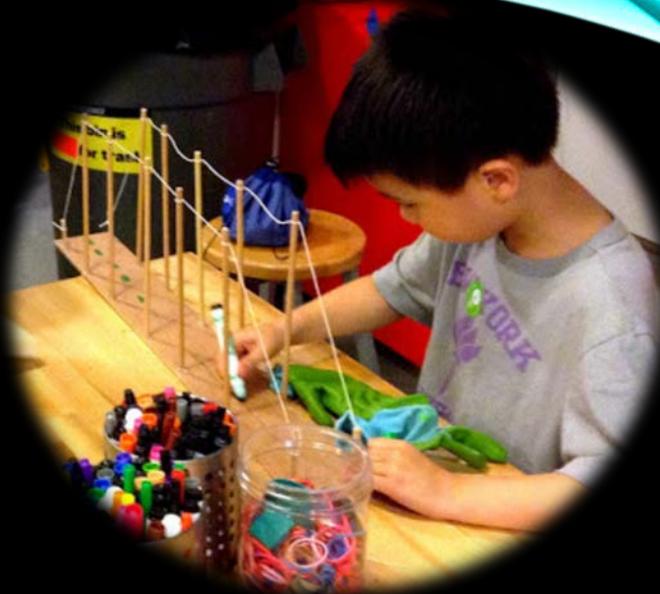
## Returning libraries

- One additional staff trained
- Act as mentors for new libraries
- Choose new tools & materials to expand programming



**Building a network of makers with skills & tools to support one another and their communities!**

# Pre-K Project



◆ Have fun with  
**mA+h** & **SCIENCE**





# SPREADING THE WORD

Facebook: [www.facebook.com/MakeItIdaho](http://www.facebook.com/MakeItIdaho)

Website: [libraries.idaho.gov/make-it-idaho](http://libraries.idaho.gov/make-it-idaho)

## Presentations:

- American Library Association annual conference
- Afterschool Alliance webinar
- Association for Small & Rural Libraries conference 2013, 2014
- Idaho Library Association conference 2013, 2014
- *Innovation in U.S. Libraries* video conference – Paris, France 2013
- Pacific Northwest Library Association conference 2013, 2014
- 2014 IMLS WebWise *Anchoring Communities* Conference, Baltimore, 2014
- 2014 IMLS Summit, San Francisco 2014
- Mayors Conference, Louisville, October 2014

**Information - [erica.compton@libraries.idaho.gov](mailto:erica.compton@libraries.idaho.gov)**

QUESTIONS  
IDEAS  
INPUT  
?

