

Idaho MakerSpaces- Engaging Teens through Making

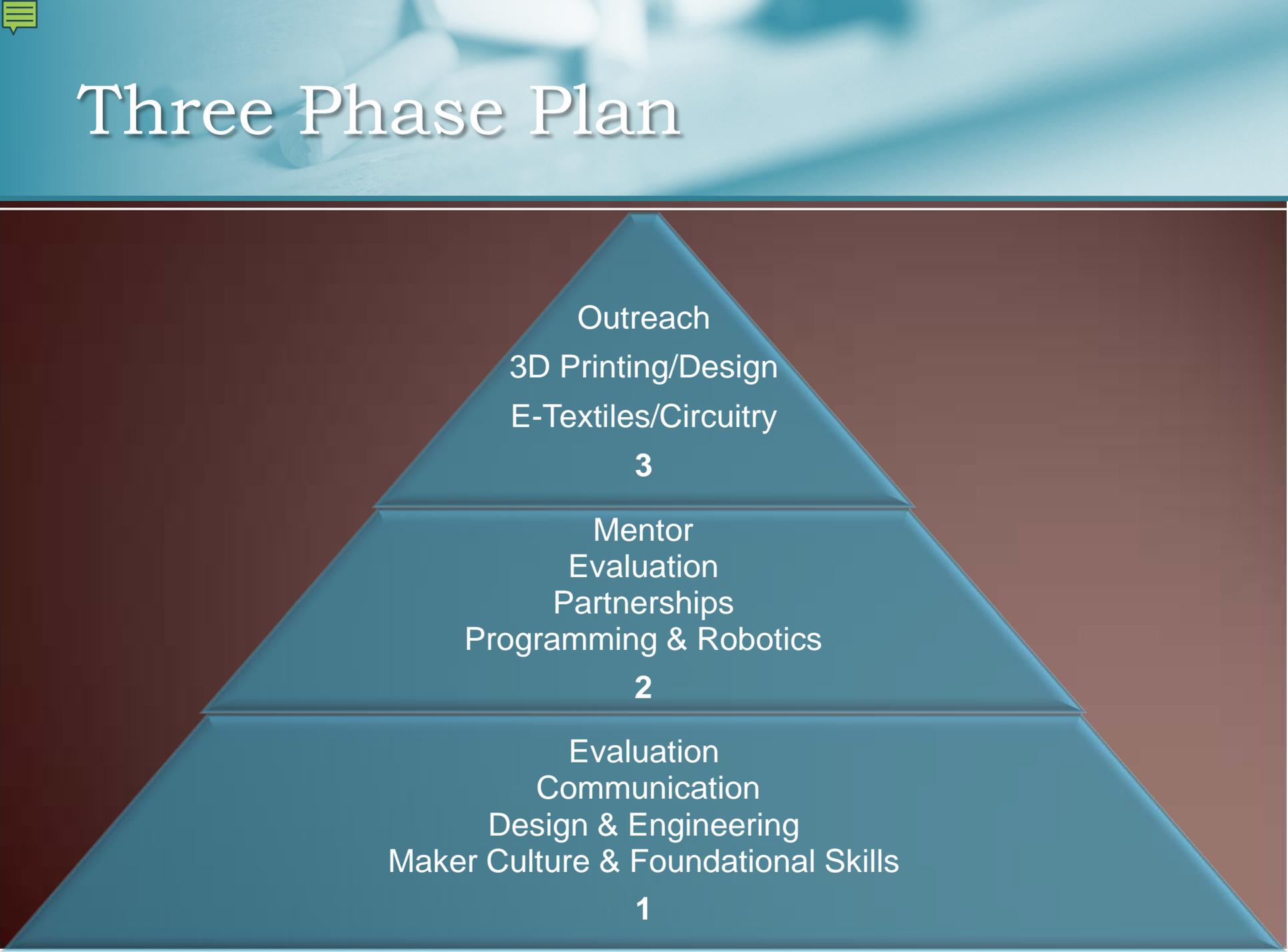


Why Library Makerspaces?



Make It at the Library



A pyramid diagram divided into three horizontal sections. The top section is labeled '3' and contains 'Outreach', '3D Printing/Design', and 'E-Textiles/Circuitry'. The middle section is labeled '2' and contains 'Mentor Evaluation Partnerships' and 'Programming & Robotics'. The bottom section is labeled '1' and contains 'Evaluation Communication', 'Design & Engineering', and 'Maker Culture & Foundational Skills'.

Three Phase Plan

Outreach

3D Printing/Design

E-Textiles/Circuitry

3

Mentor

Evaluation

Partnerships

Programming & Robotics

2

Evaluation

Communication

Design & Engineering

Maker Culture & Foundational Skills

1

Our Building Blocks – Cool Tools...

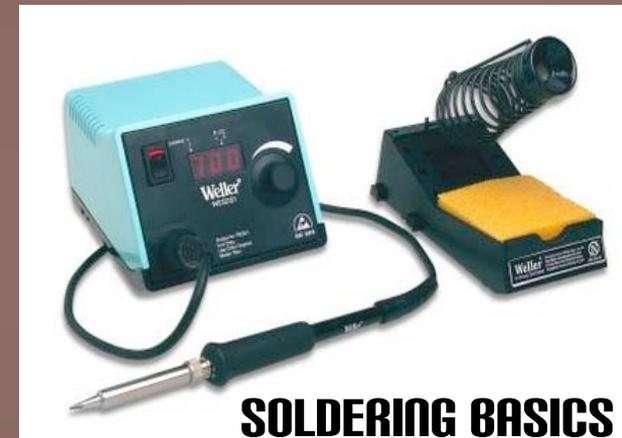
FISCHERTECHNIK®



ELECTRONICS KITS



PCS EDVENTURES ROBOTICS



SOLDERING BASICS

RECYCLED OBJECTS

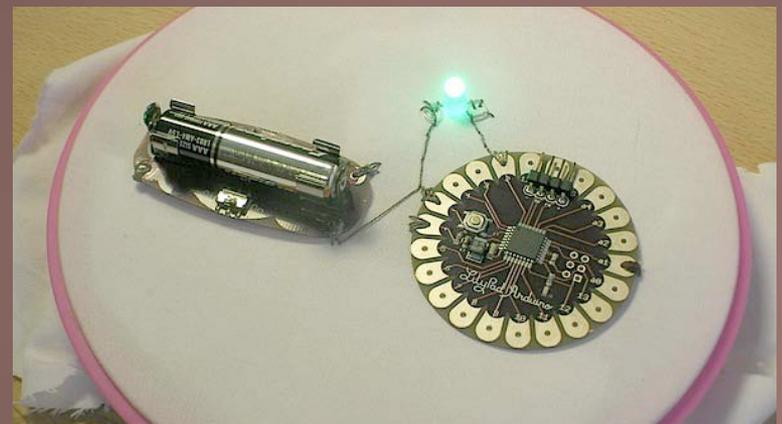


...And Cutting-Edge Technologies

November 2013



3D Design & Printing



E-Textiles & Circuitry

Training is KEY!



- Foundational work
- Phased-in slowly
- Responsive to needs

- Hands-on with real tools
- Relevant to outcomes
- Exploration time



And Builds Support



So What About Space?



Formal Programs



Bridge Challenge
Taught Structural Engineering
& Critical Thinking



Life-Size Angry Birds
Fosters Creativity!

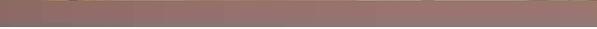
Zhu-Zhu Pet Battles
Involved Problem Solving



Fischertechnik® Carnival Ride
Explores Force & Gravity



LEGO® Pinball
Machines Use Levers



Not Just Technology!

Meet the Sheep!



All about shearing



Washing wool



Final product!



Re-Cycle and Re-Use!

Boat race challenge



Problem-Solving and Creativity

More Ideas...



Get started faster through organization



Generate interest through displays



All ages love to MAKE!



Seek out mentors and community partners

Think outside the box!

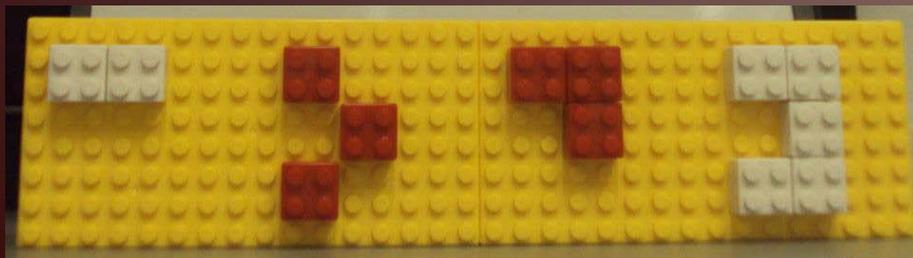


Stealth Programs



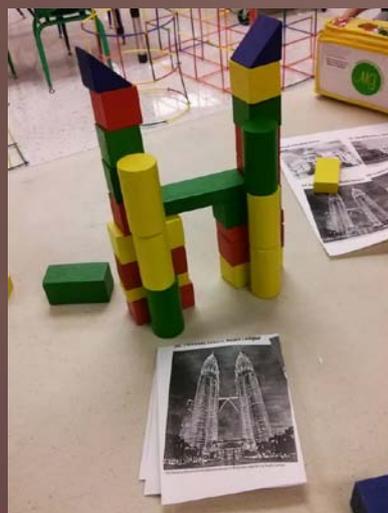
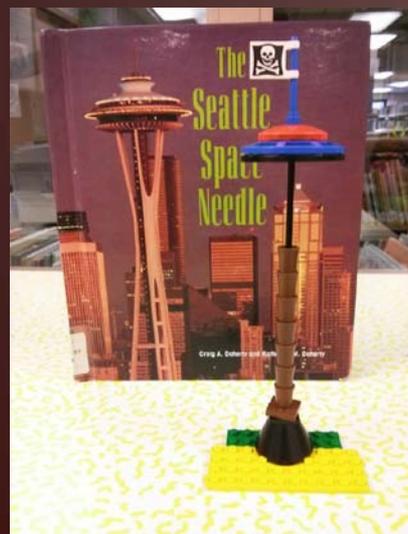
Build a hedgehog!

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



Write your name in Braille using bricks...

Stealthier...



Evaluation

- 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



High Points

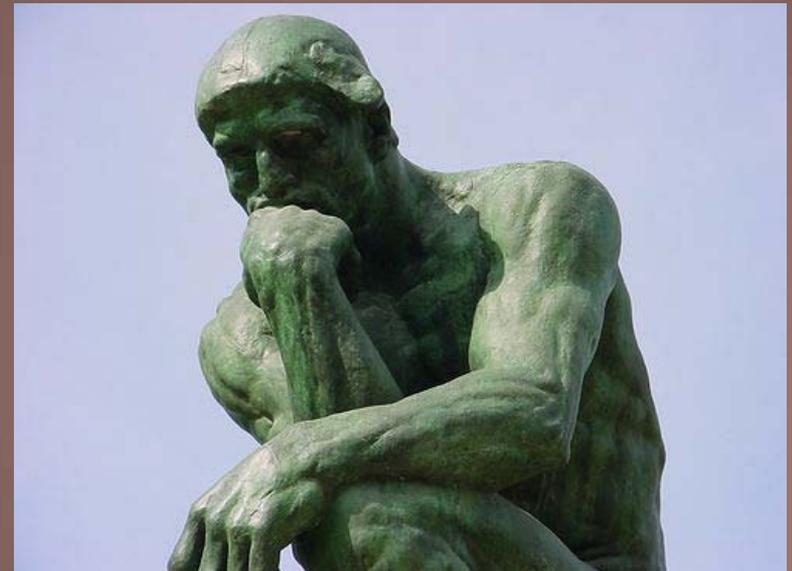
- Staff gained confidence
- Encouraged new thinking about:
 - Space
 - Collections
 - Programming



- Branch libraries on board
- National attention
- Positive feedback

Lessons Learned

- Relevant training is key
- Ongoing communication facilitates growth
- Flexibility is essential
- Unconventional ideas welcomed...and needed
- Prepare to adapt!





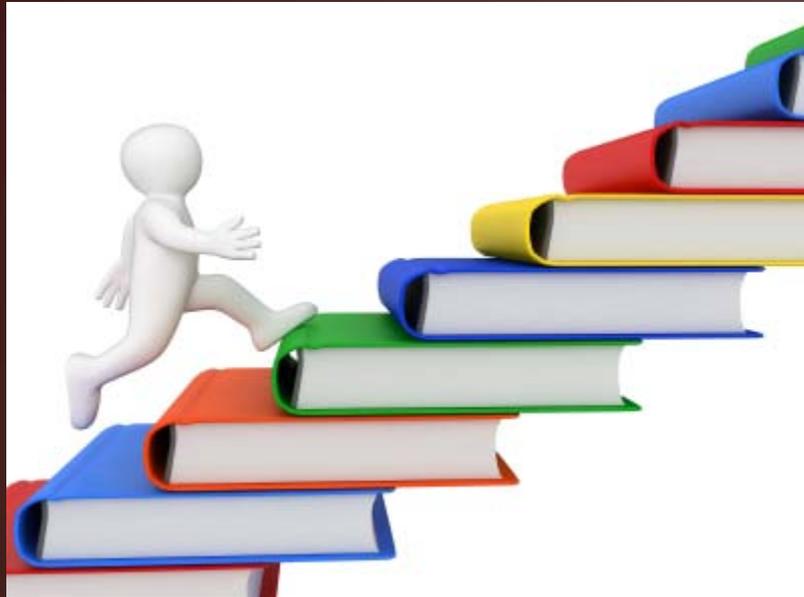
Challenges

SPACE

Inventory Management

Staff Buy-In

What's Next



- Open opportunity to new libraries
- Refine evaluation process
- Continue to spread the word

YEAR TWO

- Dedicated spaces
- Expand to branch libraries



What Will You Make?



Contact Information & Links



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Make It at the Library Facebook page
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Idaho Commission for Libraries' *Make It at the Library* webpage
<http://libraries.idaho.gov/page/make-it-library-where-idaho-makers-meet>