MAKING + LIBRARIES = STEM-TASTIC!
Session Objectives

1. To introduce participants to a variety of activities which foster critical thinking and creativity and to present new tools, technologies, and materials that can be used in out-of-school programming.

2. To share information and lessons learned from the Make It at the Library project.

3. To inform participants about the importance of making for children of all ages.
WHY... MAKING? LIBRARIES?
LIFELONG LEARNING

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

- Formal Learning Environments: 9.25%
- Informal Learning Environments: 18.5%, 7%, 5.1%

Source: Learning in Informal and Formal Environments Center
DEMAND IS HIGH

More youth than ever before—
10.2 million
—are in afterschool programs.

For every child in a program,
2 are waiting to get in.

NEW RESEARCH SHOWS

Afterschool Is a
Real Solution Linked
to Closing the Gap

Afterschool Participation Narrows the Math Achievement Gap

Income differences in math achievement were eliminated for students who had consistent afterschool activities across K-5.

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.

Year 1, 2013  5 libraries
Year 2, 2014  6 libraries
Year 3, 2015  10 libraries
LEARNING THROUGH DOING

CONSUMER → PRODUCER

NOVEL APPLICATIONS OF TECHNOLOGIES

OPEN SOURCE & FREELY SHARED

PEER-LED & SHARED LEARNING
**HOW**

1. **Foundational Knowledge**
2. **Technical Skills**
3. **Tools, Kits, & Equipment!**
4. **Mentoring & Support**
SQUISHY CIRCUITS FUN

Teaching Basic Circuits
http://courseweb.stthomas.edu/apthomas/SquishyCircuits/PDFs/Circuit%20Basics.pdf
3D DESIGN & PRINTING
WHAT HAVE WE LEARNED?

Making activities engage all ages

It is easier than many staff thought!

Fosters collaboration among patrons

IT’S FUN!

...(And when kids are having fun, they are most open to learning!)

Helps build new partnerships

Making can happen ANYWHERE!

Can be VERY cost effective!
RESOURCES

Libraries.Idaho.gov/make-it-idaho

bostonchildrensmuseum.org/sites/default/files/pdfs/STEMGuide.pdf

pbs.org/wholechild/providers/play.html

Maker Education Initiative

ecrp.uiuc.edu/beyond/seed/katz.html

makeymakey.com/guides/

makerkids.ca/
WHAT WILL YOU MAKE?