

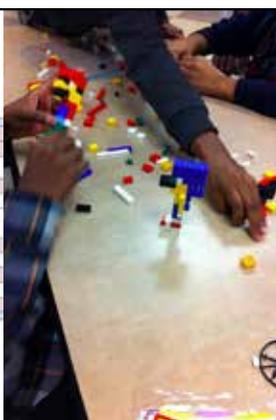


Making Maker Learning

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Slides:
makinglibraries.si.umich.edu

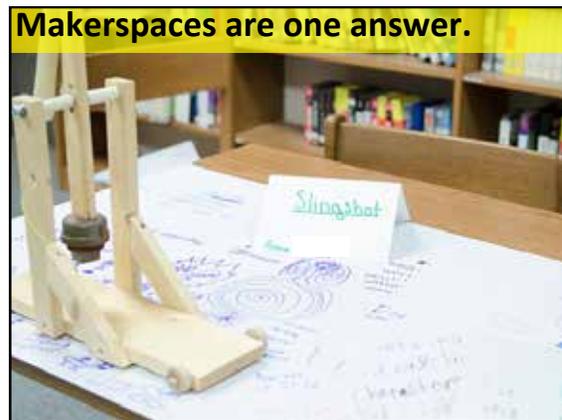
Tuesday, May 10, 9:30 – 4:30,
Benton Harbor Public Library
(includes slides added to during workshop)



Slide	Text	Notes
1	hello.	
2	and you are?	
3	our approach	
4	string + pencil + index card	
5	string + pencil + index card	
6	string + pencil + index card	
7	string + pencil + index card	
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**String + Pencil + Index Card =
Our Opening Activity**





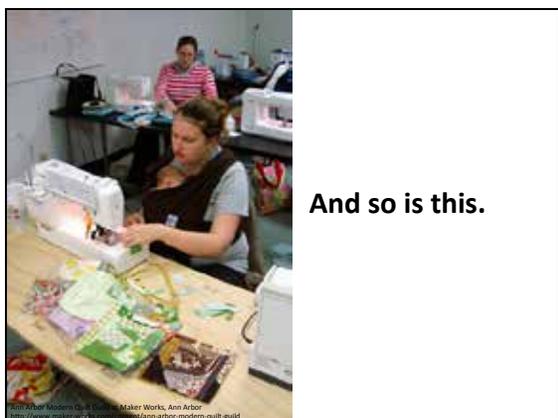
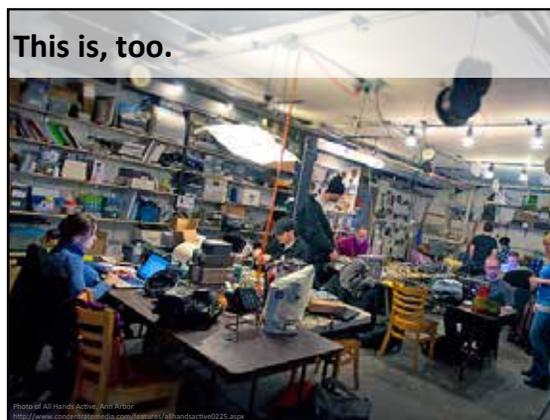
MAKE

Making is fundamental to what it means to be human. We must make, create, and express ourselves to feel whole. There is something unique about making physical things. These things are like little pieces of us and seem to embody portions of our souls.

LEARN

You must learn to make. You must always seek to learn more about your making. You may become a journeyman or master craftsman, but you will still learn, want to learn, and push yourself to learn new techniques, materials, and processes. Building a lifelong learning path ensures a rich and rewarding making life and, importantly, enables one to share.

<http://bit.ly/makermanifestochapter>





Parker Thomas,
<http://makezine.com/2013/08/11/key-qualities-for-a-school-makerspace/>

Tools
 +
 Support
 +
 Community

People
 +
 Process
 +
 Place

Dale Grover, Maker Works, Ann Arbor, Michigan

Parker Thomas,
<http://makezine.com/2013/08/11/key-qualities-for-a-school-makerspace/>

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EXPLORATION + FORMAL AND INFORMAL LEARNING +
 PEER LEARNING + EXPOSITION + CONTENT?

Dale Grover, Maker Works, Ann Arbor, Michigan

All this for 15 cents—
300 New Ideas
 300 New Pictures!

Do you know...

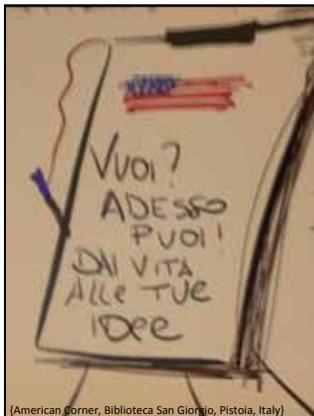
Making isn't new ...

APRIL Popular Science Monthly

On all Newsstands — get your copy today

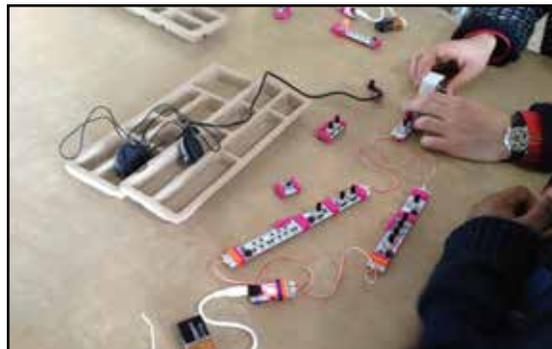
http://upload.wikimedia.org/wikipedia/commons/0/04/Popular_Science_Monthly_1916_Ad.jpg





Want to?
Now you can!
Give life to your ideas

(American Corner, Biblioteca San Giorgio, Pistoia, Italy)



No Two Makerspaces Are The Same.



Some Things to Consider ...



#1: Know Your Purpose Before You Buy Anything.

Entertain? Inform? Educate?

Enhance academics? Fill a void in academics?

Have one-off projects or build a community?

Welcome new makers? New services for existing makers?



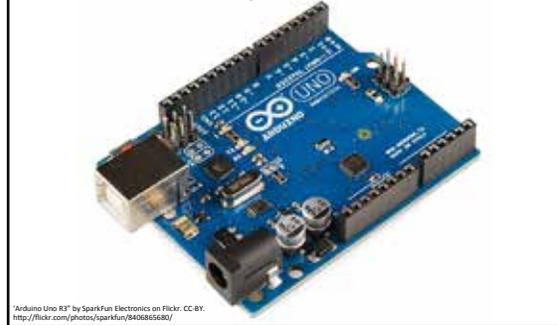
Example: Michigan Makers

- Create community around making
- Balance DIY exploration with guidance from mentors
- Create sustainability and replicability
- "Have something for every member of the family"

#2: Consider Short- And Long-term Projects (and start small).



3: Embrace Open – and Open Source -- Thinking.



Corollary: Look for Partners & Sherpas.



Corollary: Partner Skills, Too: Look For Mashups.

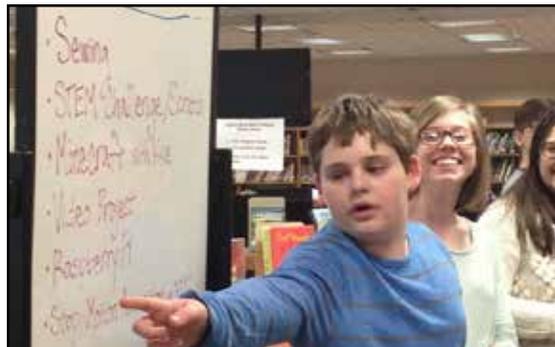


#5: Not all making is serious business.





Corollary: Sometimes, making allows for self-soothing and re-centering.



#6: Develop Peer Leadership.

Corollary: Redefine "Teacher" And "Learner."



Corollary: Match Mentors with Learners.

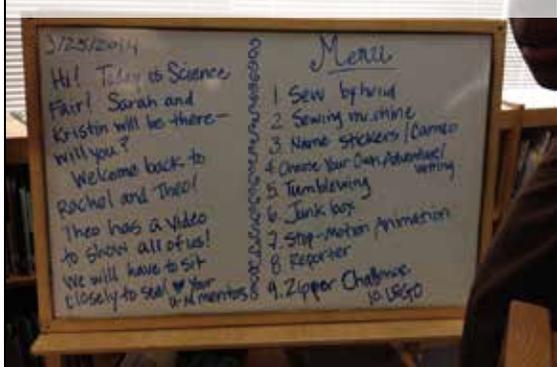


Marshmallow Towers



Egg Drop Challenge

#7: Think Windows And Mirrors.



#5: Think Windows And Mirrors.

There is something missing in our definition, vision, of a human being: the need to make.

We are creatures who need to make.

Because existence is willy-nilly thrust into our hands, our fate is to make something—if nothing else, the shape cut by the arc of our lives ...

Making is the mirror in which we see ourselves ...

Frank Biedart, "Advice to the Players," <https://harvardmagazine.com/1999/09/poetry.html>



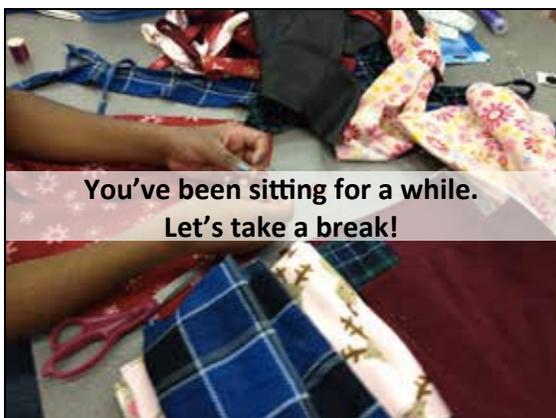
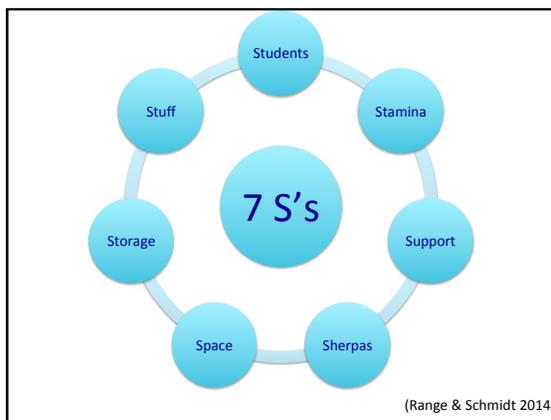
#8: Celebrate Daily Progress.



#9: Celebrate Long-term Progress.



Corollary: Celebrate by just making something.



**You've been sitting for a while.
Let's take a break!**

break until 10:50

slides at
<http://makinglibraries.si.umich.edu>

determining purpose

why does this matter?



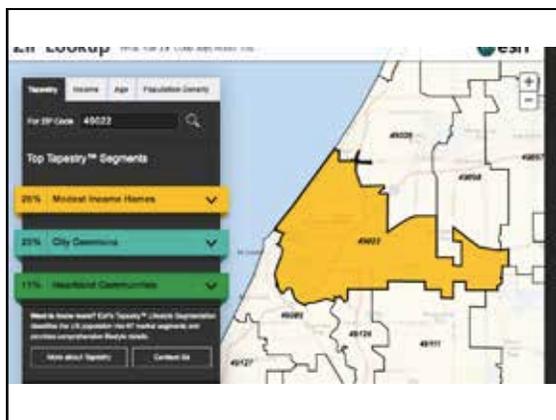
Our makerspaces hit the mark when makers are working from their “center of gravity”

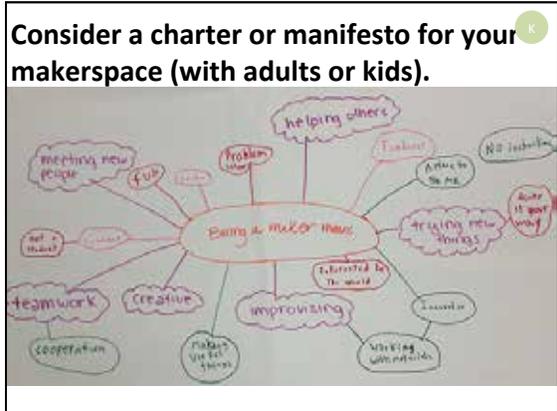
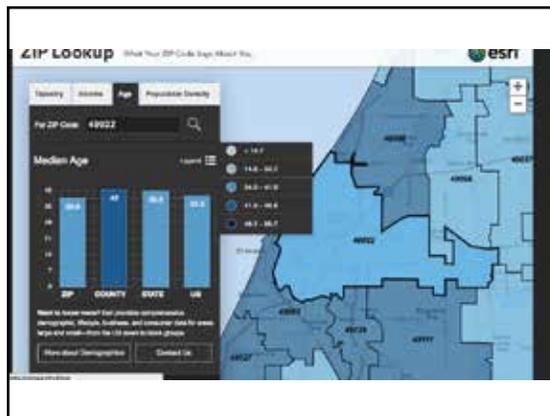
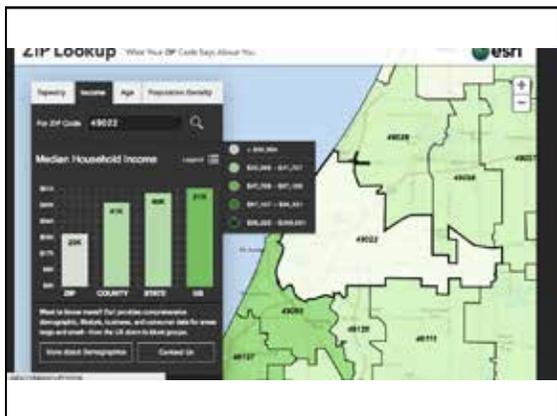
(Dewey 1900)



Mindset and culture come before the tools. What mindset do you want to develop in your patrons/learners? How do you know what folks want?

- Data Points**
- School Curriculum
 - Library Circ Patterns
 - Petting Zoos (pool your resources!)
 - Mel.org → Databases > DemographicsNow
 - ESRI Tapestry (<http://www.esri.com/landing-pages/tapestry>)





Based on _____, I see that our students/patrons need opportunities to _____.

Therefore, we'd like to launch a maker program that will give them the chance to _____.

In this program, we will prioritize _____.

We will know that we are successful if _____.

turn and talk.

connectedlearning.tv

ok.

now how do we structure this?



Some context!
For us, making prioritizes:

- Process** over product
- Agency** over teacher-directed work
- Choice** over following directions
- Experimental mindset** over "failure if it doesn't work the first time"

K



Remember our activity from this morning?

Free maker PD this summer statewide! makinglibraries.si.umich.edu
Today's slides: bit.ly/fontblog

M



Whose work stood out to you as being great?

What criteria did you use to determine whose was best?

If we were to **repeat** the exercise and **share** those criteria, what do you think might happen to the **range** of ideas we saw?

It's really **hard** to compare open-ended work, isn't it?

Design Challenges

- Common challenge for each student
- Open options for completion to give space for agency and choice
- Agreed-upon metrics for success
- Built on curriculum learning
- Preceded by direct instruction and/or interspersed with mini-lessons as needed
- Time limits serve to motivate creativity within constraints



#1 Design Challenge Seeds

- Design an **invention** that would fix _____
- Create a **prototype** that would _____
- Research and identify a **solution** that _____
- Create a **stamp/statue/logo/mascot** for _____ based on what you know about _____



#1 Design Challenge Examples

- We have studied how _____ influenced society by harnessing/inventing _____. What new global challenge do you see needing to be solved? Create a **prototype** for your solution.
- People with Parkinson's have difficulty eating soup because their hand shakes. **Research existing solutions** and design an alternative ...



Your Challenge! Break at 1pm

Individual Challenge	Group Challenge
<ul style="list-style-type: none"> • Create a sculptural representation of the theme or conflict of your favorite book or historical event. • Be prepared to explain the choices you made. • Use a sticky note to create a catchy title and informative subtitle, like this: Alone Among Others: A Key Social Theme in Hamlet 	<ul style="list-style-type: none"> • Start by collecting data from group members about something that new students struggle with at your school or library. • Use that data to focus on a single problem. • Brainstorm solutions. • Build a prototype. • Be prepared to explain the choices you made. • Use a sticky note to create a catchy title and informative subtitle, like this: Friend Tracker: An App to Help New Students Find Kindred Spirits

*Or ... create your own challenge and be ready to explain it to others.
Or ... be a group reporter!*

lunch 1-2pm

Assessment in design challenges can come from ...

- Product pitches
- Advertising copy for product
- Infomercials for product
- Letters
- Any of the other techniques

Gallery Walking

- ½ present, ½ view
- Consider half-page “Hamburger-style” table tents
 - Possible content:
 - What is the object?
 - What does the creator want the viewer to notice in particular?
 - I am proud of _____.
 - Keep to one sentence
 - In-process or after project completion

Maker Gallery Walk Guidelines

- Lend support, not critique
- Ask questions
- Listen intently
- Give advice only if asked for it

Gallery Walk until _____

- Framing gallery walk/exposition etiquette with kids
- Move your creation to the back of the dining hall (leave your workspace as is)
- Remember your caption! Fun title: Informative subtitle
- Take turns staffing your station



Artist Statements

Artist Statements Can Convey

- Purpose/intent
- Process (if succinct)
- Inspirations
- Unpacking of your thinking about the product you made

Great resource for your teaching:
<http://www.artbusiness.com/artstate.html>

Artist’s Statements at multiple points in process

Formative Assessment

- “Ticket out the door”
- Index card
- A few sentences or a paragraph
- Cloze sentences:
 - “The visuals I chose are meant to _____.”
 - “I chose this medium because _____.”
 - “The visuals in my slide deck are meant to _____.”
 - “I’m including this primary source image because _____.”

Summative Assessment

- Multiple paragraphs
- Extended thought
- Reflects on the finished product and on the process



Artist's Statement

This group of pictures was completely unexpected. I arrived in Italy last autumn as a Visiting Artist at the American Academy in Rome, with plans for a project involving facade-era beachfront architecture in Otricoli, and perhaps something unrelated engendered in the hazy postwar outskirts of Rome. But on our first day there I made my own pilgrimage to the Pantheon, one of my favorite places to be in Rome, and usually a primary destination.

A constant stream of visitors enters and exits the Pantheon all day. For the most part, they have their recording devices held high over head as they enter, foregoing the old-fashioned step of looking at something first, then photographing it. No, these pilgrims have their memories immediately formed into 10-digital data storage, safely encrypted for retrieval at some later date. There was something charming about it, something universal and soothing, not cerebral exactly but focused and intense, a kind of the divine in an otherwise mechanical world: Everyone gazing so intently into the scales, the eye of God. I fell into a rhythm, studying the screens of my own camera and watching for the moments of rapture and deep concentration, moving invisible from one subject to the next. I was lost in my own rapture, my mind quiet but for the occasional visit from the ghost of Walter Evers, whose pictures of subway riders during the early 1940s were never far from my thoughts.

The 40 photographs in this exhibition were made on four days in October 2012 with the Sony Nex-7 digital camera. I want to thank my wife Terry Hogan for her love and thoughtfulness, Daniel Leuck for his advice and assistance in many aspects of the exhibition, Lu Cimini, Craig Weiss, Elizabeth Johnson, Gad Wright, the Stanford University Department of Art and Art History, and the American Academy in Rome.

Joel Leuck, Robert and Ruth Halperin Professor in Photography, Department of Art & Art History, Stanford University.

Dedicated to my friend Richard Gordon.

Knowledge In the Room

- When introducing maker movement to teachers, will stay away from technology at the start. Start with crafts materials, then go to tech later.
- Started w/coloring and duct tape #coloryourcollections
- Use compasses & protractors to make coloring pages
- Writing as making (haikus on content topics)
- Kids who delete work before being done – easier for those who see kids daily to get done
- Oriental Trading Company? Depends on the situation. What about hacking the OTC kits in new ways?
- Abuse of materials? Limit what goes out, natural social consequences? Tape spoons/plastic flowers to pens/pencils?
- fabric stores, grocery stores castoffs

break

maker activity stations until _____

use your purpose statement as a lens through which to see tools that are a good fit

reflection, closure, next steps, evaluation

contactmichiganmakers@umich.edu
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This project is made possible in part by Institute of Museum and Library Services RE-05-15-0021-15.