INTRODUCTION TO MAKER SPACES

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WHAT IS A MAKERSPACE?

KNOW OF ANY?
http://joshandshelly.blogspot.com/2013/10/disney-world-trip.html

https://blogs.libraries.indiana.edu/ref/2015/10/09/legos-in-the-library/
ABOUT MAKERSPACES

• They’re locations where people with common interests can meet up, socialize, and/or collaborate.
• “idea incubators”
• Goal of “makers” is to share resources and knowledge to help each other build new things!
WHY ARE MAKERVICES VALUABLE?

- They promote and teach engagement;
- Foster play and exploration;
- Redefine users as creators;
- Teach needs-based skills;
- Support business & entrepreneurship
WHAT IS A MAKERSPACE?

A makerspace (also referred to as a hackerspace) is any location that is tied to a community and that focuses on creative experimentation between disciplines with a goal of developing creative people that can approach problems in a new way.
WHAT IS A MAKERSPACE?

http://www.opensourceclassroom.com/maker-space-home/
WHAT IS A MAKERSPACE?

http://sites.tufts.edu/ceeomakerspace/2013/08/06/storage/
WHAT IS A MAKERSPACE?

WHAT IS A MAKERSPACE?

http://castlemakers.org/whats-a-makerspace/
WHAT IS A MAKERSPACE?

http://thinksmartplan.com/wordpress/category/building-design-or-components/
WHAT IS A MAKERSPACE?

http://www.edutopia.org/blog/designing-a-school-makerspace-jennifer-cooper
WHAT IS A MAKERSPACE?

http://www.core77.com/blog/digital_fabrication/chicago_public_library_to_open_free_digital_fabrication_maker_space_25086.asp
WHAT IS A MAKERSPACE?

http://www.engadget.com/2014/12/06/techshop-inside-is-a-modern-shop-class-on-wheels/
WHAT IS A MAKERSPACE?

“Beyond engineering and STEM, this is about creating creative people.”

-Jeff Sturges of Detroit's Mt. Elliott Makerspace

http://www.alatechsource.org/blog/2012/12/what-is-a-makerspace-creativity-in-the-library.html
http://heartlandmakerfest.org/meet-the-makers-makerspace-urbana/
WHERE ARE MAKERSPACES?

http://spaces.makerspace.com/makerspace-directory
FORT HOUSTON

CREATIVE, INNOVATIVE, AND TECHNOLOGICAL RESOURCES FOR THOSE WHO WISH TO TEACH & THOSE WHO SEEK TO LEARN

http://forthouston.com/
STUDIO @ NPL

What is Studio NPL?

Studio NPL is a library space where teens can come and explore their passions and, through mentors, discover new passions! Become an inventor, problem solver, maker, musician, artist... these spaces are dedicated to providing welcoming and creative environments.

Where are the Studios?

- Green Hills Branch
- Southeast Branch (October 2014)
- Bellevue Branch (January 2015)
- Main Library (Coming Soon!)

More to come

http://nashvillepubliclibrary.org/studionpl/
Welcome to Project MACH: an original mobile makerspace that is brightening children’s days and improving patient care at Monroe Carell Jr. Children’s Hospital at Vanderbilt in Nashville, TN. Led by Founder & Project Lead Gokul Krishnan, this initiative has touched the hearts of the littleBits staff and we are honored to be part of their important and meaningful work.

http://littlebits.cc/community-spotlight-project-mch
DESIGN STUDIO (ENGINEERING)

https://my.vanderbilt.edu/designstudio/aboutus/

VANDERBILT UNIVERSITY
Where did we start?
3D but...

http://www.opensourceclassroom.com/maker-space-home/
SCULPTURES ARE 3D, HOW DO I...

- Capture?
- Manipulate?
- Store?
- Publish an online map with natively functionality in the browser?

http://news.vanderbilt.edu/2014/10/rare-korean-artifact-oct-9/
Capture

Photogrammetry
- Just need a camera and software
- Photoscan by Agisoft (EDU $60)
- Takes a lot more work to get a usable model but cheapest solution.

Consumer 3D Scanner
- Sense 3D, Fuel 3D, Hacked Kinects
- Start at around $300 (Kinects are cheap at pawn shops though)
- Easier, but they do produce softer models and have problems with certain objects.
Creaform Go!SCAN 3D
- Handheld
- High resolution color scans
- Very easy to use
- Pocket change at starting at $30K (hoping to find that pocket)
- Emits its own light so it must be from heaven
- On my Christmas list
NextEngine UltraHD 3D Scanner

The #1 Best-Selling 3D Scanner.

- Breathtaking Quality: Captures fine detail to 100 micron precision
- Extreme Flexibility: The choice of Industry & EDU in 90 countries
- Automated Simplicity: Scanning in thousands of schools & universities

The only 3D Scanner with a 100% Money-Back Guarantee

$2,995

NEW! 2016 Data

Compare Quality

SCAN IT! DEATH MASKS DREAMS OF THE UNBROKEN.
HISTORY ARCHAEOLOGY ORIGIN OF MAN
Makerspace ideals coming to a museum near you!

Manipulate

http://www.blender.org/

http://www.autodesk.com/products/3ds-max/

http://www.sketchup.com/
Store

- No clear standard yet so I would pick...
- STL. It seems to be the most popular but...
- OpenSIM liked DAE/COLLADA (why 2 names)...
- I have also seen OBJ a lot so maybe...
- X3D? First time I have ever seen that as a “popular” format...
- Best practice at this point is to save in multiple formats including the format native to the editor (BLEN for Blender, SKP for Sketchup).
WHAT ARE THE POSSIBILITIES?

COMING TO A VANDERBILT VRC NEAR YOU