

# Makerspaces and the Academic Library

Oregon Library Association Annual Conference  
18 April 2014, Salem Oregon  
Mellinger

# Makerspace Exploration

- Committee formed in Spring, 2013.
- Reviewed the literature
- Gathered information
- Site visits
- Considered local environment
- Consulted student users

# Defining Makerspaces

“... a physical location where people gather to share resources and knowledge, work on projects, network and build.”

Site Visit

# EUGENE MINI-MAKER FAIRE

Welcome to the

# SCIENCE FACTORY

Children's Museum & Exploration Dome



**Winter Hours:**

September - June,  
10 am - 4 pm,  
Wednesday - Sunday

**Summer Hours:**

July and August,  
10 am - 4 pm, Daily

**Planetarium Shows:**

Saturdays and Sundays

Closed on Oregon Home Football  
Game Days and Major Holidays





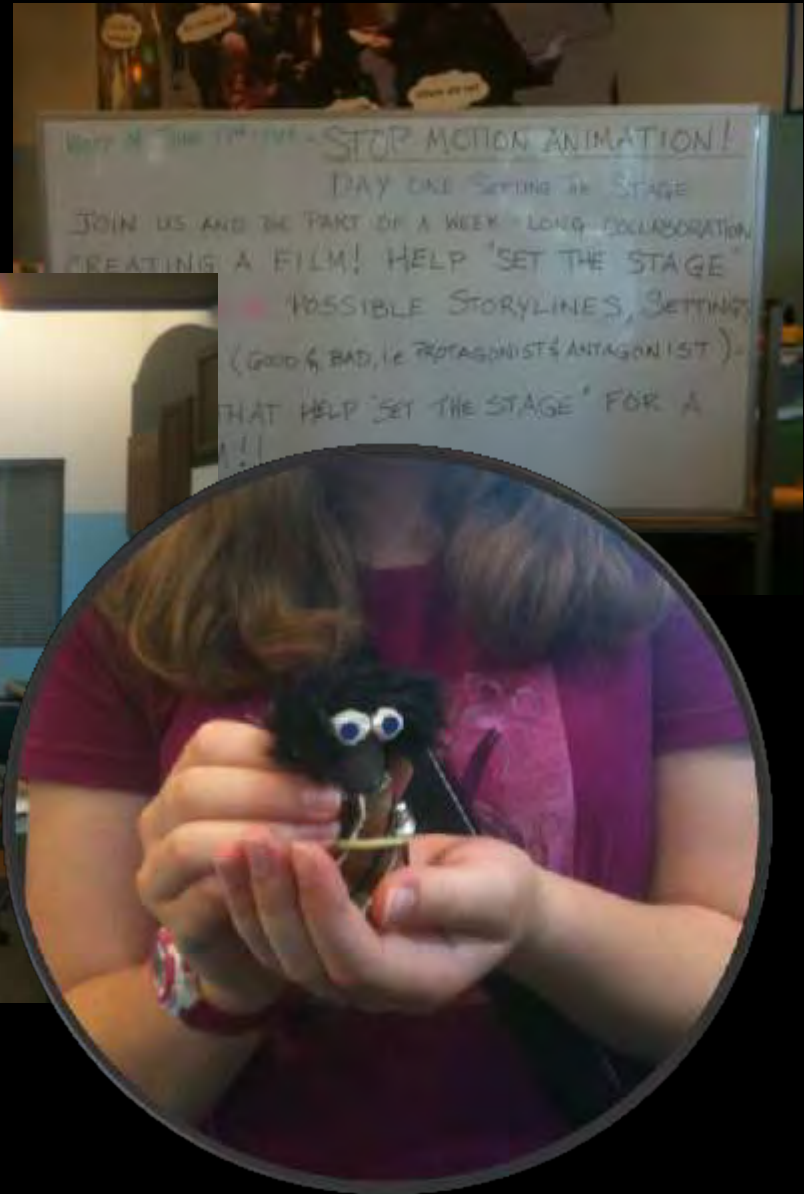






Site Visit

OMSI MAKER [ SPACE ]



Site Visit

ADX



Site visit

OSU CAMPUS

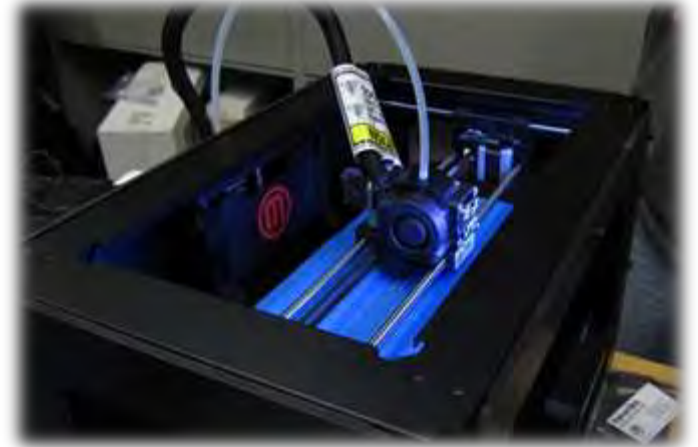




# What's already in place ?

- Craft Center
- Robotics Lab
- Mechanical Engineering Workshops
- Electrical Engineering 3D printer and Collaboratory
- **Austin Entrepreneurship Program “Garage”**
- Music & Technology Program
- STEM Education
- Saturday Academy

# What would students want?



# Attempts at funding

- ~~Technology Resource Fee proposal~~
- *End of year funding (possible)*
- Donations
  - So far, we've spent about \$4K
  - Not counting staff time 😊
  - Setting up a student fee structure

# Deciding on a Printer

Cube X



Makerbot Replicator 2





# First Steps

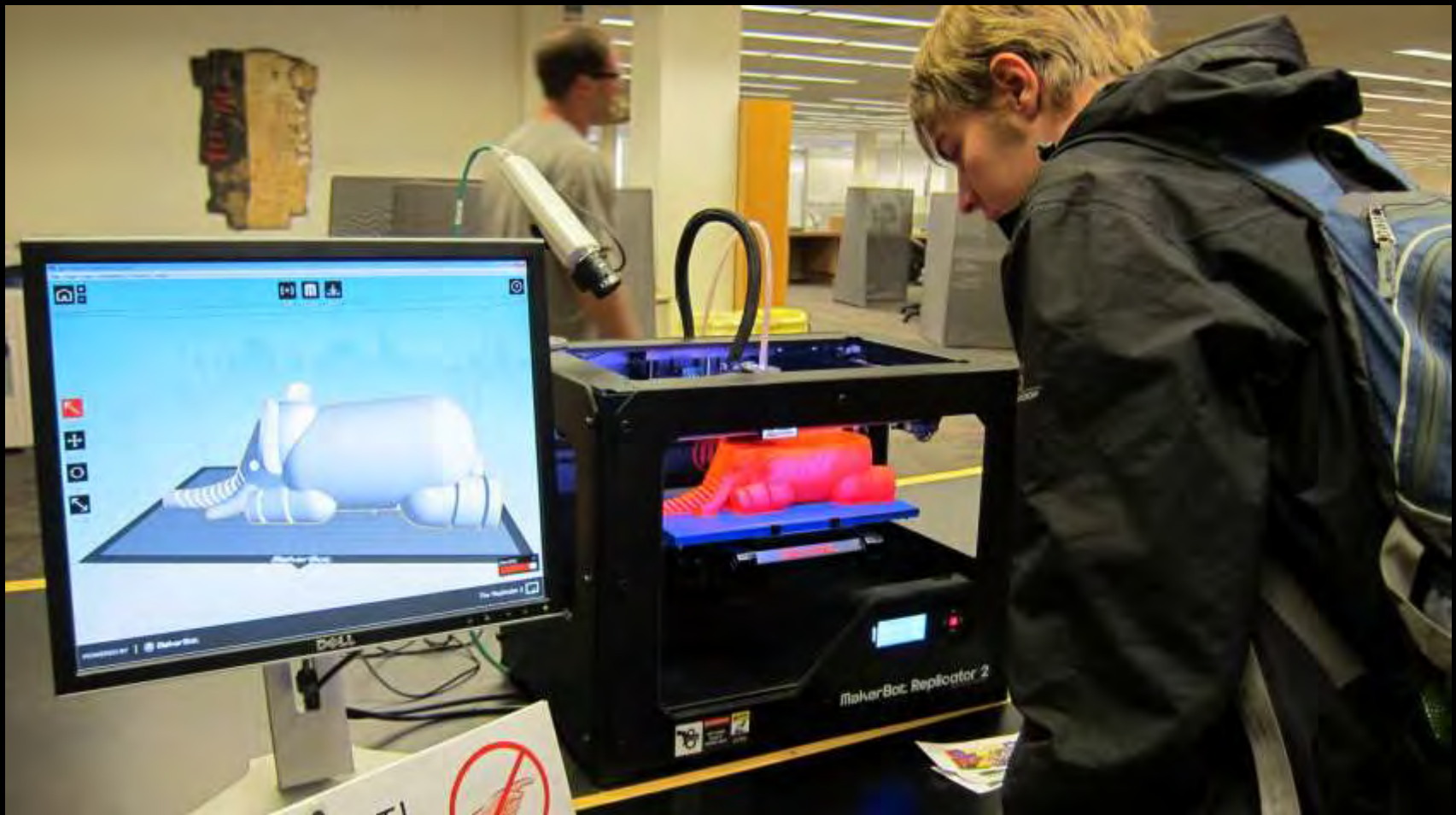
- Unbox! Hey, it works, let's print an octocat



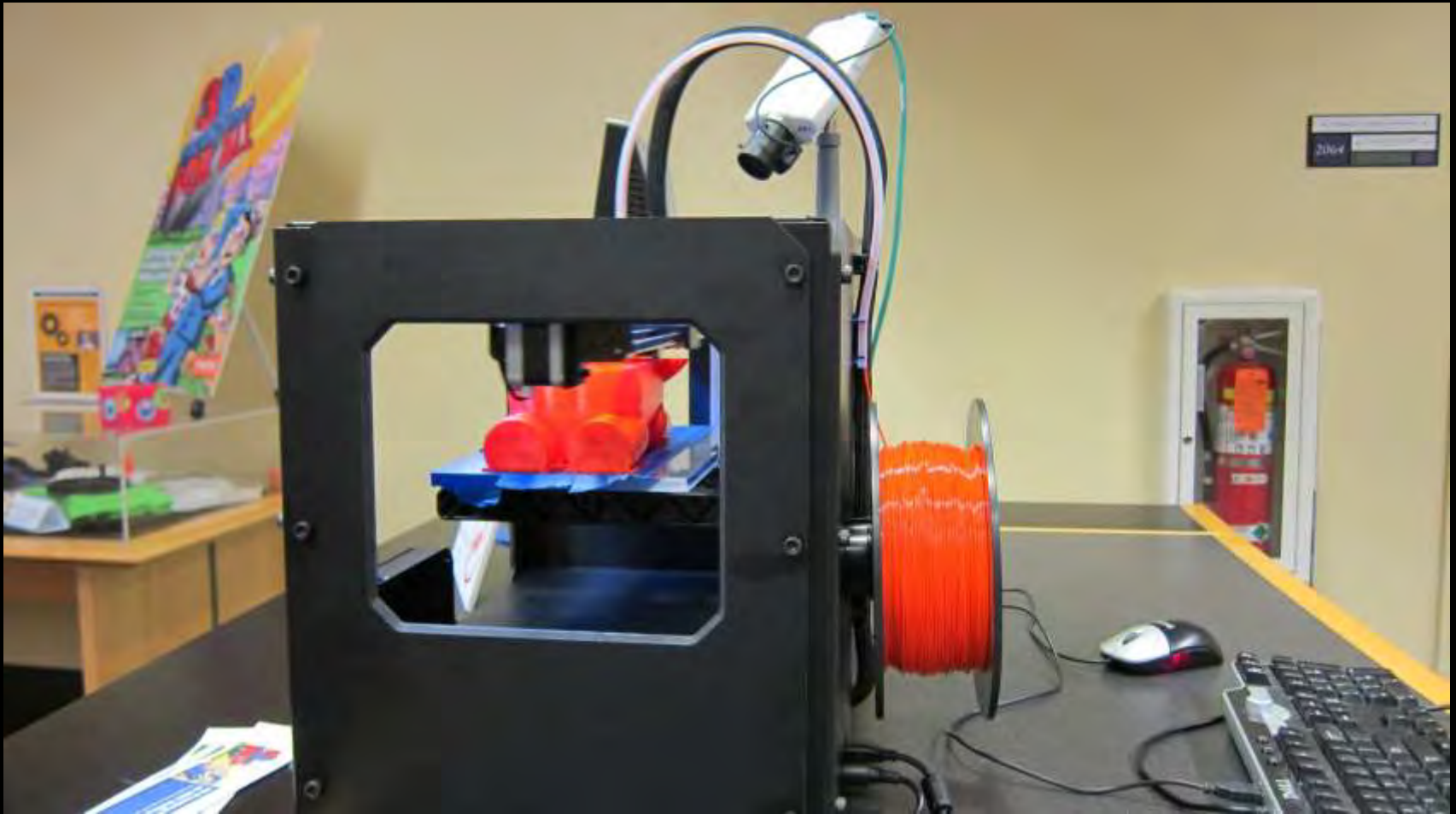
# First Steps, continued

- Practicing printing
- Talking with others on campus
- Extruder failed
- Fan began to fail
- Maker Care paid for itself

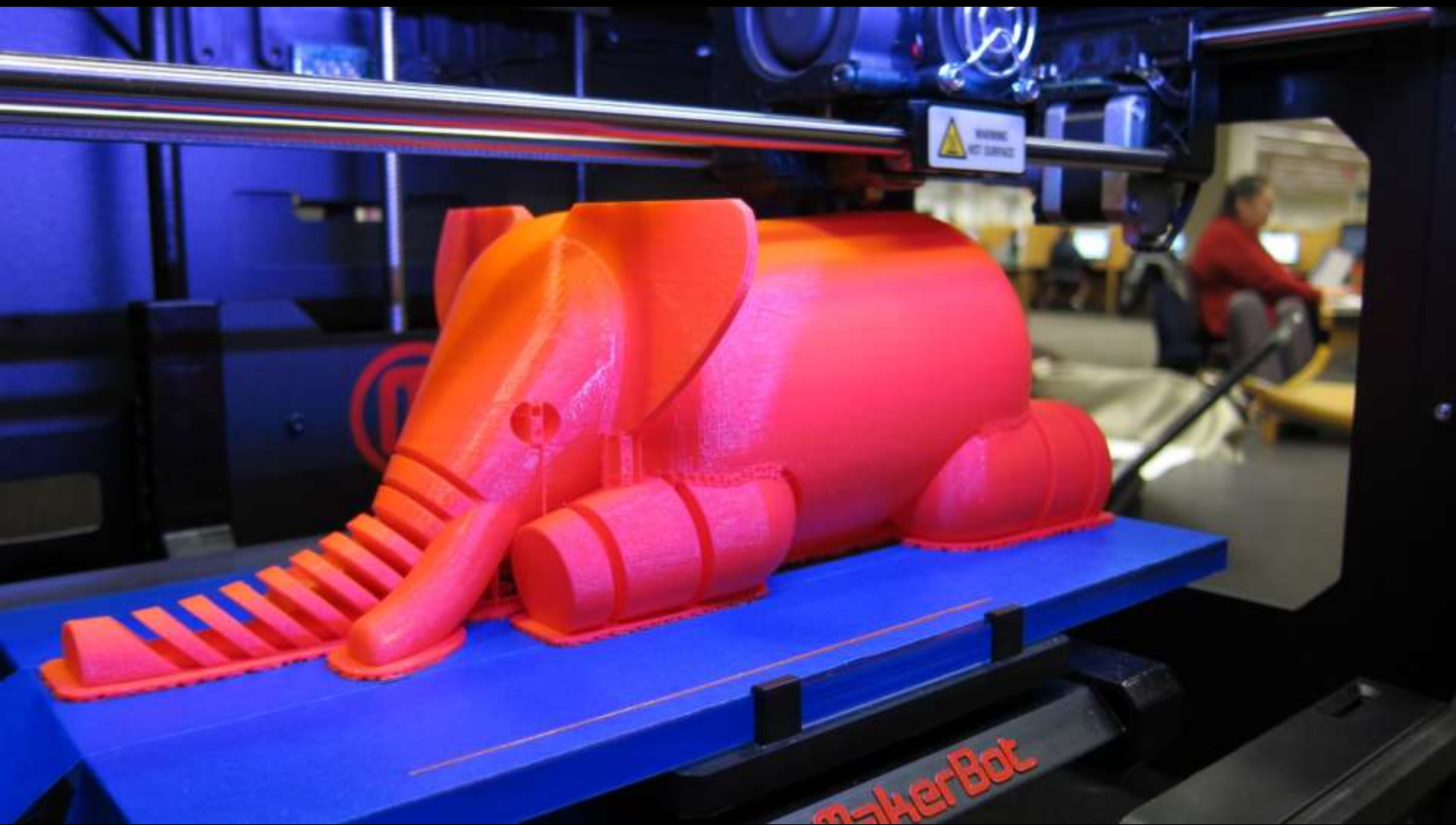
# Printer Launched 3/31/14



In the space that we have









Students love it



And another thing

ADDITIONAL ACTIVITIES

# Guide to 3D Printing

## 3D printing

A guide about where to find 3D printers and training at OSU.

[Home](#) [3D Modeling Software](#) [Free 3D models](#) [Valley 3D Printing Request](#) [Printer Policy](#) [Training & Workshops](#)

### 3D printers on campus

#### Announcements

3D Printing launched at the Valley Library on 3/31/2014. No tuition money was used to purchase this printer. During the Spring Term 2014 pilot phase, your first print job is free. Because of demand, we can print only one project per student during this time.

Announcement: 4/9/2014 The cooling fan is broken on the printer. It is fixed - we want to catch up a bit with the printing, so we'll open the print request form again on Monday 4/14.

#### 3D printed objects

- The orange elephant debuted on our webcam



#### 3D Printer Webcam



#### What is 3D printing?

3D printers use digital models to fabricate three-dimensional objects, a layer at a time. The process of 3D printing - called additive manufacturing or rapid prototyping in engineering and commercial settings - has been around for almost 30 years. Low cost 3D printers, do-it-yourself kits and open source software are

#### Librarian



Margaret Mellinger

#### Contact Info

Office Hours: Call or email for appointment  
Office Location: The Valley Library, 4th Floor  
541.737.9642  
[Send Email](#)

#### Links:

[Profile & Guides](#)

#### Librarian



# Printing Policy

## Purpose

The Valley Library desires to offer the OSU community access to emerging technologies such as 3D printers to inspire interest in design and help students bring their creations to life. This policy establishes how and under what circumstances the OSU community may use the Library's 3D printer.

Policy adapted from  
Sacramento Public Library

## Policy

The Valley Library's 3D printer is available to OSU students, faculty and staff to make three-dimensional objects in plastic using a design that is uploaded from a digital computer file.

I. The Valley Library's 3D printer may be used only for lawful purposes. No one will be permitted to use the Library's 3D printer to create material that is:

- a. Prohibited by local, state or federal law.
- b. Unsafe, harmful, dangerous or poses an immediate threat to the well-being of others. (Such use may violate the terms of use of the manufacturer.)
- c. Obscene or otherwise inappropriate for the Library environment.
- d. In violation of another's intellectual property rights. For example, the printer will not be used to reproduce material subject to copyright, patent or trademark protection.

II. The Library reserves the right to refuse any 3D print request.

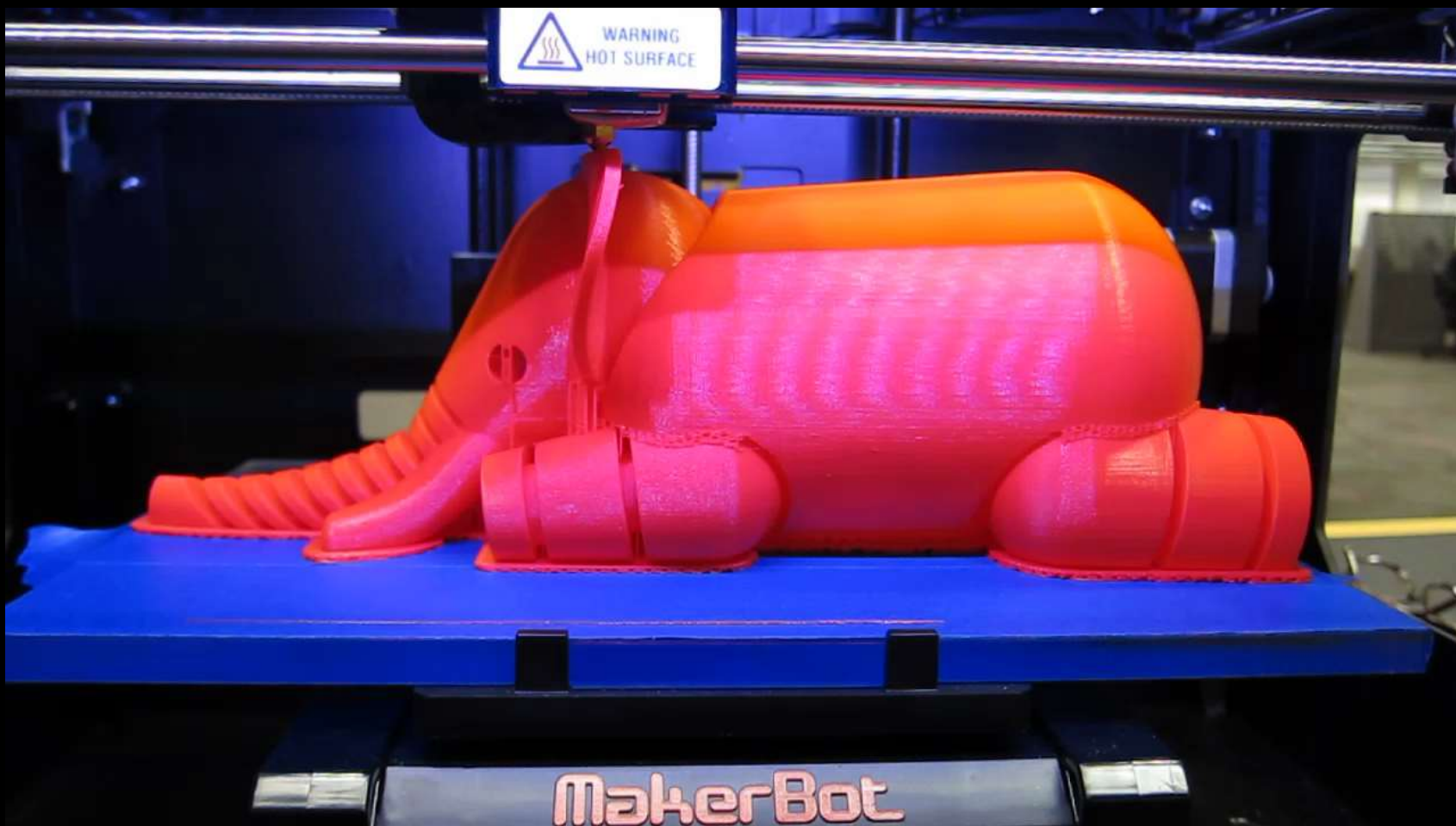
III. Cost: Your first 3D print at the Library is free until 6/30/2014. After that time, there will be a charge of 10 cents per gram of filament used in the printing process. 3D printing costs will be charged to ONID accounts.

IV. Items printed from the Library 3D printer not picked up within 7 days after being printed become the property of the Library. Items must be picked up by the individual who printed them, using an OSU ID.

V. Only designated Library staff and volunteers will have hands-on access to the 3D printer.



# Web Cam!

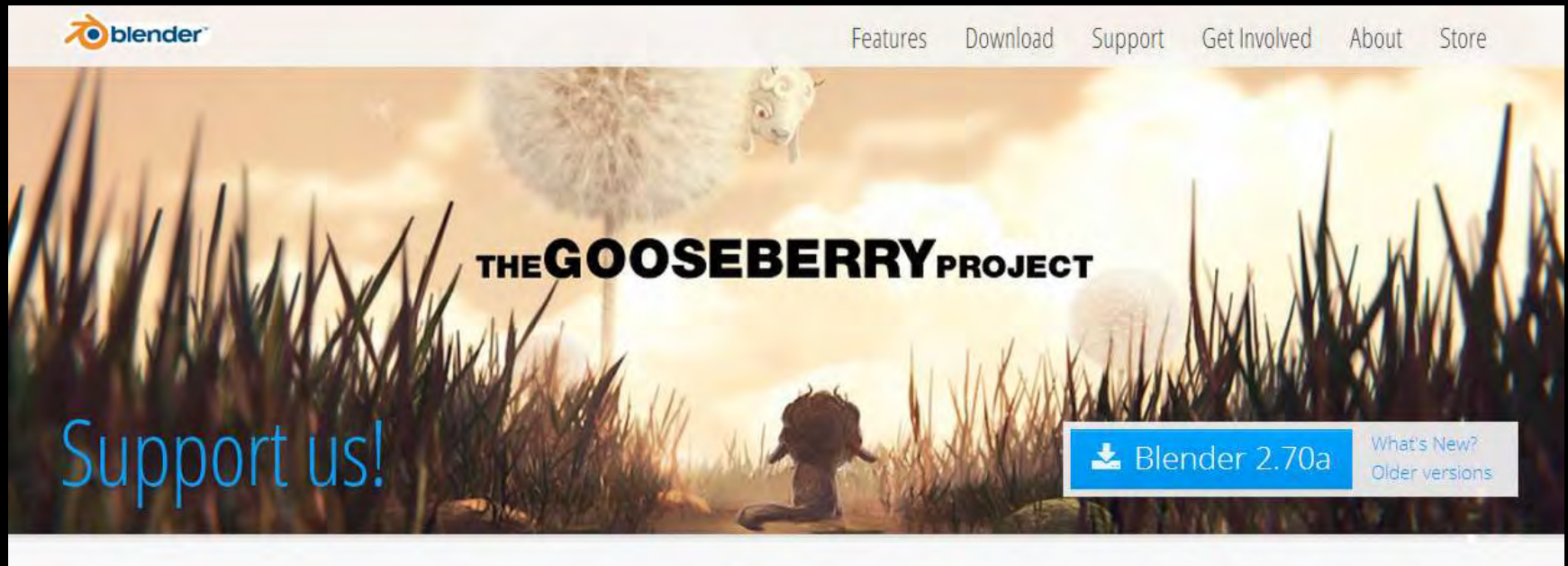




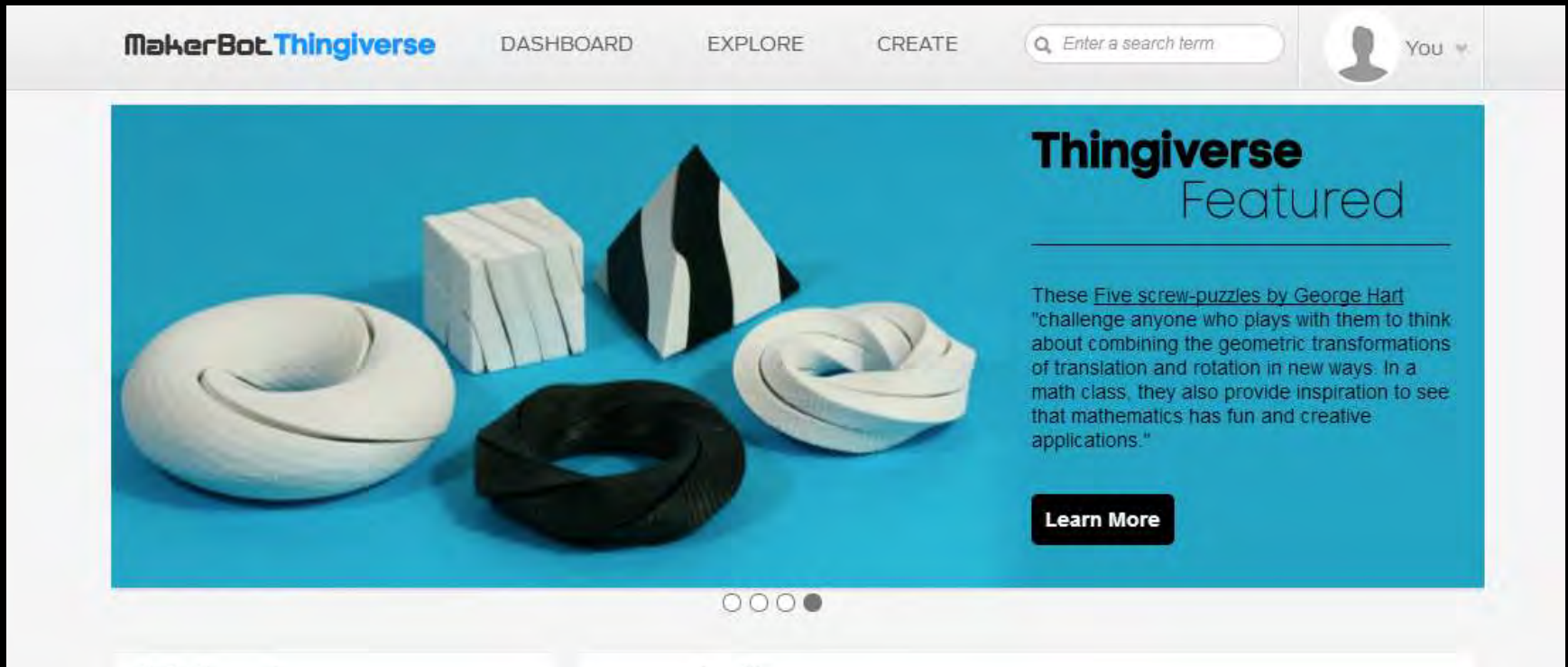
# 3D Printing Club



# Blender Learning Community



# 3D Printing Workshop





# Promotion

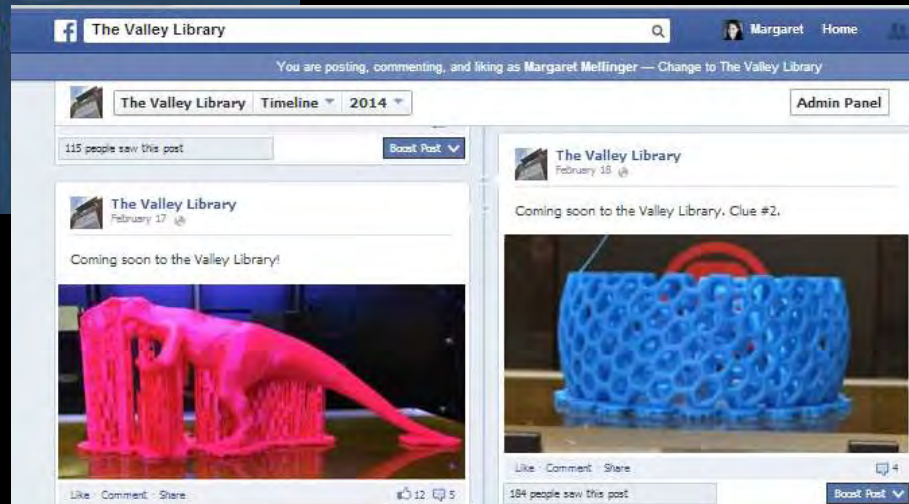


# Buttons & Bookmarks





# Social Media





# News items

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# LIFE@OSU

THE LIVES AND STORIES OF OREGON STATE UNIVERSITY

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APRIL 10TH, 2014

## New 3-D printer draws crowds at OSU's Valley Library

Small crowds have been gathering at the information desk at Valley Library over the last few weeks, but they're not there to ask where to find the latest New York Times bestseller. Instead, they're focused on a small, boxy printer steadily humming away on a corner of the desk.

Depending on when they're visiting, they could be watching anything from an elephant to an octopus to jewelry taking shape. A new 3-D printer began cranking out student-based projects during the first week of Spring Term, and so far the printer has created objects ranging from a replica of a human heart to a Nerf gun part. The new printer was purchased by the Friends of the Library, as a way to offer access to technology that some students might never be able to utilize.



A new 3-D printer at Valley Library has drawn a lot of attention. (photo: Theresa Hogue)

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# Library Outreach Cart



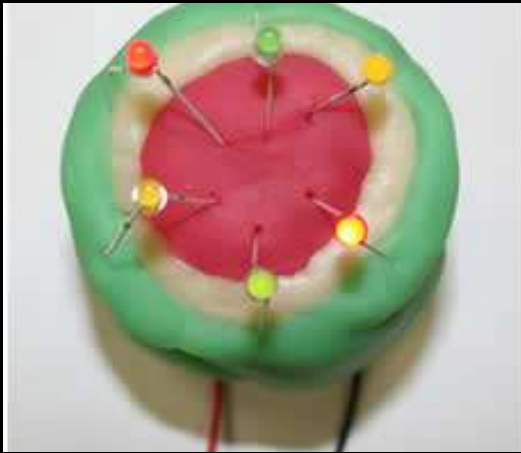
# With Power!



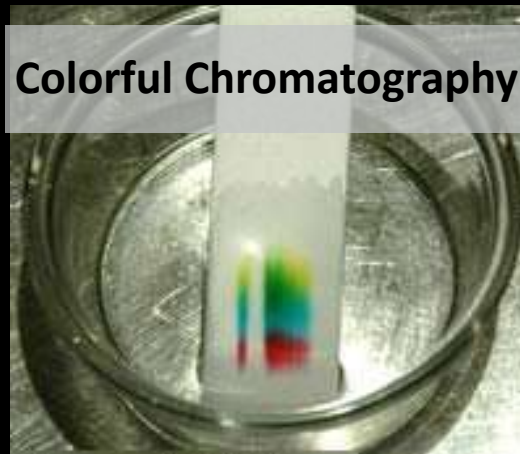
# Proud Makers



# In-service Maker Session



**Squishy Circuits**



**Colorful Chromatography**



**6 Word Memoirs**



**Mini-Spectrometer**



And now for the

TAKEAWAYS

It's not about the  
3D printer



community  
building

self-  
directed  
activities

peer  
teaching &  
learning

neutral  
territory

natural  
partners

raise  
visibility

Try something

Something small



Keep on learning

Talk to everyone

Engage your  
community