

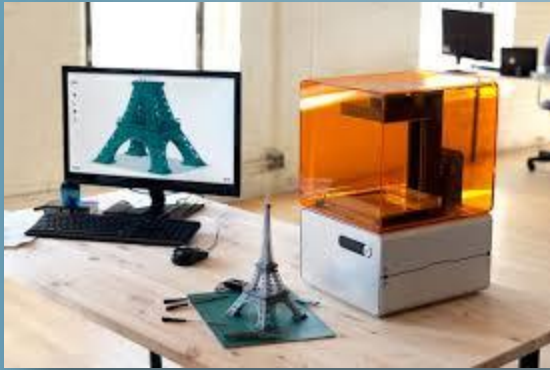
THE MAKER MOVEMENT AND CONGRESSIONAL MAKER CAUCUS

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Sponsored by the Department of Energy

THE MAKER MOVEMENT

- Grassroots effort by people who like to tinker, create, design, and build, often using 21st century tools.
- Embraced by the White House, corporations, mayors, libraries, museums, colleges, schools, and non-profits



3D printing



Robotics



Computer Numerical
Control machining



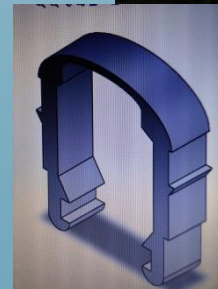
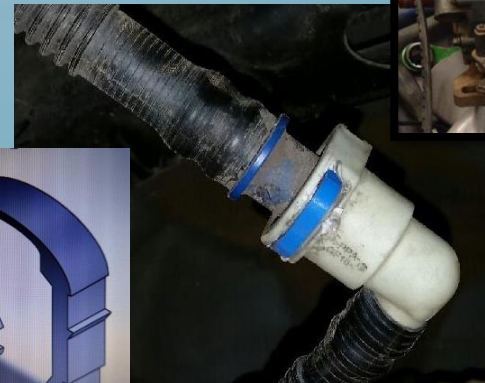
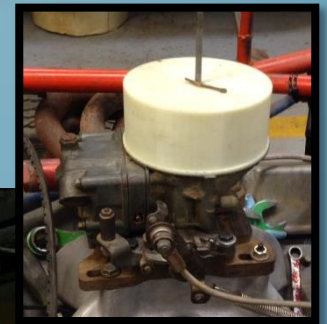
Electronics



Sewing/Fashion

THE MAKER MOVEMENT HISTORY

- Americans are self-reliant do-it-yourselfers.
- Moved away from physical creation to digital creation
- Maker tools became more accessible and affordable to create physical representations of digital designs.



MAKERSPACES

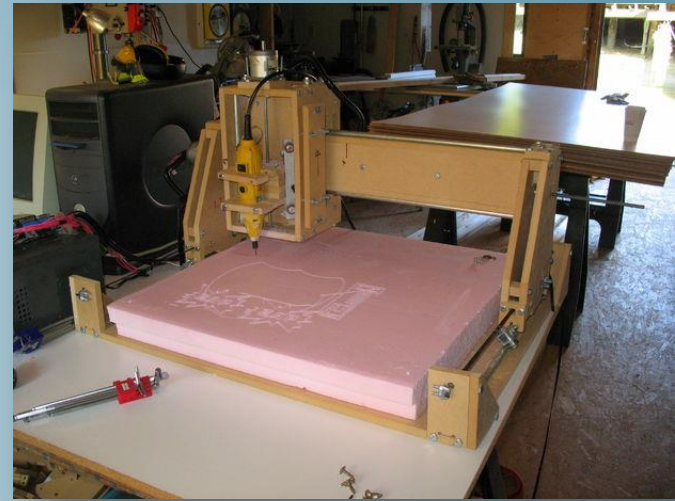
- Neil Gershenfeld created a class in 1998 entitled “How to Make (almost) Anything” to introduce students to machines that could be used for personal fabrication.



- As interest in the class grew he created Fab Lab in 2001, a makerspace model that is found around the world.

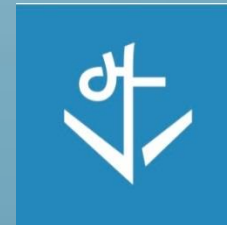
MAKERSPACES

- Give everyday people access to larger and more expensive tools often used by Makers.
- Take advantage of new technology while working independently or together.
- Now found in libraries, museums, and schools.



MAKERSPACES

- Digital Harbor Foundation (DHF) Tech Center in Baltimore used to be a neglected rec center in the underserved neighborhood.
- Offers a Maker Foundations program to encourage and prepare middle and high school students for careers in technology.
- Abilities Hackathon



MAKER FAIRE



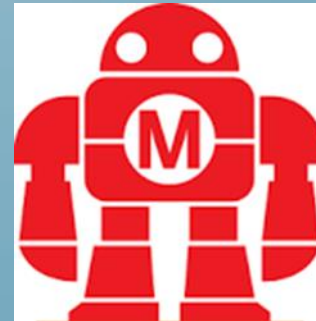
- Dale Dougherty formed Make magazine in 2005.
- In 2006, he organized the first Maker Faire for people to show what they made.

- Maker Faires have now spread across the US and around the world.
- The Greatest Show and Tell on Earth



MAKER FAIRE

- President Obama held the first White House Maker Faire in June 2014.
- Now the National Week of Making, during which the National Maker Faire is held.



MAKING IN EDUCATION

- Engages students in hands-on, interactive and applied learning that promotes science, technology, engineering and math (STEM).
- Promotes critical thinking and problem solving skills



- Allows all students regardless of socioeconomic status to have access to Maker tools
- Stimulates creativity, self-expression and curiosity

MAKING IN EDUCATION

- The Jet Propulsion Laboratory was hiring the wrong kind of people.
- Retiring engineers had taken apart, made, built, or fixed things. The same was true of young engineering hires who were adept at problem solving.
- Questions about “youthful projects and play” became a standard part of job interviews.



MAKING AND MANUFACTURING



- Makerspaces can minimize start-up costs and provide tools to bring innovations to market
- Makers produce innovative and personalized products that contribute to the American economy
- It is making an impact: Etsy, Martha Stewart American Made, and Amazon Handmade

MAKING AND MANUFACTURING

- Some makers scale up to micro- or small-scale manufacturing.
- Etsy Manufacturing
- Makerspaces are training people for manufacturing jobs.



Open Works Baltimore

CONGRESSIONAL MAKER CAUCUS



- Bipartisan group of Members dedicated to issues related to the Maker Movement.
- Educate Congress and the public about the Maker Movement
- Connect Members to their local makers and makerspaces
- Support emerging technologies; and ensure that rules and regulations are designed to support Makers and the Maker industries

CONGRESSIONAL MAKER CAUCUS

- Congressman Takano visited Vocademy, a Makerspace in his district.
- Other Members who had visited Makerspaces in their districts were interested in the Maker Movement.
- Led to the formation of the Congressional Maker Caucus with Members from both parties and from all over the country.



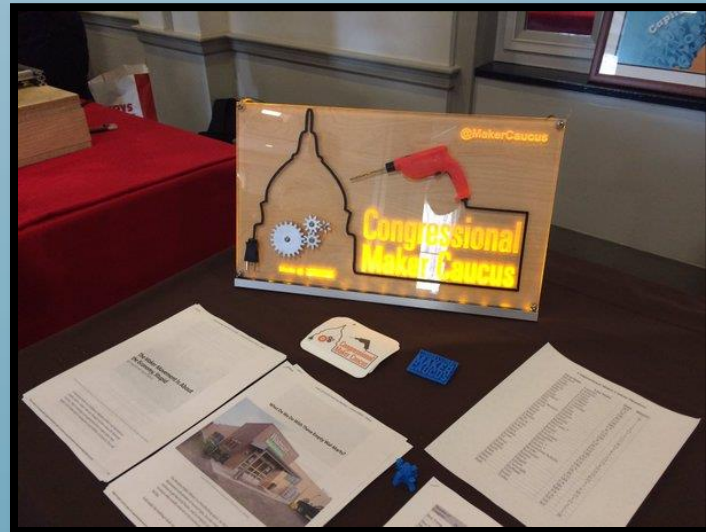
EVENTS AND BRIEFINGS



Additive Manufacturing
Briefing

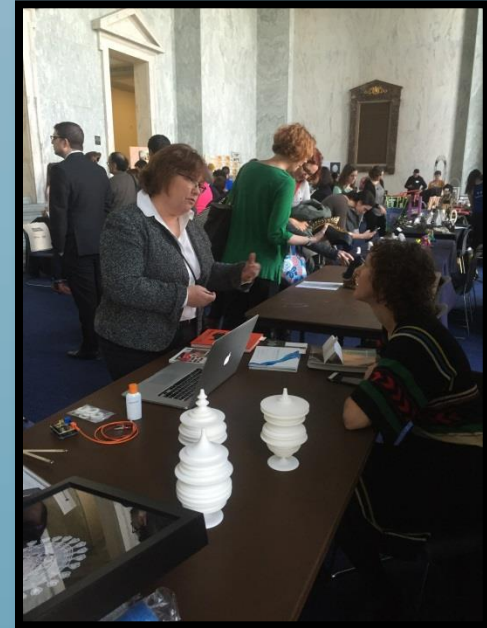
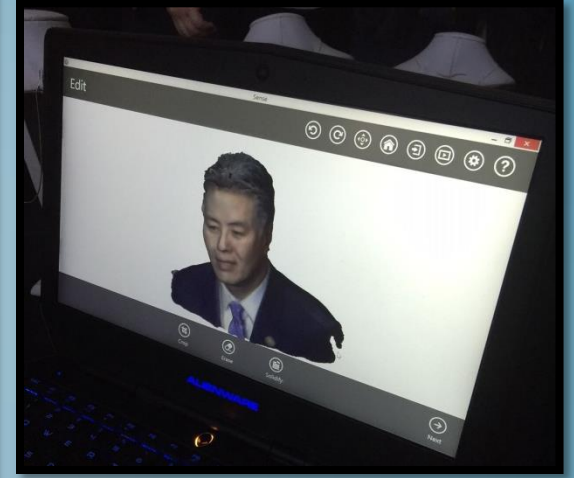


DIYBio Briefing



3D/DC

MAKING IN THE ARTS EXHIBITION

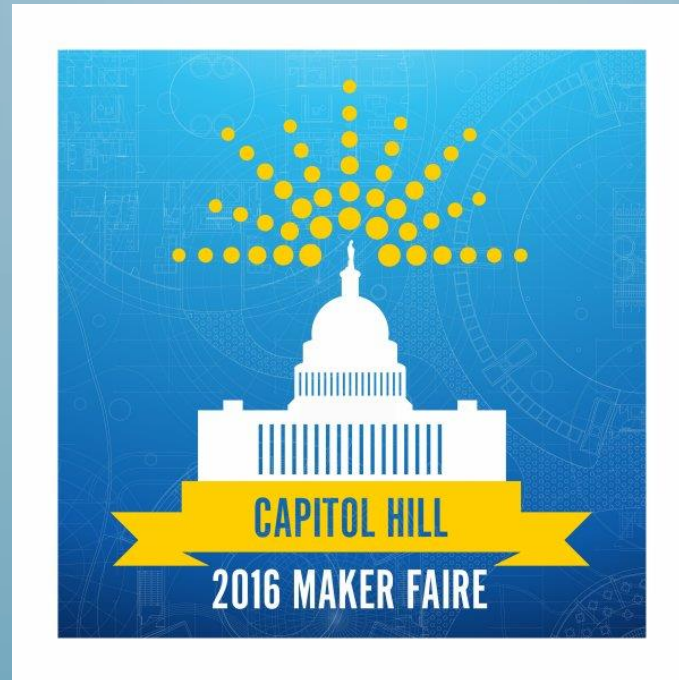


CONGRESSIONAL MAKER CAUCUS

- Social Media
 - Twitter - @makercaucus
 - Facebook
 - www.facebook.com/makercaucus
 - Thingiverse page
 - www.thingiverse.com/makercaucus

UPCOMING EVENTS

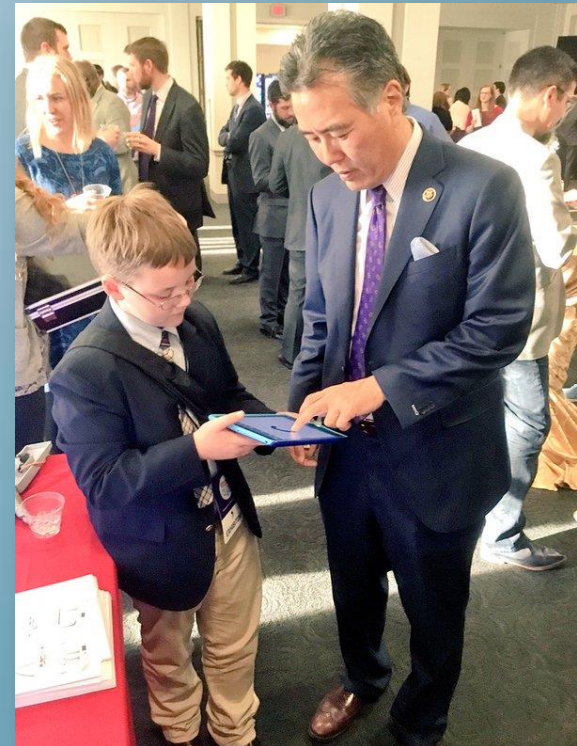
- Capitol Hill Maker Faire – June 21



MAKER STORIES



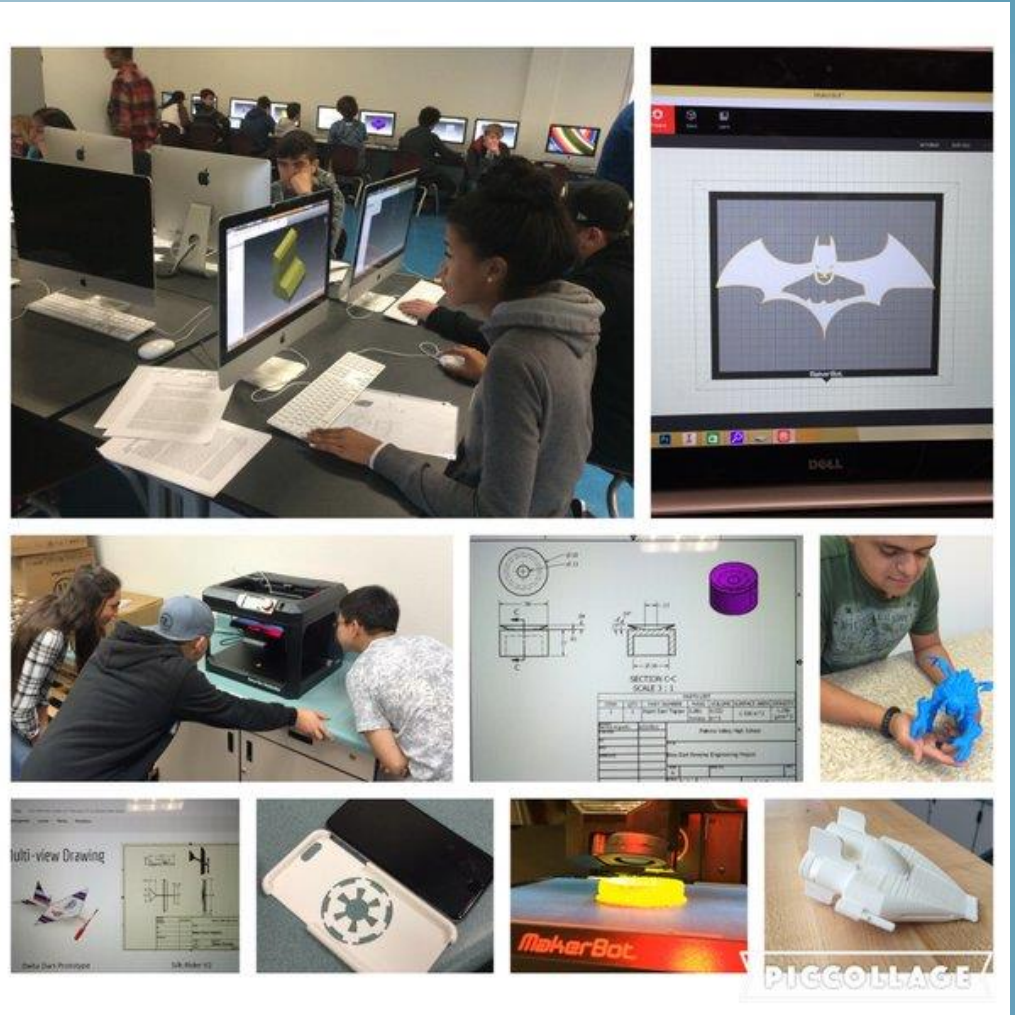
Becky
and John
Button
are both
avid
Makers.



MAKER STORIES



Solar Boat Challenge



3D Design and Build



Swag

Perris Union High School

MAKER STORIES



e-NABLE

The e-NABLE Community is an amazing group of individuals from all over the world who are using their 3D printers to create free 3D printed hands and arms for those in need of an upper limb assistive device.