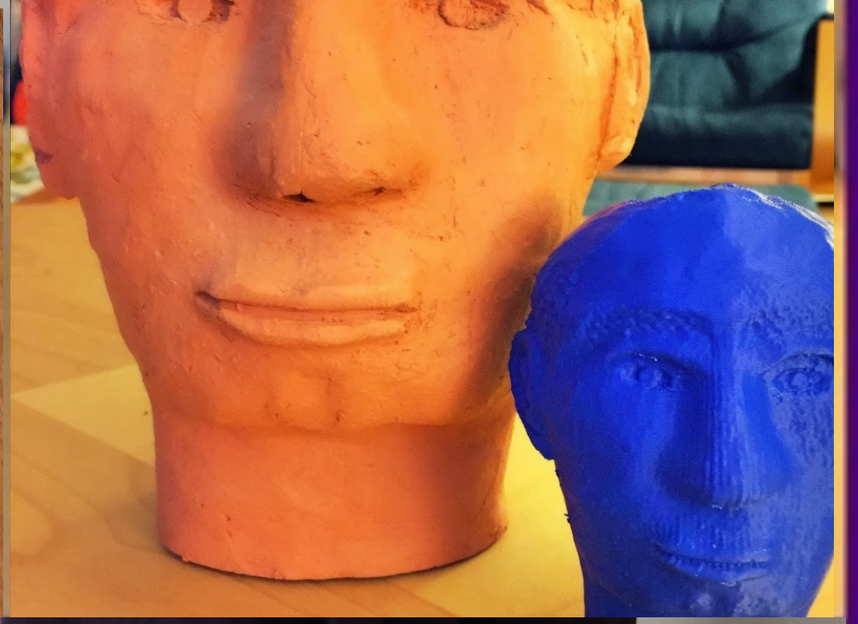
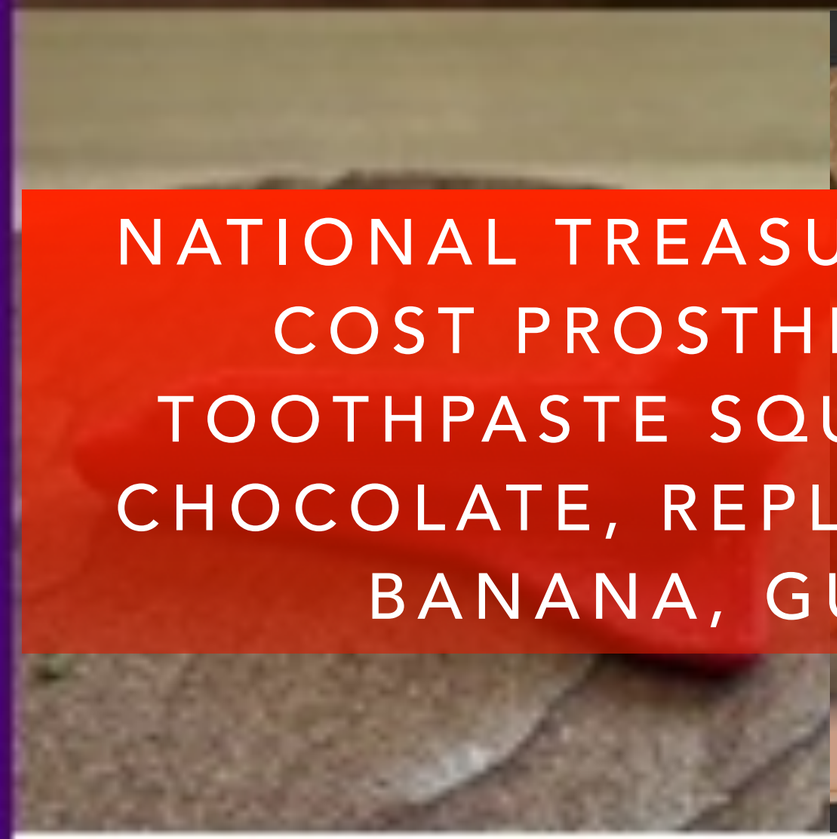
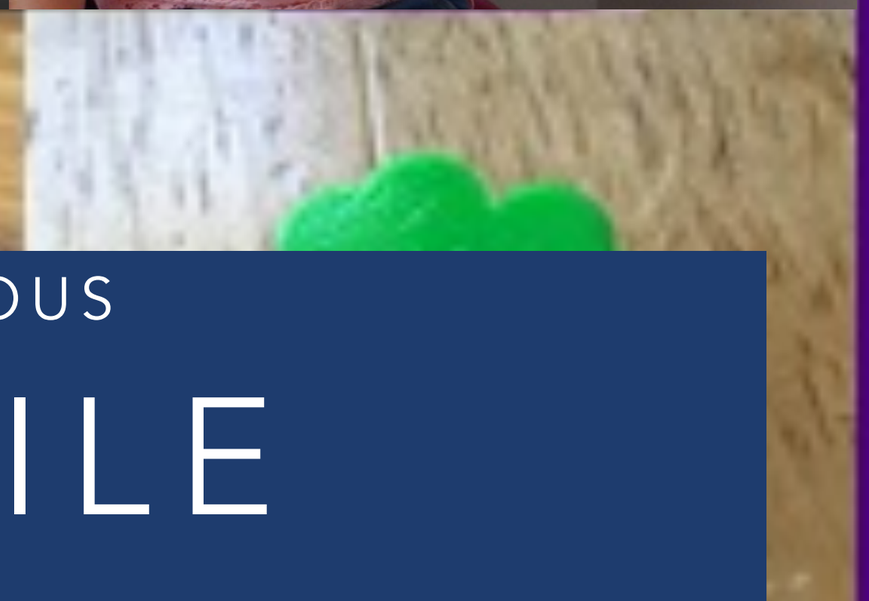
EVELYN SANDER, GEORGE MASON UNIVERSITY

ACTIVE LEARNING: 3D PRINTING



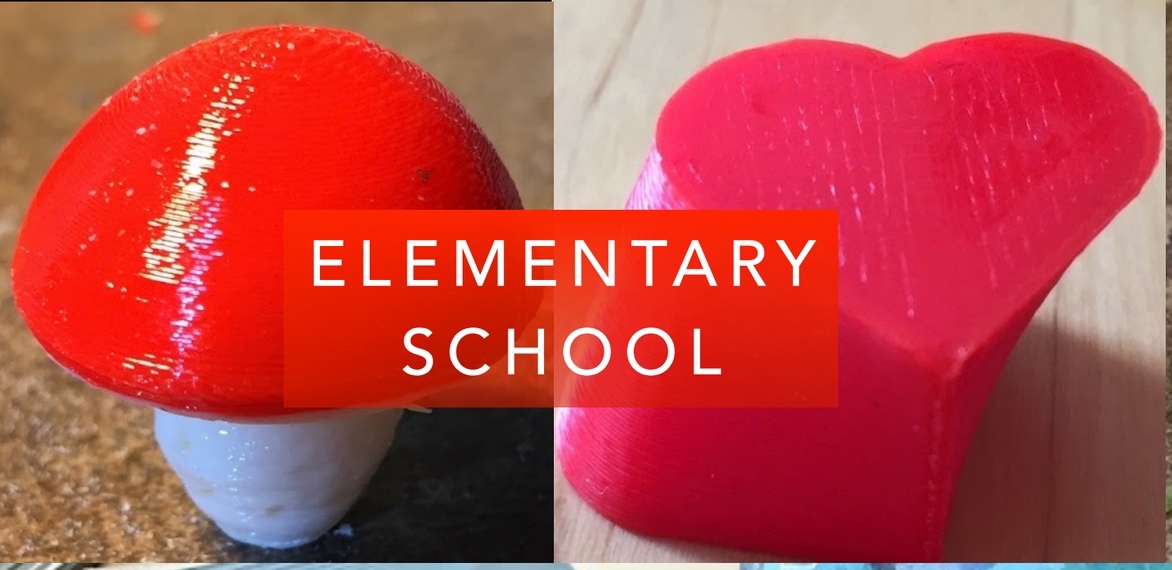


NATIONAL TREASURES, LOW COST PROSTHETICS, TOOTHPASTE SQUEEZERS, CHOCOLATE, REPLACEMENT BANANA, GUNS



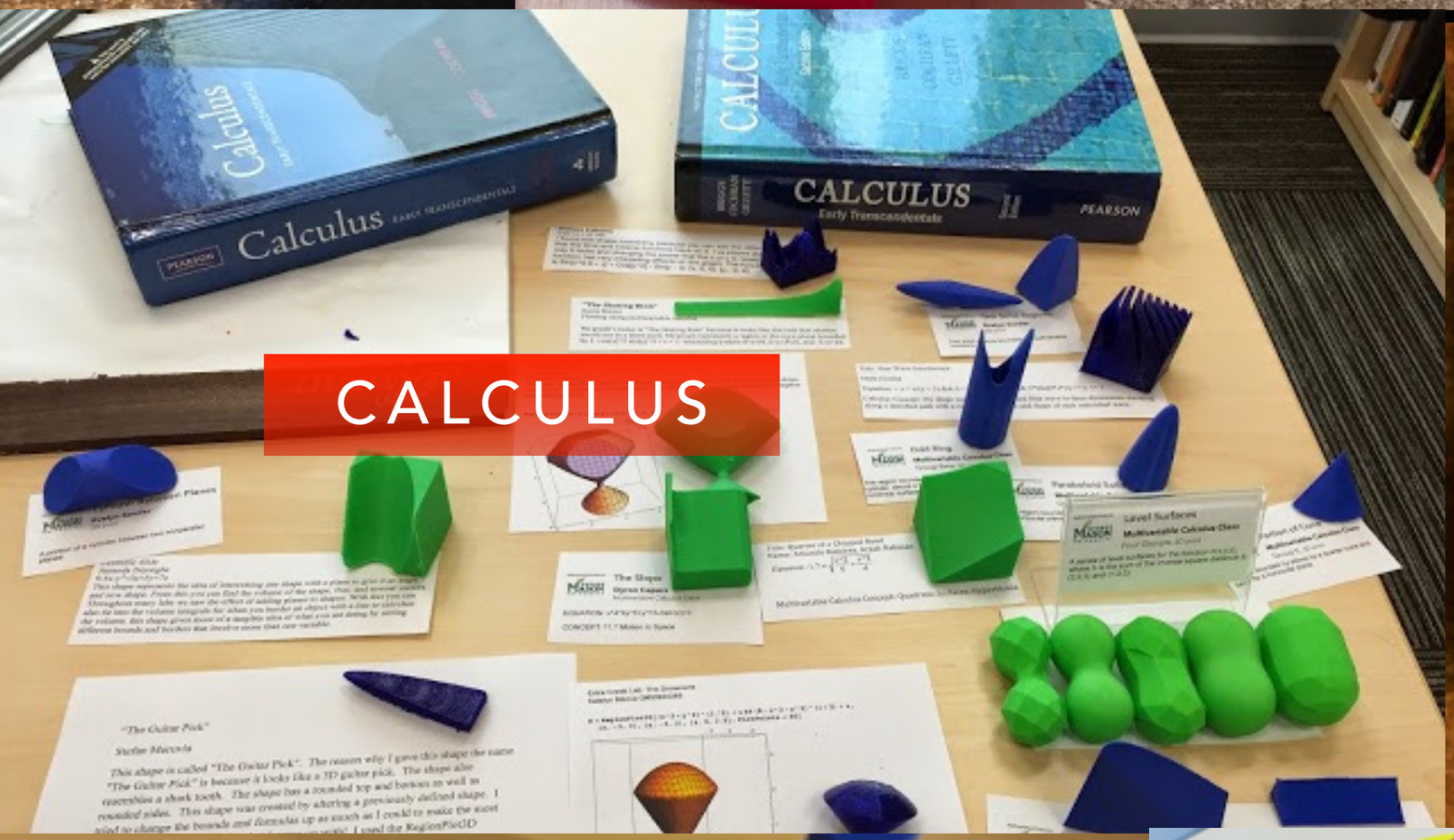
3D PRINTING: FROM SUBLIME TO RIDICULOUS

HIGHLY VERSATILE

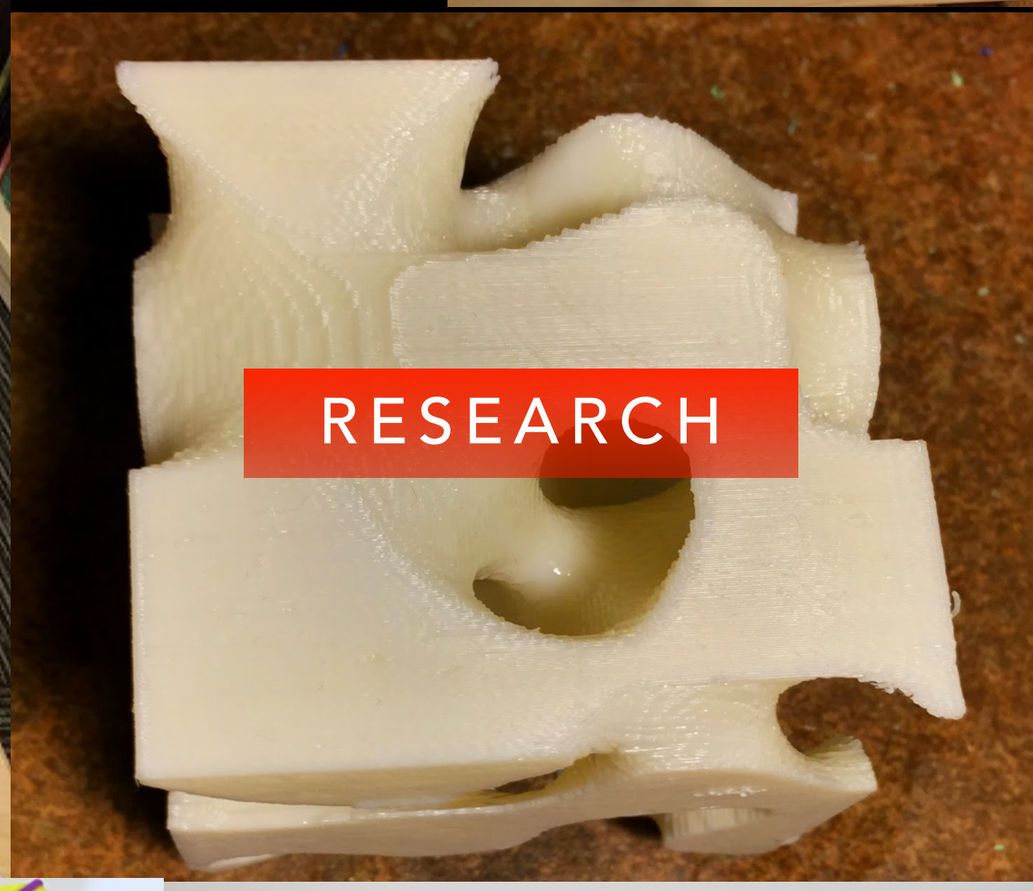


ELEMENTARY SCHOOL

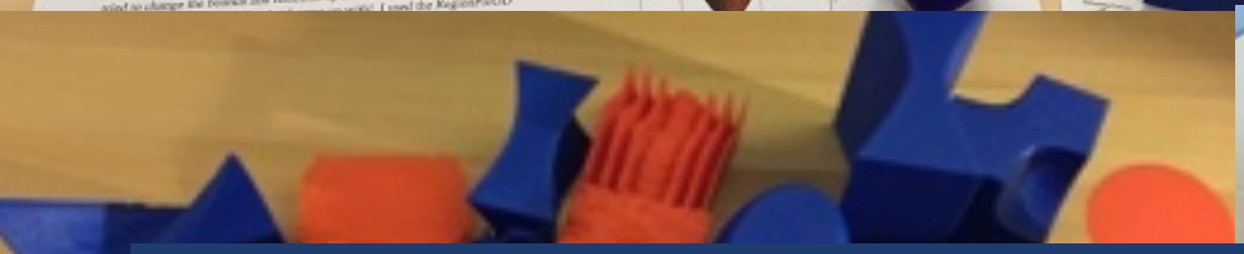
MIDDLE SCHOOL

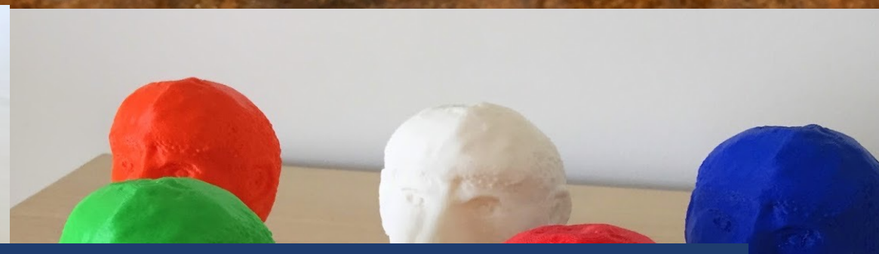


CALCULUS



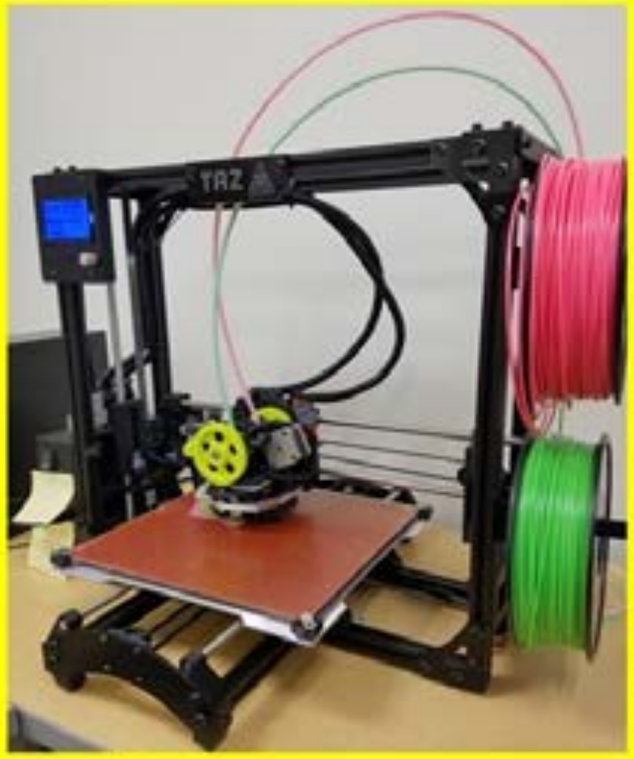
RESEARCH

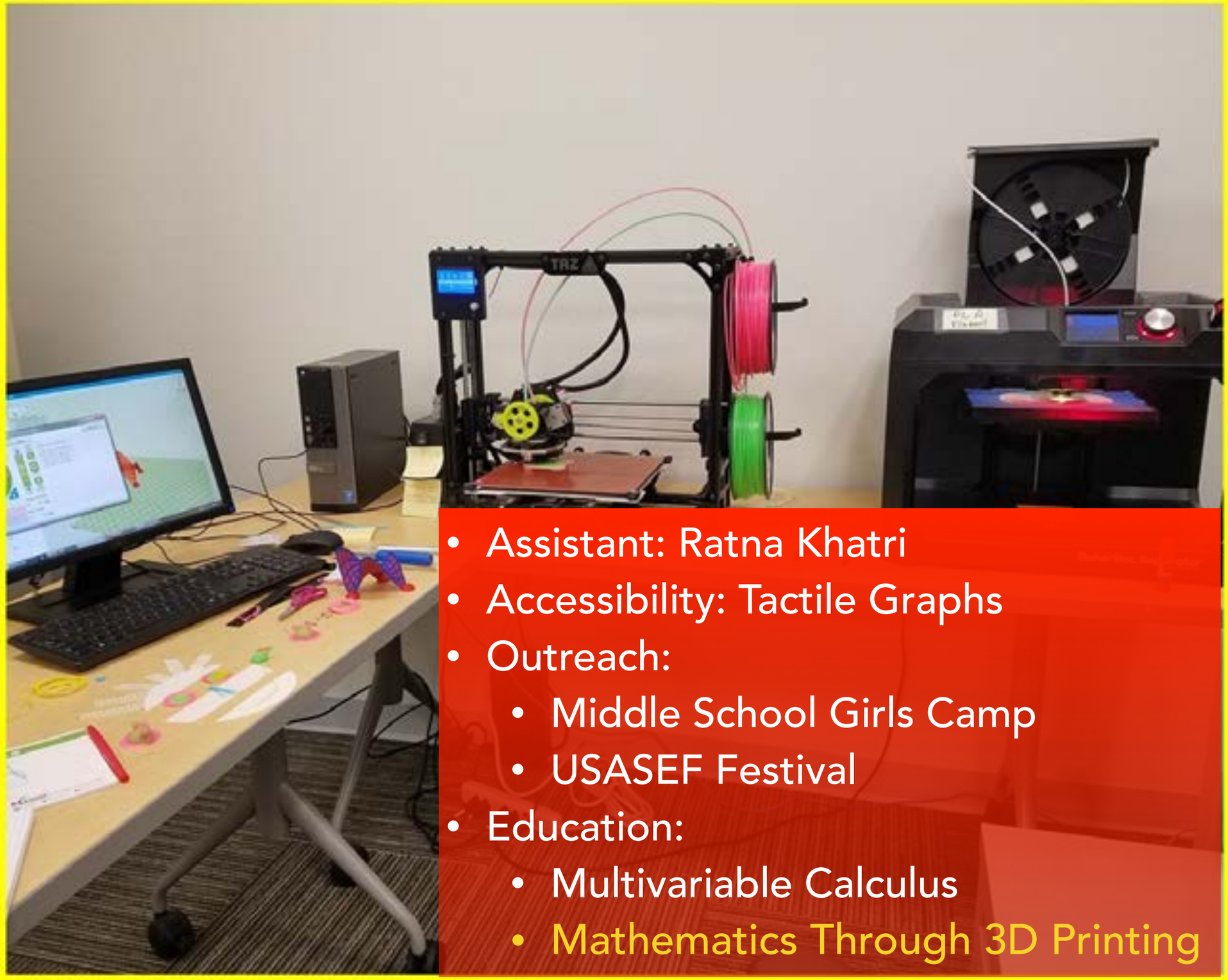




EVERYONE CAN DESIGN A MODEL

ACCESSIBLE AT ALL LEVELS





- Assistant: Ratna Khatri
- Accessibility: Tactile Graphs
- Outreach:
  - Middle School Girls Camp
  - USASEF Festival
- Education:
  - Multivariable Calculus
  - Mathematics Through 3D Printing

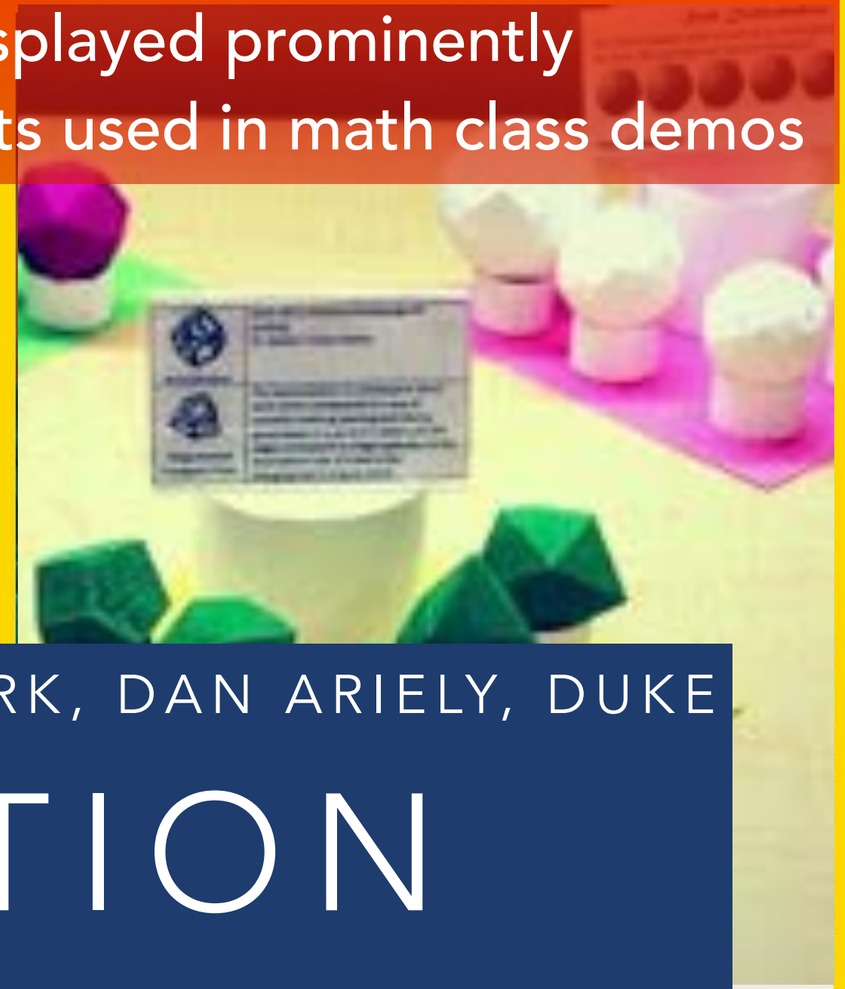
HTTP://GMUMATHMAKER.BLOGSPOT.COM

GMU MATH MAKERLAB

ONE MATH CONCEPT PER WEEK, ONE PRINT PER WEEK

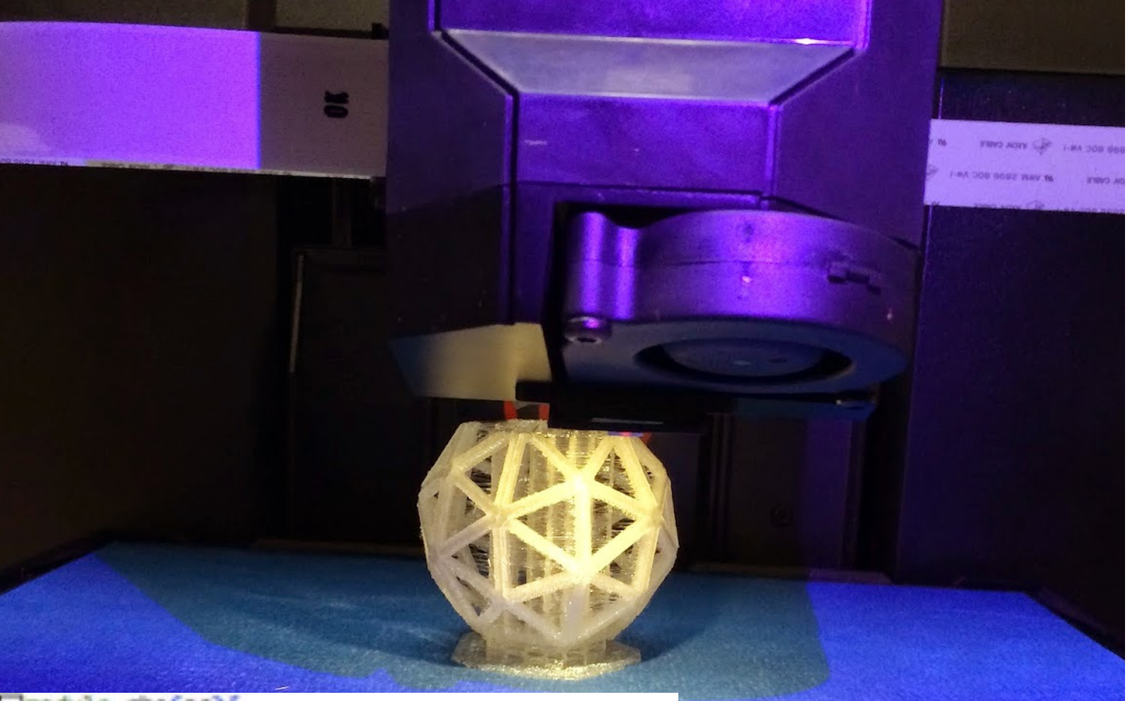
BRING ABSTRACT CONCEPTS TO LIFE

- Students involved in all aspects of design and printing
- Models displayed prominently
- Some prints used in math class demos



A SENSE OF PURPOSE MAKES US HAPPY AT WORK, DAN ARIELY, DUKE

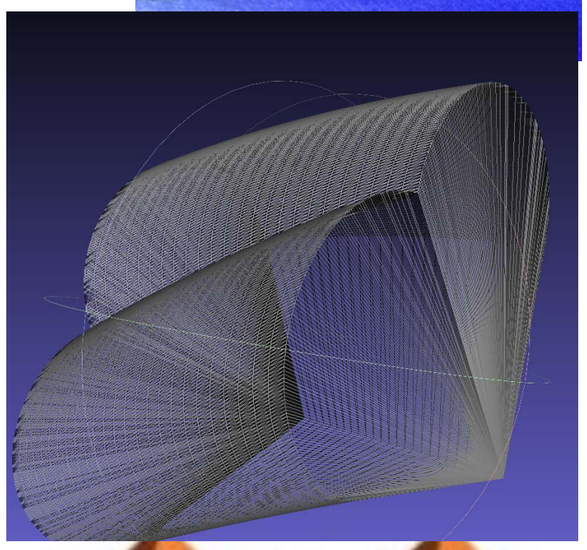
PRIDE OF CREATION



```
module rho(sc){
scale(sc)
import("rhombi.stl");
}

module del(sc){
    scale(sc)
    import("delt.stl");}

intersection() {
del(12.3);
rho(15);
}
```



Wednesday, April 6, 2016

Fun with Fractals

What are

Iterated functions are a way of constructing Fractals.

Tuesday, March 1, 2016

The Rhombicosidodecahedron: More than just a fancy name

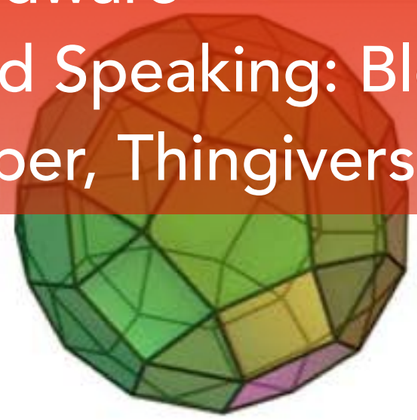
The Rhombicosidodecahedron: More than just a fancy name

by Anneliese Slaton
MATH 493: Math Through 3D Printing

If someone asked me if I wanted to see their rhombicosidodecahedron, I'd be skeptical. Did they have a dinosaur? A bug?? Some other terrifying mystery of nature??

text and https://6legs2many.files.wordpress.com/2011/01/lygaeidae_oncopeltus_fasciatus_female_milkweed_bug.jpg

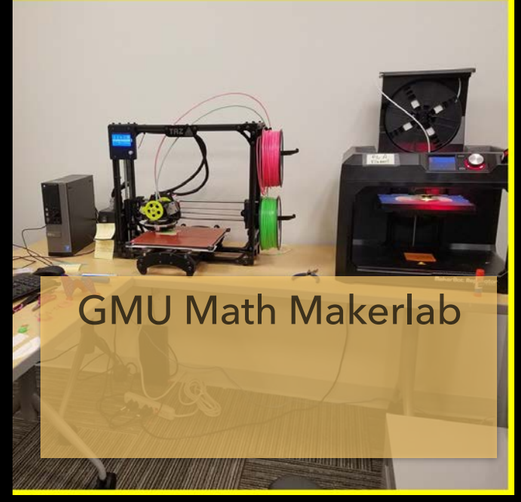
Thankfully for my delicate sensibilities, a rhombicosidodecahedron is simply a sphere



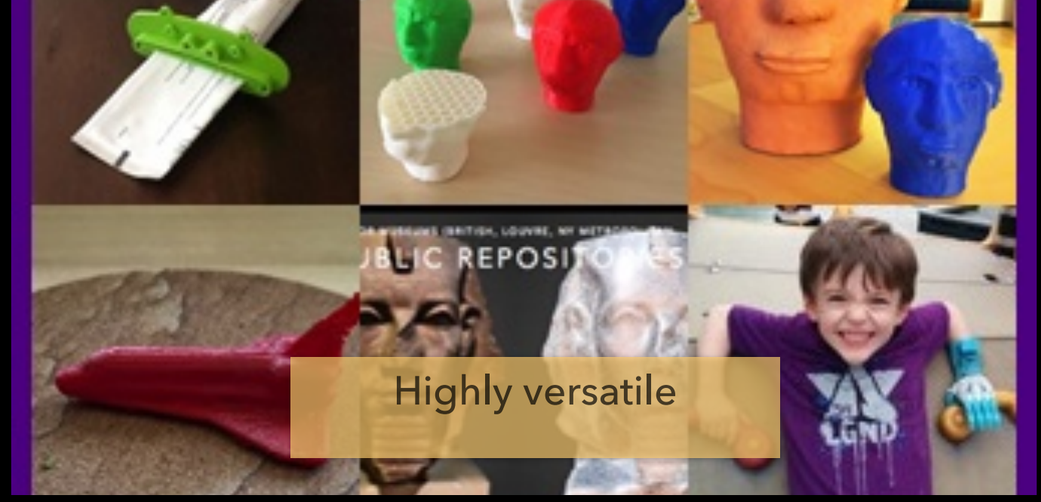
- New mathematics
- Coding skills
- Design and production software
- Printer hardware
- Writing and Speaking: Blog, Oral, Formal paper, Thingiverse, Poster

APPLYING MULTIPLE SKILLS ENHANCES MASTERY, ROBERT GAGNE

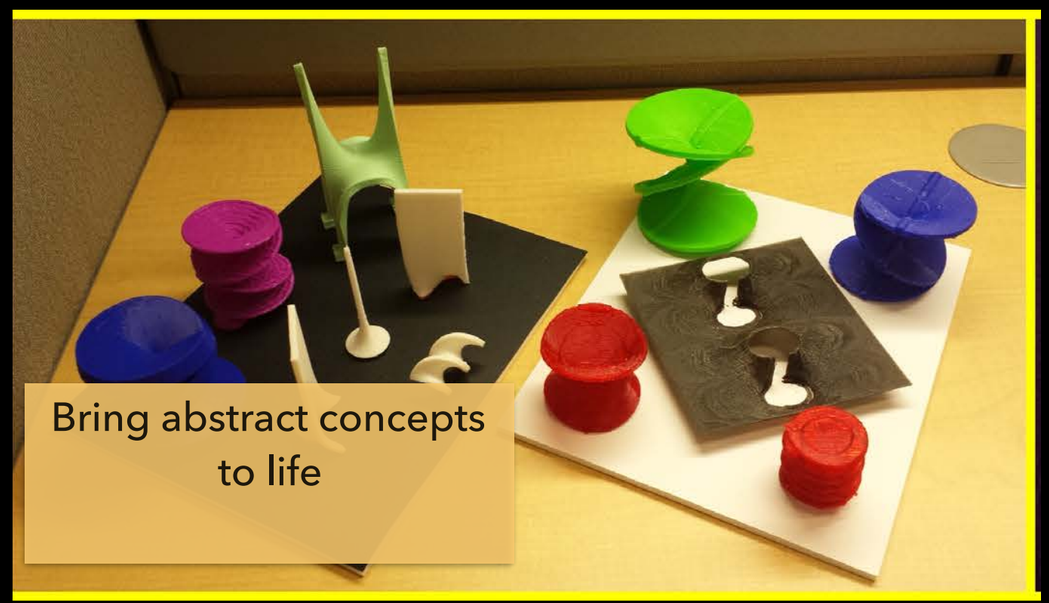
SYNTHESIS



GMU Math Makerlab



Highly versatile

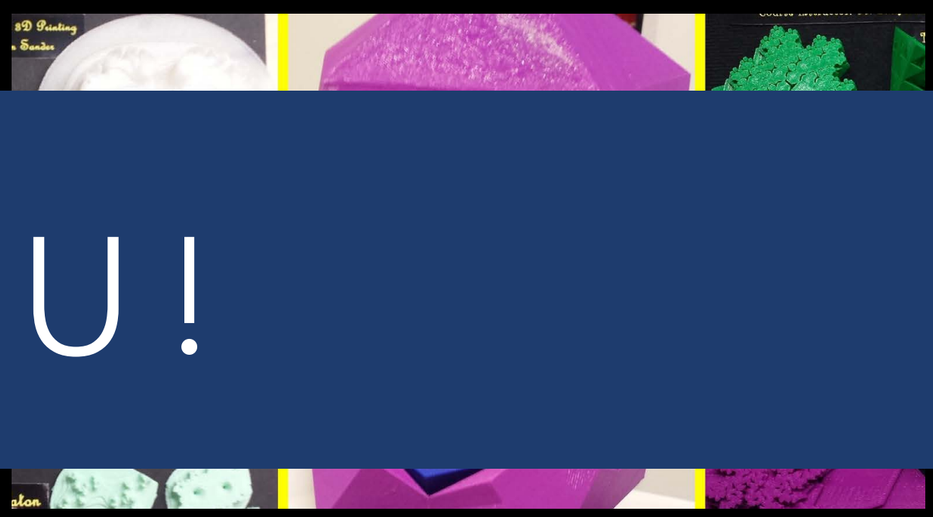


Bring abstract concepts to life

Pride of creation sense of purpose

Active Learning: 3D Printing

Evelyn Sander esander@gmu.edu
George Mason Department of Mathematical Sciences &
GMU Math Makerlab http://gmumathmaker.blogspot.com



QUESTIONS AND

THANK YOU!