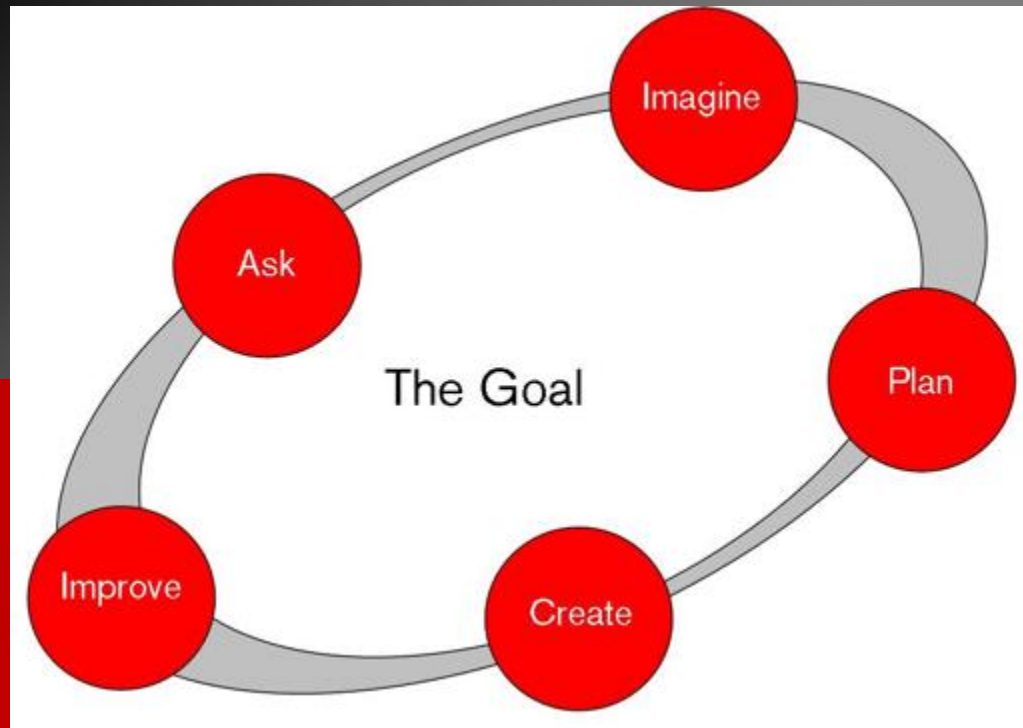


3-D Printing for Education

The Making of a Maker

Elizabeth Tanner

April 2014



The Design Cycle

Investigate...Design...Plan...Create...Evaluate

[http://henry.mpls.k12.mn.us/design cycle](http://henry.mpls.k12.mn.us/design%20cycle)

The design process is what puts Design Thinking into action.
It's a structured approach to generating and developing ideas.

The five phases of the design process:

1 DISCOVERY

I have a challenge. How do I approach it?

2 INTERPRETATION

I learned something. How do I interpret it?

3 IDEATION

I see an opportunity. What do I create?

4 EXPERIMENTATION

I have an idea. How do I build it?

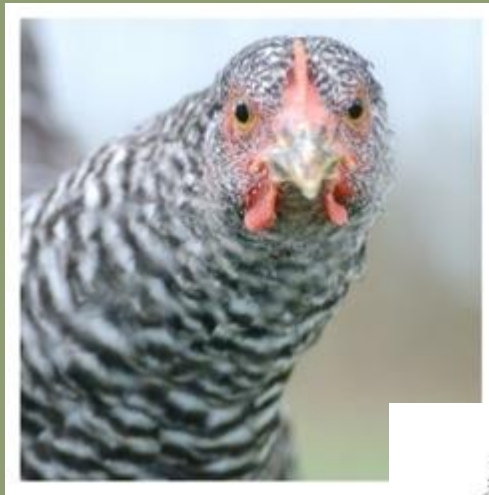
5 EVOLUTION

I tried something. How do I evolve it?

Digital Photography

IDEATION

Animal Documentation
Nikon D50



Adobe Suite

IDEATION

Photoshop

Illustrator

In Design



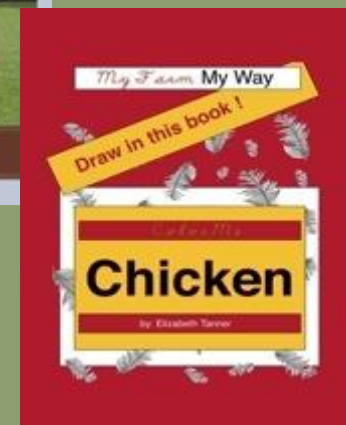
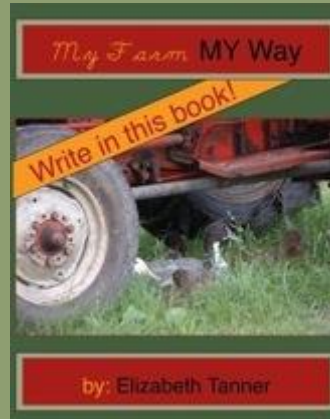
My Way Series

EXPERIMENTATION

Create Space

Amazon Self Publishing

Children's Coloring Books



Wildwood School

EVOLUTION

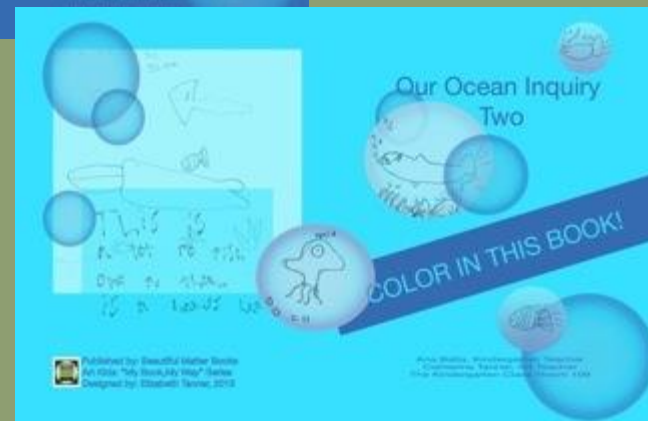
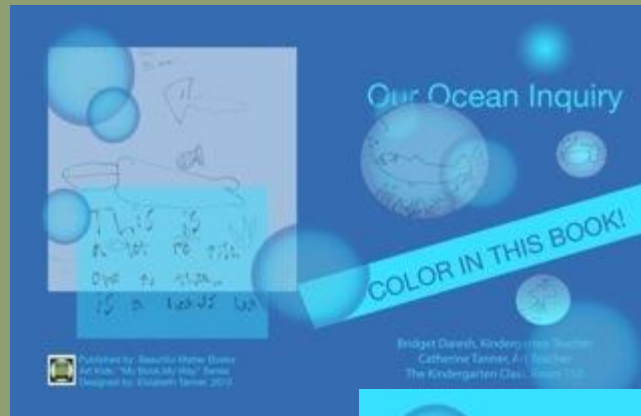
Beautiful Matter Books

Create Space, Amazon Self Publishing

Coloring Books

Collaboration with Kindergarten Class

3 books pending



Demetri's Fish

Inspiration

Action Figure!



Demetri's Fish

Inspiration

Action Figure!



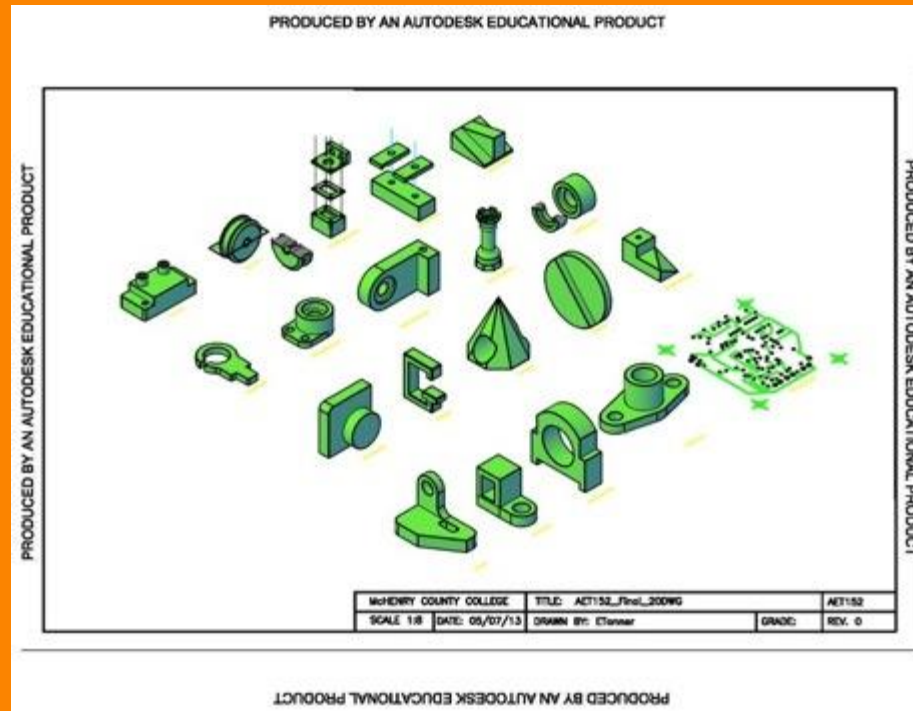
CAD

EXPERIMENTATION

Autodesk

Educational Product

2-d and 3-d Architectural and
Engineering Drafting



Adobe Suite

EXPERIMENTATION

Photoshop

Illustrator

In Design

SPEED AND DESIGN 1936

INNOVATION - Bugatti Type 57sc Atlantic Coupe



INCARNATION -

Jesse Owens wins four medals in the Berlin Olympics.



Devastation -

The Bristol Aeroplane Company designs and builds: The Bristol Blenheim

3D Max Studio

EVOLUTION

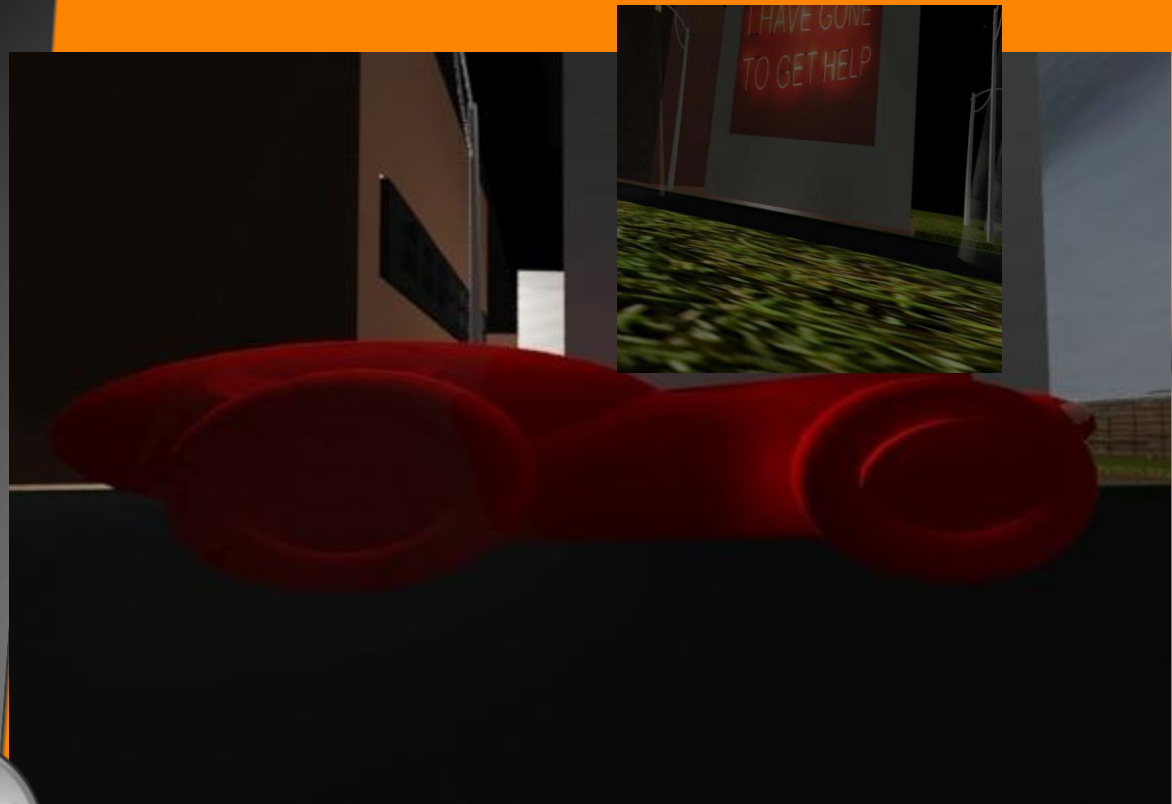
3-d modeling and animation



3D Max Studio

EVOLUTION

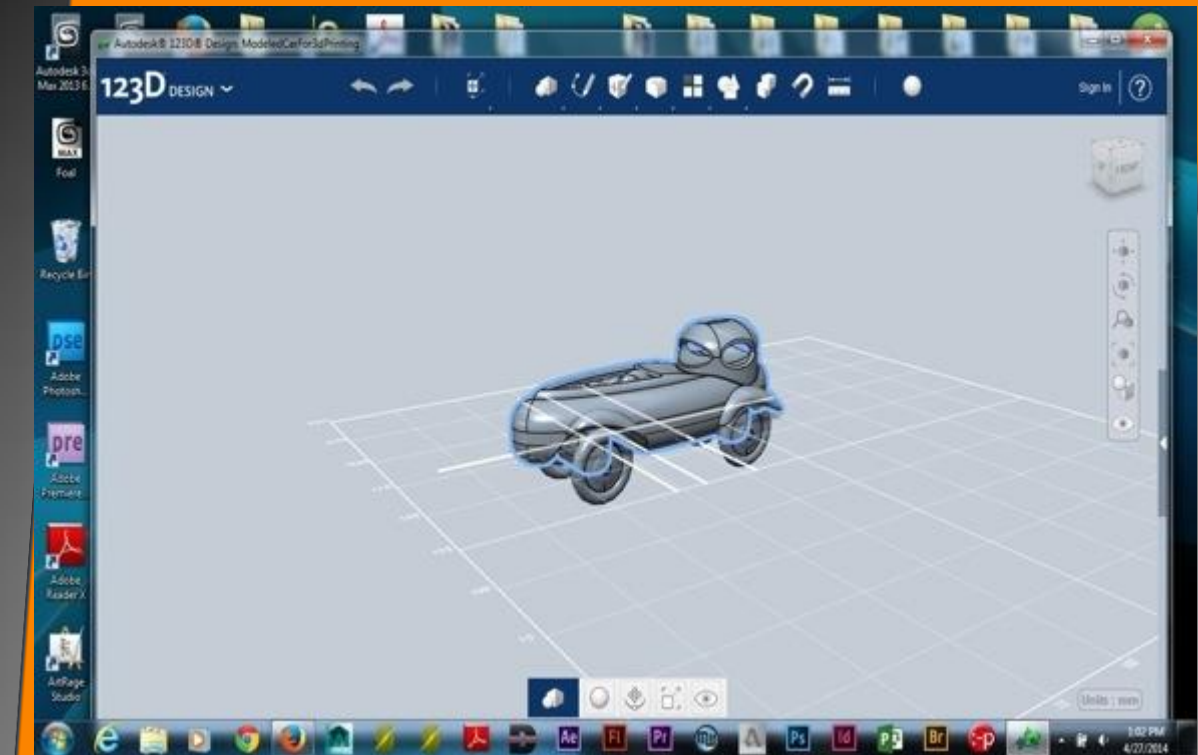
3-d modeling and animation



123 Design

EXPERIMENTATION

3-d modeling

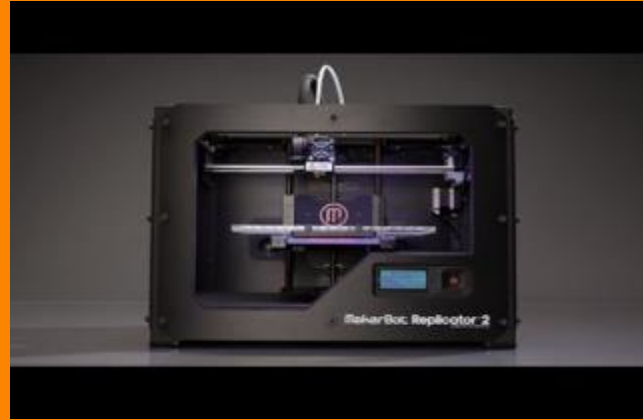


Makerbot

EXPERIMENTATION

123Design

3-d printing



Makerbot

EXPERIMENTATION

3D Max Studio

3-d printing



Demetri's Fish

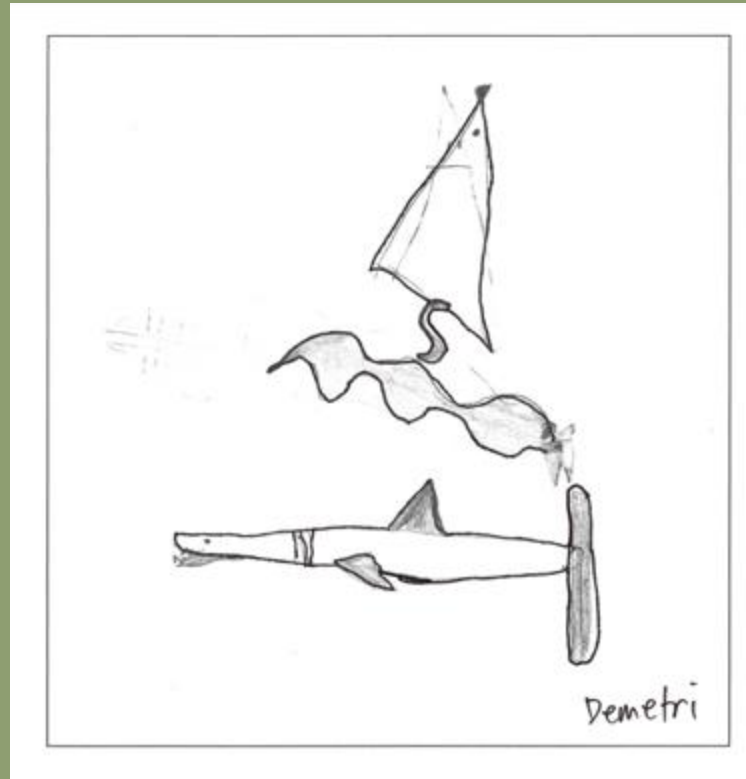
EVOLUTION
Action Figure!



Demetri's Fish

EVOLUTION

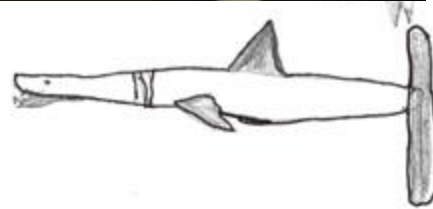
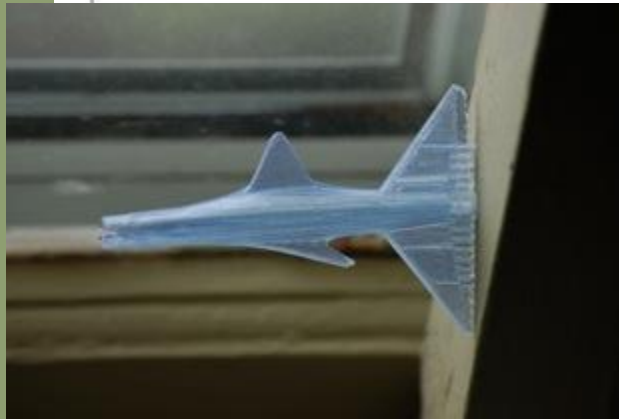
Illustration



Demetri's Fish

EVOLUTION

Illustration, Action Figure

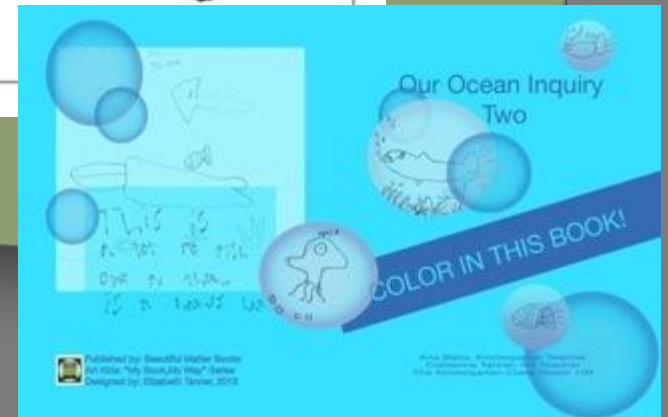
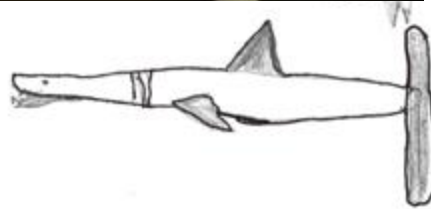
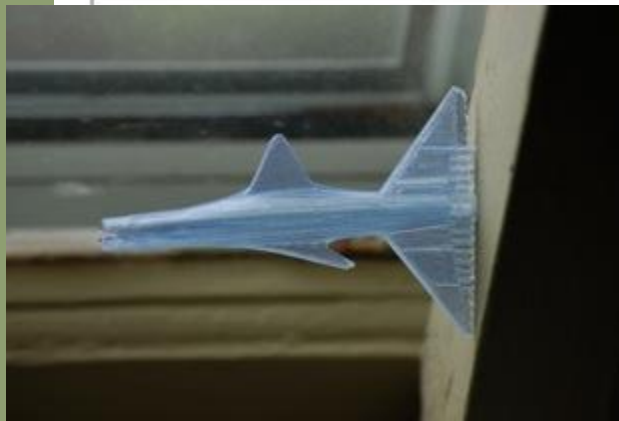


Demetri

Demetri's Fish

EVOLUTION

Illustration, Action Figure, Book,
Online Store



Thank you for attending!



beautifulmatter.wix.com/beautifulmatter

Thank you for attending!

Questions?



beautifulmatter.wix.com/beautifulmatter

Special thanks to my Teachers at MCC.

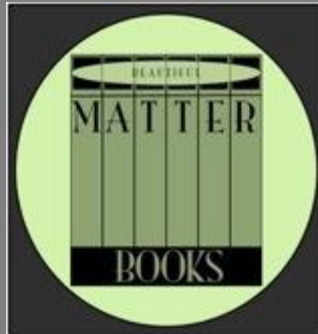
Sean ODonnell – Flash and 2d Animation
Jim Christensen – Digital Photography
Bob Mihelich – CAD and Digital Fabrication
Susan Thompson – 3D Max Studio
Ossiris Valverde – Adobe Suite
Dr. Decio – Technical Communications



beautifulmatter.wix.com/beautifulmatter

Special thanks to Evette Thompson

Career Services
Undergraduate Scholar Research Program



beautifulmatter.wix.com/beautifulmatter