

MOBILE APPS AND PBL

Examples from Classroom Practice

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APPS, APPS, APPS



- Desmos
- Graphical Analysis



- Numbers



- Notability



- Algodoo

- picsart

- camera

- sketchup

- Math Flyer

- geogebra

- sketch explorer

- wolfram alpha

- showme

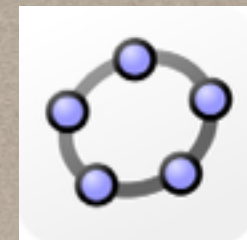
- explain everything

- taptap blocks

- geometry pad

- Skitch

- and many more

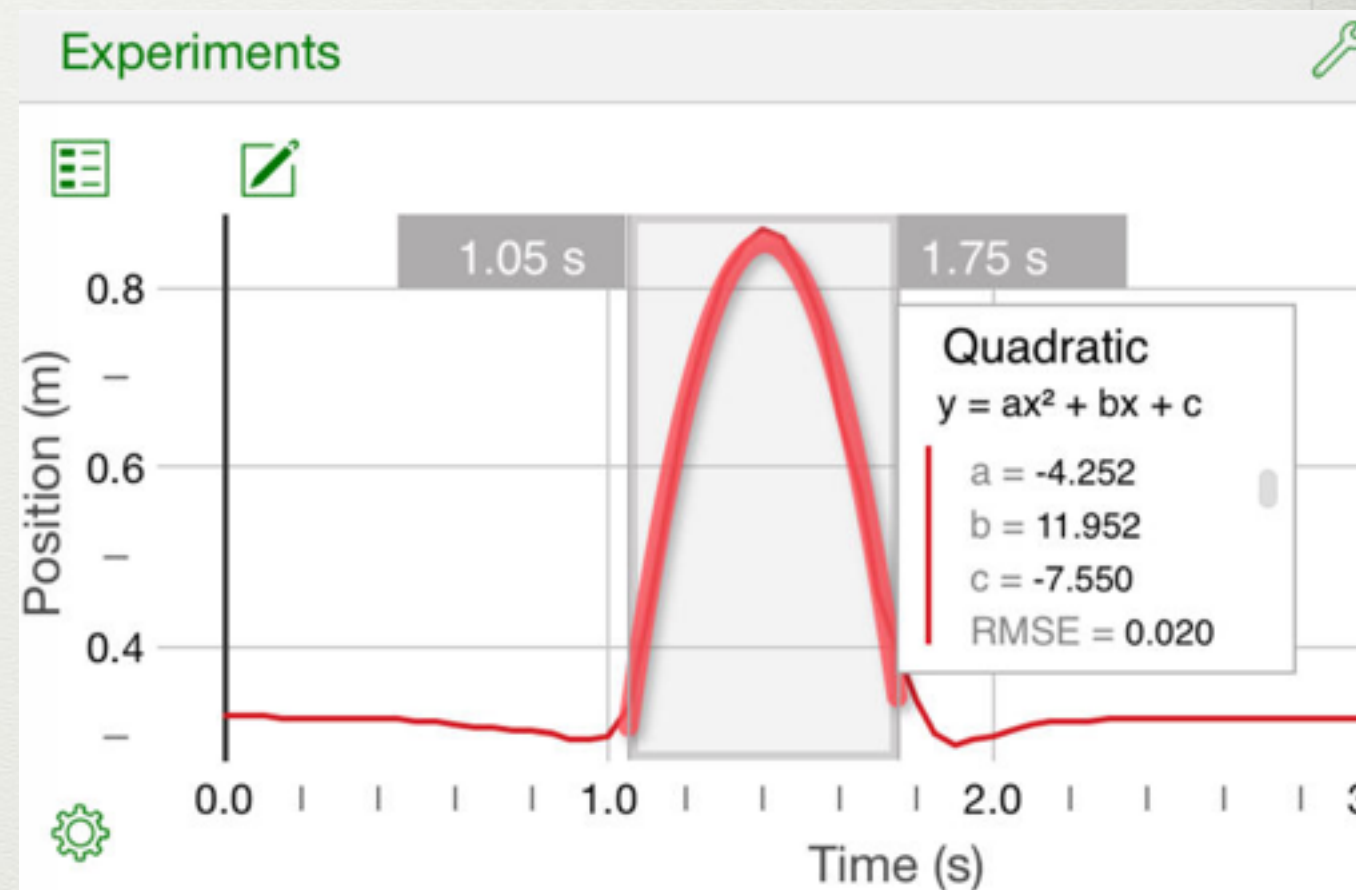
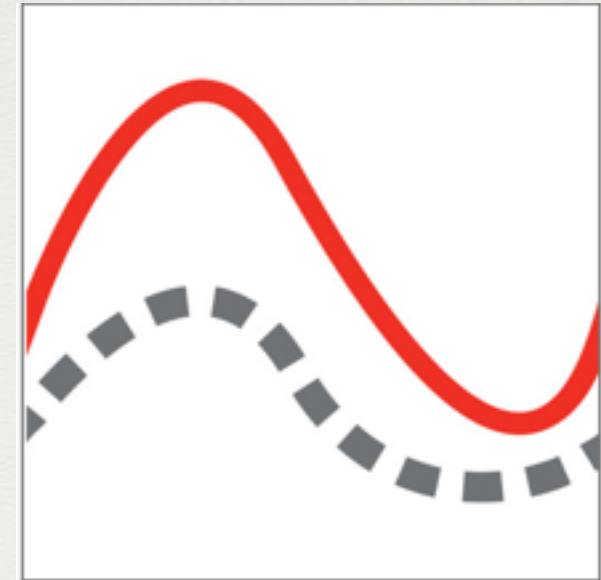


Activity Type: Data Analysis

The App:
Graphical Analysis

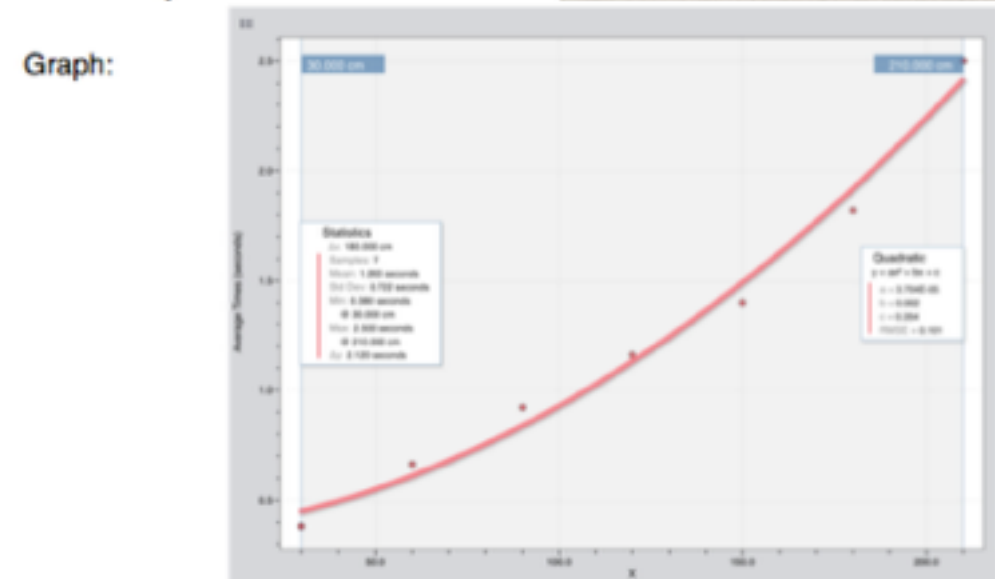
Use:

student's enter data and map and model mathematical functions. Great for algebra 2 and precalculus and working with The Common Core application of functions



student work examples

- looking at quadratic functions as objects move down an inclined plane



This graph is using a quadratic formula. The equation given is $y = ax^2 + bx + c$. So to take this equation and make it so that it is specifically fitting this set of data we must change the letters used. So the equation would read: $T(\text{time}) = ad(\text{distance})^2 + bd + c$. Then when you plug in the numbers it would be $T = 3.704d^2 + .002d + .354$. We chose this style of graph because of how well it fit the plotted points that were on the graph.



This is an image of the set up we used to perform this experiment. Shows the ramp, the pieces of blue tape, object rolling down, timer set up next to the ramp, and the people at both ends.

student work examples

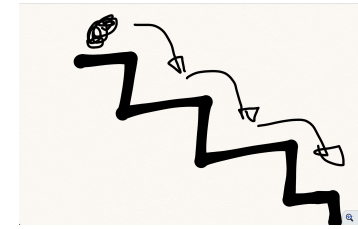
- collecting data from a self-made experiment to determine linear relationship within the data

Purpose: To determine what the rate a slinky falls from different numbers of steps
Independent variable: stairs
Dependent variable: time

Anticipated domain and range: 1-6

I think this will be linear because I think the slinky will fall slower from a higher number of steps but will travel faster from a lower number of steps. This will make a linear line.

Apparatus:



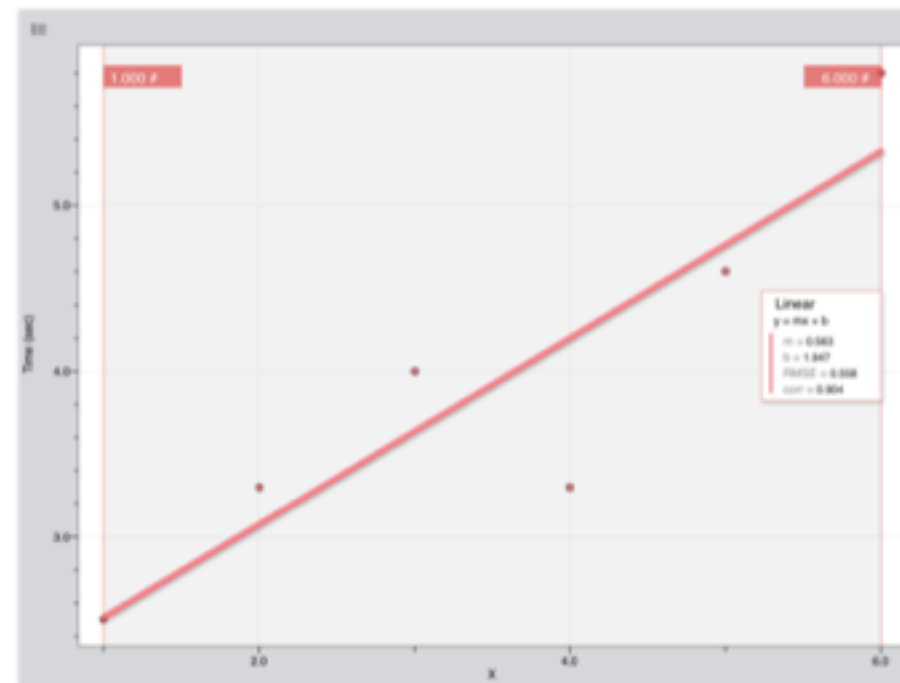
Procedure:

1. Set up slinky at top of step
2. Get timer ready
3. Using your hand, grab the top of the slinky and push it forward
4. Let the slinky fall down the steps
5. Stop timer when slinky stops
6. Repeat for each step

Data Table

	Step 1(sec)	Step 2 (sec)	Step 3 (sec)	Step 4 (sec)	Step 5 (sec)	Step 6 (sec)
Trial 1	2.9	3.5	3.5	3.0	4.5	5.8
Trial 2	2.0	2.7	2.9	3.3	4.6	5.9
					8	5.7

Graph



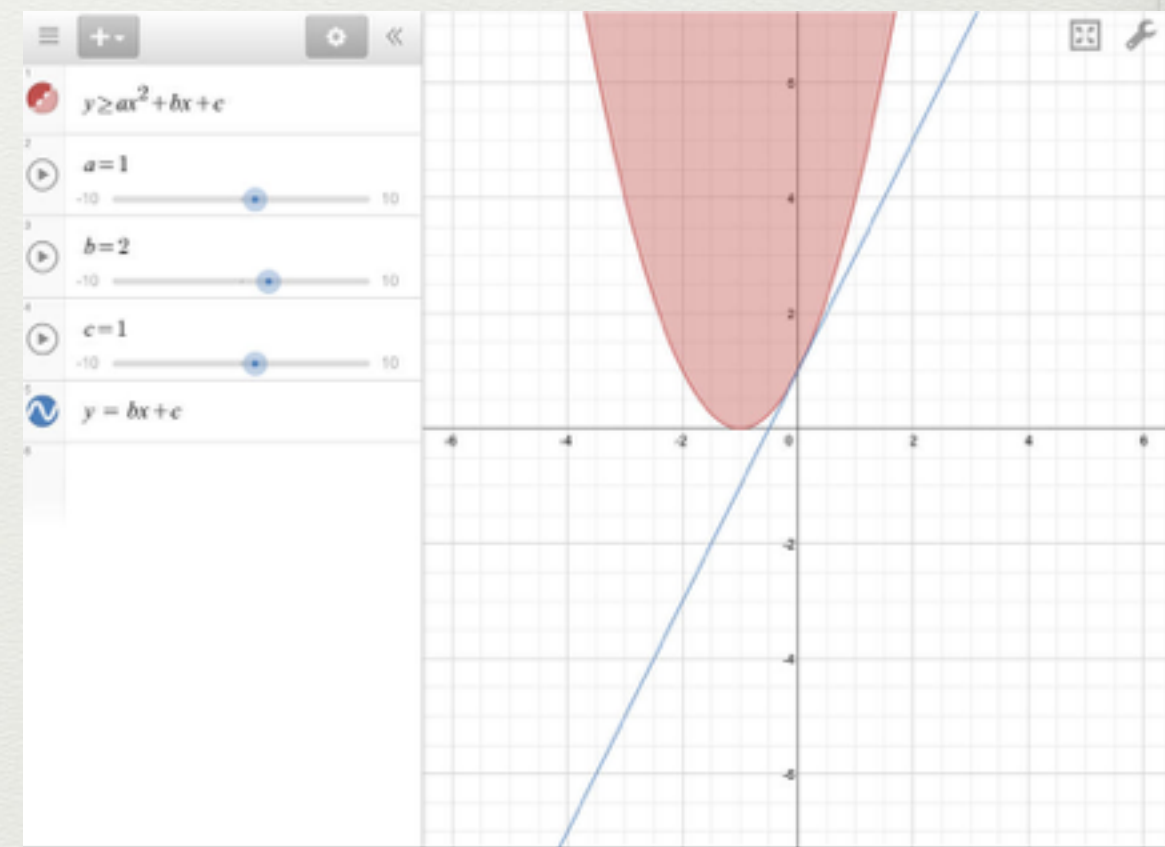
$$S = .6\text{sec} + 1.947\text{steps}$$

This graph shows that the line is not very linear. I think it wasn't as linear because the experiment was flawed in that the slinky did not fall correctly and wasn't very reliable. You can see this in the difference in data in terms of the fourth step average drops very low. I think that I would change that if I were to do the experiment again and try and fix the slinky.

Activity Type: Data Analysis

The App:
Desmos
Use:

students enter mathematical models to experiment with and confirm functions and their relationships

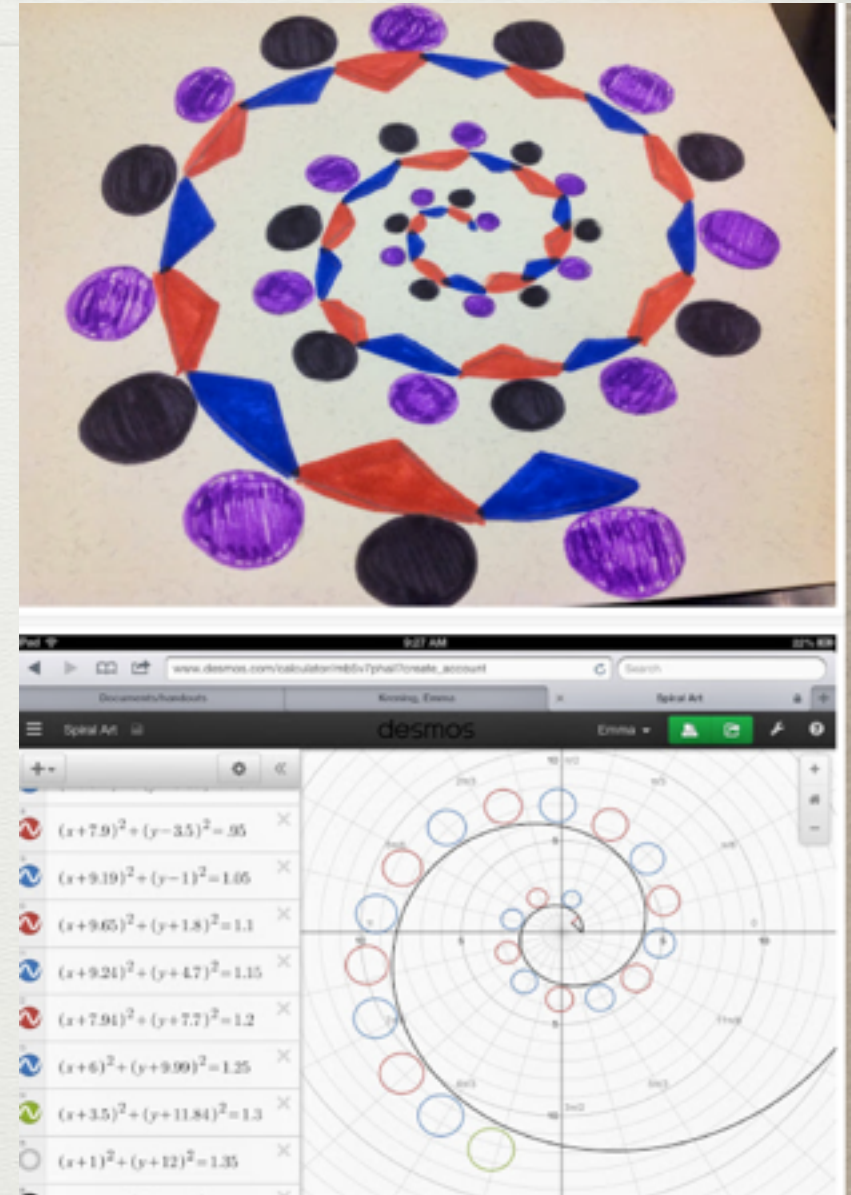


student work examples

- creating art and then generating mathematical models that create the artwork as a mathematical set of functions

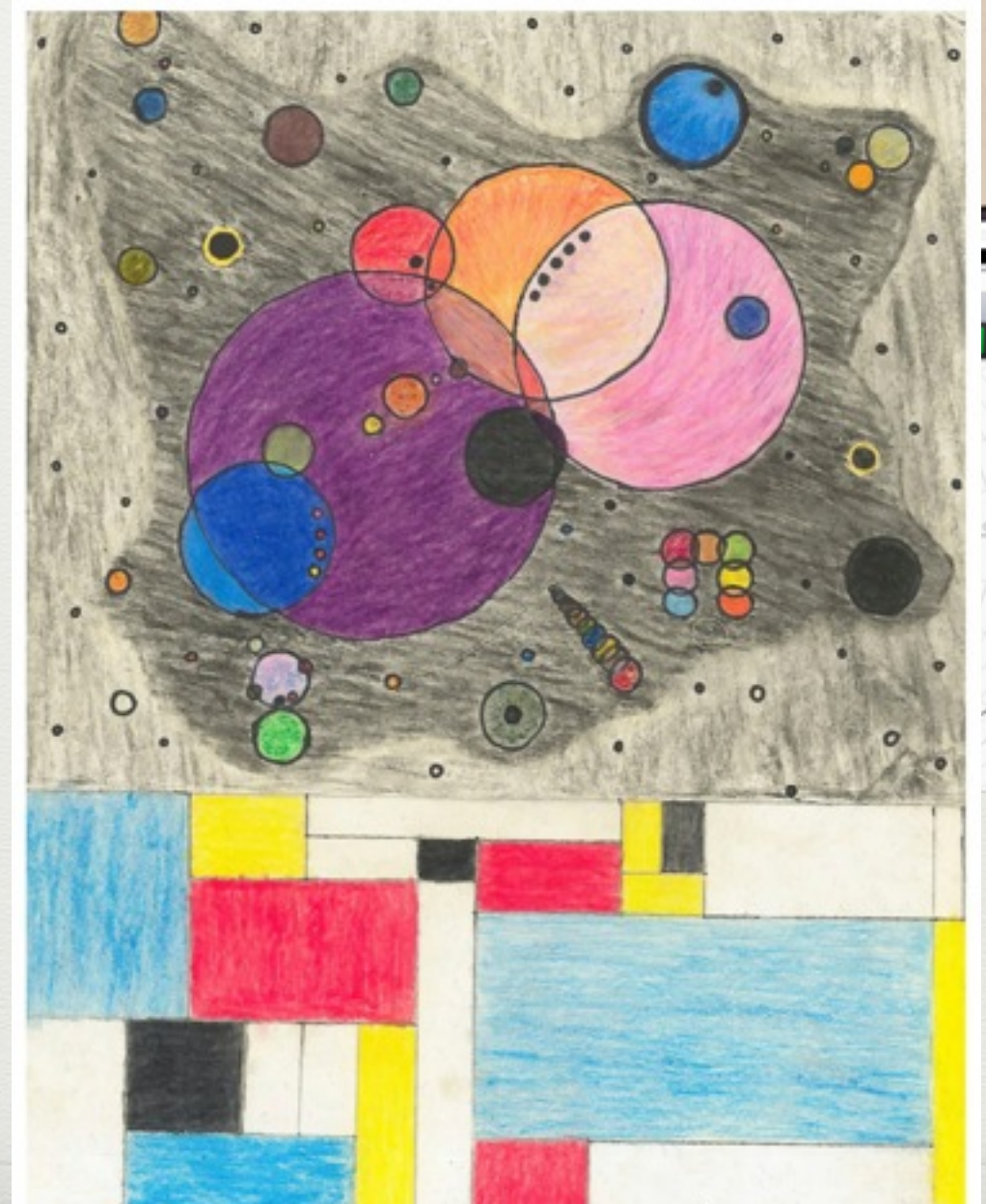
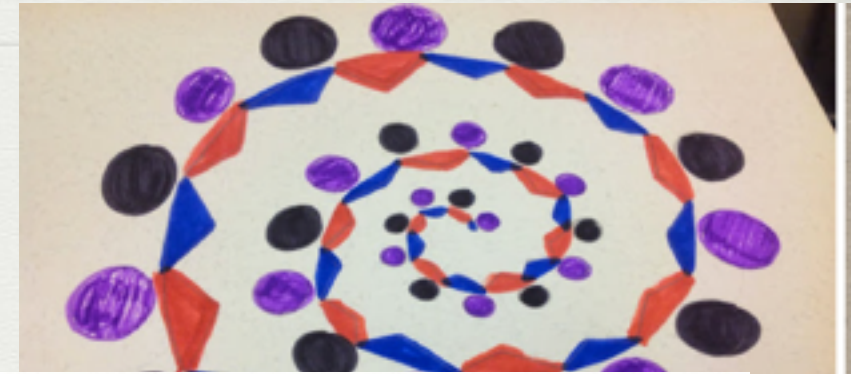
student work examples

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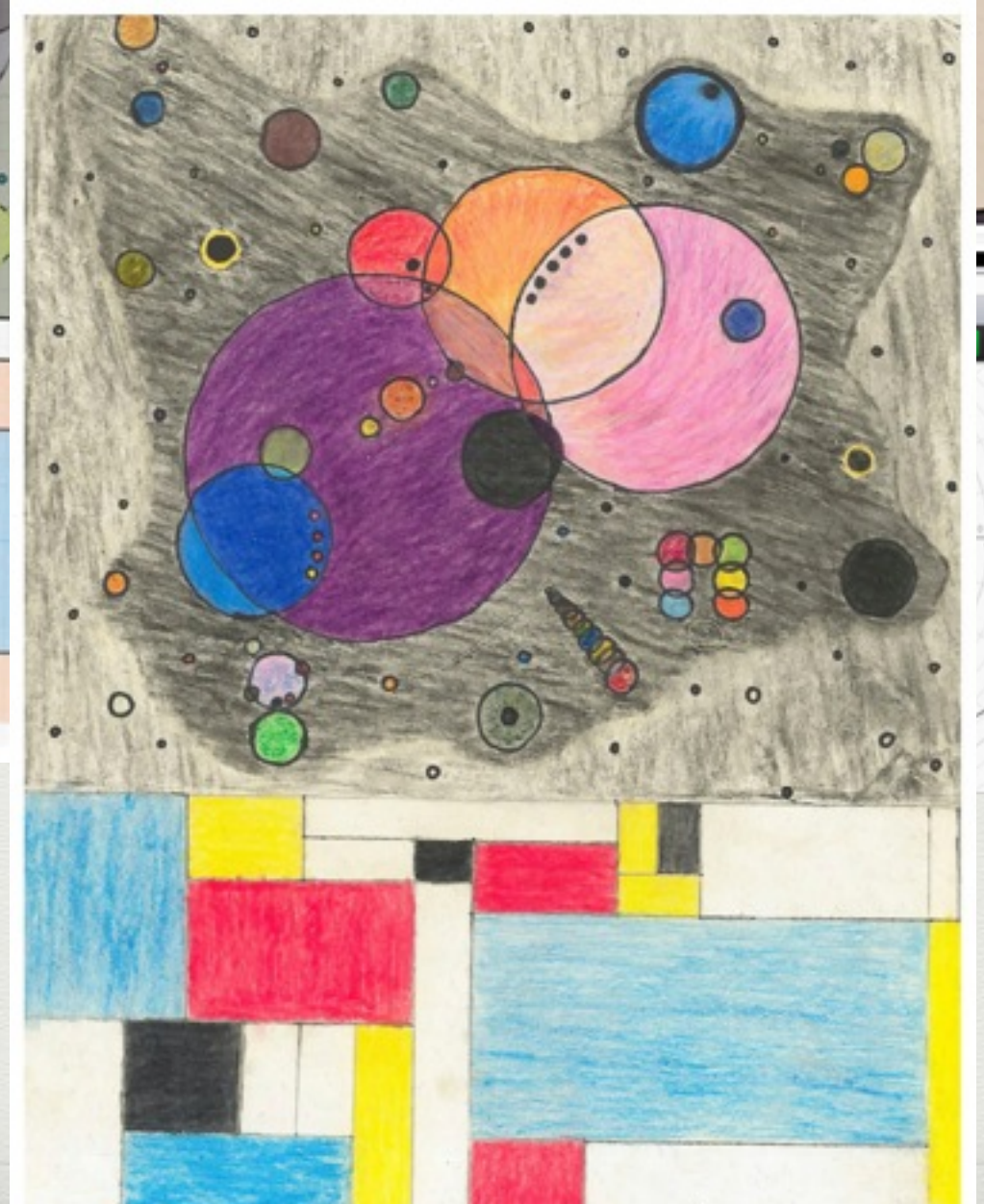
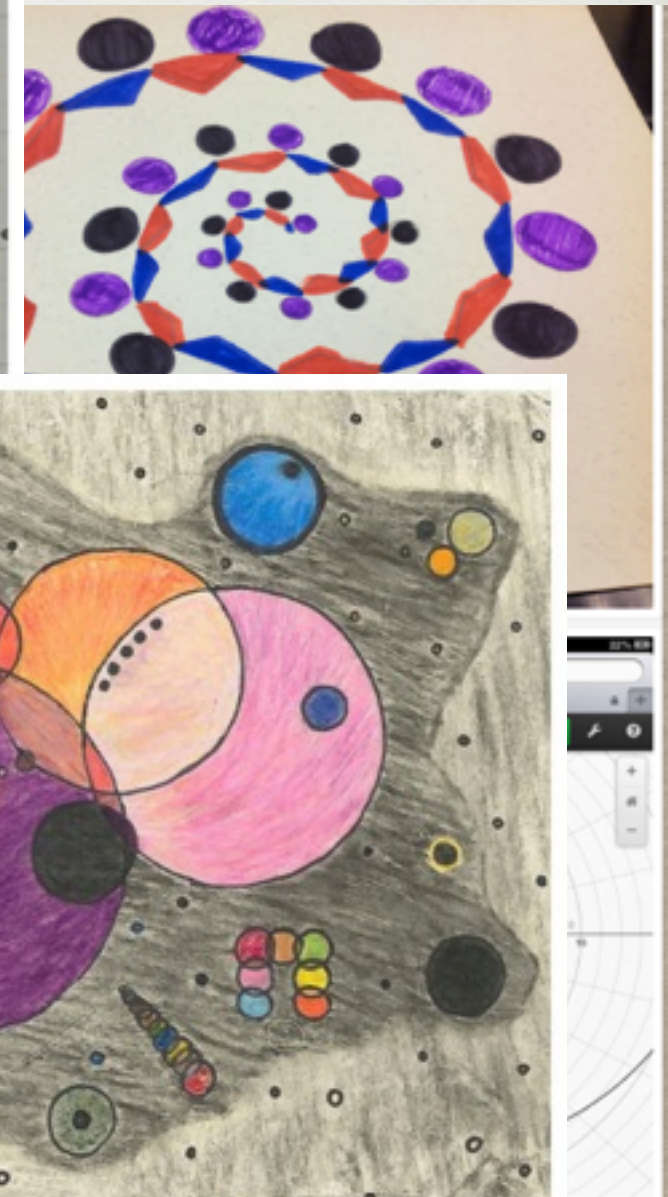
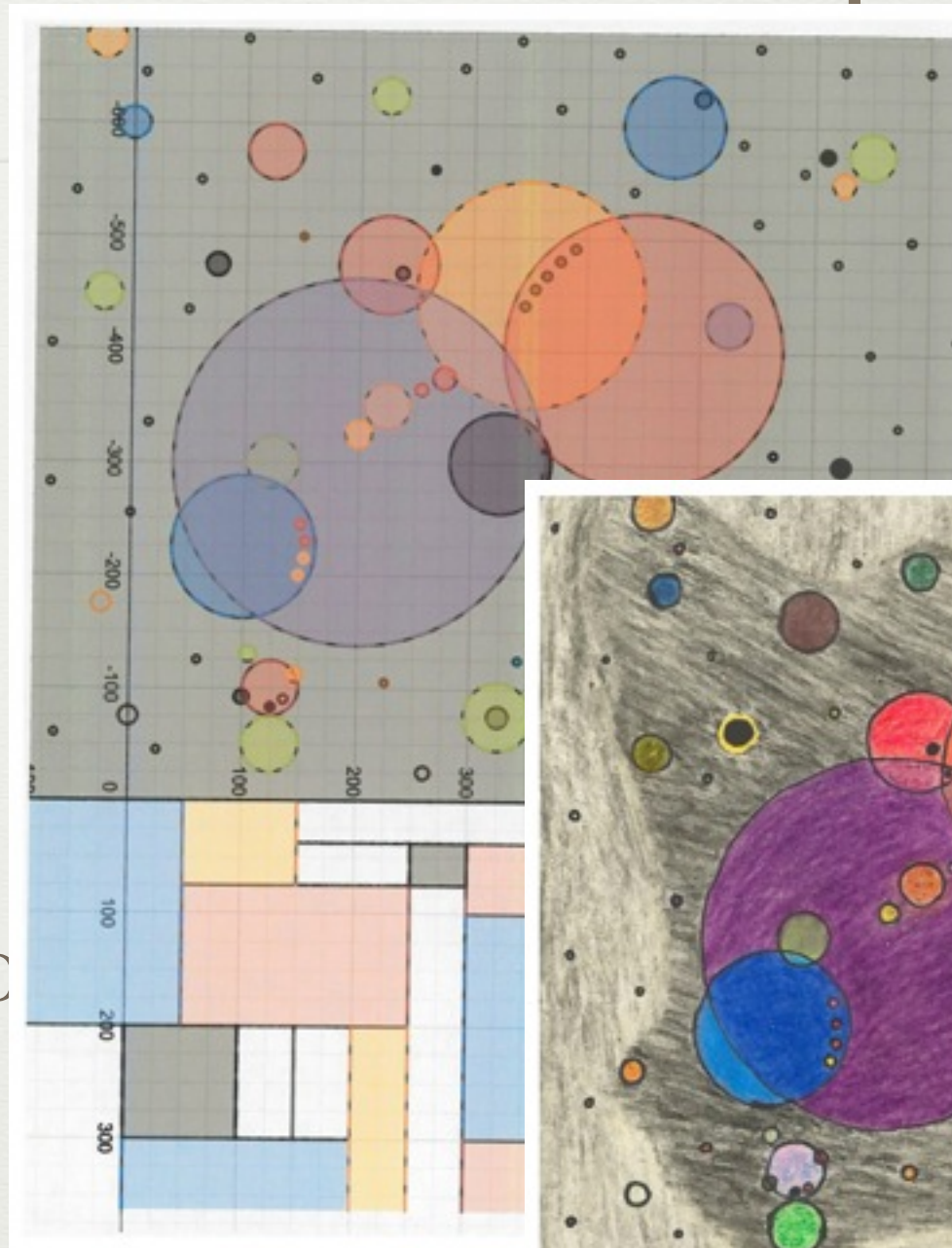
student work examples

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student work examples

- creating art and then generating mathematical models that create the artwork as a mathematical set of functions

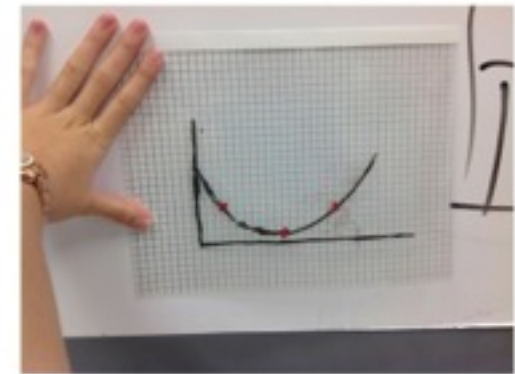


student work examples

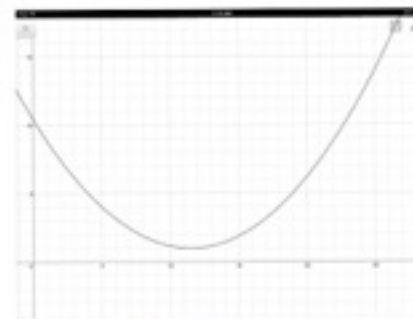
- Finding a quadratic relation in nature and modeling the function in Desmos to confirm the relationship



Above is my real life Parabola



Above is the tracing of my real life Parabola, after I traced it I marked 3 points that intersected with another



Above is the finish product on Desmos when I figured what point A,B,C was. I graphed it using points



Above is the transparency of my original shape to my desmos graph after graphing the points



To the left is my steps of my work.

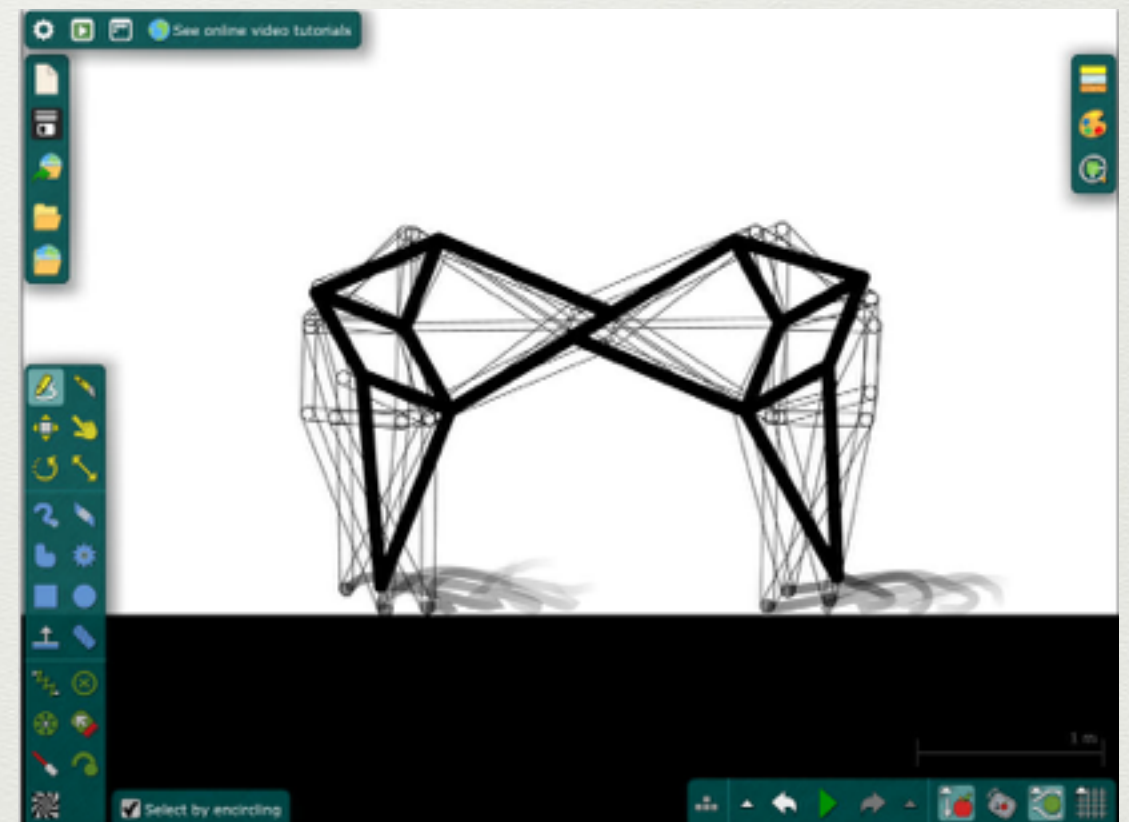
Summary: I think my function fit my form pretty well, even though I had to adjust it a little it was close.

Activity Type: Simulation

The App:
Algadoo

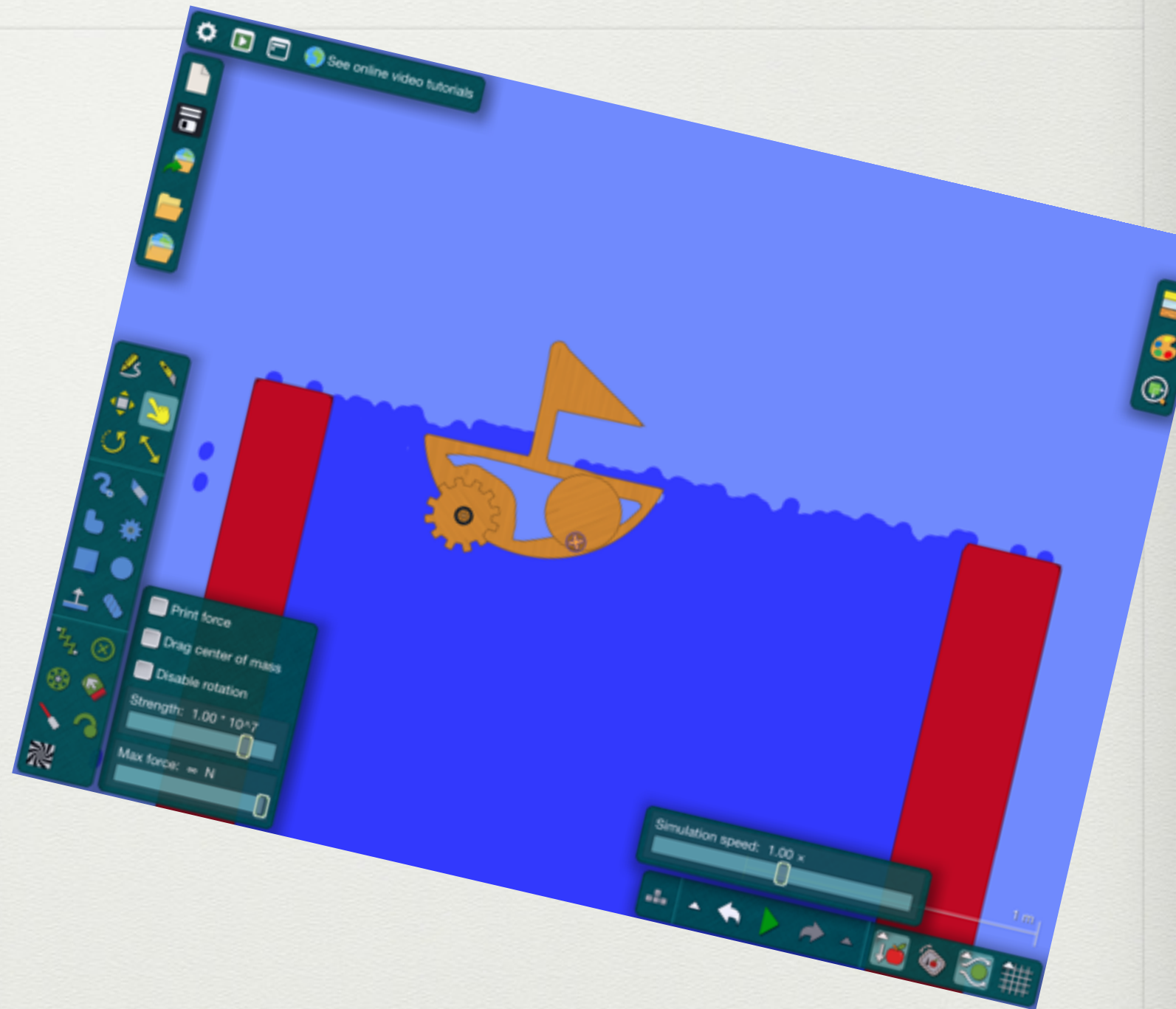
Use:

students design and apply
physical science concepts to
construct simulations of
physical phenomena and
design ideas



student work examples

- design challenge:
build a pool of water,
and construct the
craft that can propel
itself from one end to
the other using
whatever physical
science concepts you
can design and
explain

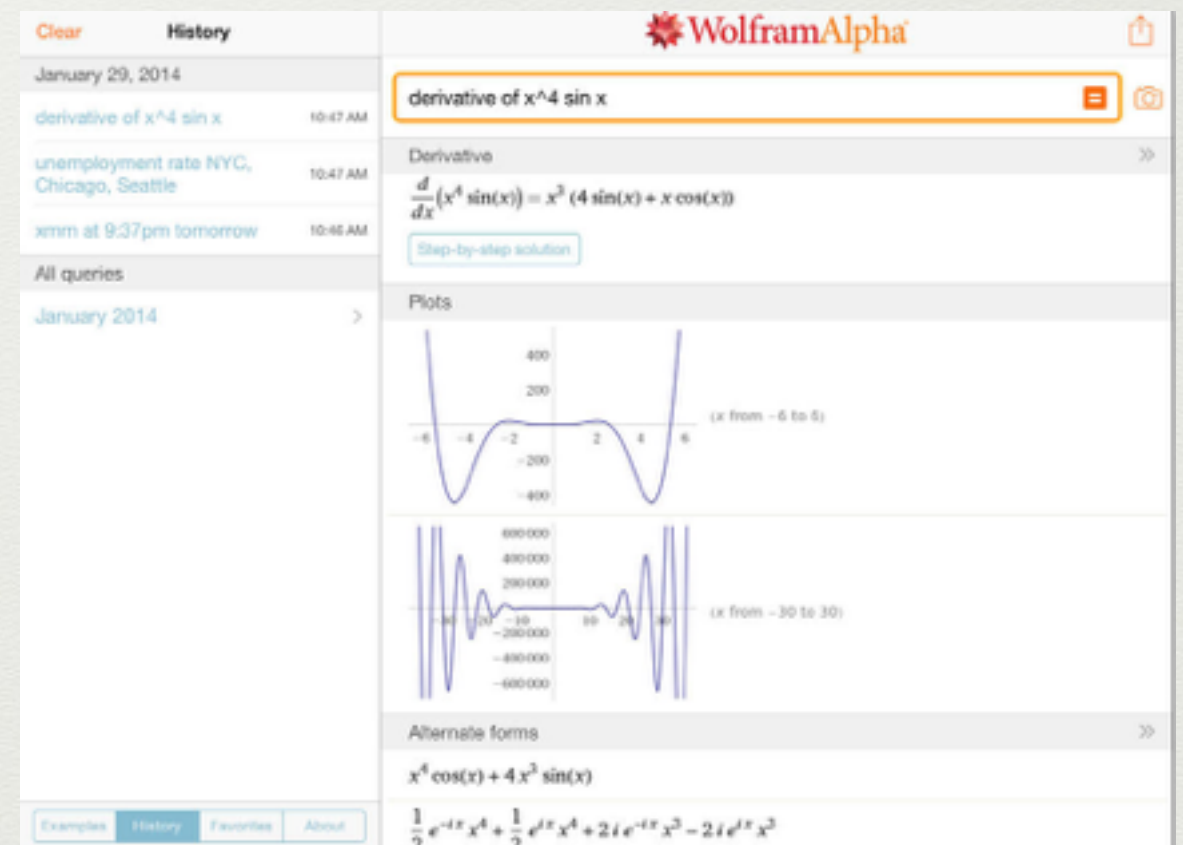


Activity Type: Simulation

The App:
WolframAlpha

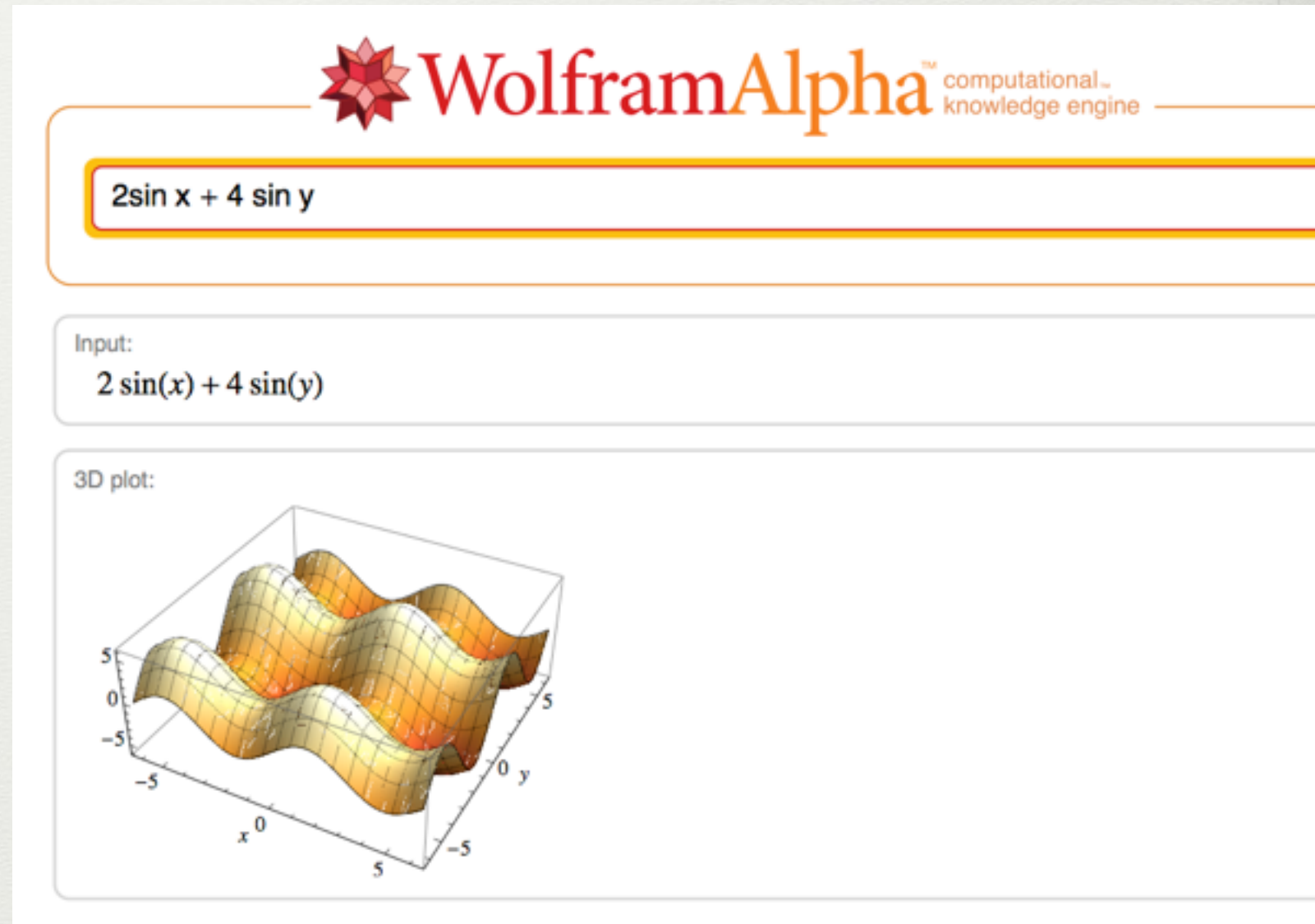
Use:

students research, design
and model data sets and
functional relations
understand their underlying
mathematical principles



student work examples

- students exploring functions and limits within their math and physics curriculum



Activity Type: Media

The App:
Camera

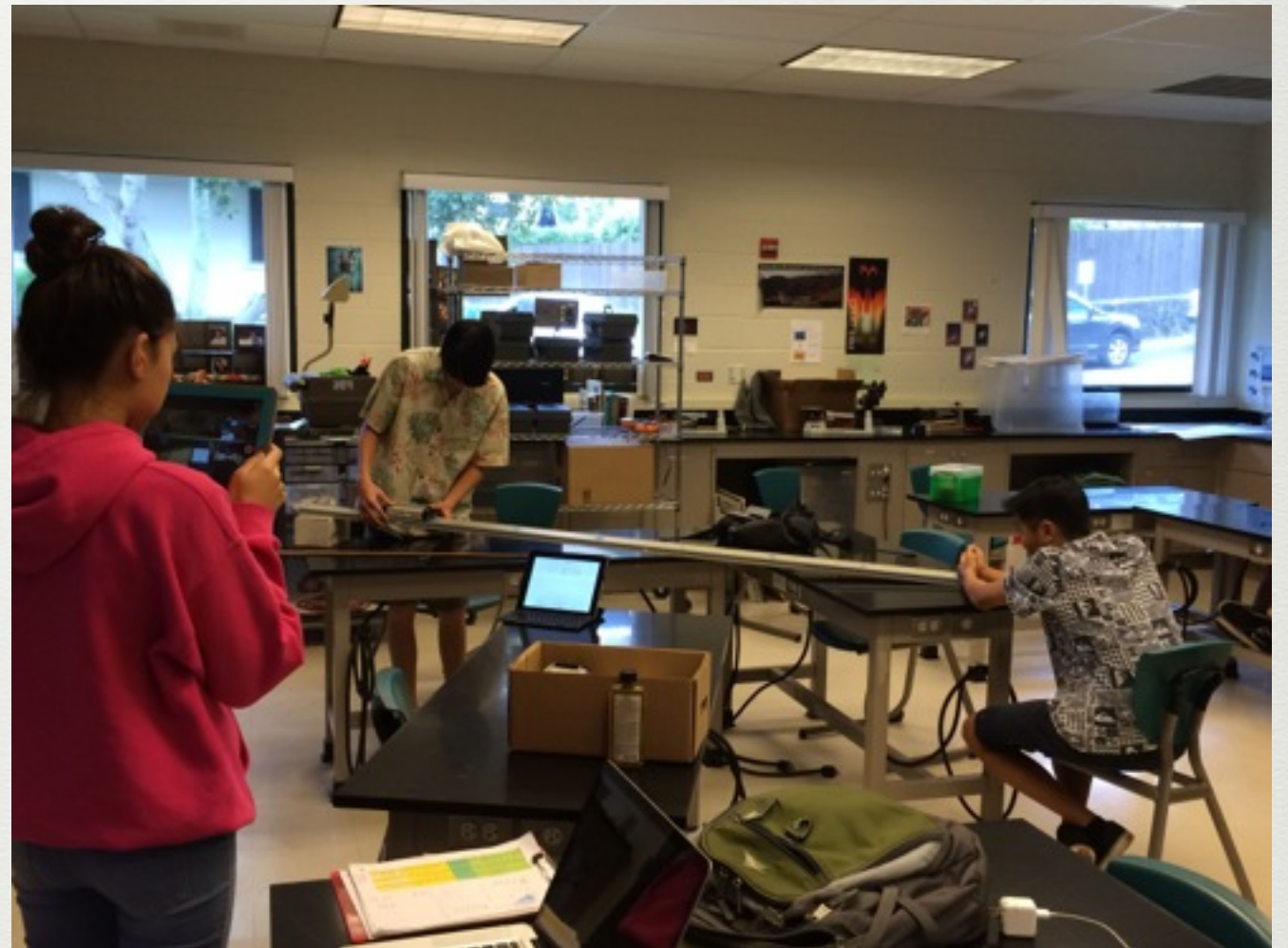
Use:

students use the image and
video function to document
real world phenomena,
create video logs on work in
progress, use as
documentation for projects



student work examples

- students captured experimental phenomena on film with running clock to time sequence experimental data sets



Activity Type: Media

The App:
iMovie

Use:

students create formative
and summative videos to
detail their learning and
share with an audience



student work examples

- students created videos to sell their ideas on tabletop Aquaponics Systems for Kickstarter
- YouTube links [here](#) and [here](#)

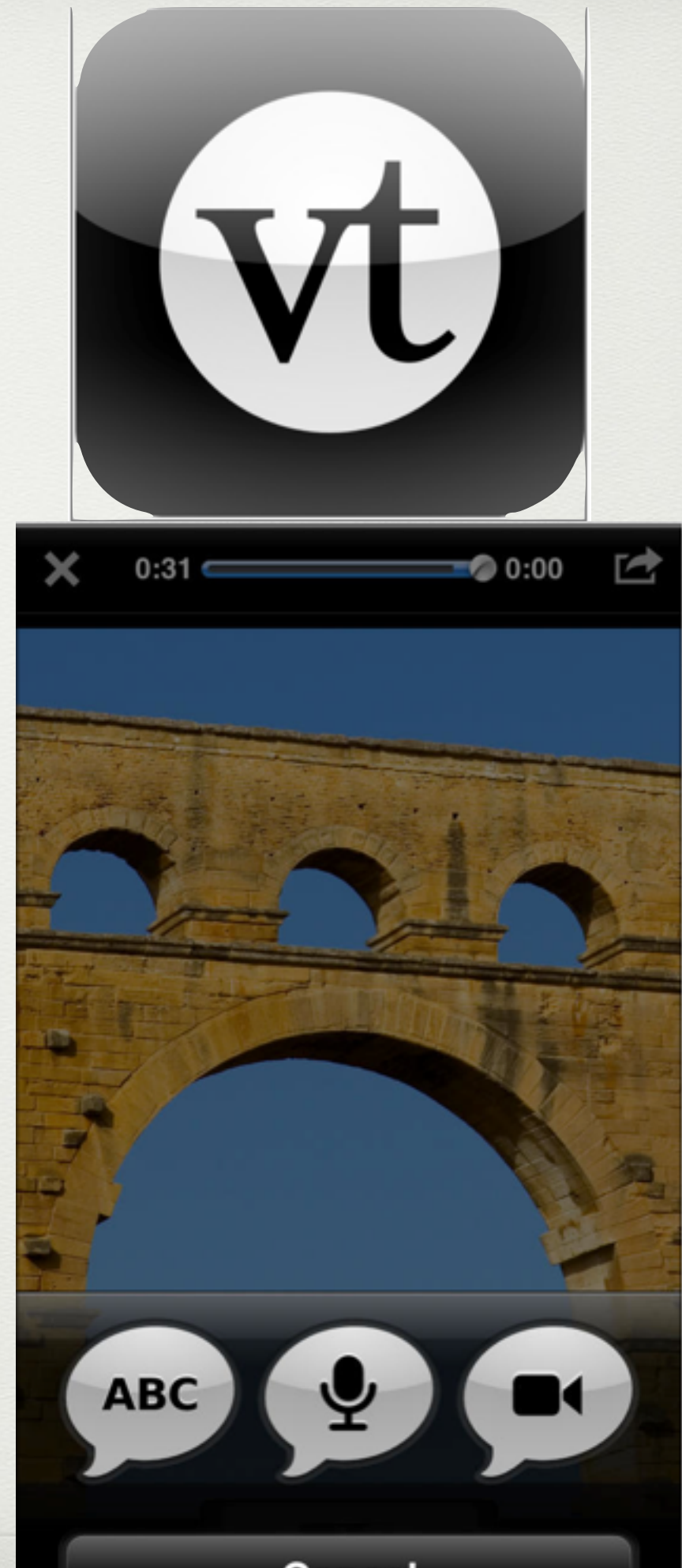


Activity Type: Media

The App:
VoiceThread

Use:

students create formative
and summative videos to
detail their learning and
share with an audience



student work examples

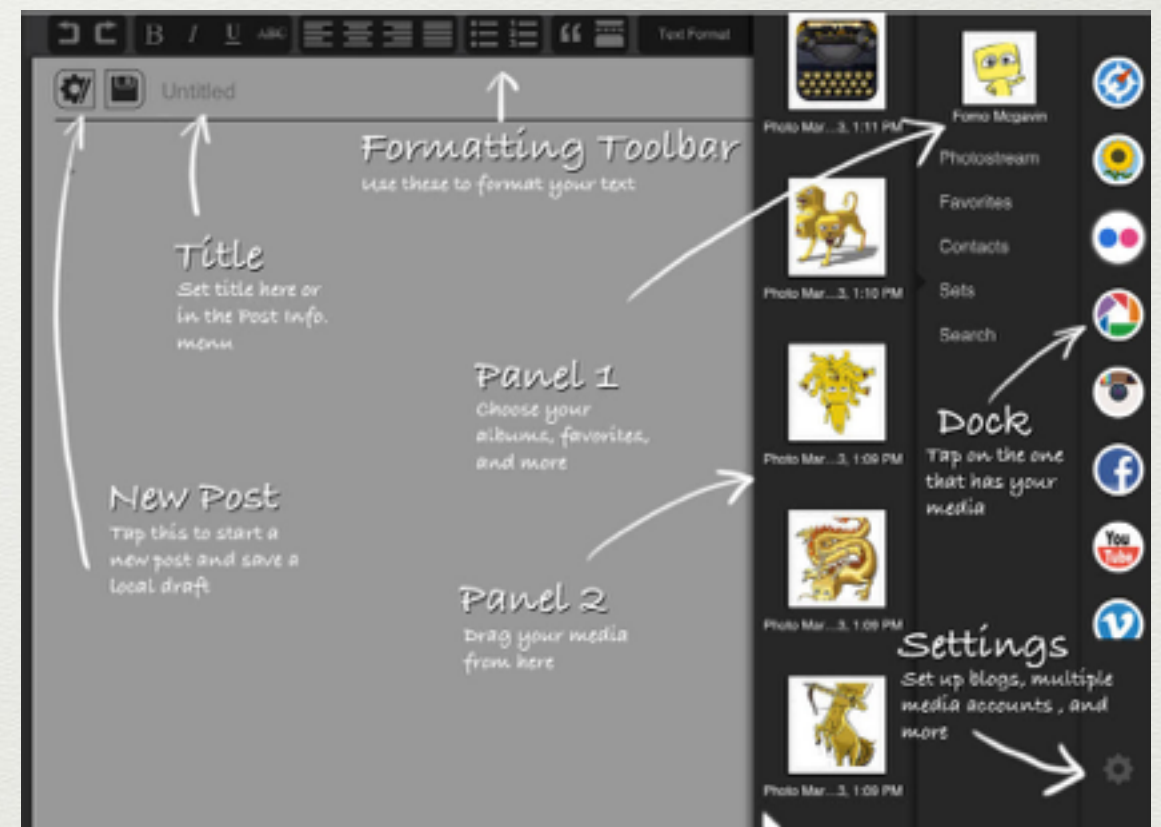
- students created video versions of their Presentation of Learning (PoL) for feedback before the actual event
- Links [here](#)



Activity Type: Web, Blogs, and Writing

The App:
Blogsy
Use:

great blogging tool students
used to attach to their
blogger accounts for writing,
curation, and artifact
documentation



student work examples

- students maintained reflective blogs which included written reflections, images of artifacts, videos and graphic sketches

Photo Draft



Posted by Isaiah at 5:47 PM

No comments:



Recommend this on Google

Wednesday, April 30, 2014

Photo project

My idea for this project is to change the color of my photograph just like in the second example given. I really think this would be a unique way to express my project. My idea for this project is to take one of my photos from my template and then change the color. I think if I changed the color it would make the photo more relateable to the people viewing. I feel often times when people see a black and white photo they feel a disconnect. I want to change that and add a dynamic feature to the photo and make it more appealing for others. I plan on doing this project on Photoshop so instead of sketching out my design I will describe it. I plan on adding more color to the photo and then also darking it to make people feel the emotion of what the times were like. I might even add a border at the end if it makes the photo more appealing. Overall, my goal for this project is to really capture the emotion and seriousness of the times and portray the victims in something they would be proud of.

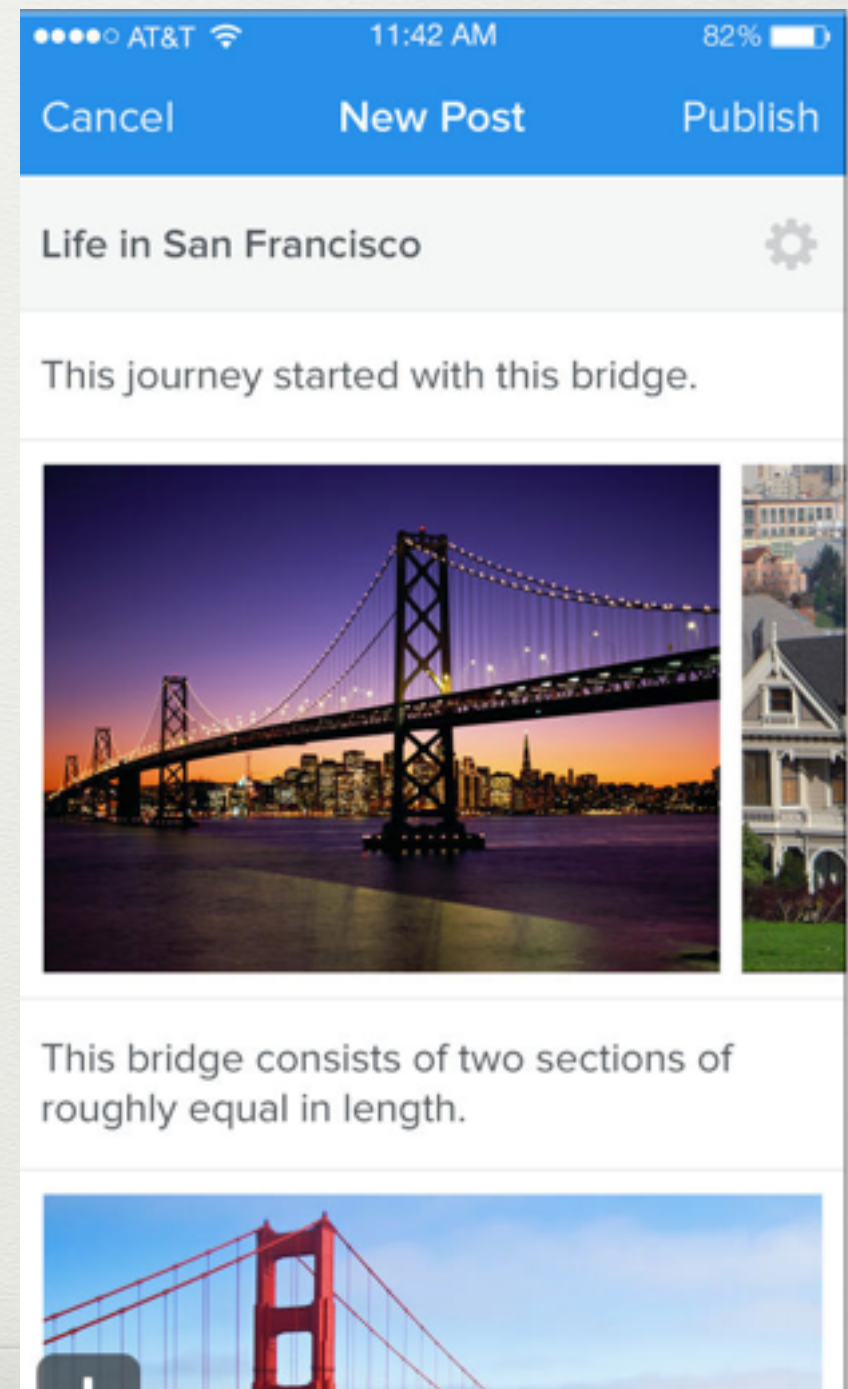
Posted by Isaiah at 8:29 PM

No comments:

Activity Type: Web, Blogs, and Writing

The App:
Weebly
Use:


student generated webpages
to demonstrate knowledge, to
share information, to create
awareness



student work examples

- Students and teachers built websites to demonstrate knowledge and understanding during the Aquaponics project
- [Link Here](#)

MPX9 Spring 2013

contact: 



SHARK TANK

FINAL POL

ENTREPRENEURIAL RESOURCES

MORE...

Project Description:

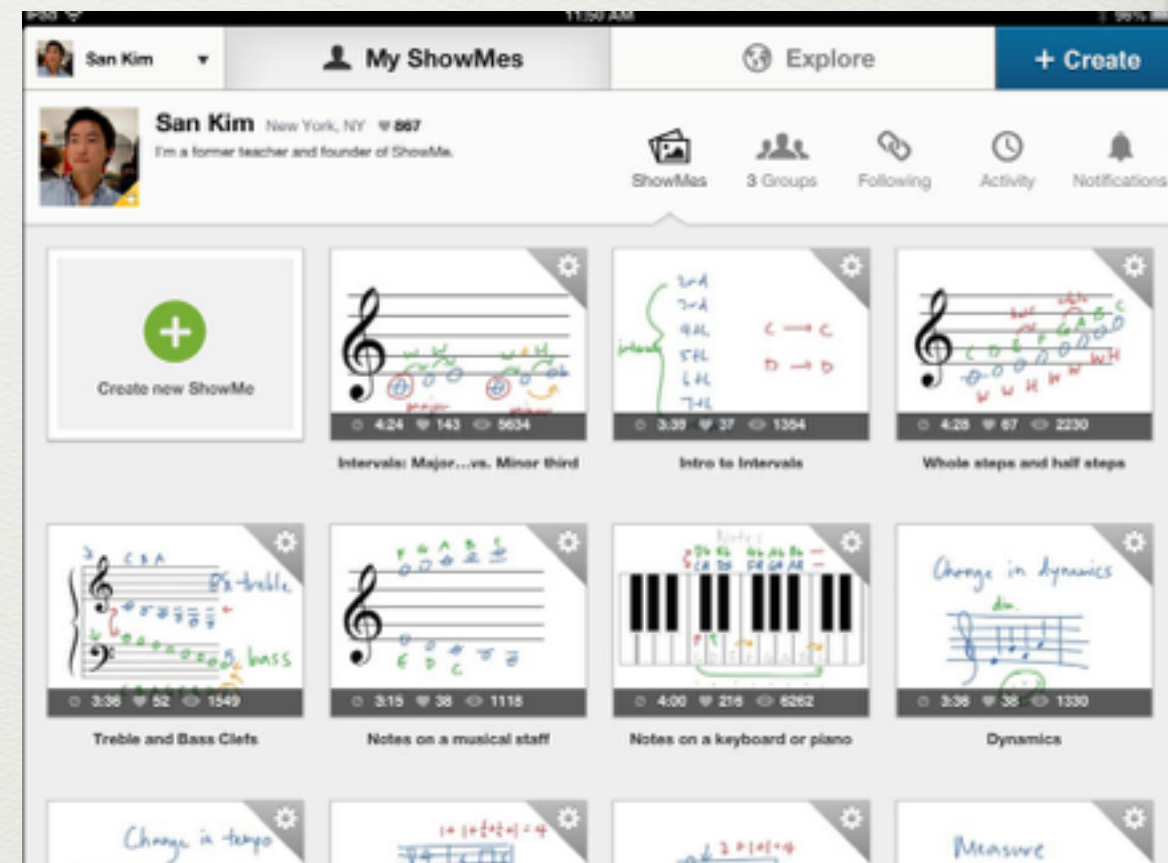
Students are working in teams to design and construct a small table- or desk-top aquaponics system for the home, and then market their product. In other words, we are blending academics and entrepreneurialism and challenging students to make Hawai'i's growth more environmentally sustainable.

Activity Type: Web, Blogs, and Writing

The App:
ShowMe

Use:

used for formative and
summative opportunities for
students to explain their
understanding and generate
content for other class
members



student work examples

- students sharing solutions to SAT problem for preparation
- [Link Here](#)

$6\frac{1}{2} \rightarrow 1 \text{ day}$

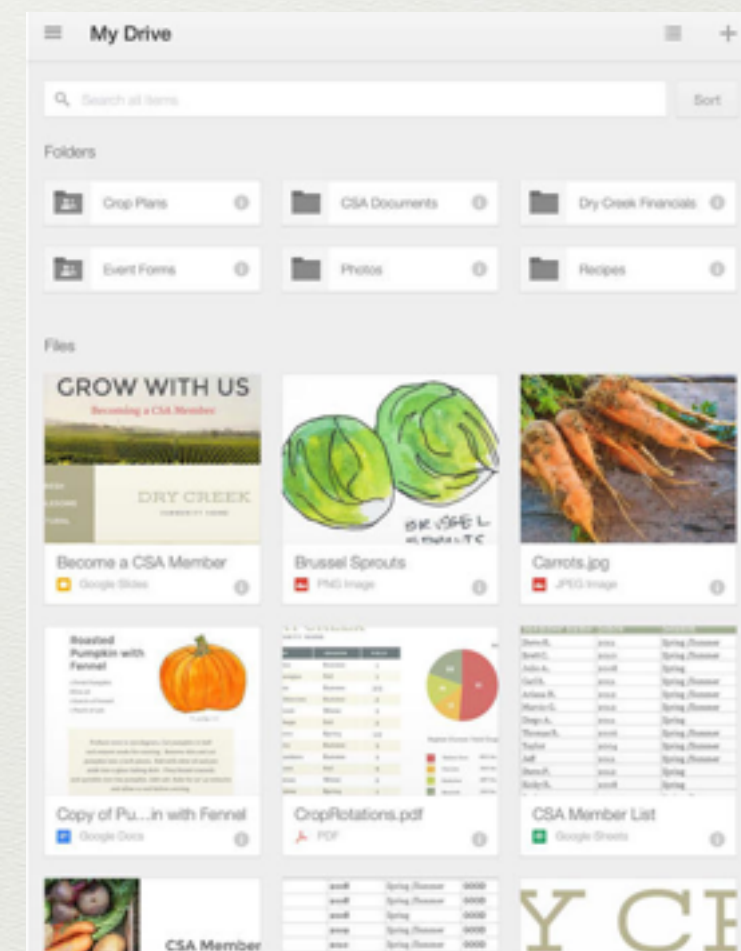
# of days	lbs. of food eaten
12	78
15	97.5
13	84.5
14	91

91 lbs
Guess & Check

Activity Type: Web, Blogs, and Writing

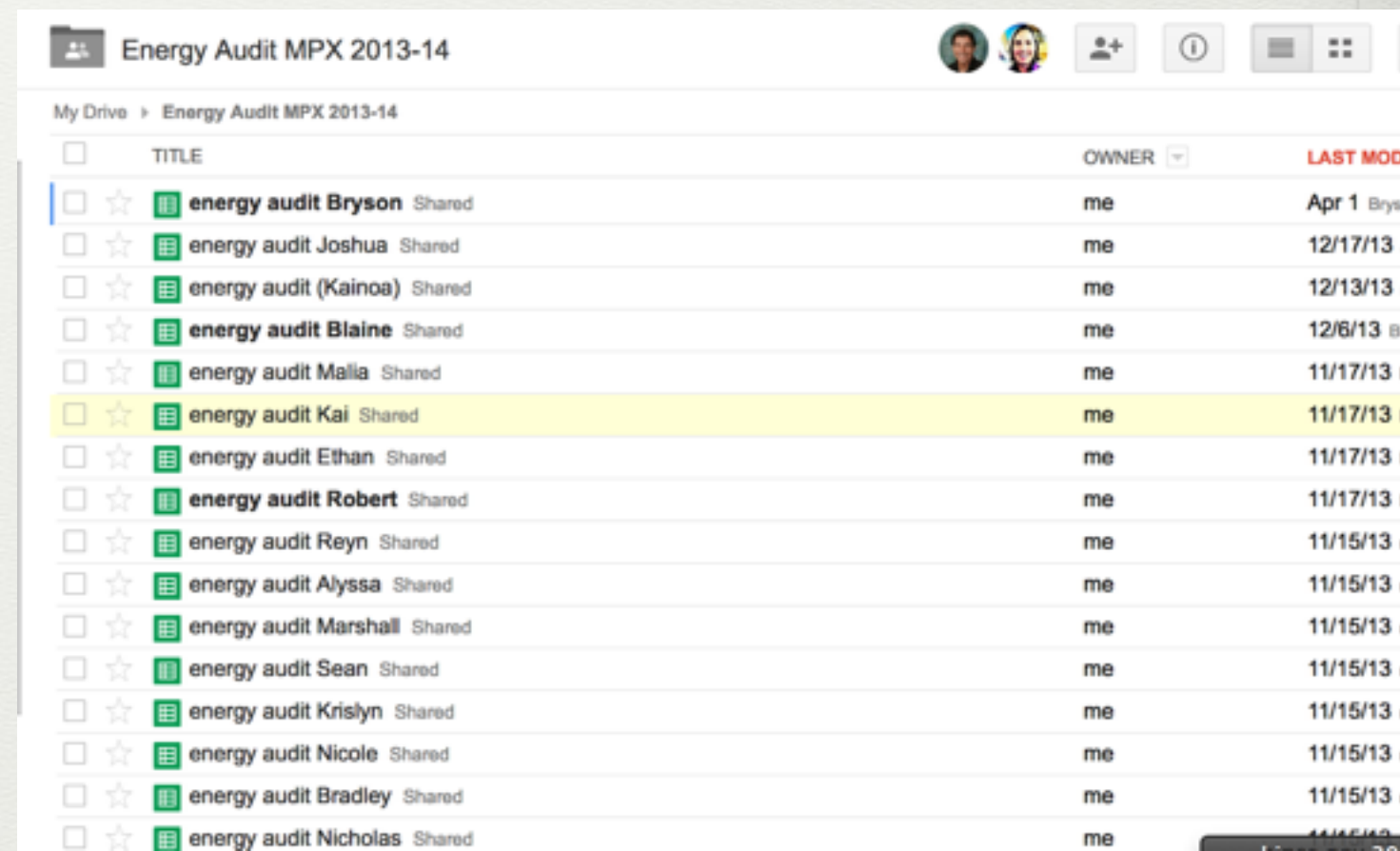
The App:
Google Apps
Use:

shared documents, resource
building, feedback and
revision loops, extensive
access and use of all of these
apps



student work examples

- Using Doctopus, templates shared with all of class to generate planning documents for energy project
- [Link Here](#)



Energy Audit MPX 2013-14

My Drive > Energy Audit MPX 2013-14

<input type="checkbox"/>	TITLE	OWNER	LAST MOD
<input type="checkbox"/>	energy audit Bryson Shared	me	Apr 1 Brys
<input type="checkbox"/>	energy audit Joshua Shared	me	12/17/13
<input type="checkbox"/>	energy audit (Kainoa) Shared	me	12/13/13
<input type="checkbox"/>	energy audit Blaine Shared	me	12/6/13 B
<input type="checkbox"/>	energy audit Malla Shared	me	11/17/13
<input type="checkbox"/>	energy audit Kai Shared	me	11/17/13
<input type="checkbox"/>	energy audit Ethan Shared	me	11/17/13
<input type="checkbox"/>	energy audit Robert Shared	me	11/17/13
<input type="checkbox"/>	energy audit Reyn Shared	me	11/15/13
<input type="checkbox"/>	energy audit Alyssa Shared	me	11/15/13
<input type="checkbox"/>	energy audit Marshall Shared	me	11/15/13
<input type="checkbox"/>	energy audit Sean Shared	me	11/15/13
<input type="checkbox"/>	energy audit Krislyn Shared	me	11/15/13
<input type="checkbox"/>	energy audit Nicole Shared	me	11/15/13
<input type="checkbox"/>	energy audit Bradley Shared	me	11/15/13
<input type="checkbox"/>	energy audit Nicholas Shared	me	11/15/13

Activity Type: Graphics and InfoGraphics

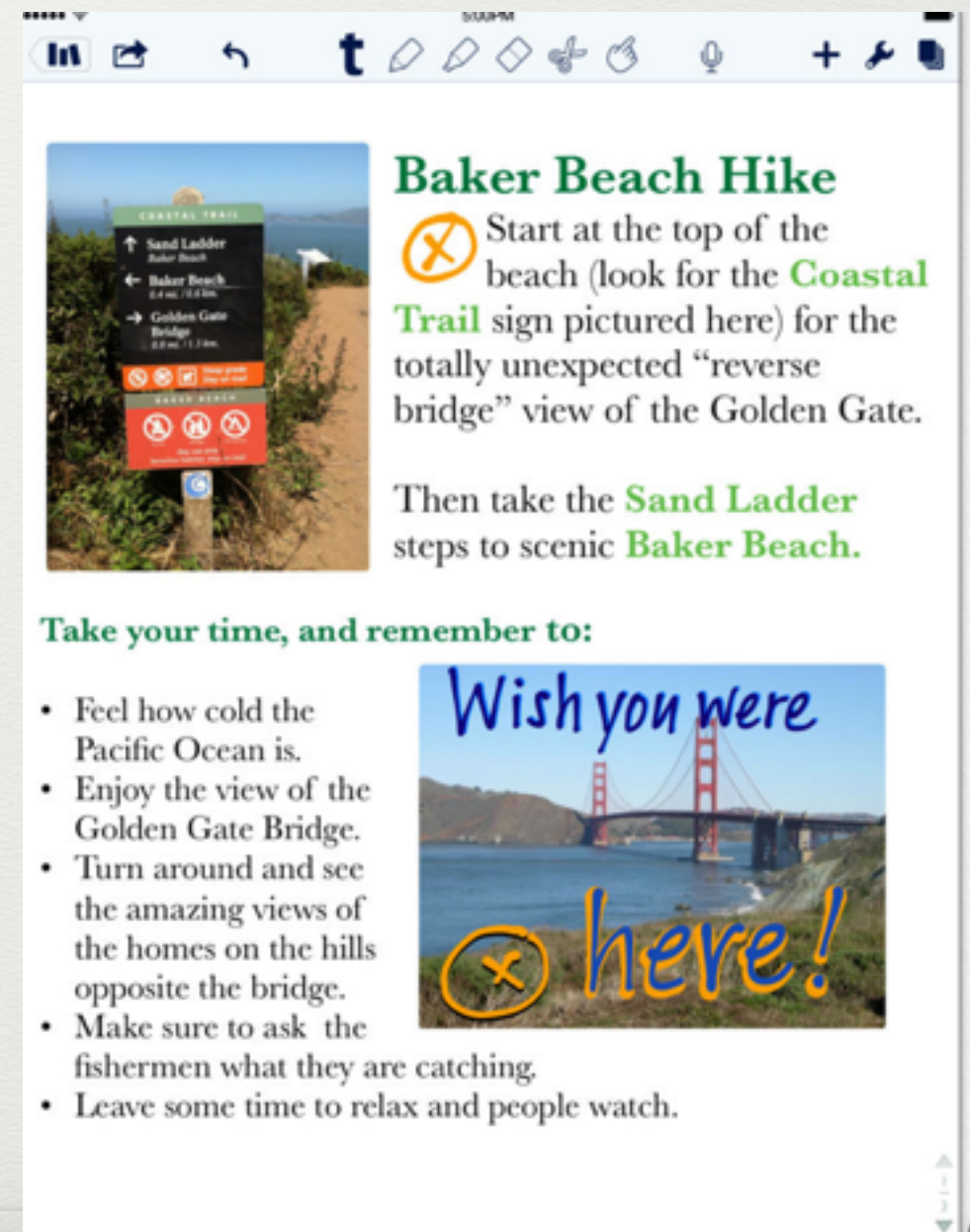
The App:
Notability

Use:

Ability to create and edit as well as markup documents which allows students to create a variety of graphically effective and powerful documents



NOTABILITY



student work examples

- annotation and resubmission of documents or images

iPad 8:54 PM 83%

Sketch all the forces acting upon the object, making the length of each vector represent the magnitude of the force.

1. Object lies motionless. 	2. Object slides at constant speed without friction.
3. Object slows due to kinetic friction. 	4. Object slides without friction.
5. Static friction prevents sliding. 	6. An object is suspended from the ceiling.
7. An object is suspended from the ceiling. 	8. The object is motionless.

student work examples

- creation of detailed infographics

student work examples

- creation of detailed infographics



Sonic AQUAPONIC



This is an Aquaponic system. It uses plants fish and water to create a non-chemical environment.

What it can do for you:
Help save the water and overall the Earth. Create educational fun for children. Invest and save money. Grow food.

Learning: Biology from the process, Math from the angles, and engineering



Diagram:

What makes ours different:
We use plexiglass, people can see thru, It's bigger than everyone else's

APPROVED

"Very Educational!"

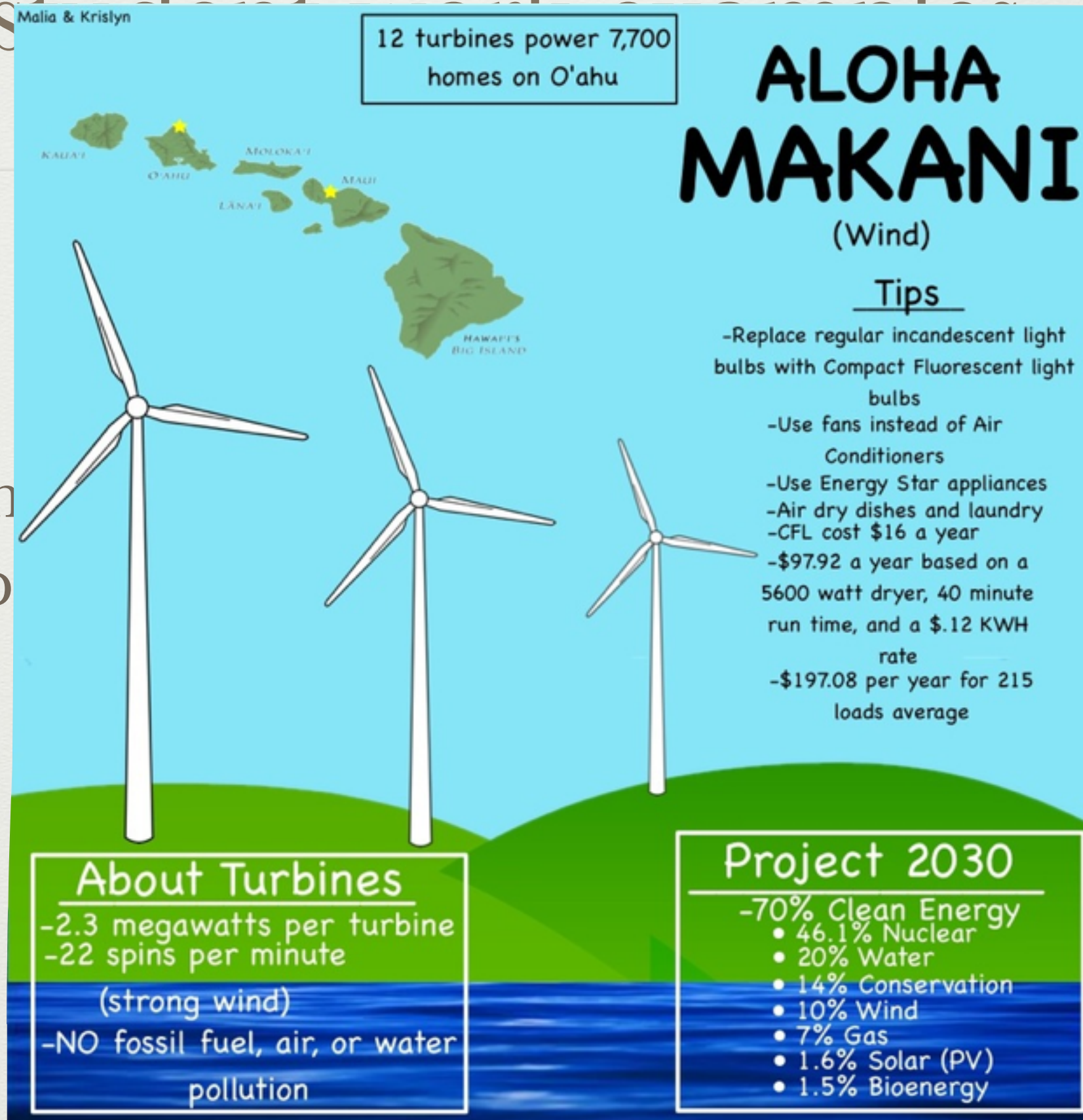
"What a deal!!!"

"Best I've seen in a while."



Our Thoughts: We think we have been very successful building this. It was hard work but it all paid off in the end. We had our rough times but we got through it in the end.

- creation
infographic



What makes ours different:
We use plexiglass, people can see thru, It's bigger than everyone else's

APPROVED

"Very Educational!"

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"Best I've seen in a while."



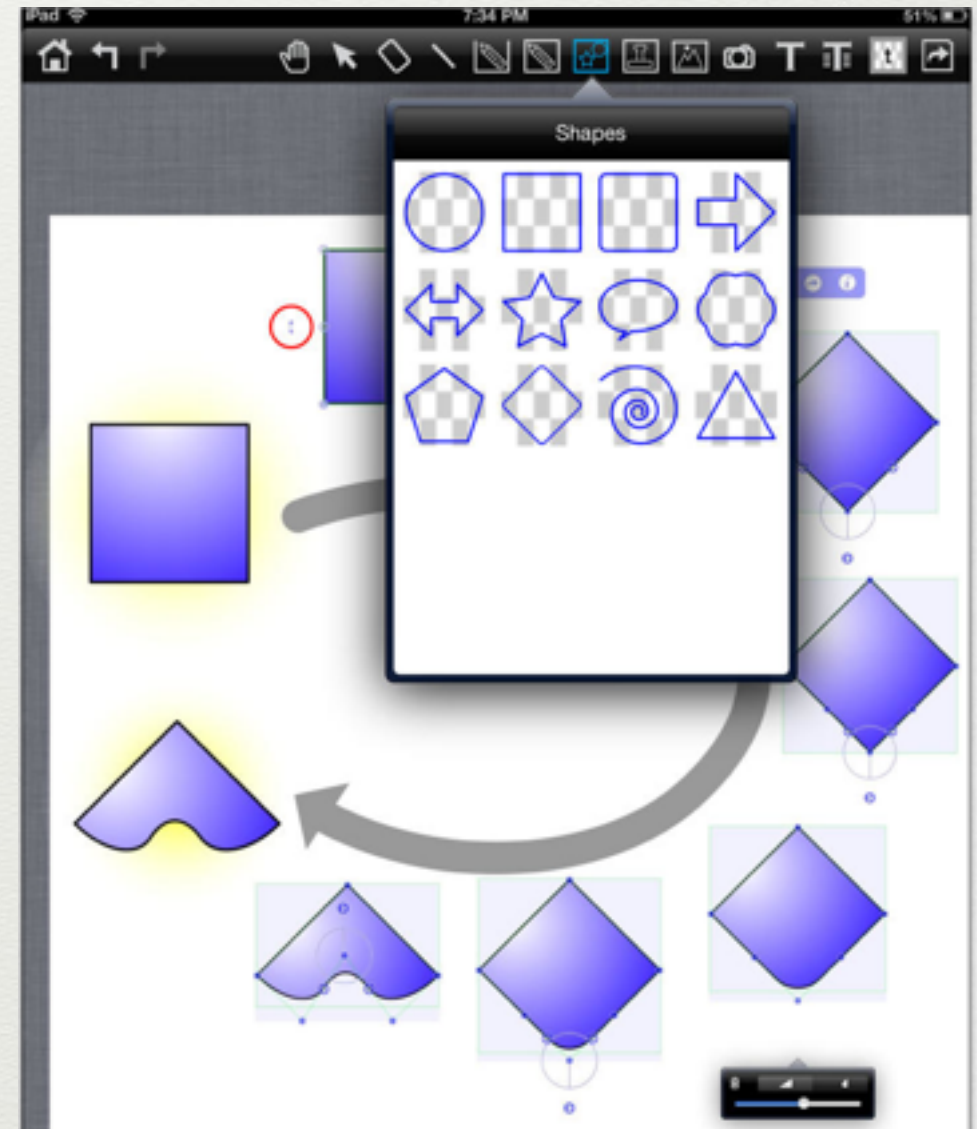
the end.

Activity Type: Graphics and InfoGraphics

The App:
NeuDraw

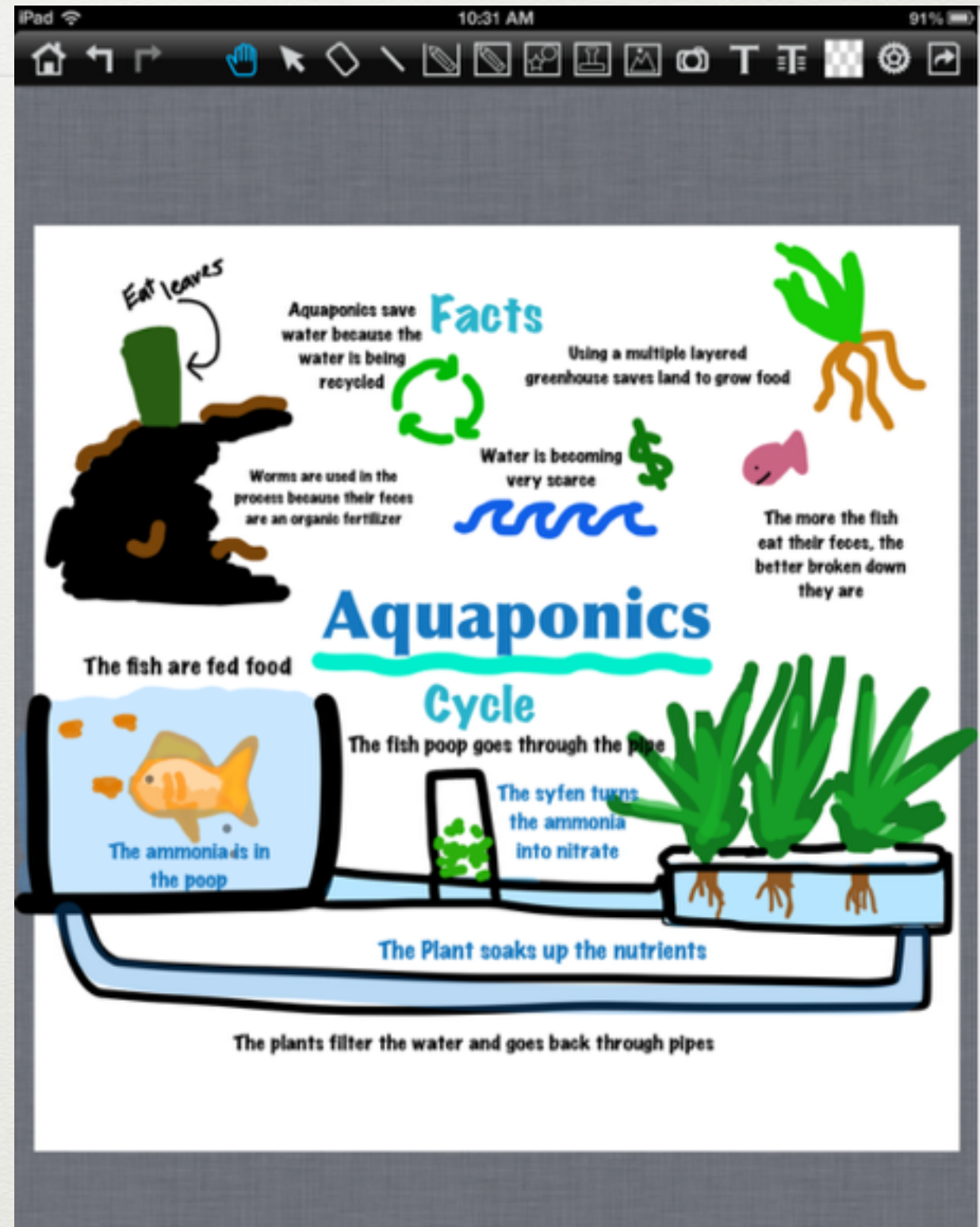
Use:

powerful vector graphics
program for scalable and
detailed graphical work and
infographics



student work examples

- annotation and resubmission of documents or images

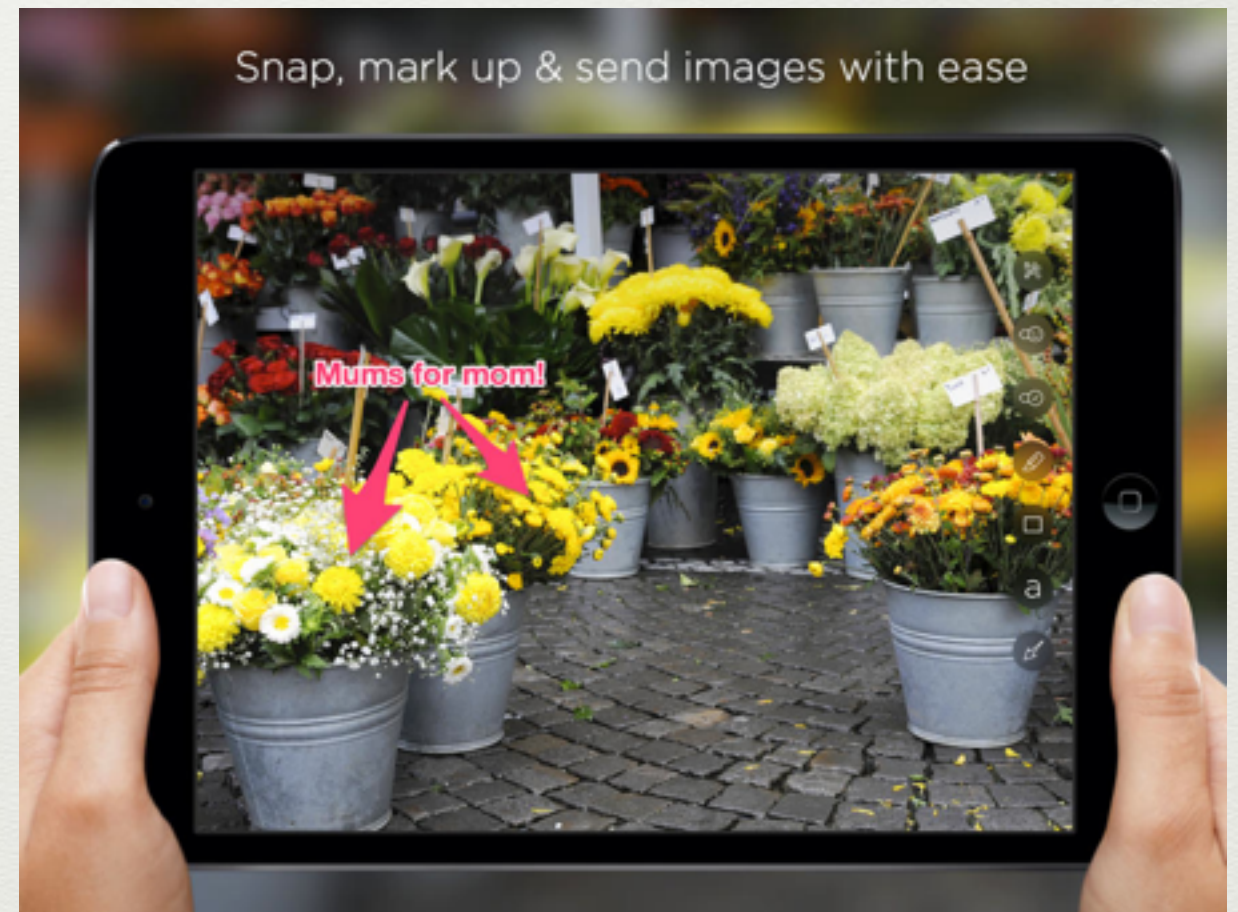


Activity Type: Graphics and InfoGraphics

The App:
Skitch

Use:

easy tool for creating and
marking up graphic
documents



student work examples

- demonstrating understanding of cell parts

