

Technology In Education: Frameworks, Models, and Applications

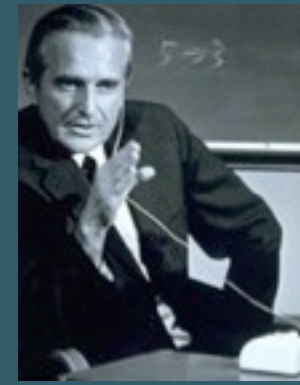
Ruben R. Puentedura, Ph.D.

Goals

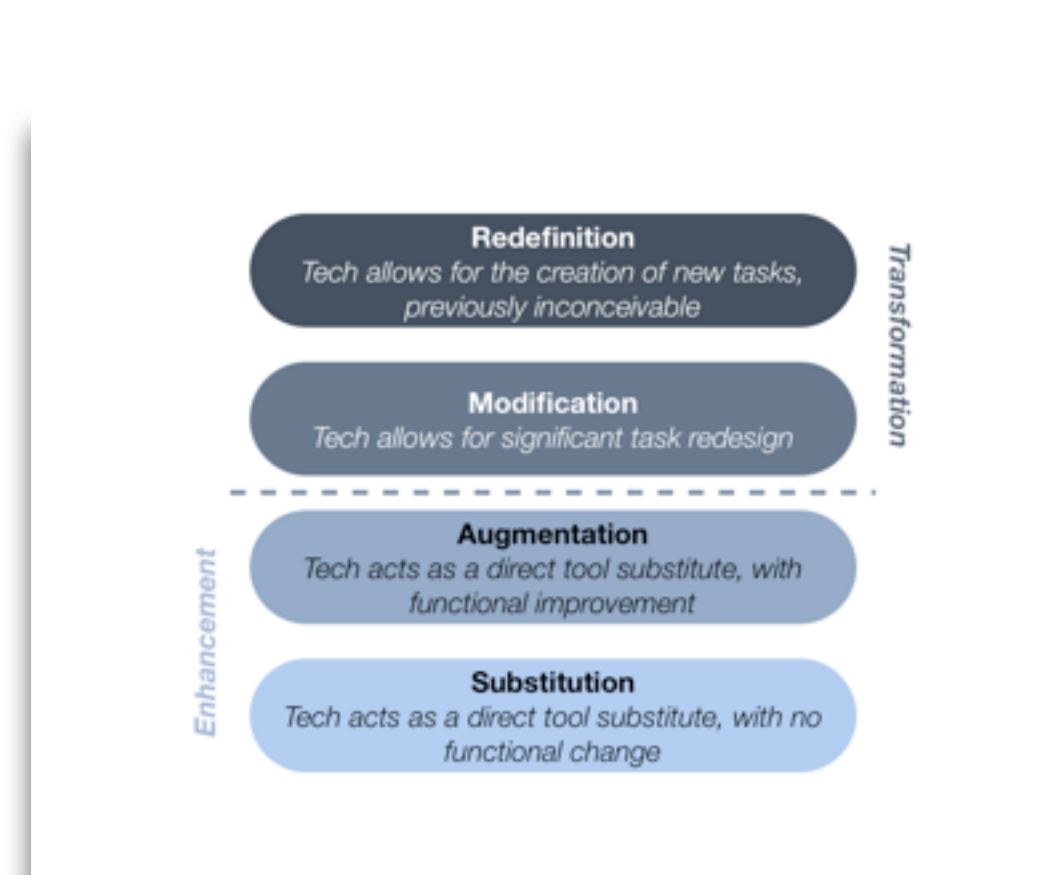
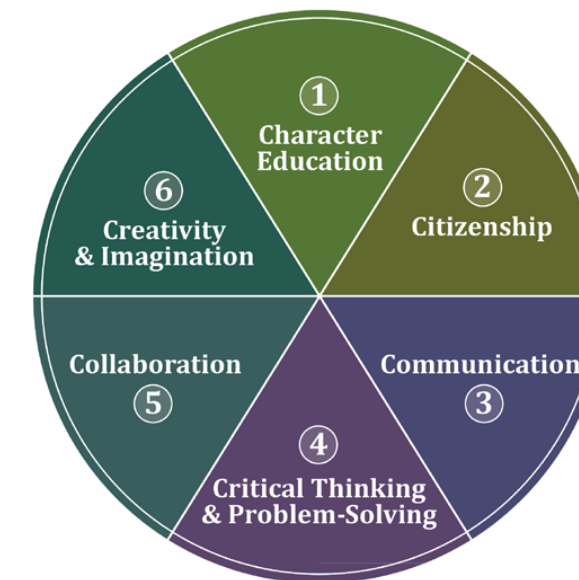
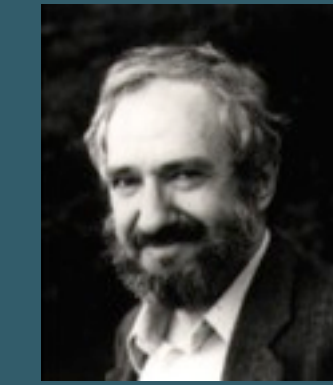
Focus

Models

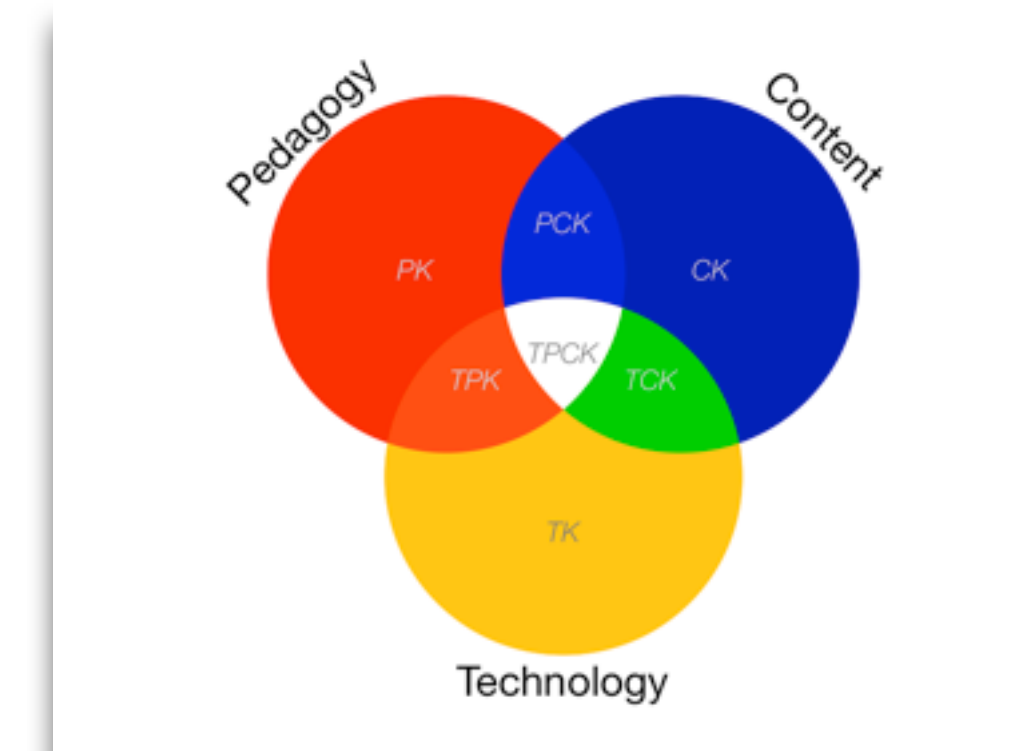
Technology



Augmenting Human Intellect & Learning Capacity



Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years



One-to-One Technologies

Transformation

Redefinition

*Tech allows for the creation of new tasks,
previously inconceivable*

Modification

Tech allows for significant task redesign

Augmentation

*Tech acts as a direct tool substitute, with
functional improvement*

Substitution

*Tech acts as a direct tool substitute, with no
functional change*

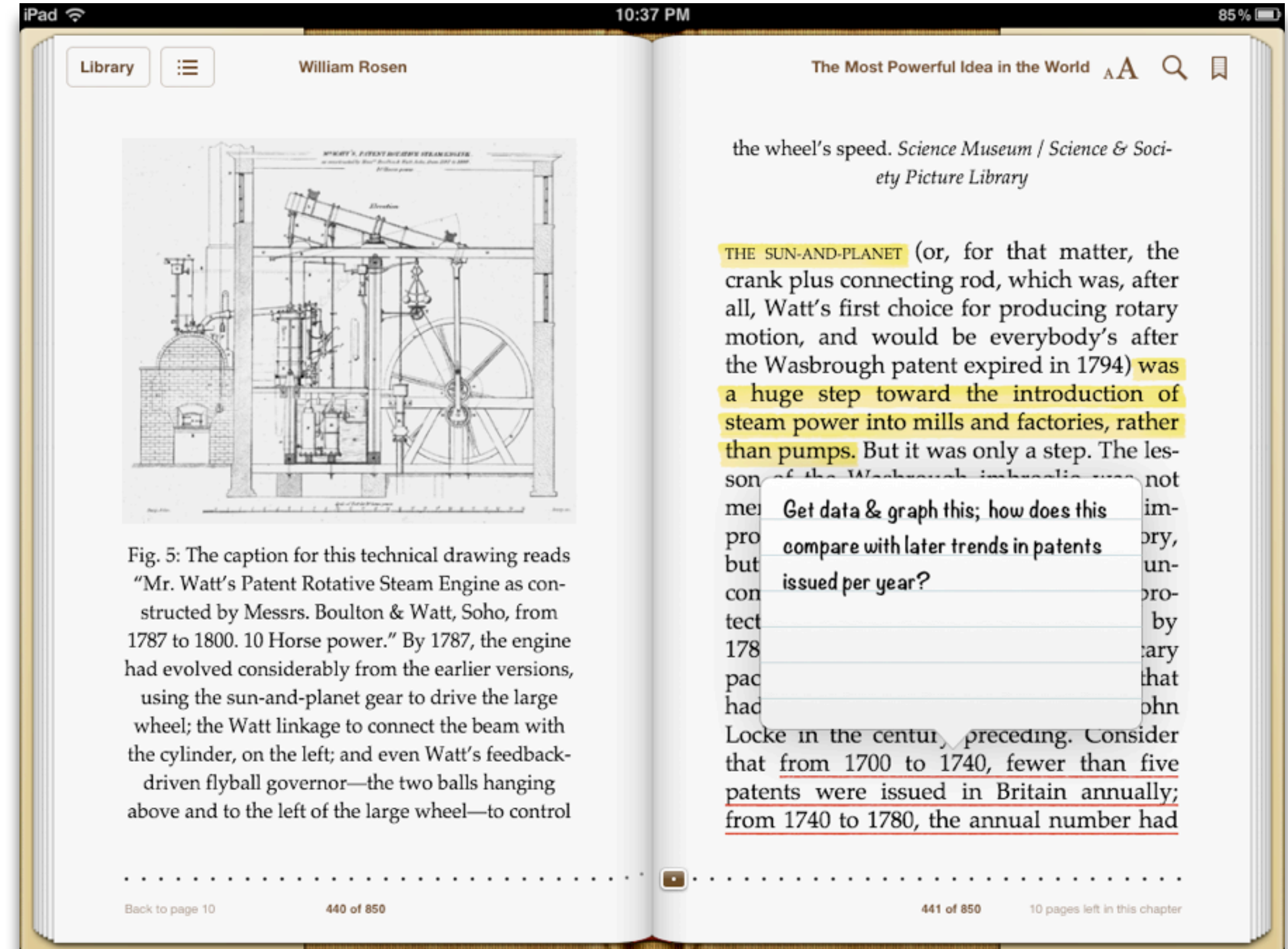
Enhancement

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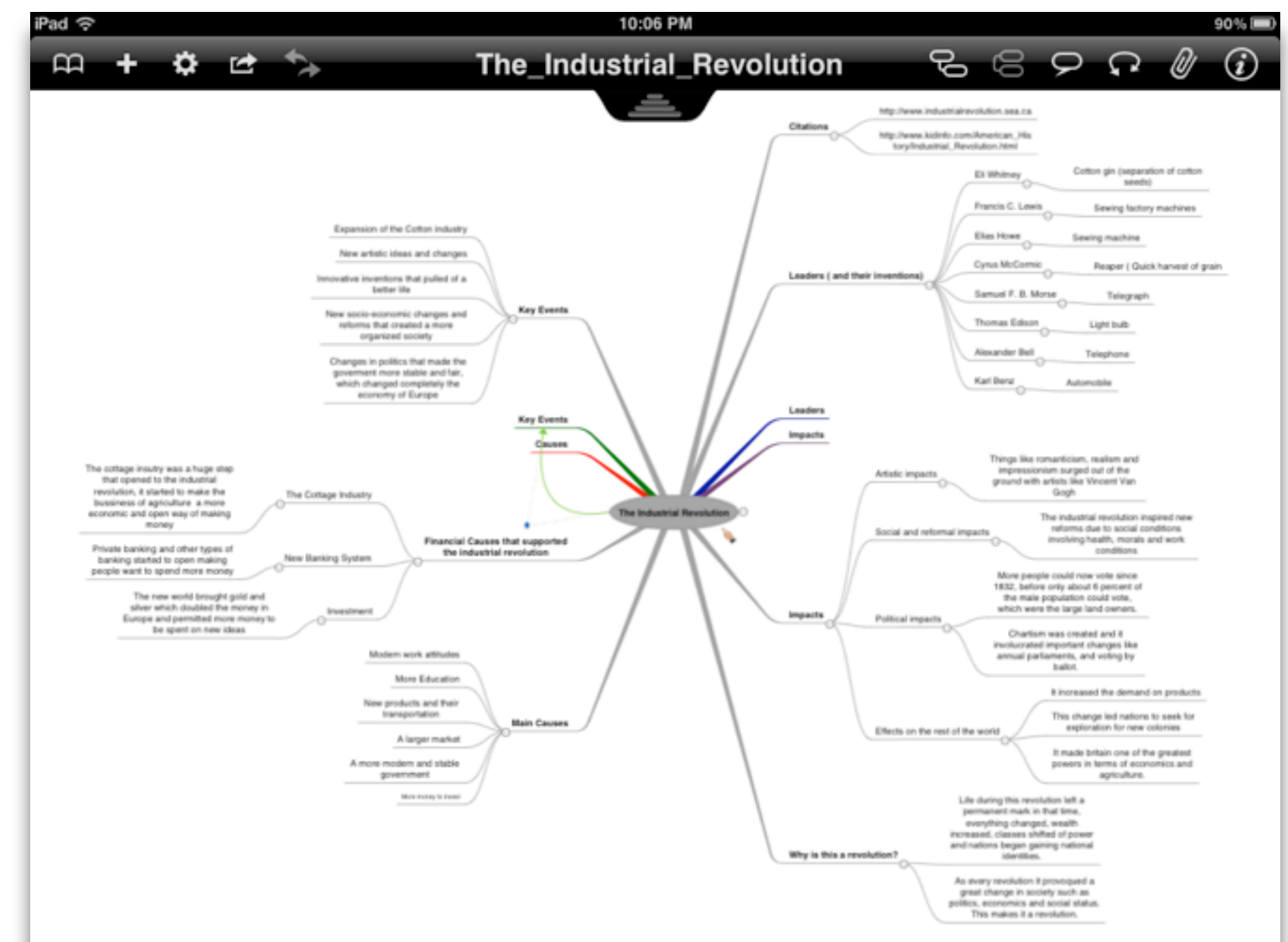
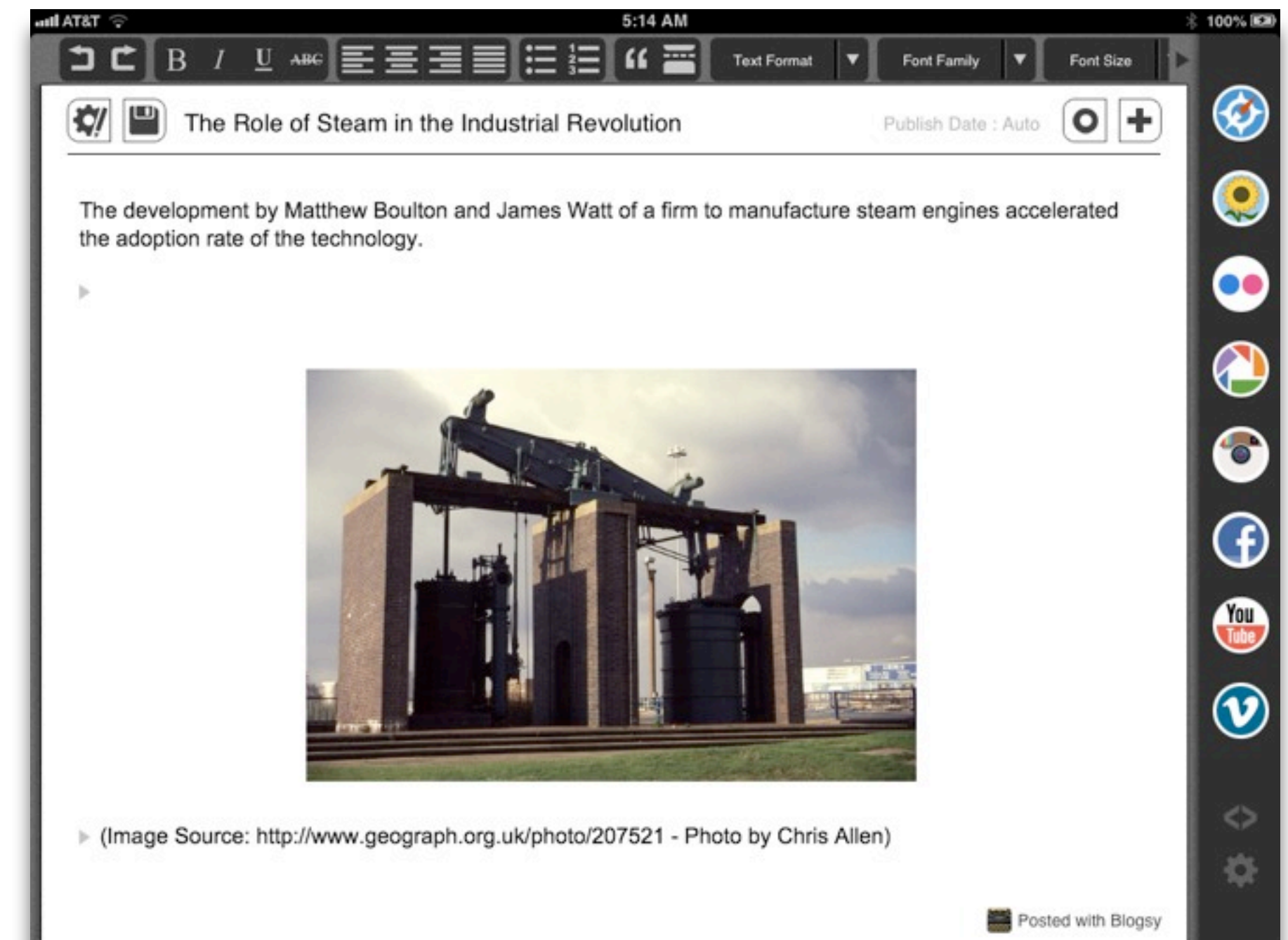
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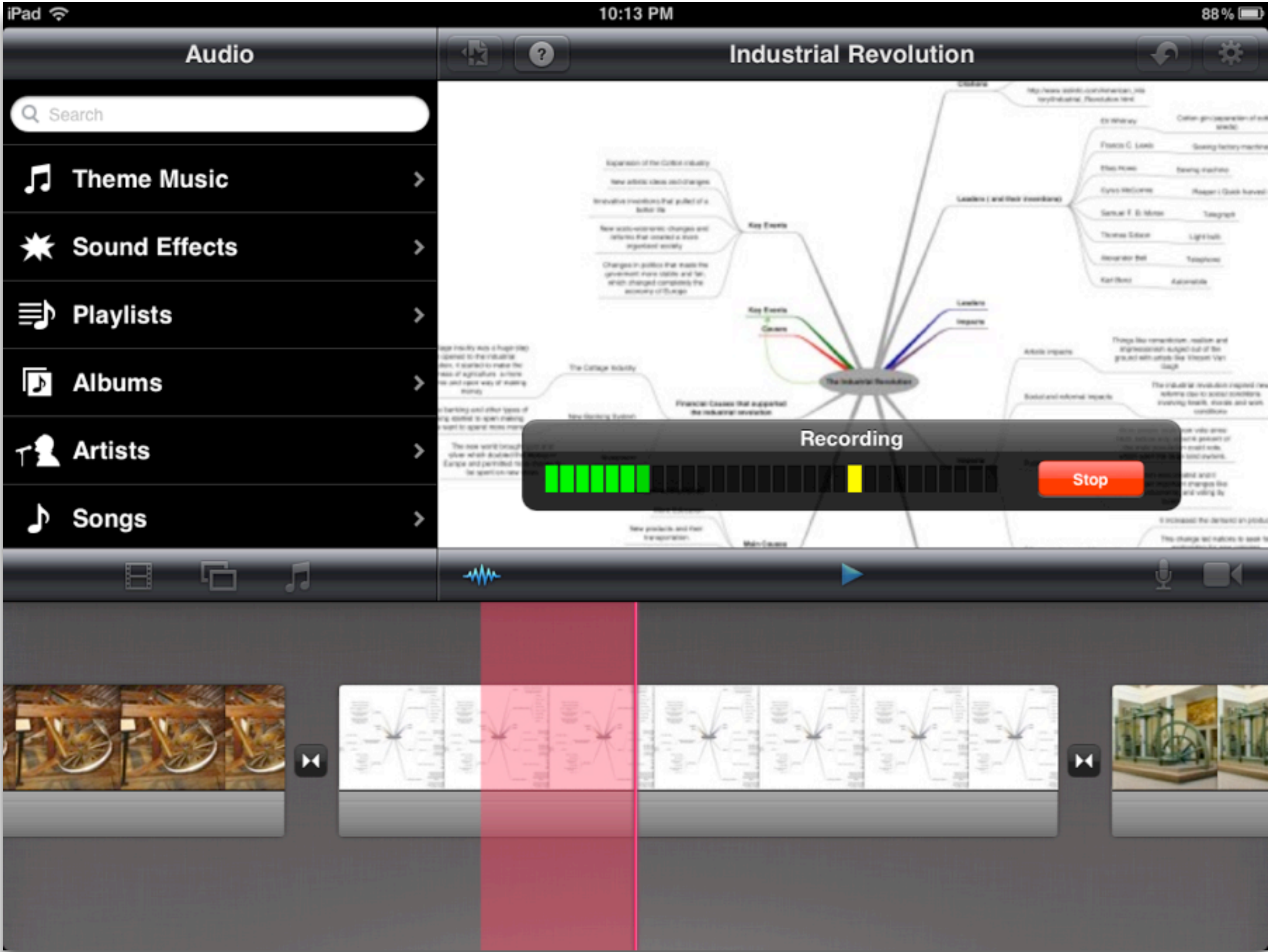
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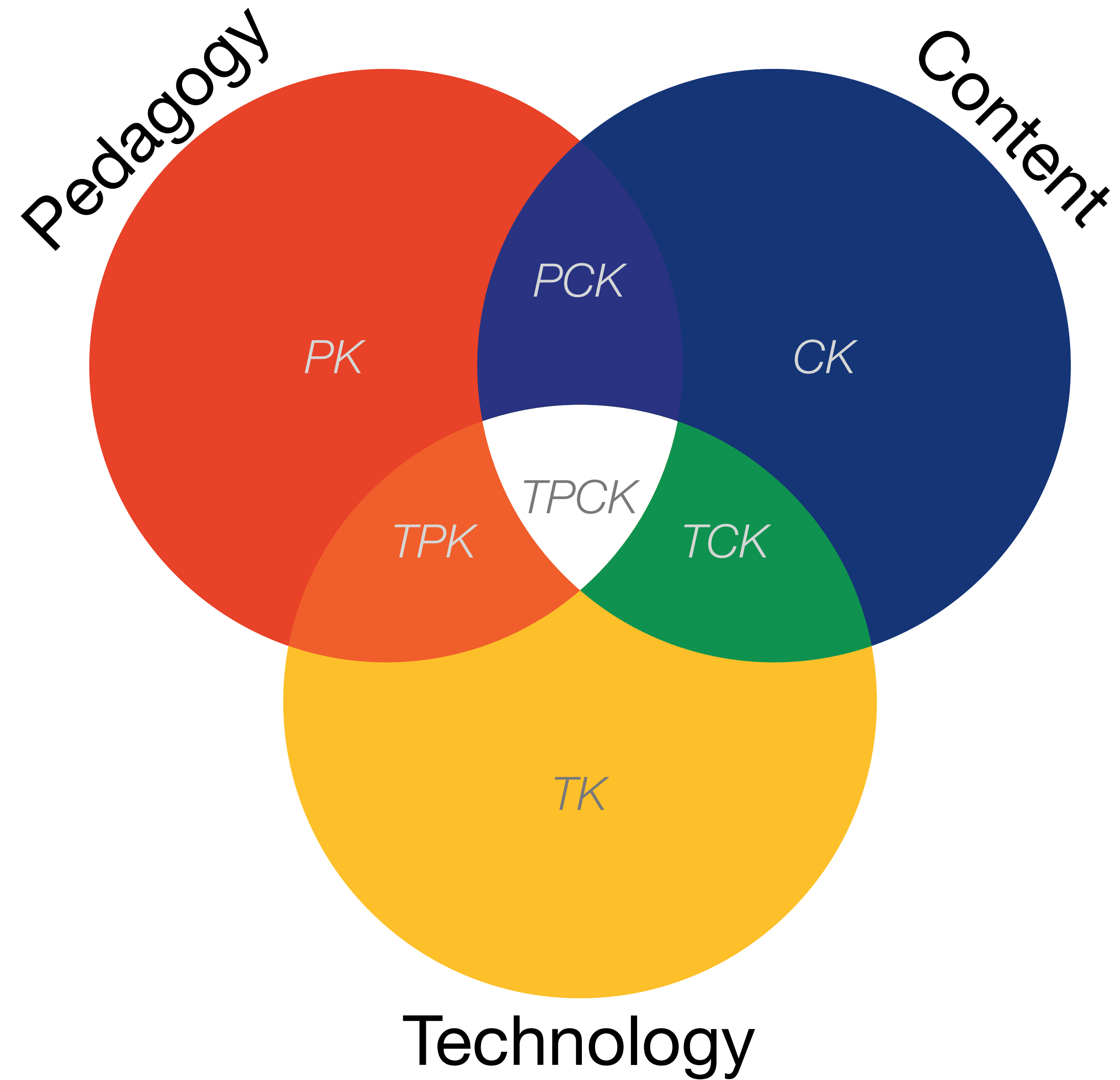
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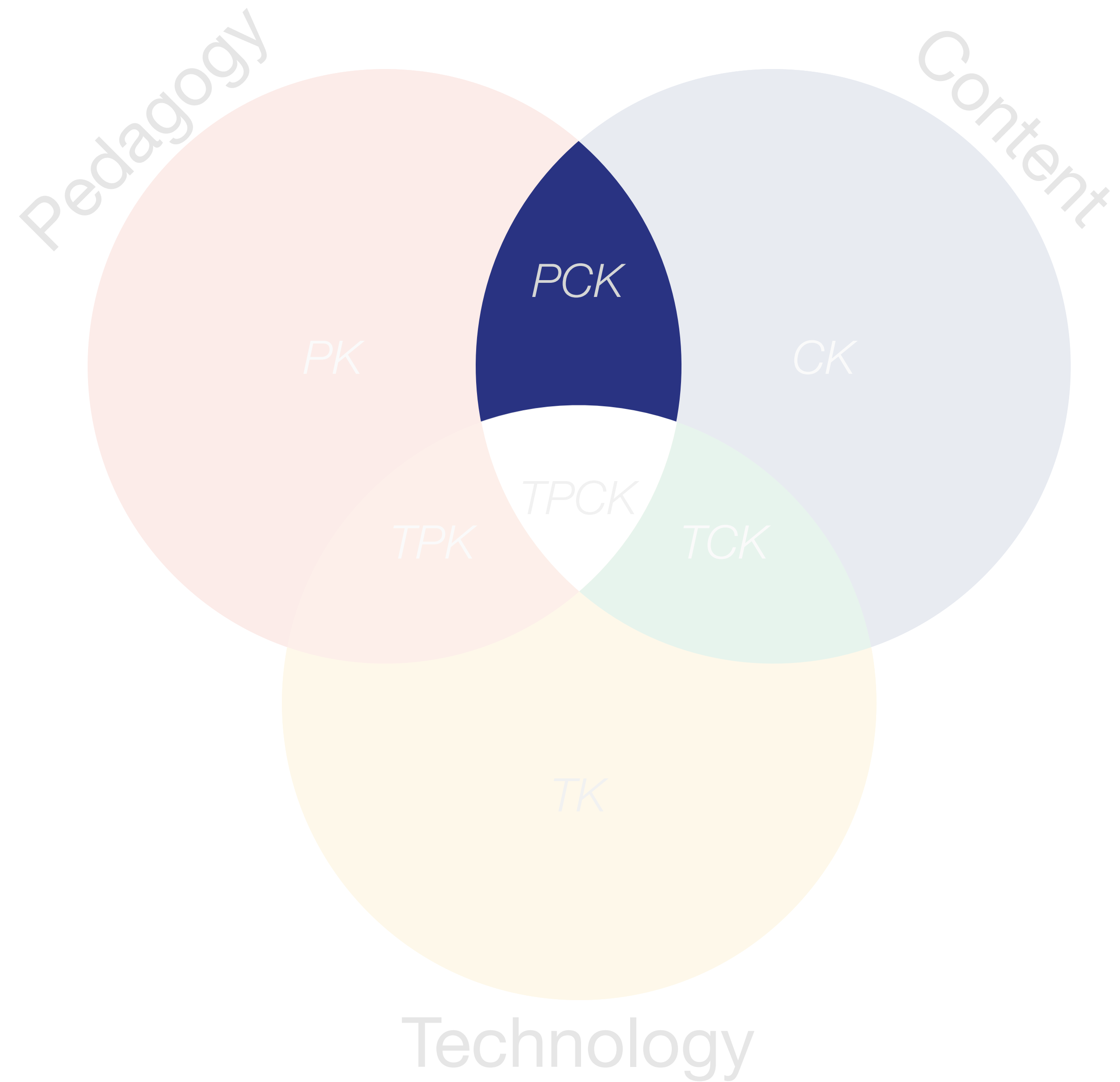
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Enhancement





Gersmehl: Teaching Geography – Four Cornerstones

- Location
 - Position in space
- Condition
 - Mix of natural & artificial features that give meaning to a location
- Links
 - Connections between places
- Region
 - Formal region: group of places with similar conditions
 - Functional region: group of places linked together by a flow

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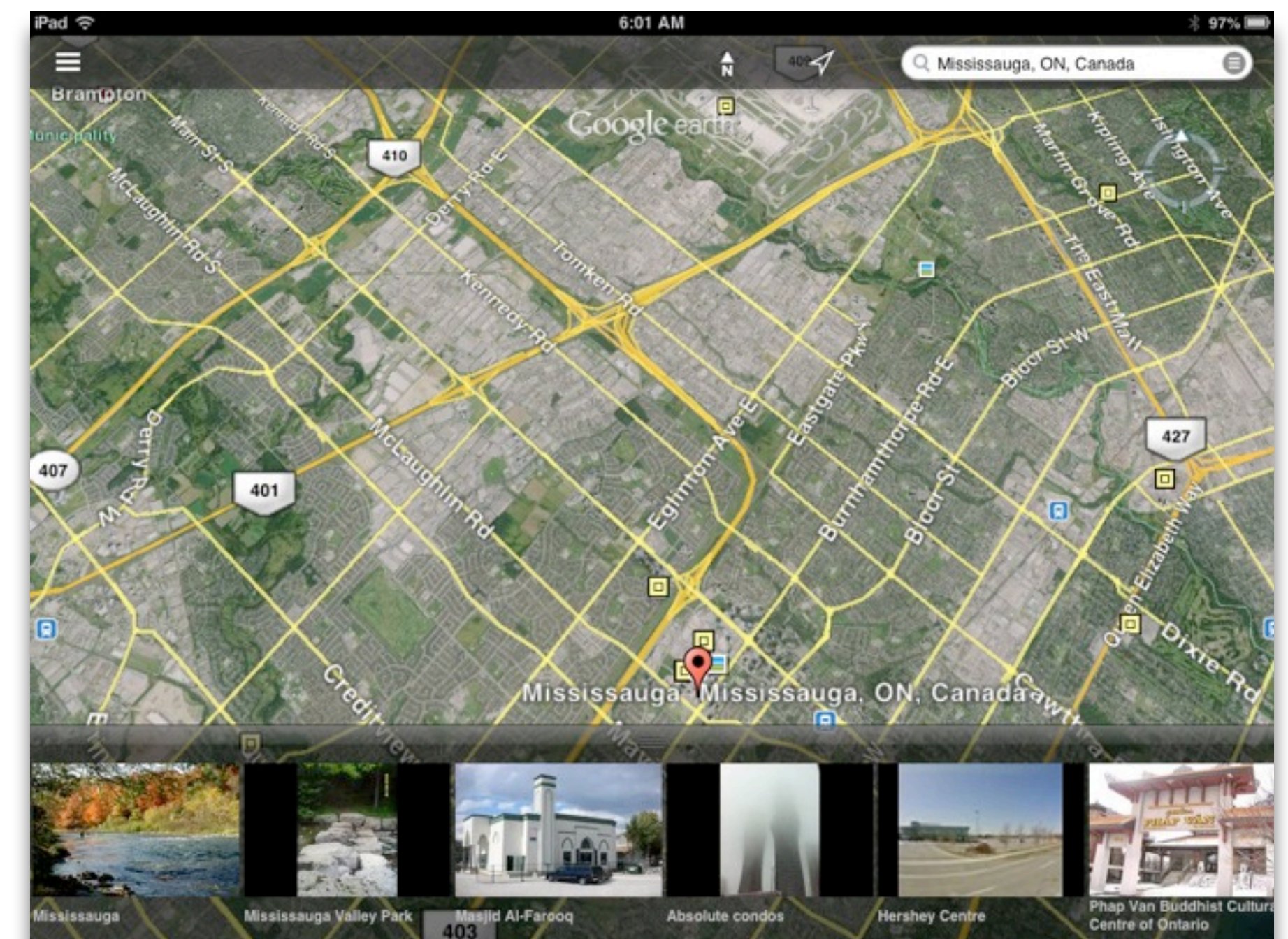
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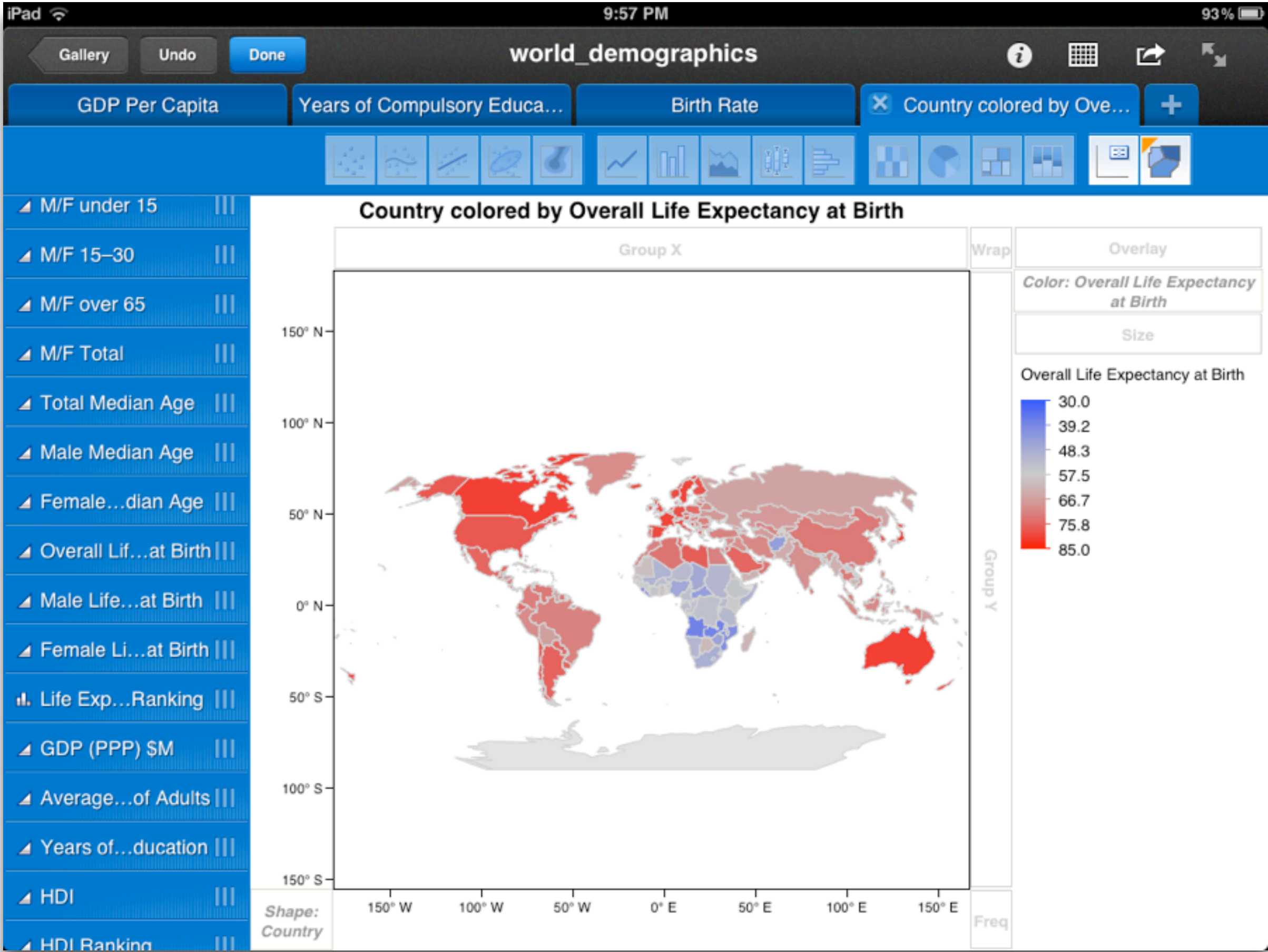
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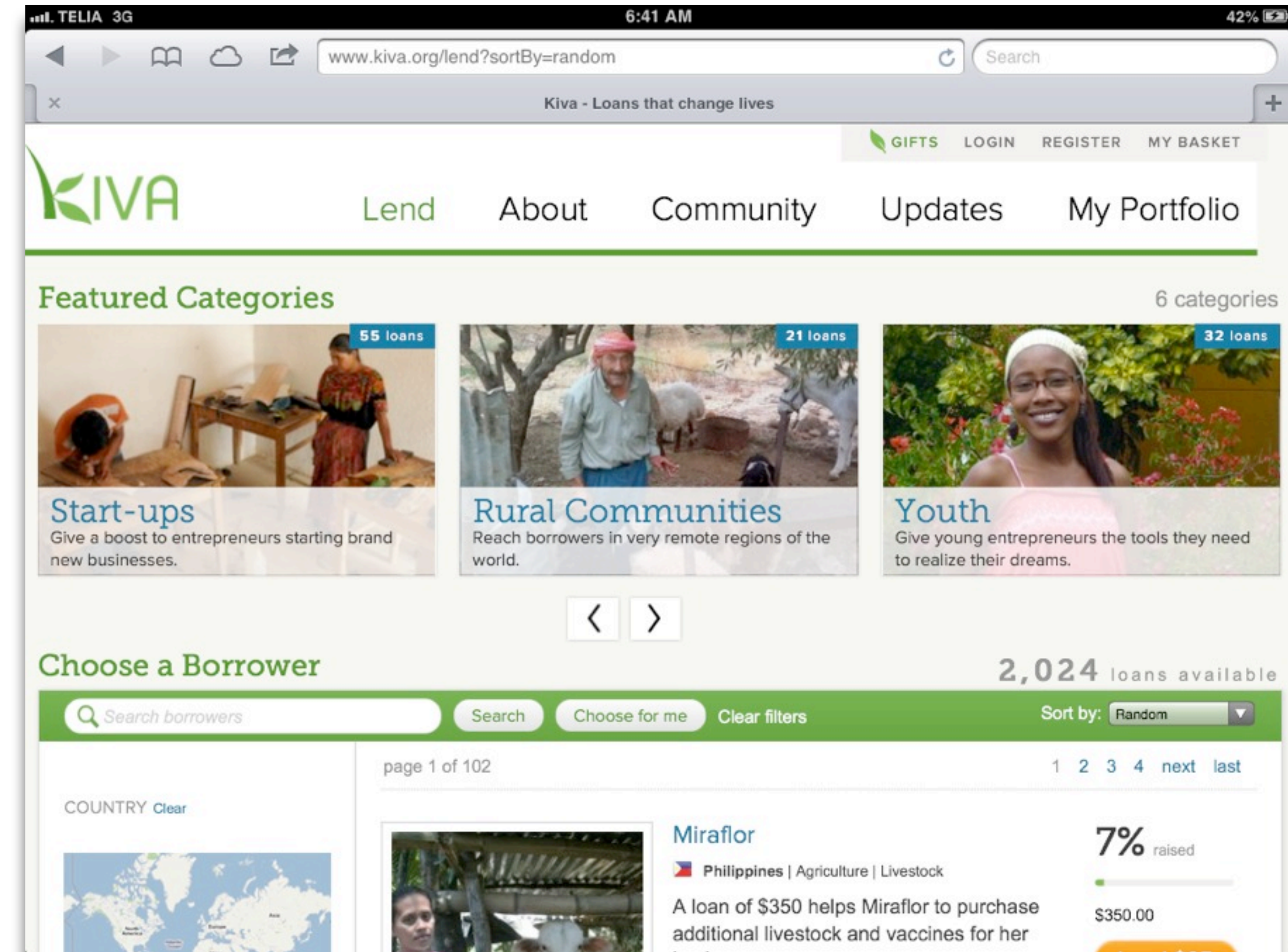
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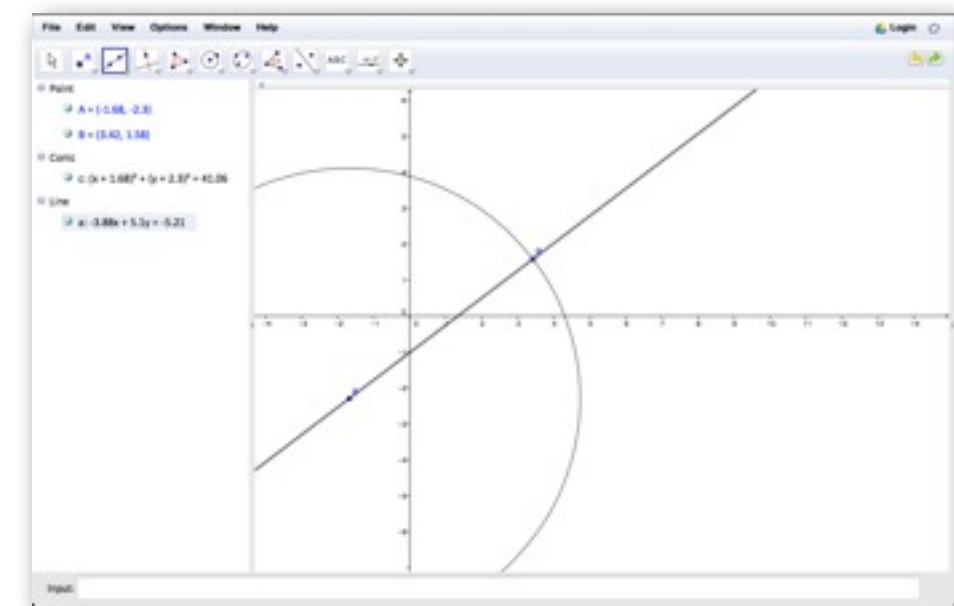
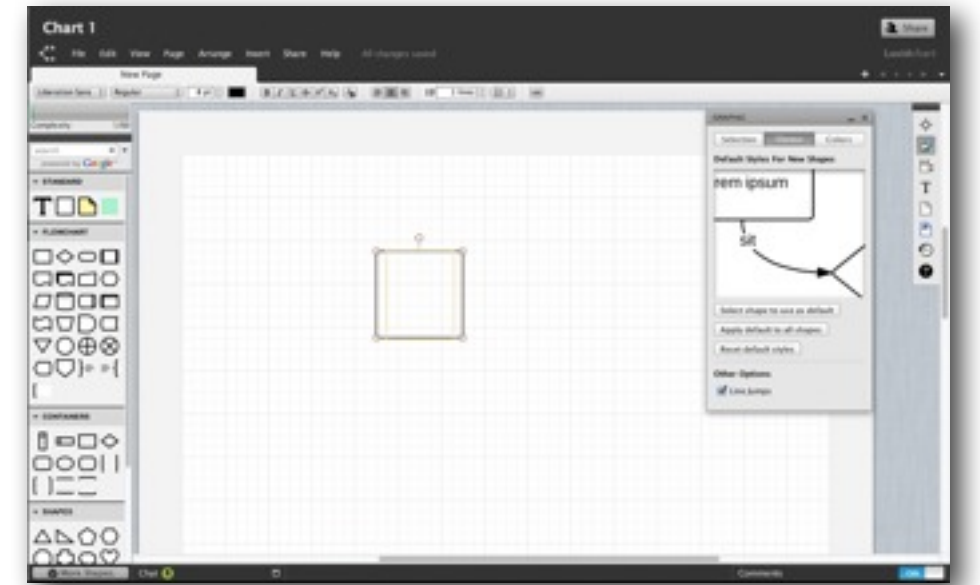
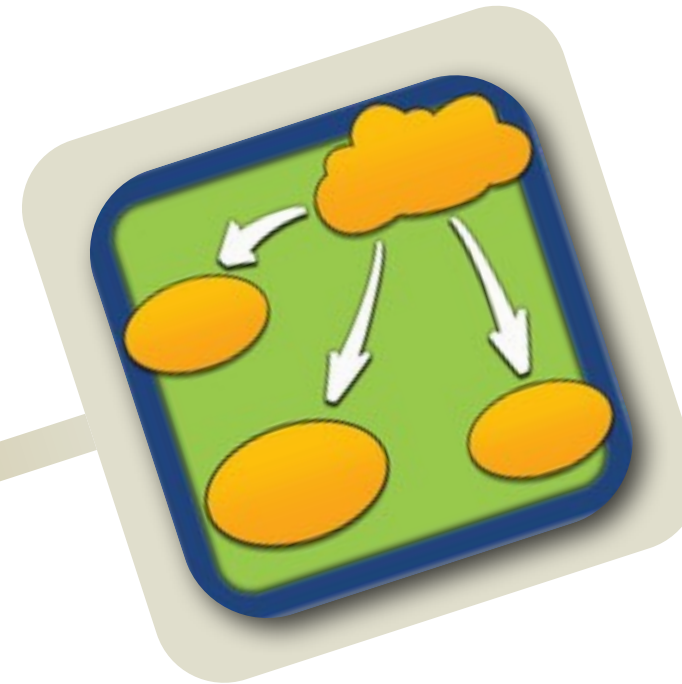
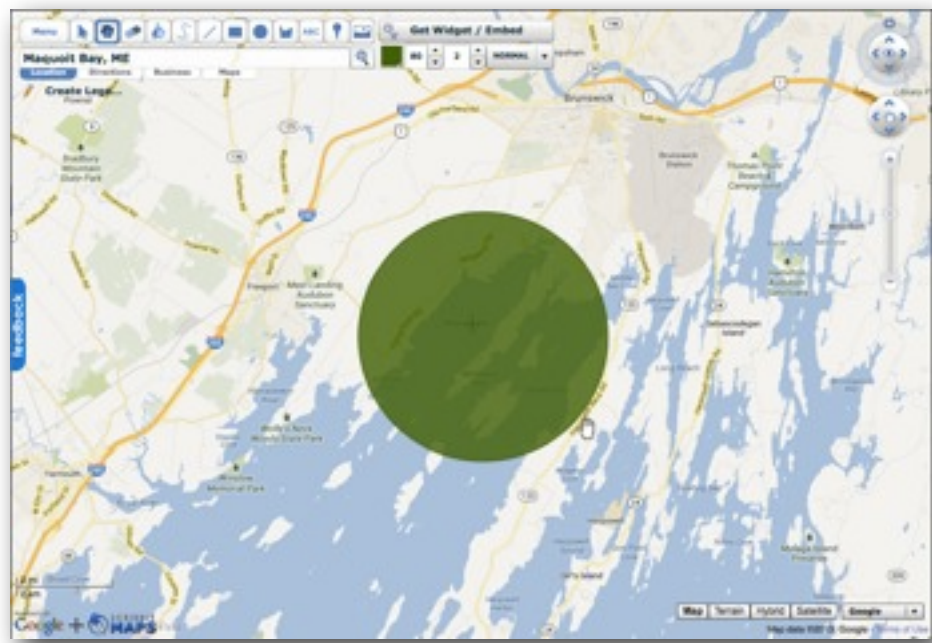
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Two-dimensio...

Two-dimensional...

Projectile

Projectile on an Incline

Challenging problem of a projectile on an inclined plane

Unit Vectors and Engineering Notation

Using unit vectors to represent the components of a vector

Clearing the Green Monster at Fenway

Setting up the problem to determine the minimum veloc...

Green Monster at Fenway Part 2

Solving the problem to determine the minimum veloc...

Unit Vector Notation

Expressing a vector as the scaled sum of unit vectors

Unit Vector Notation (part 2)

More on unit vector notation. Showing that adding the x an...

Projectile Motion with Ordered Set Notation

Solving the second part to the projectile motion problem (wit...

14 videos

3:37 AM

97%

Log In

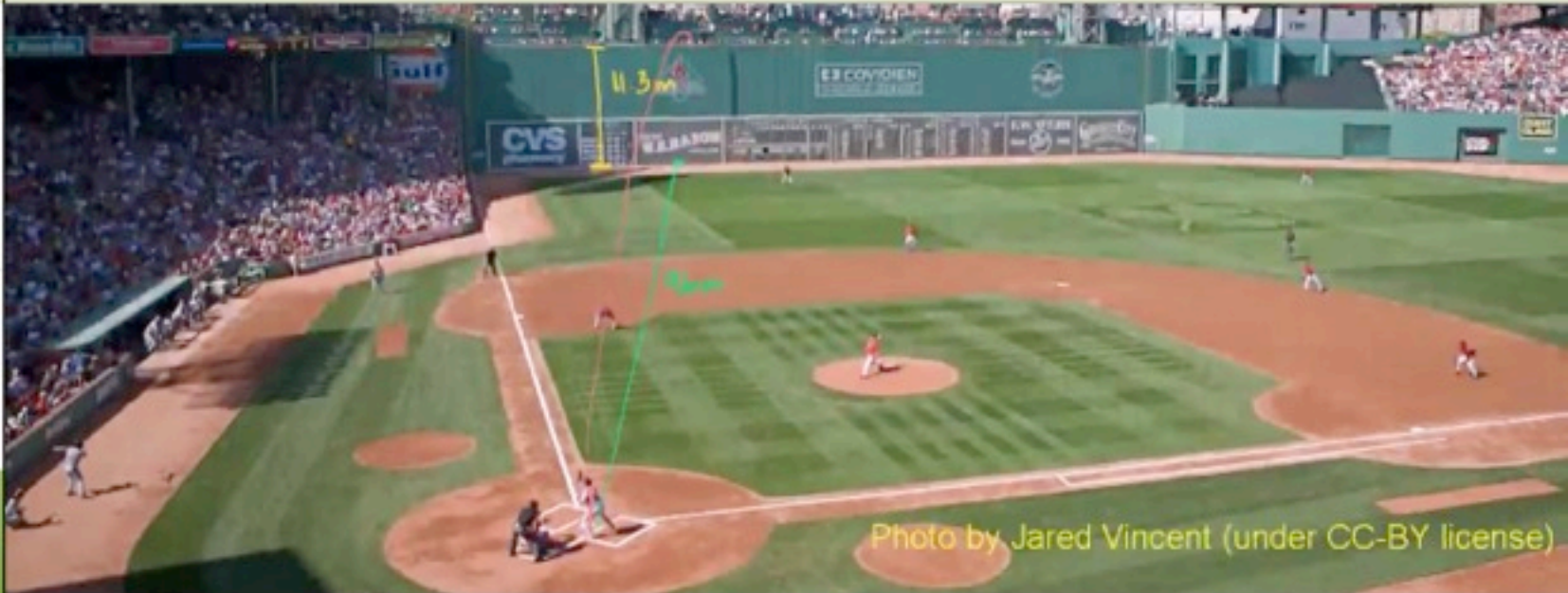


Photo by Jared Vincent (under CC-BY license)

$$\|\vec{v}_i\| = v_i$$
$$\vec{v}_i = \frac{\sqrt{2}}{2} v_i \hat{i} + \frac{\sqrt{2}}{2} v_i \hat{j}$$

Clearing the Green Monster at Fenway

Share Download

5:48

right when its crossing the wall, it should be, or lets think about it right when its, if it was just

5:53

good enough to hit the top part of the wall, let's think about what that displacement vector would have

5:57

to be and we'll solve for that velocity and then any velocity better than that will make it go even further

6:02

and faster and higher and all of the rest of the things. So right when its crossing the wall, if we want

6:07

it to just skim by or just hit the tip of the wall, our displacement vector, maybe I'll call it 'displacement

6:14

necessary' when its 96 meters in the x direction. I just put this 'n' for necessary. when

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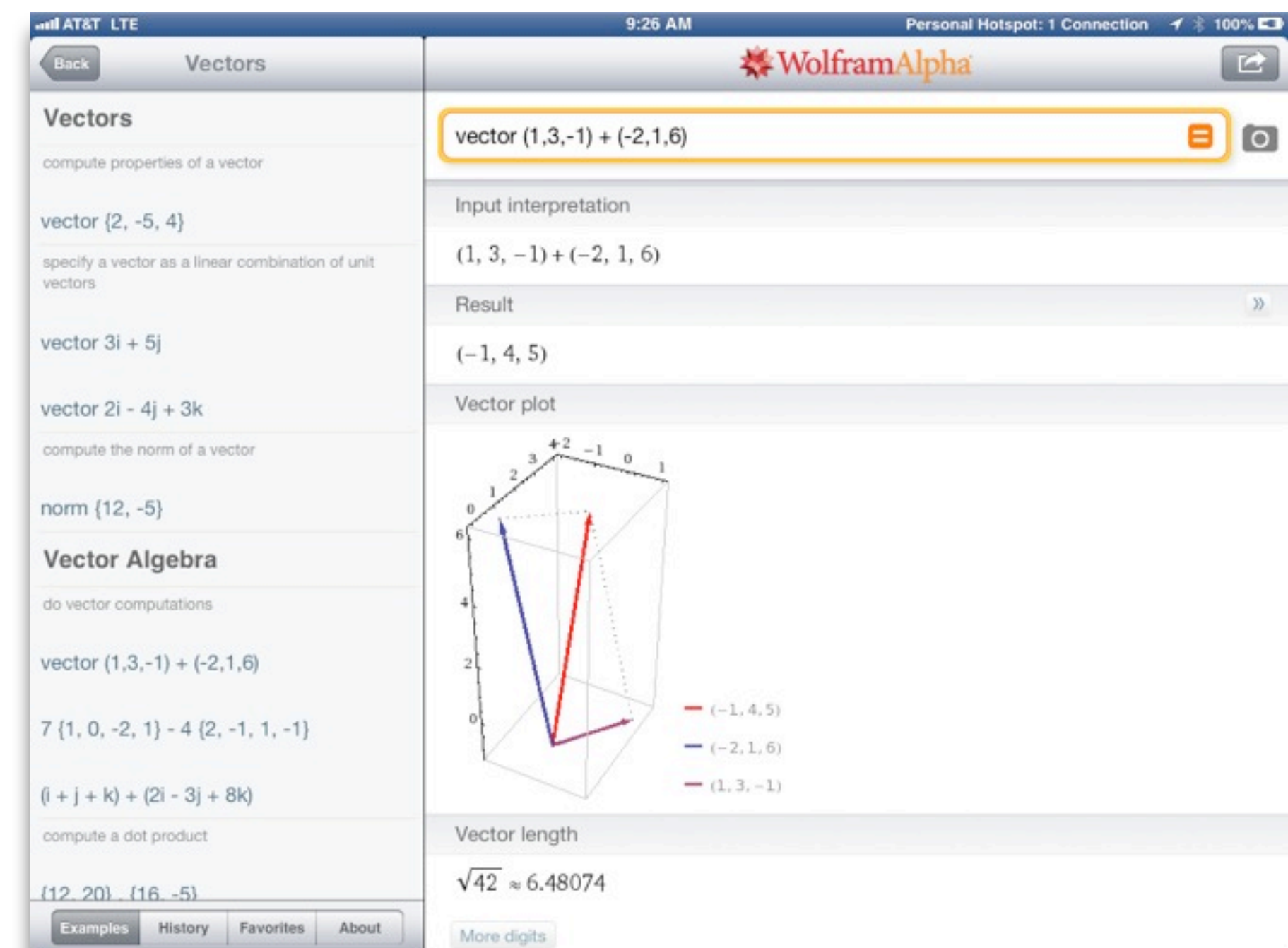
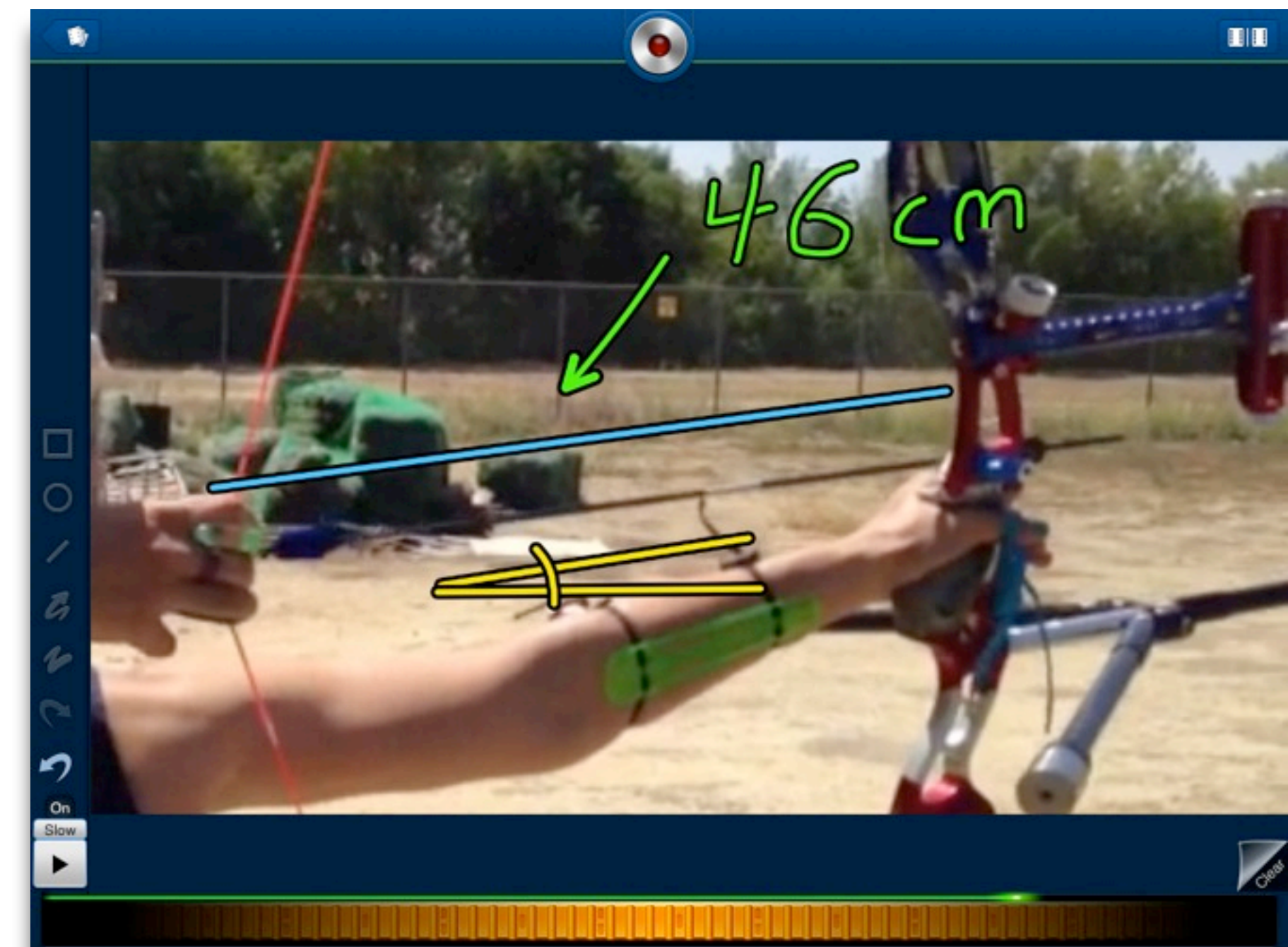
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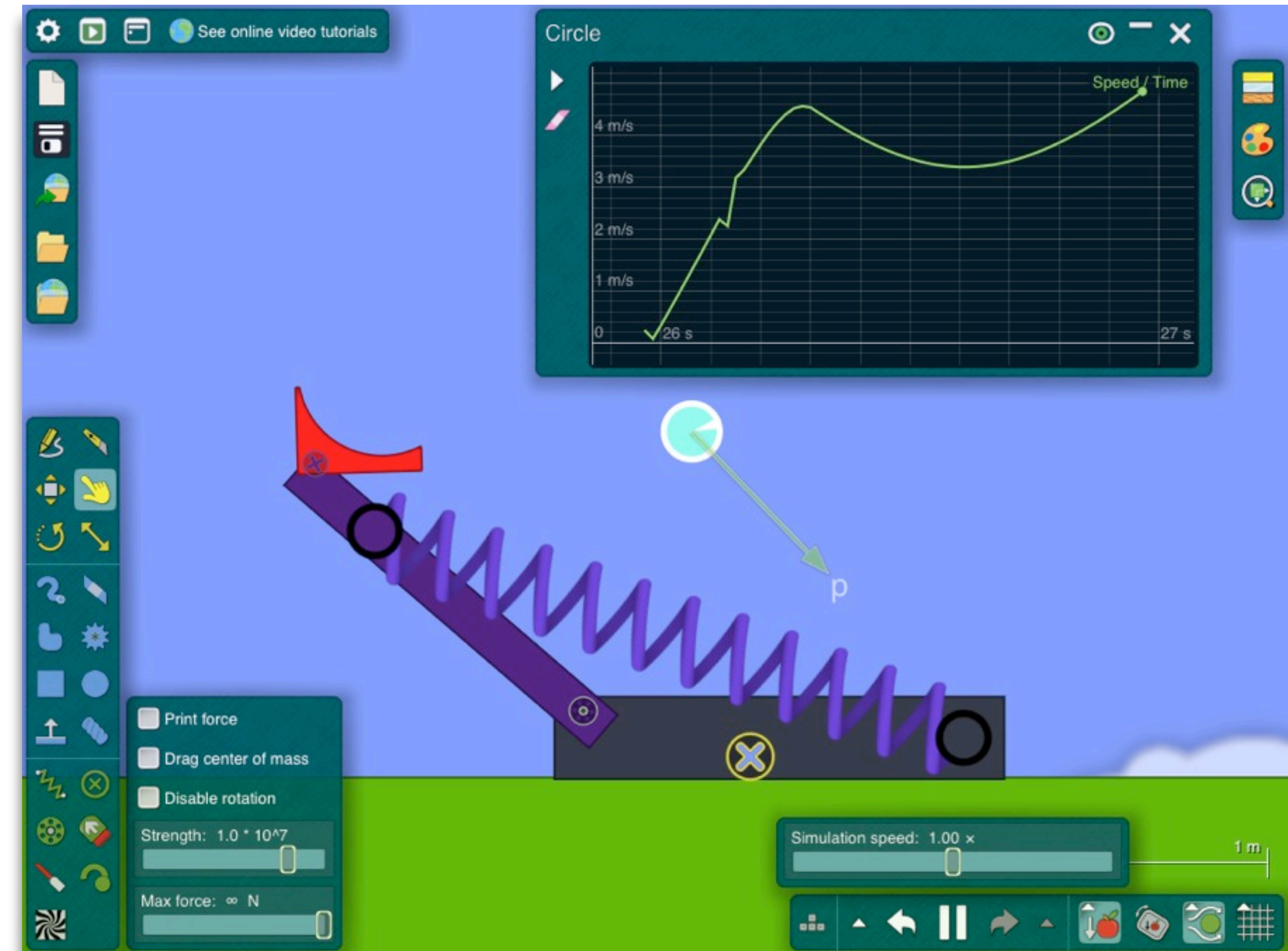
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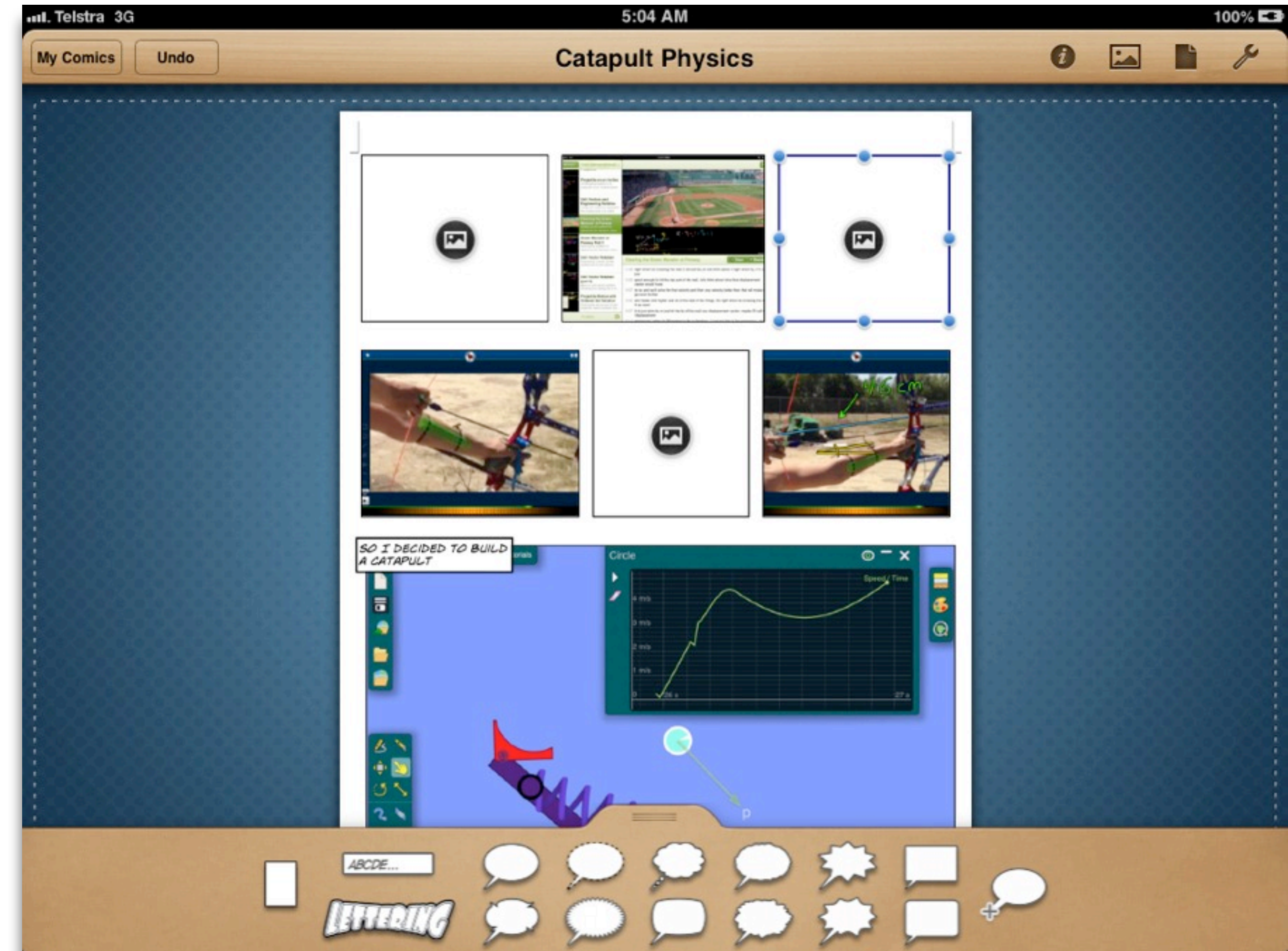
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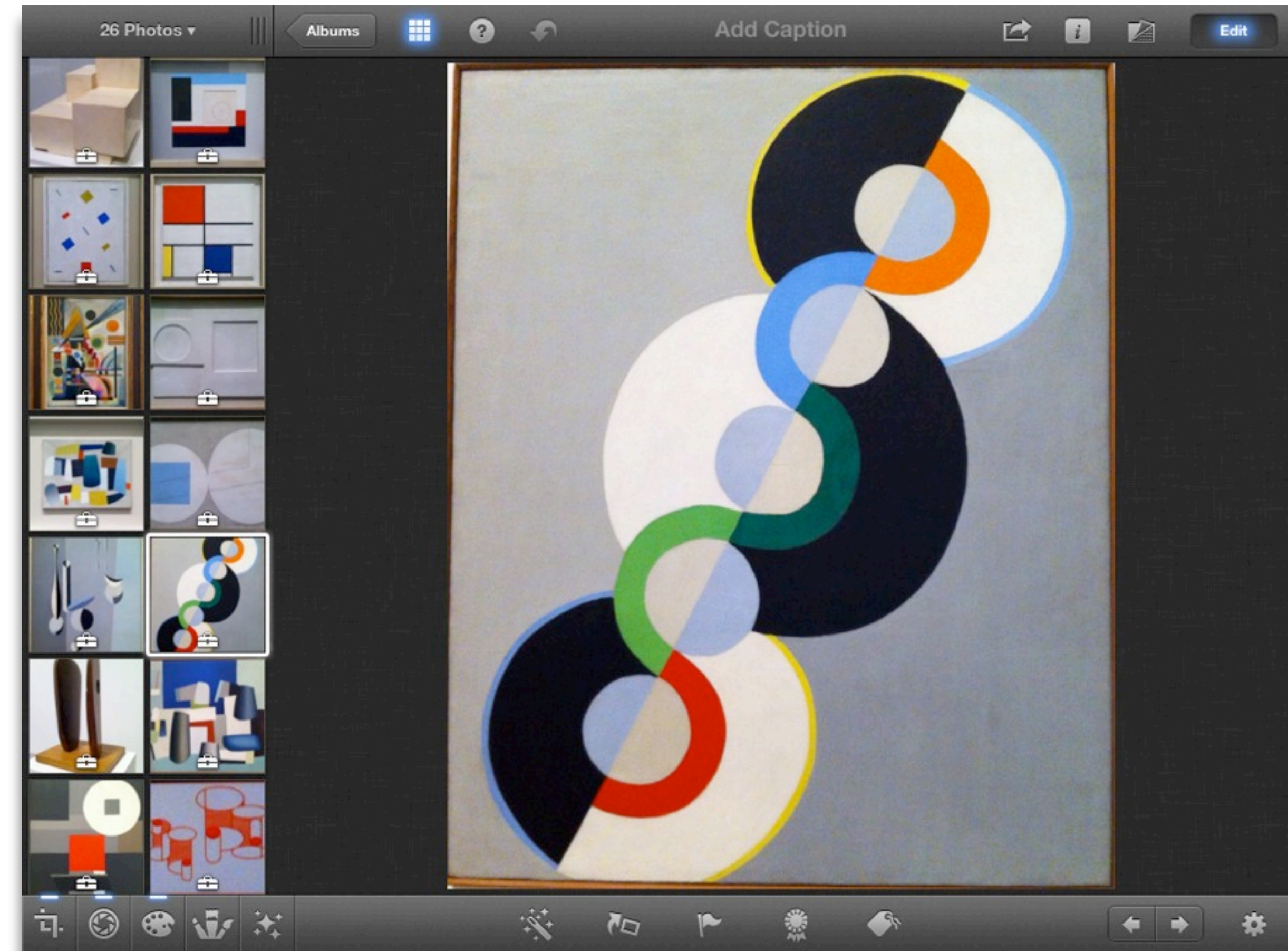
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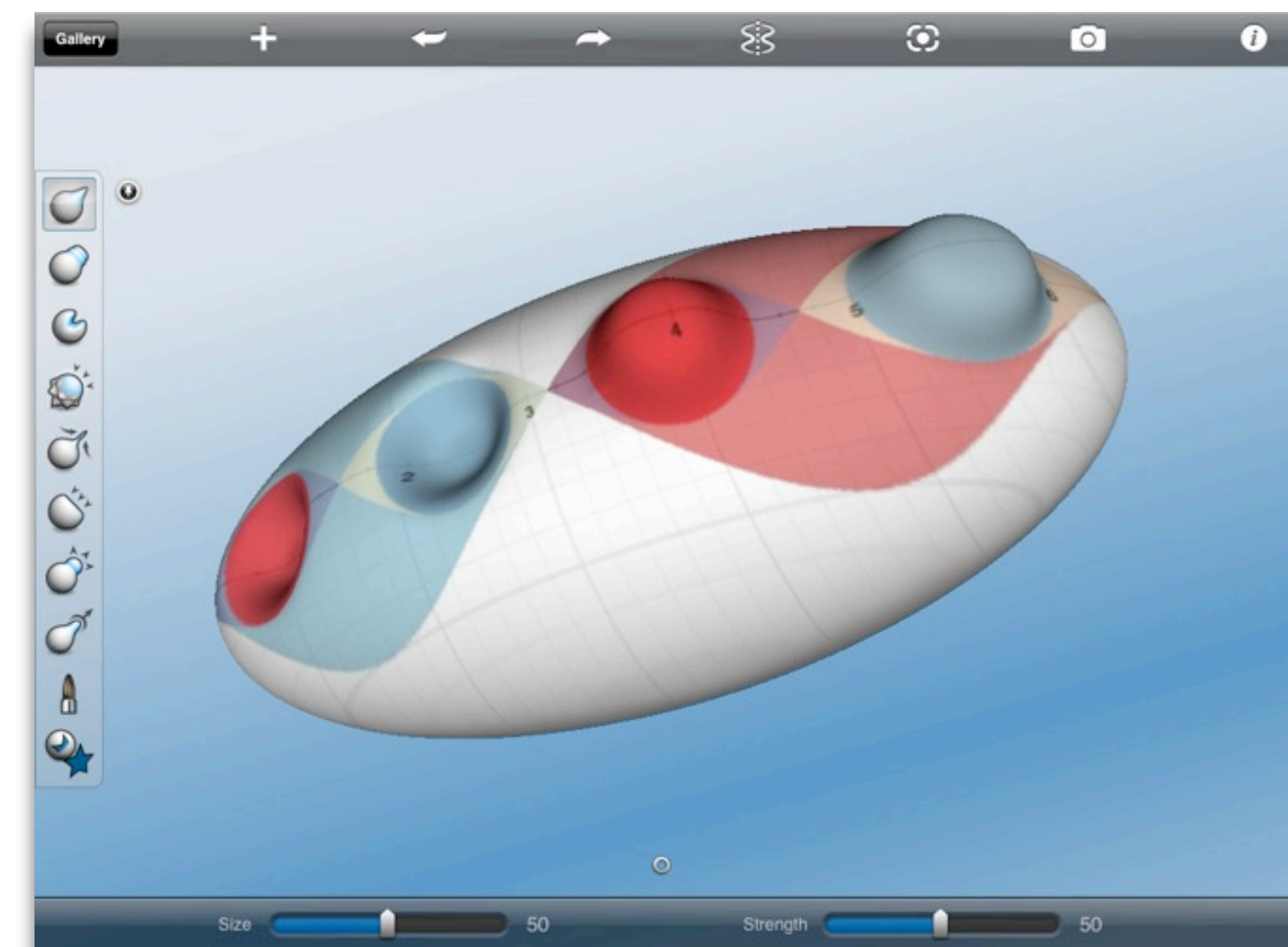
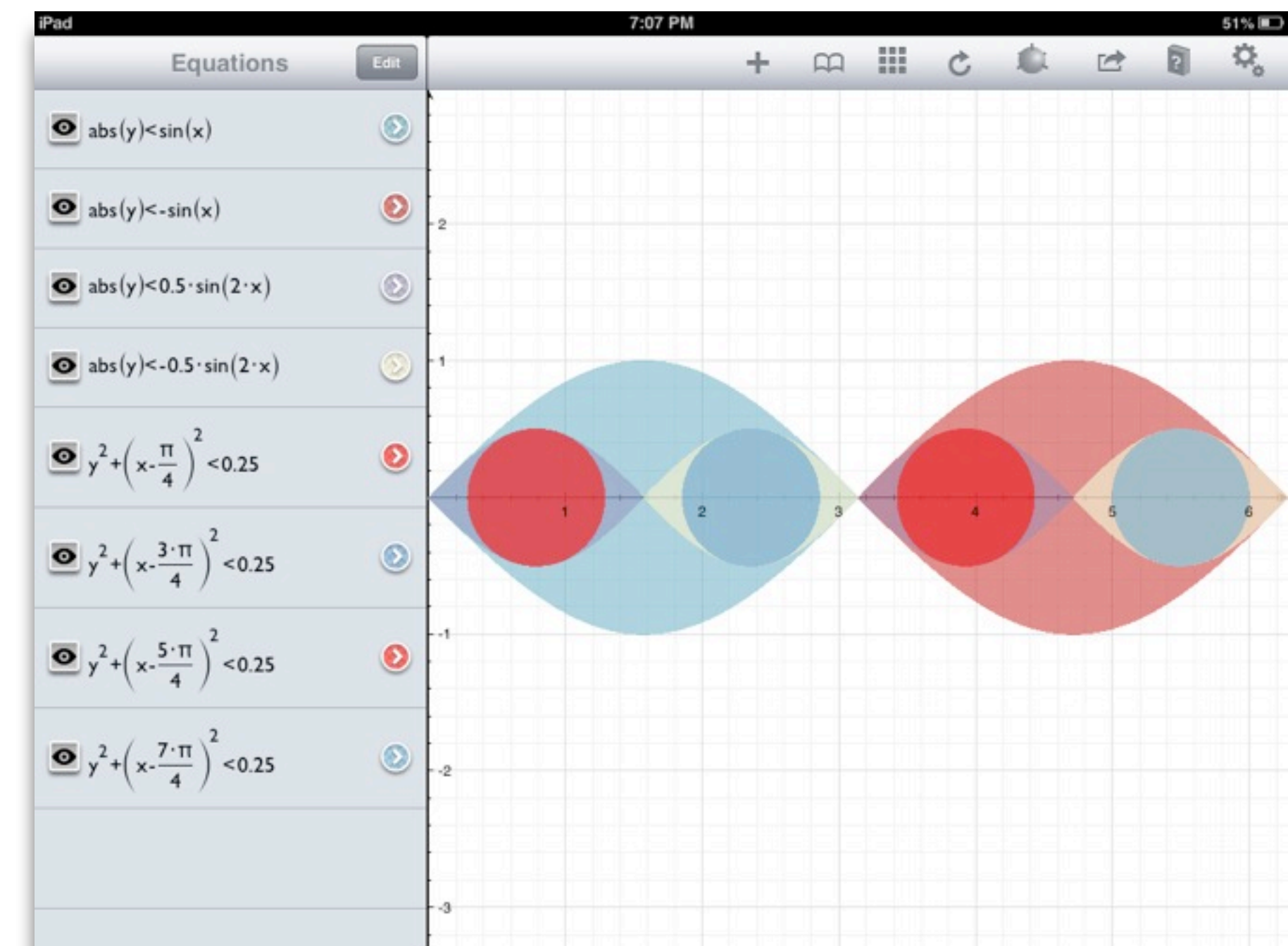
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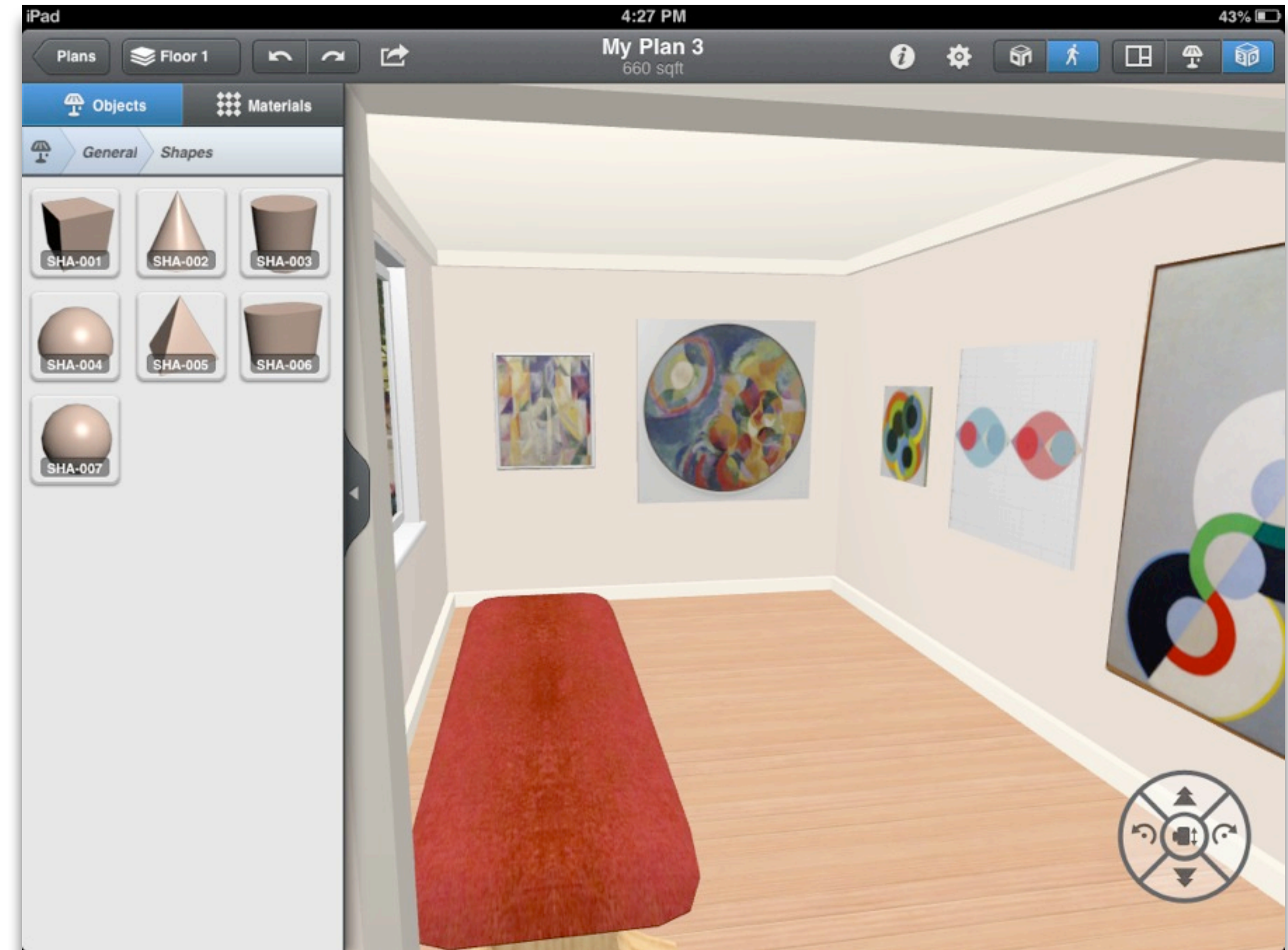
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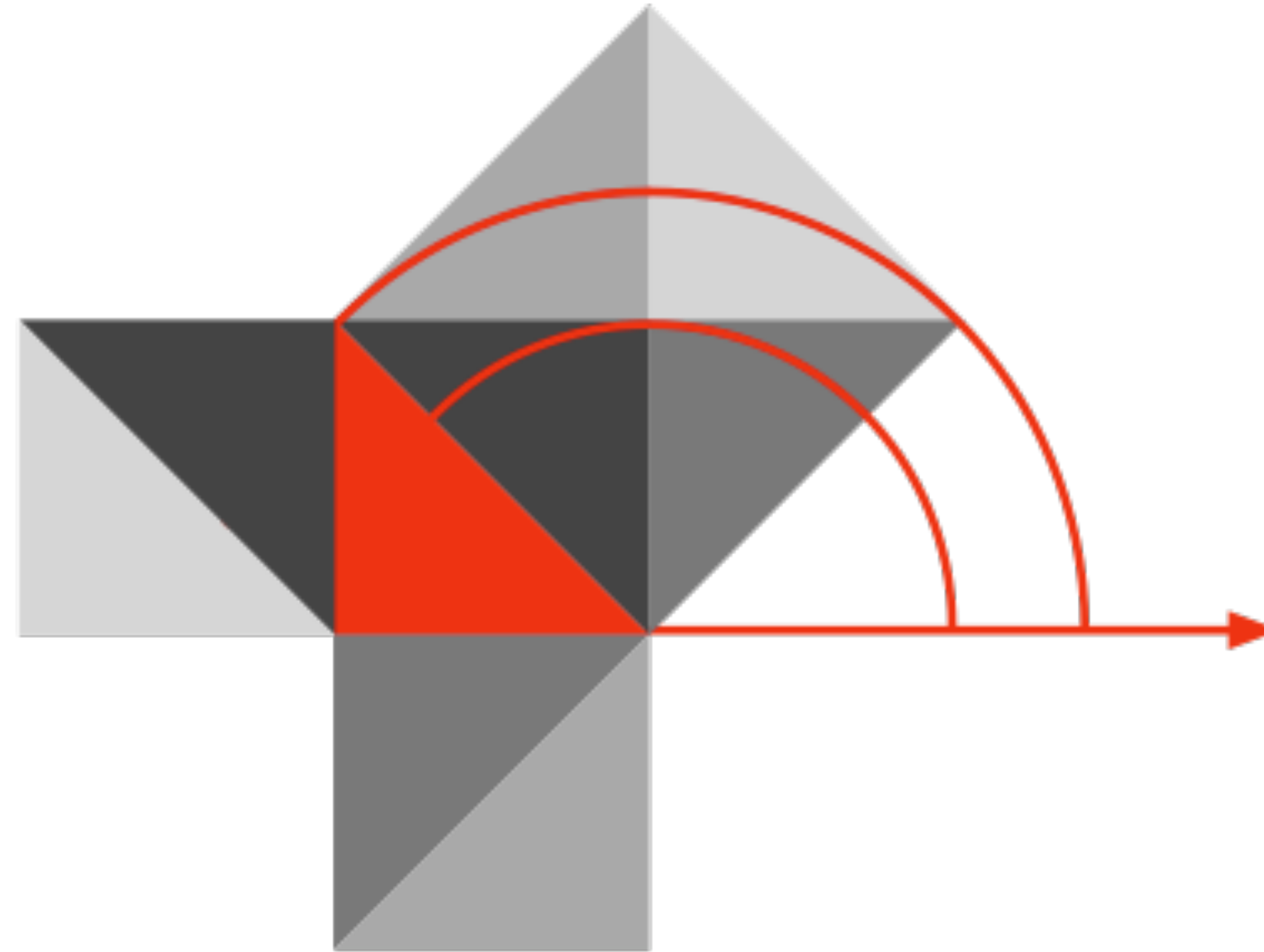
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Hippasus



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