

SAMR: An EdTech Quintet Perspective

Ruben R. Puentedura, Ph.D.

Transformation

Redefinition

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

Modification

Tech allows for significant task redesign






Augmentation

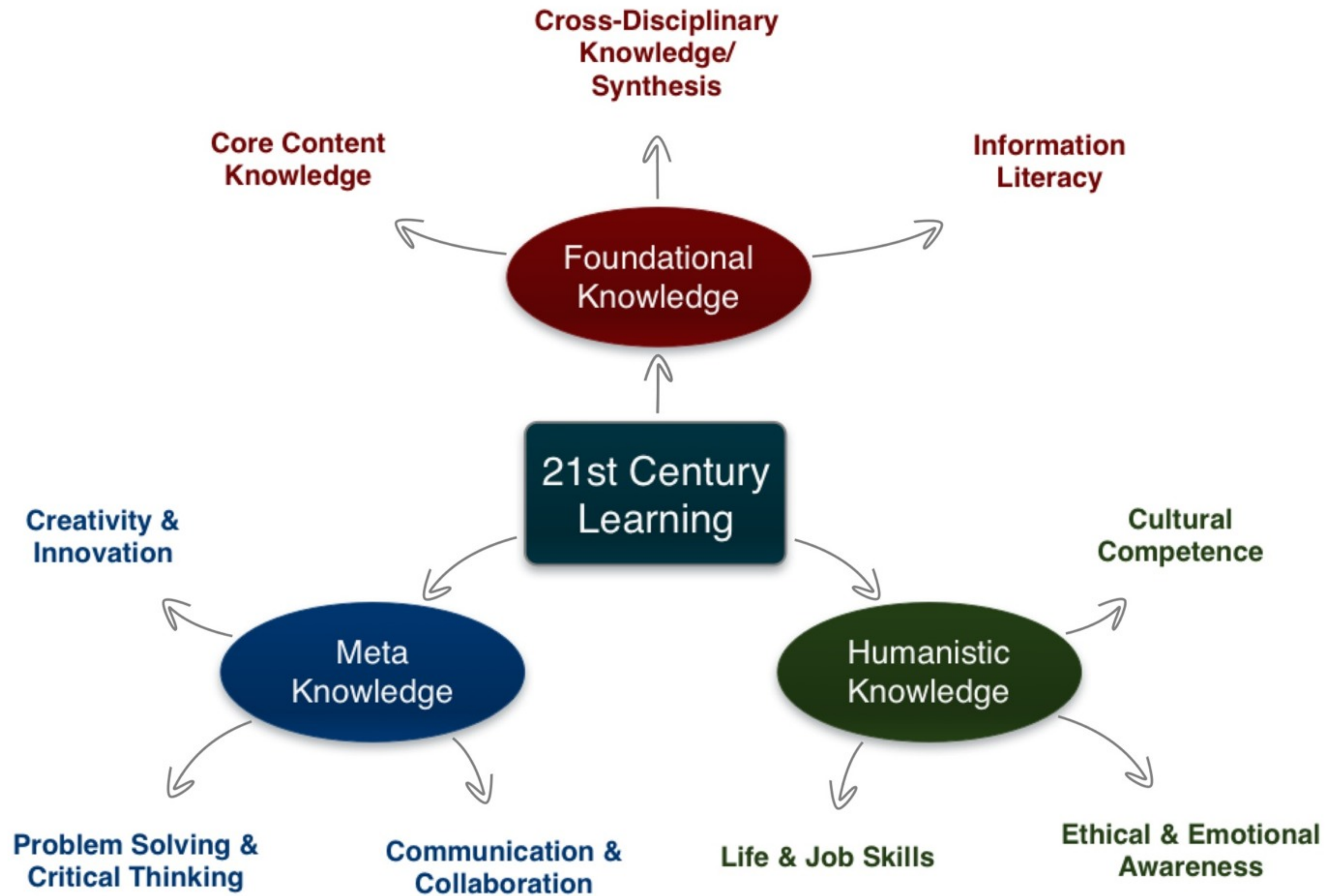
*Tech acts as a direct tool substitute, with
functional improvement*

Substitution

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

Enhancement

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



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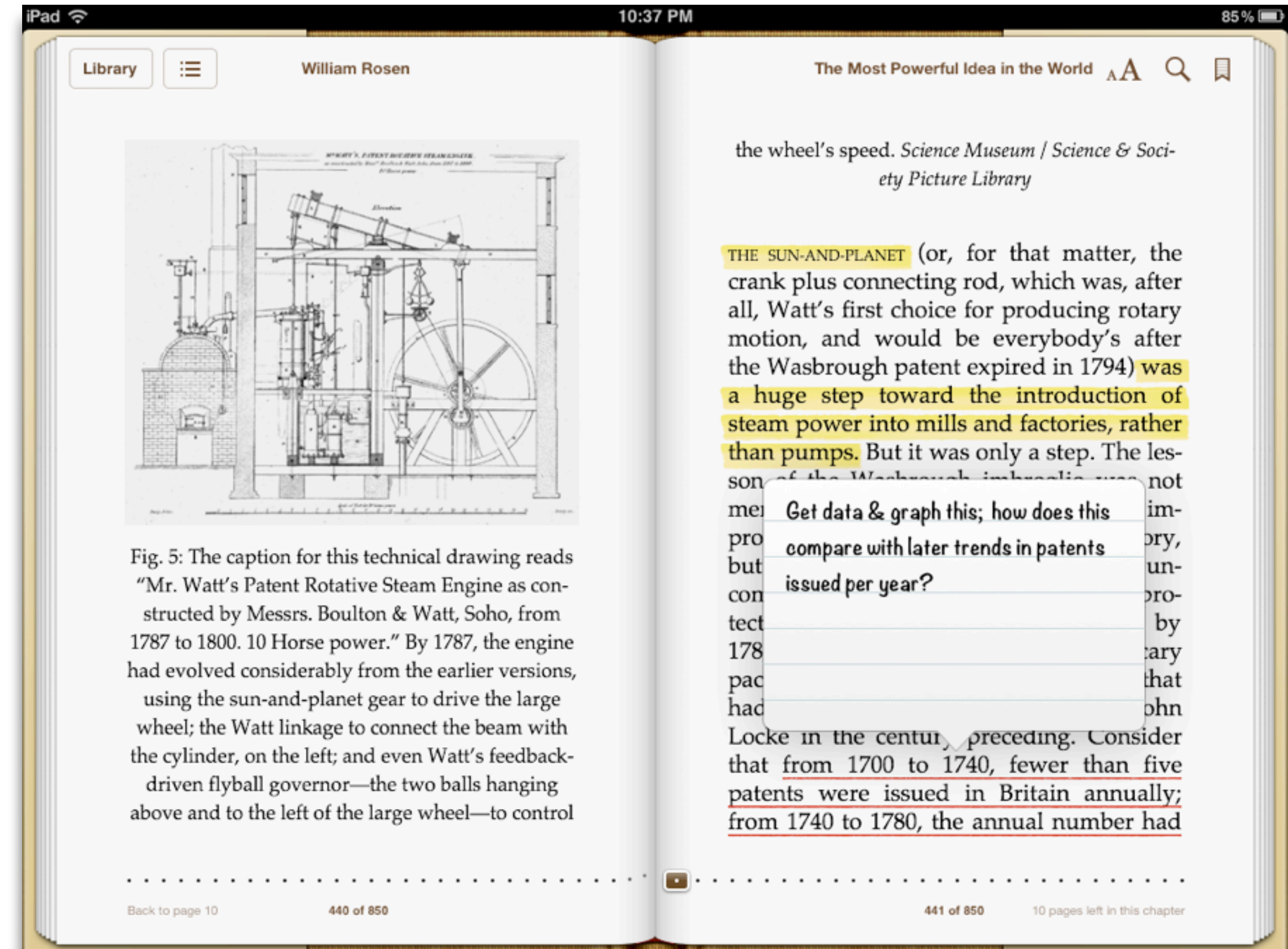
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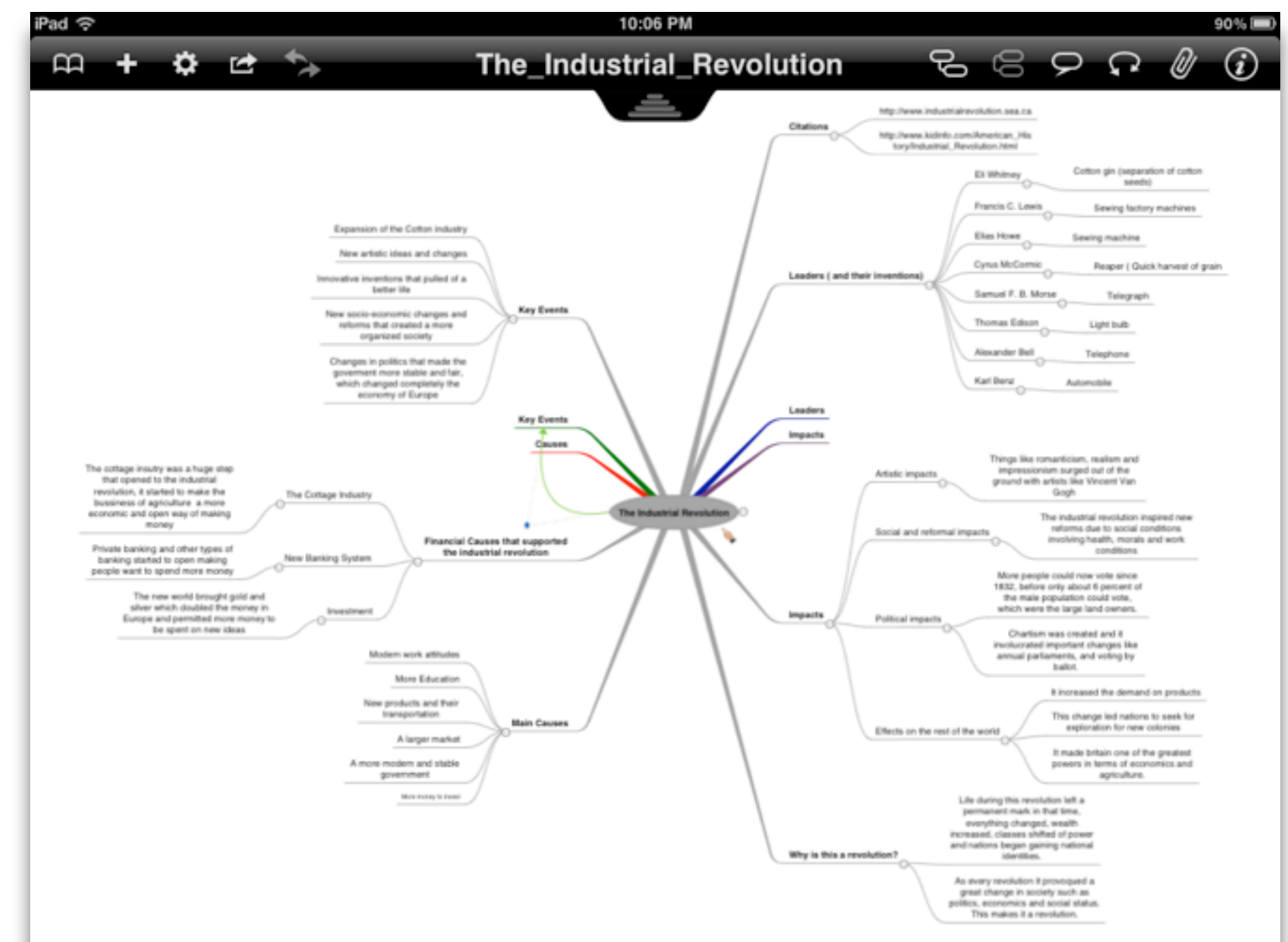
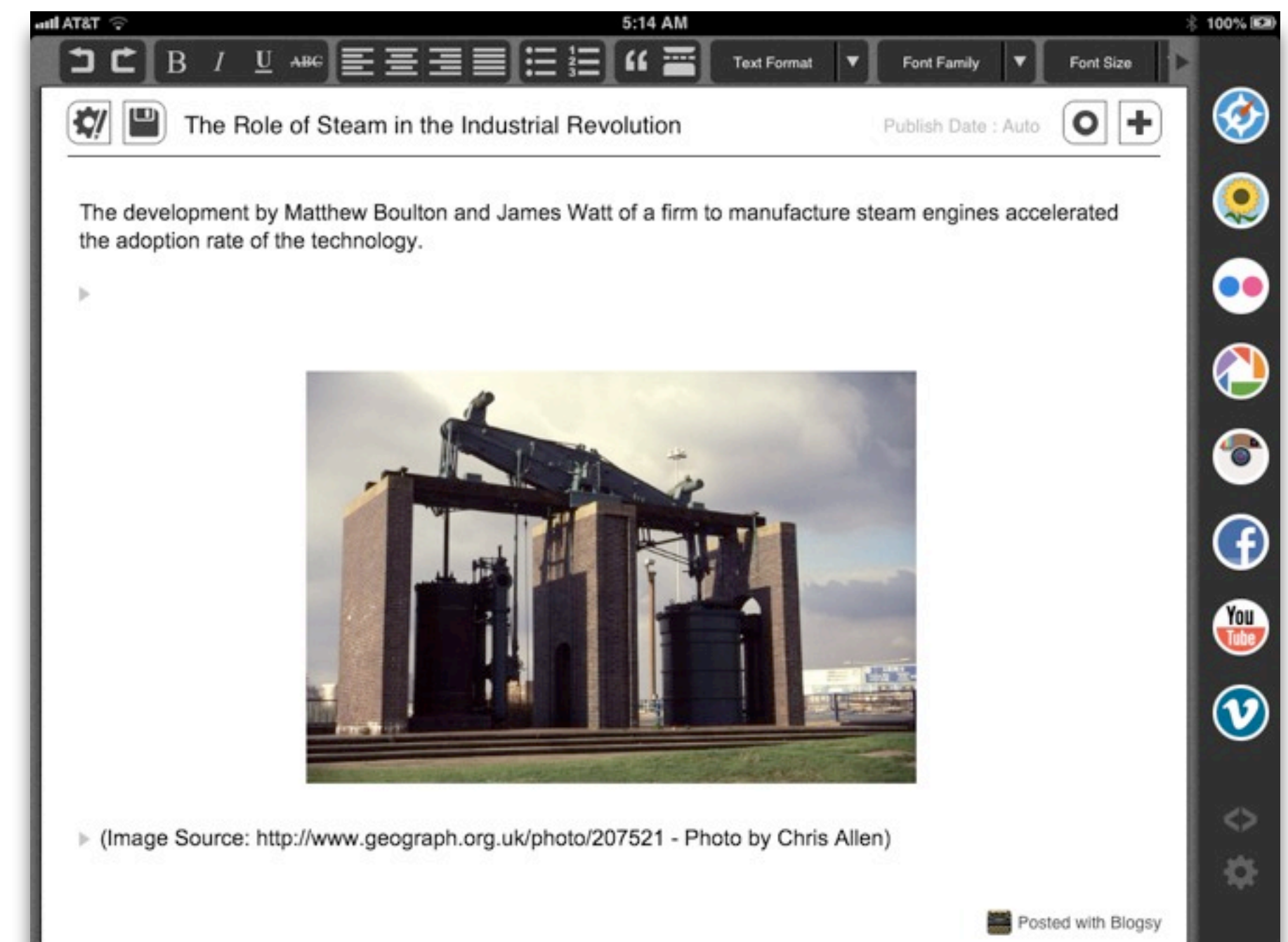
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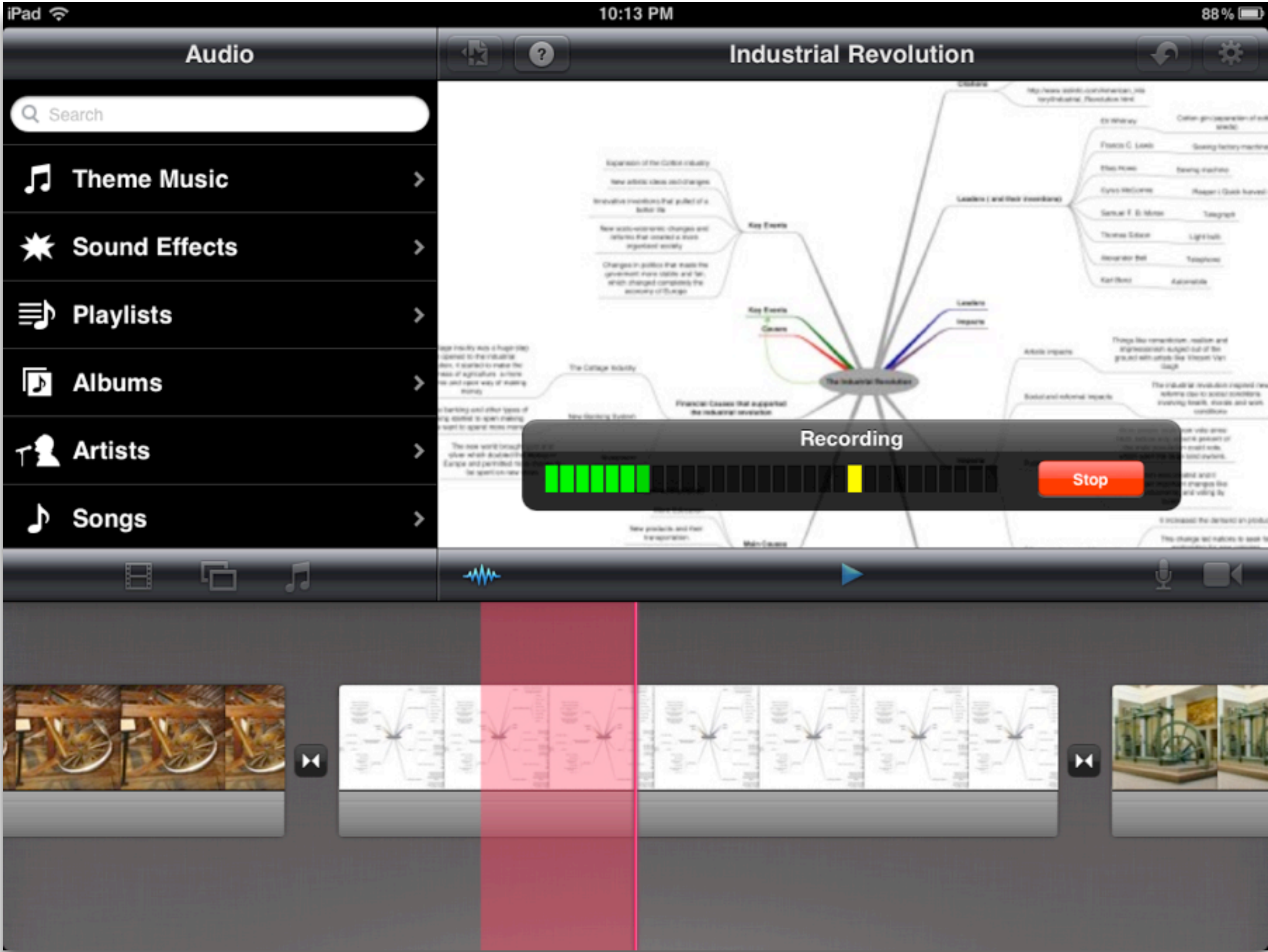
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Aquatic Biomes

Aquatic biomes cover 75 percent of the surface of the Earth. The aquatic and terrestrial biomes are similar in some ways

bi•ome | 'bī,ōm |
noun Ecology
a large naturally occurring community of flora and fauna occupying a major habitat, e.g., forest or tundra.

ORIGIN early 20th cent.: from **BIO-** 'life' + **-OME**

Search Web

Search Wikipedia

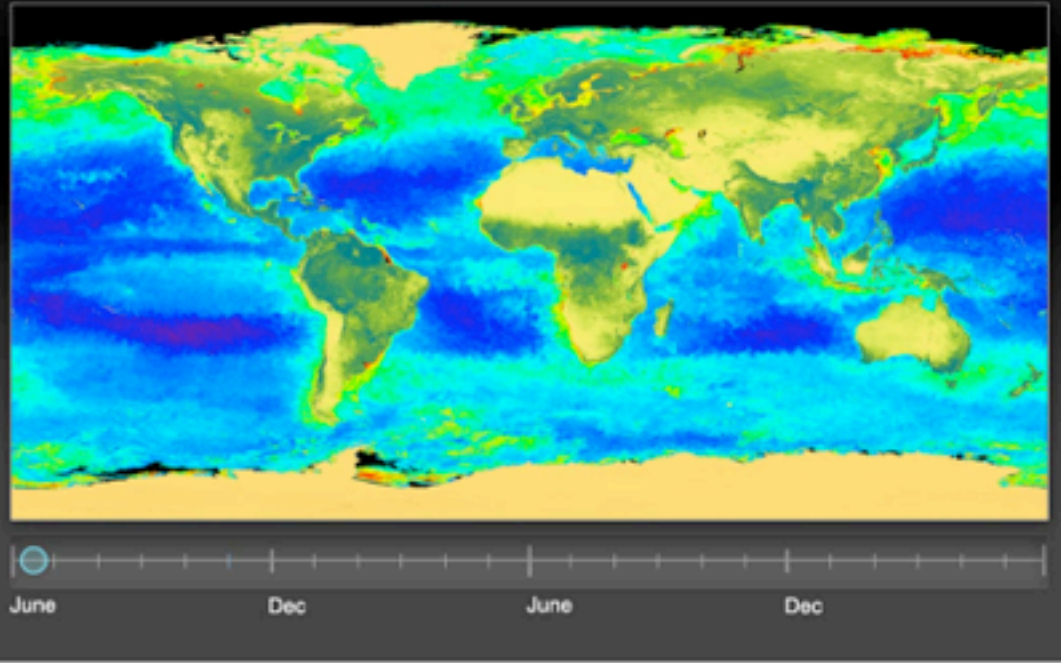
ns, the bility of is the e food nt for arth and ous oxy- e carbon oy pro- nts. d ma- on of dis- dissolved salts (0.05 percent), whereas ocean water has about 35,000 parts per million (3.5 percent).

Some aquatic organisms are adapted to both conditions for parts of their lives, such as salmon and some eels, but it

is more common for organisms to be confined to one of the two environments.

Aquatic environments have less variation globally than those on land. Taking a broad view (the lumpers' perspective), there are four kinds of aquatic biomes: surface waters, deep waters, shores, and bottoms. Within these categories are a variety of distinctive marine and freshwater life zones that are frequently designated as separate biomes.

Worldwide Photosynthetic Activity



June Dec June Dec

Interactive The latitudes of peak photosynthesis change with the seasons.

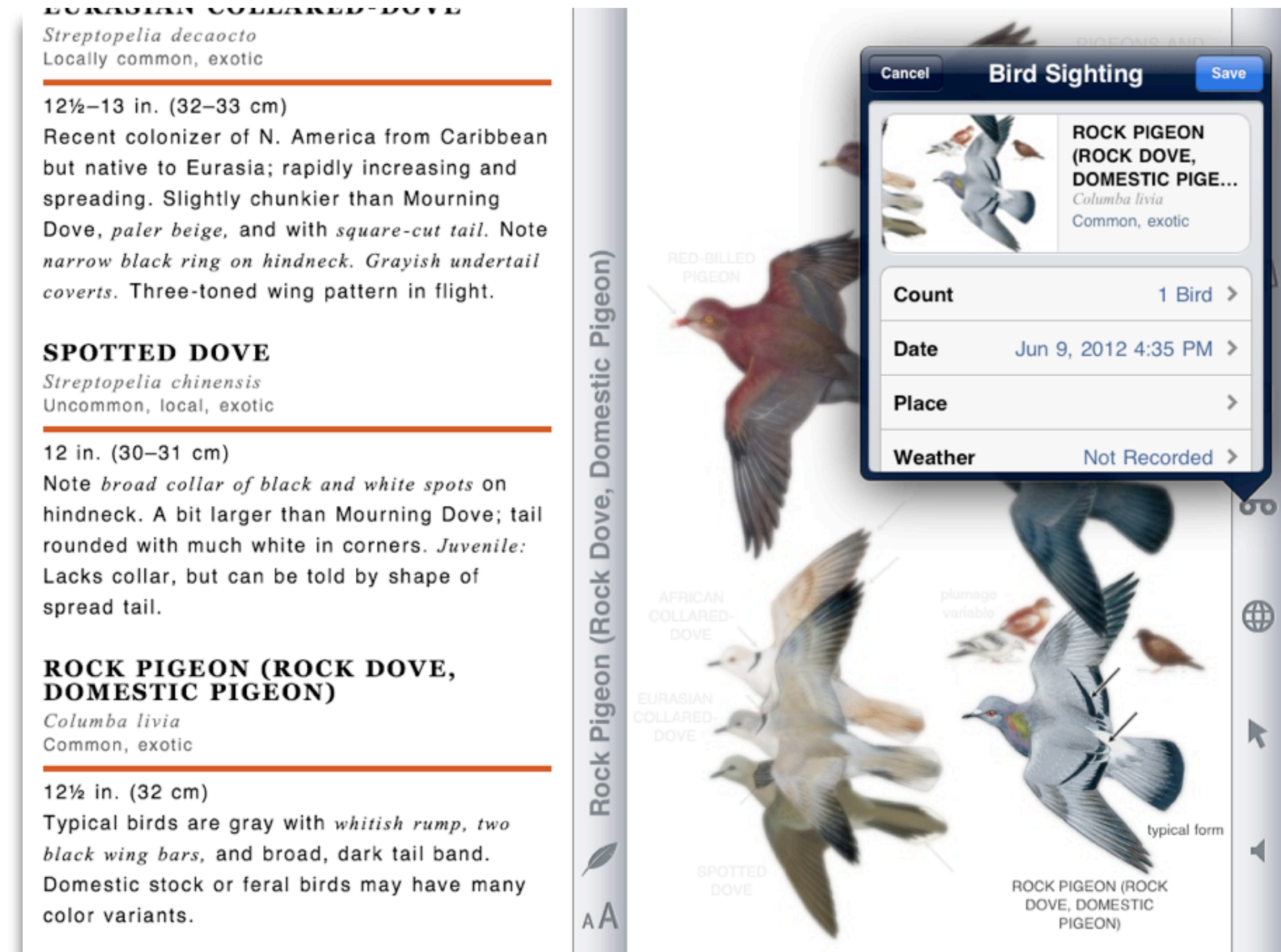
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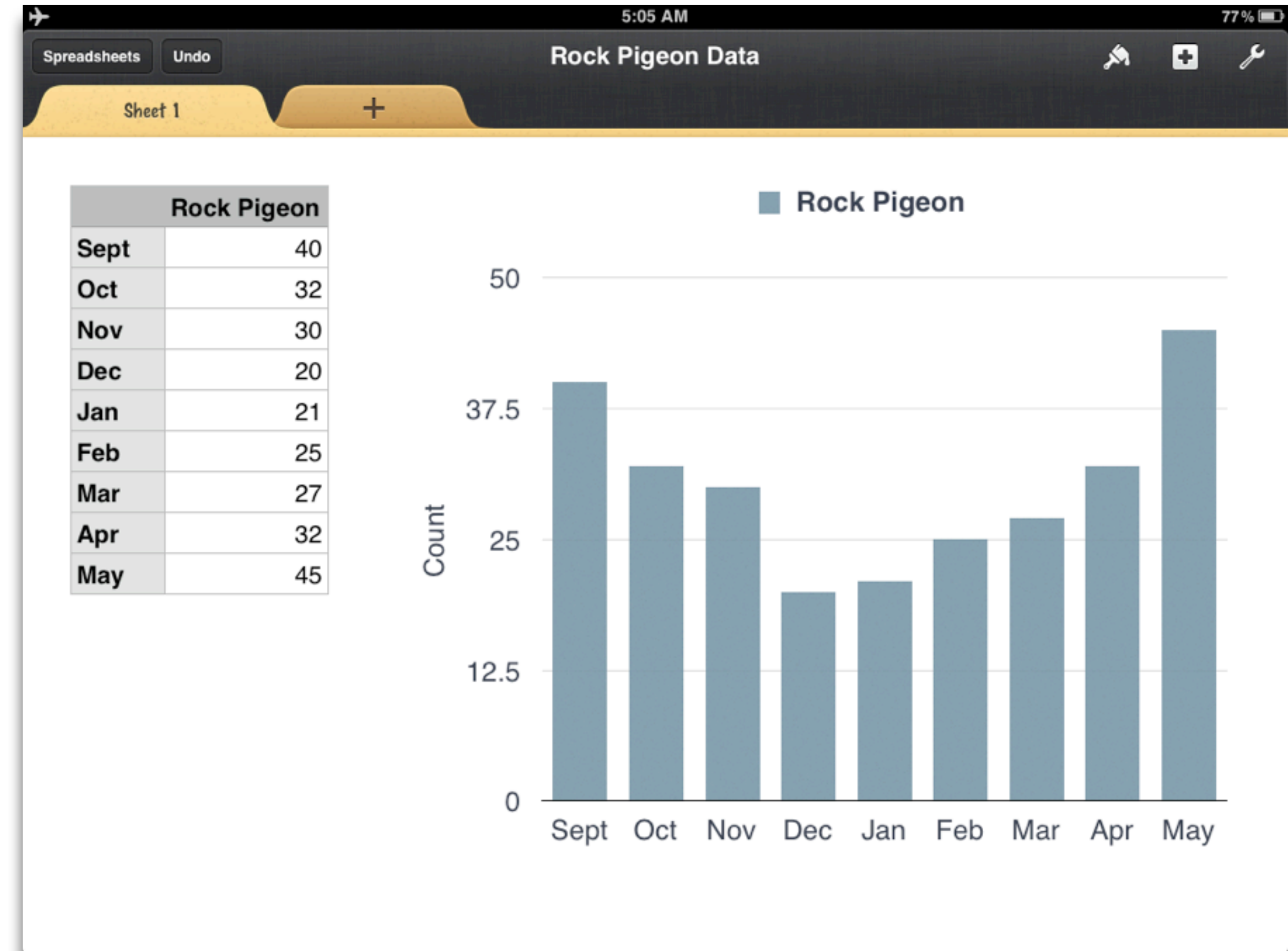
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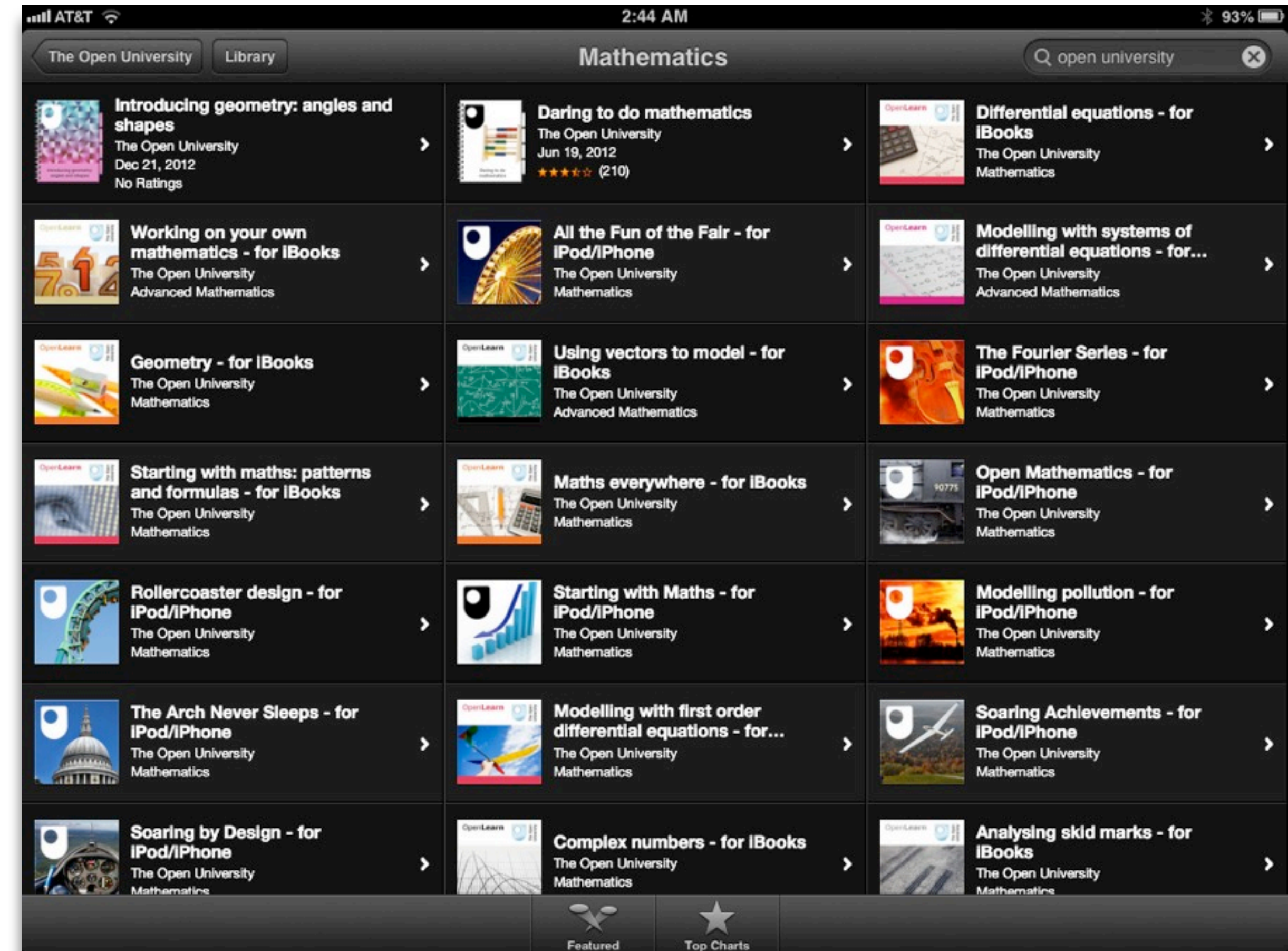
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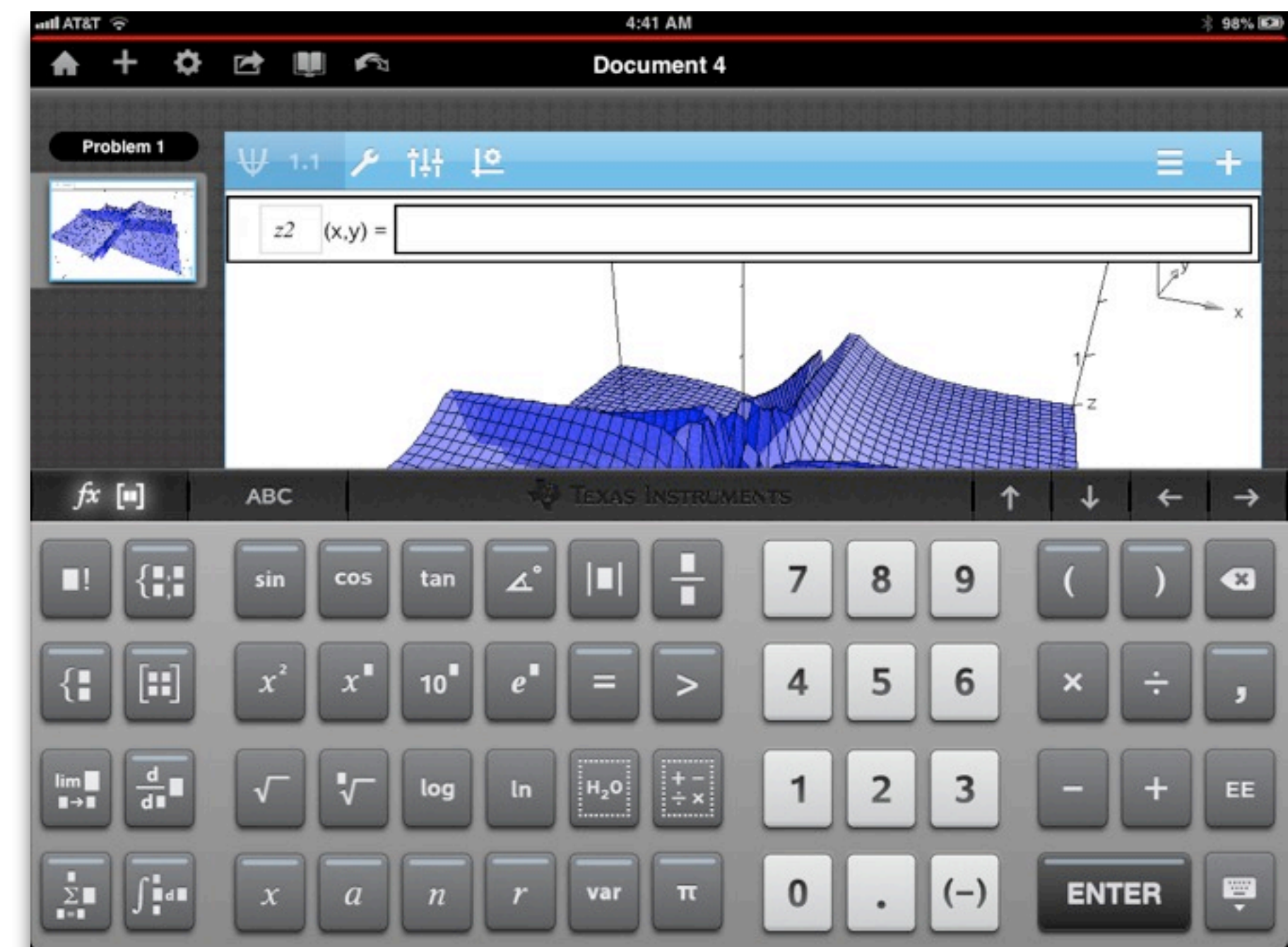
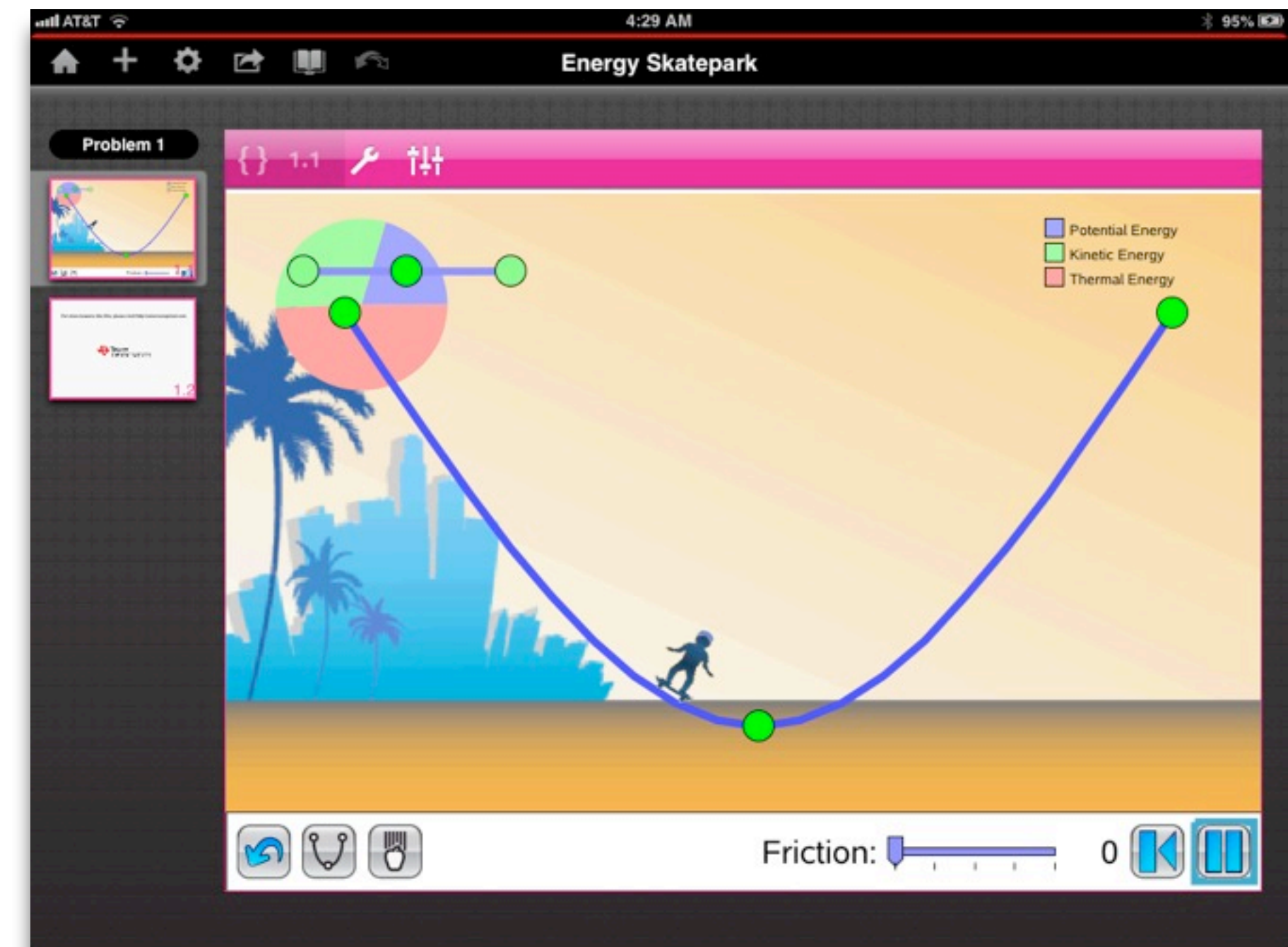
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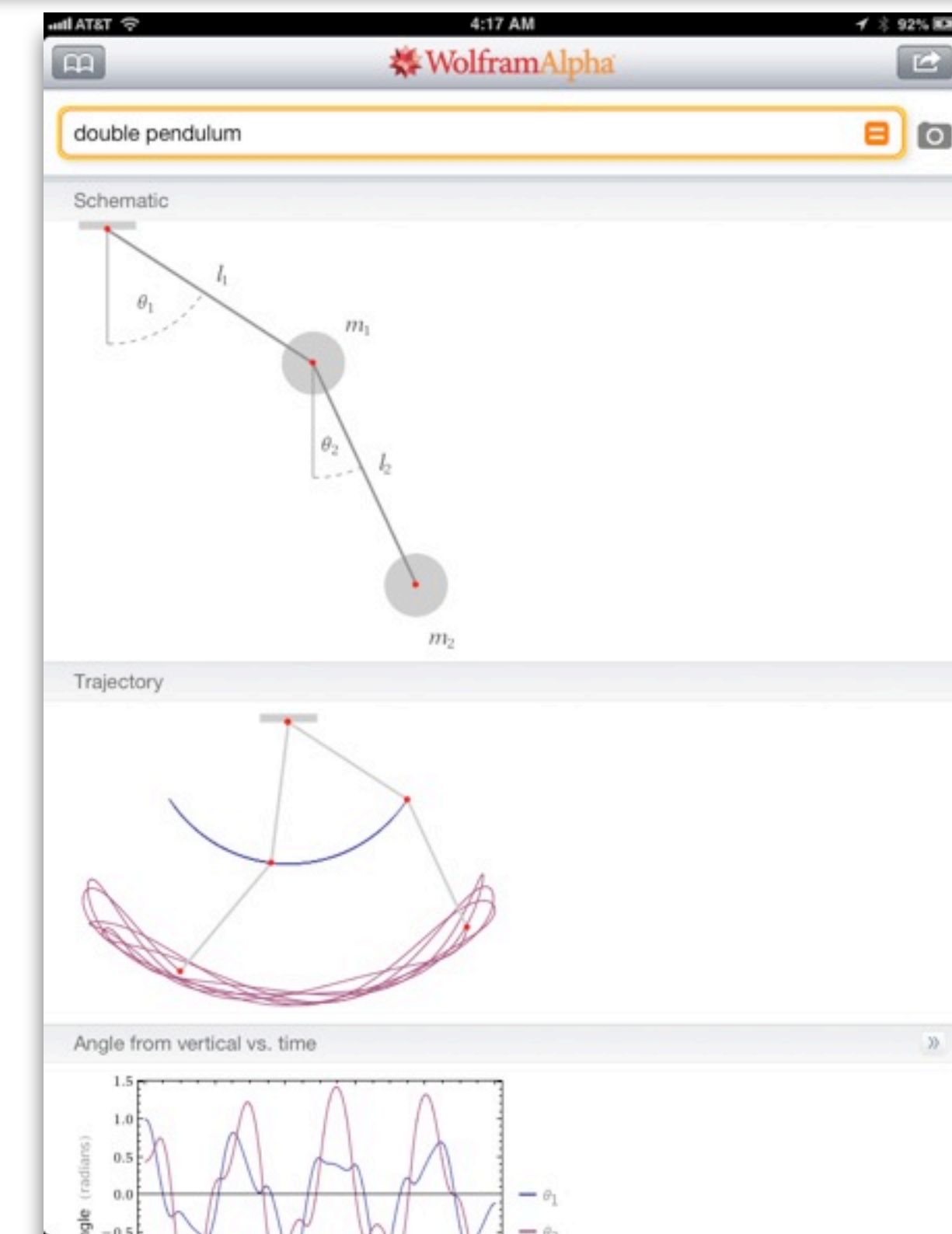
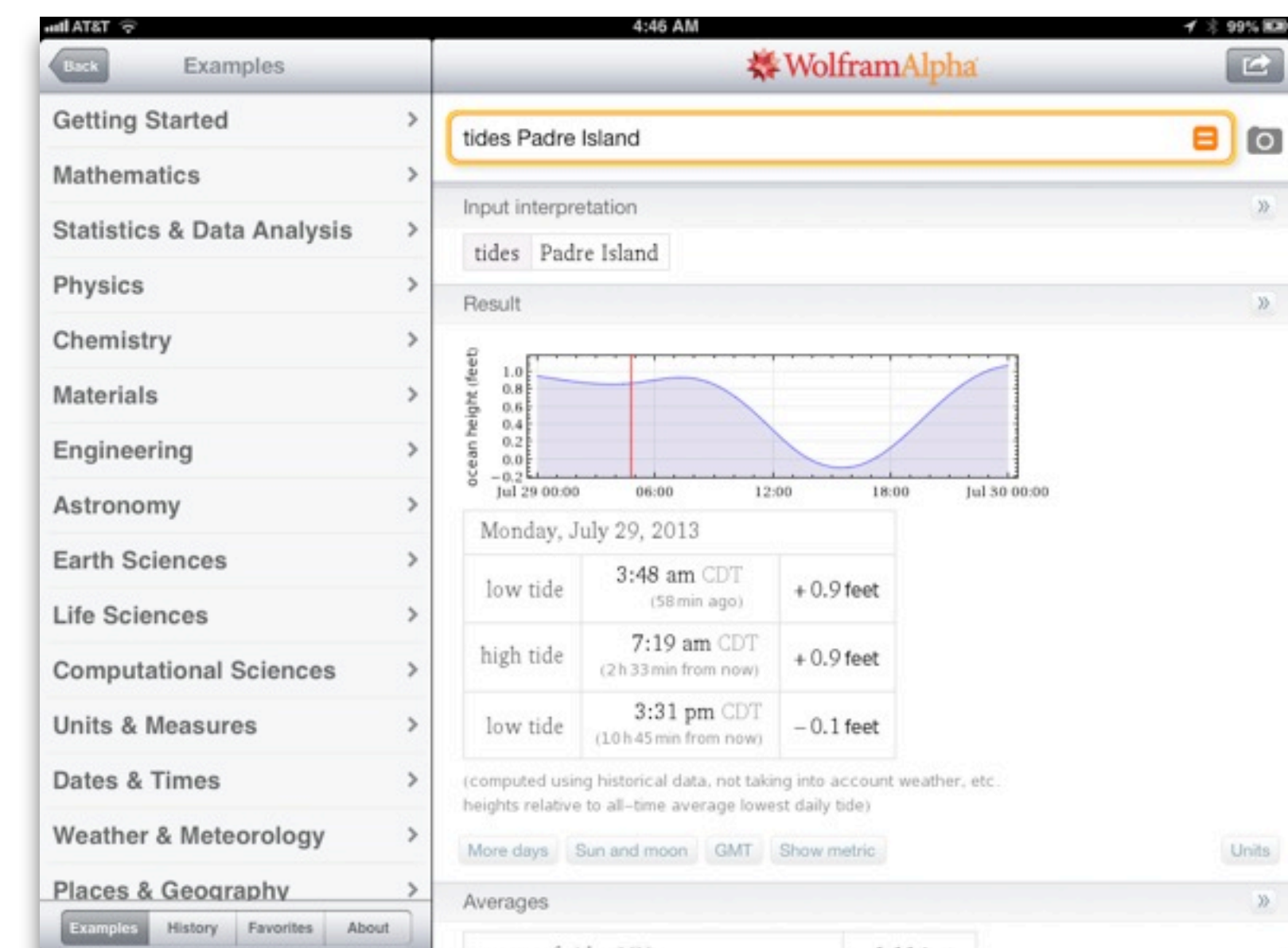
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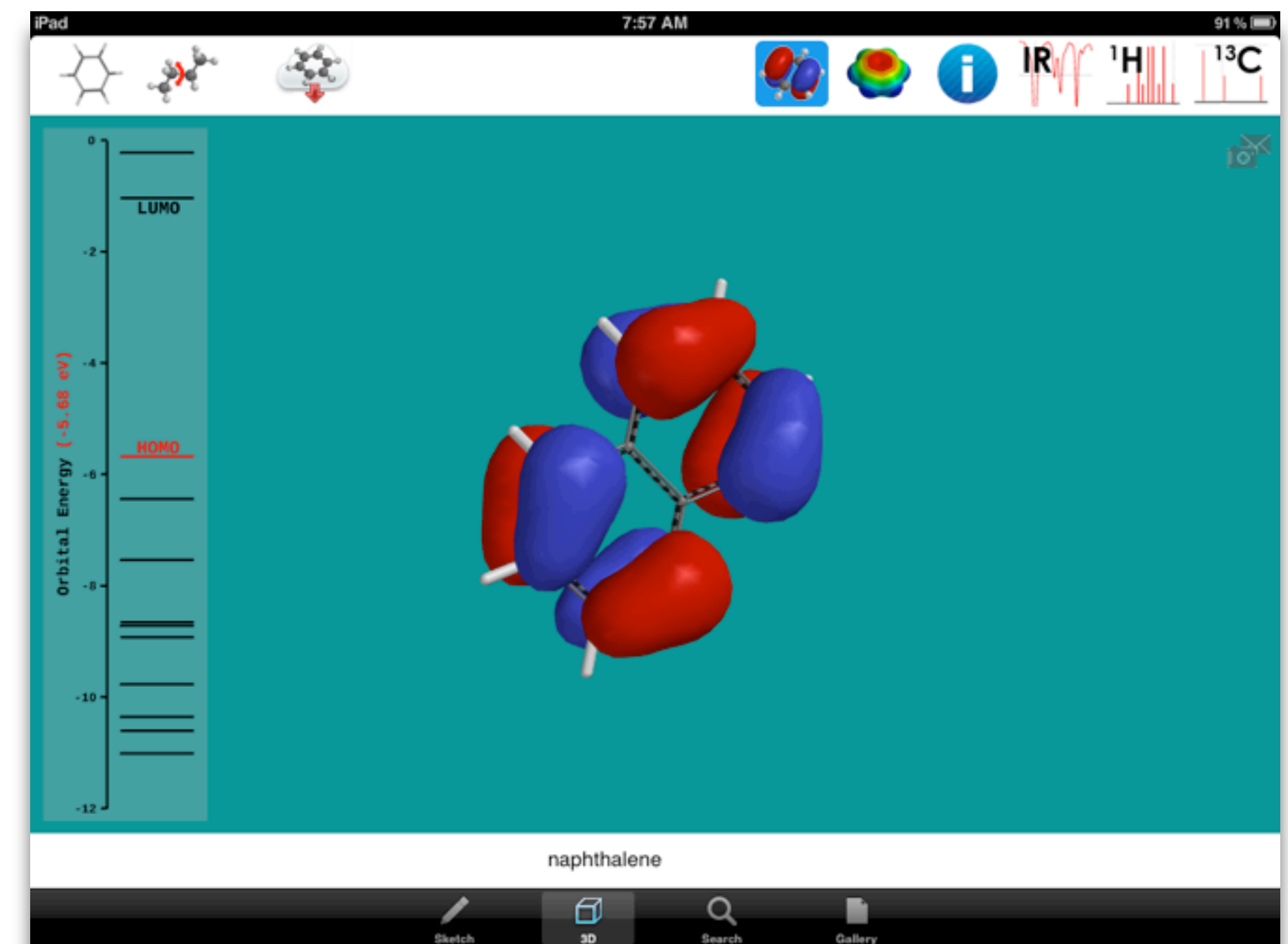
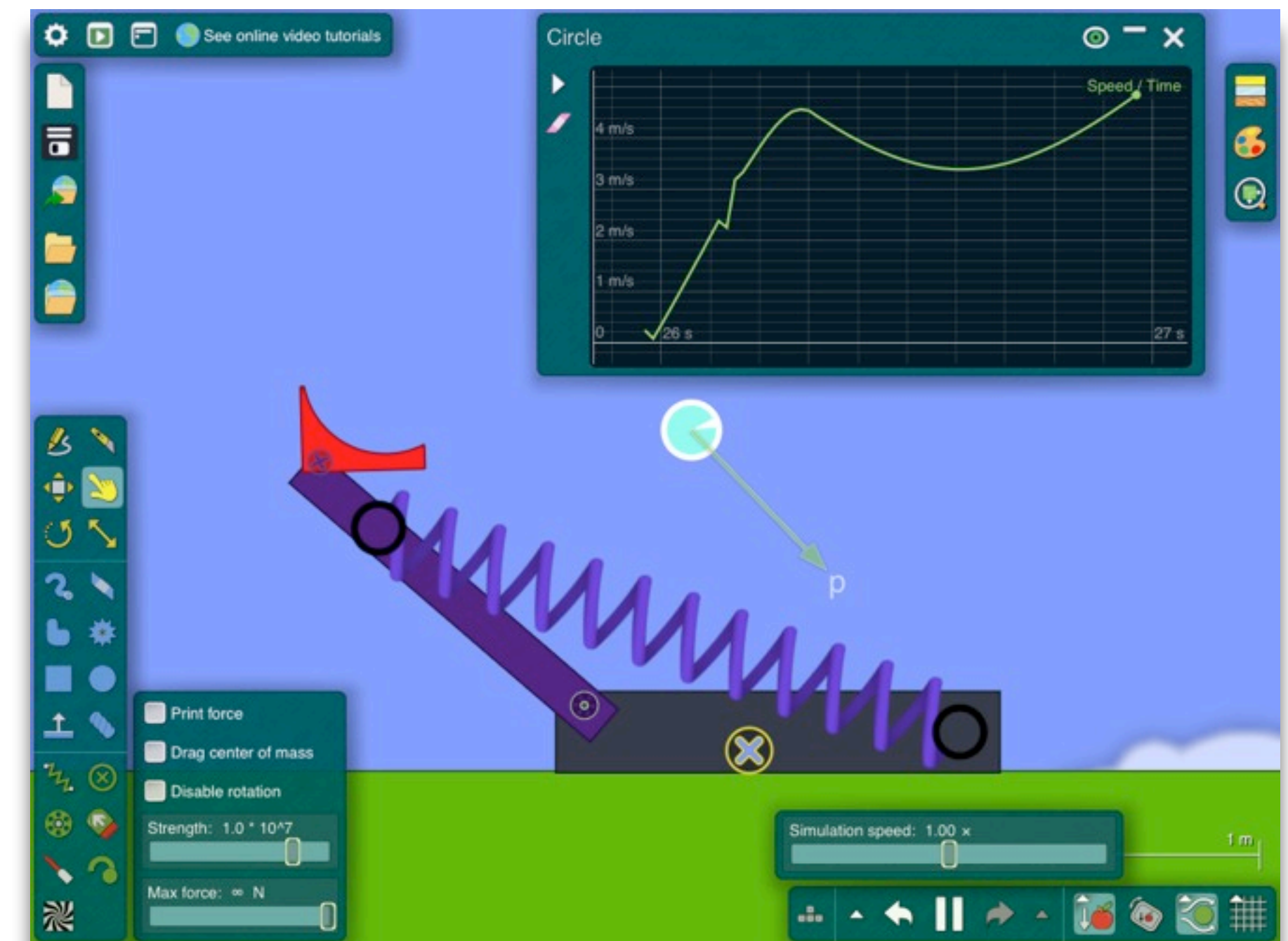
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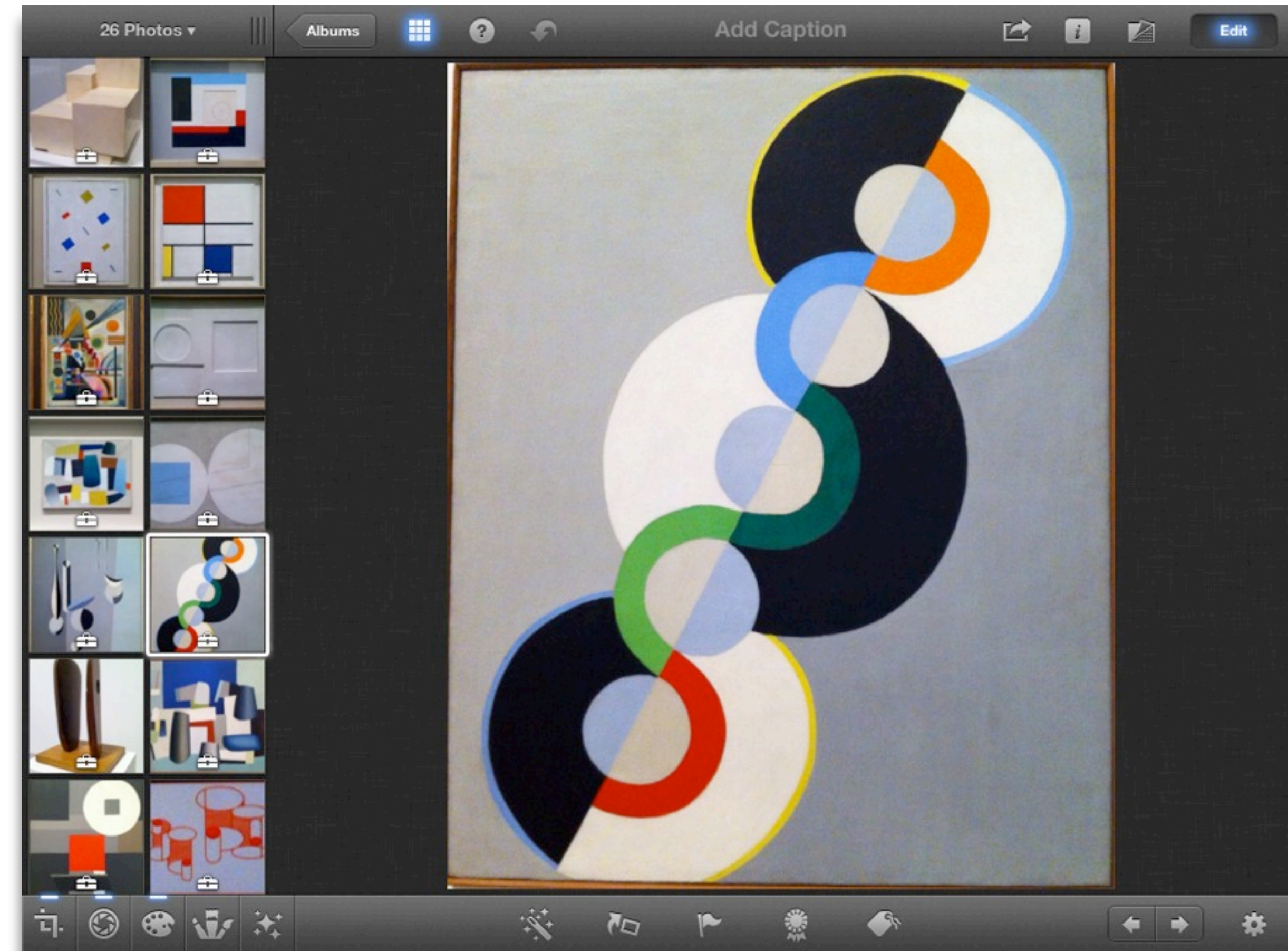
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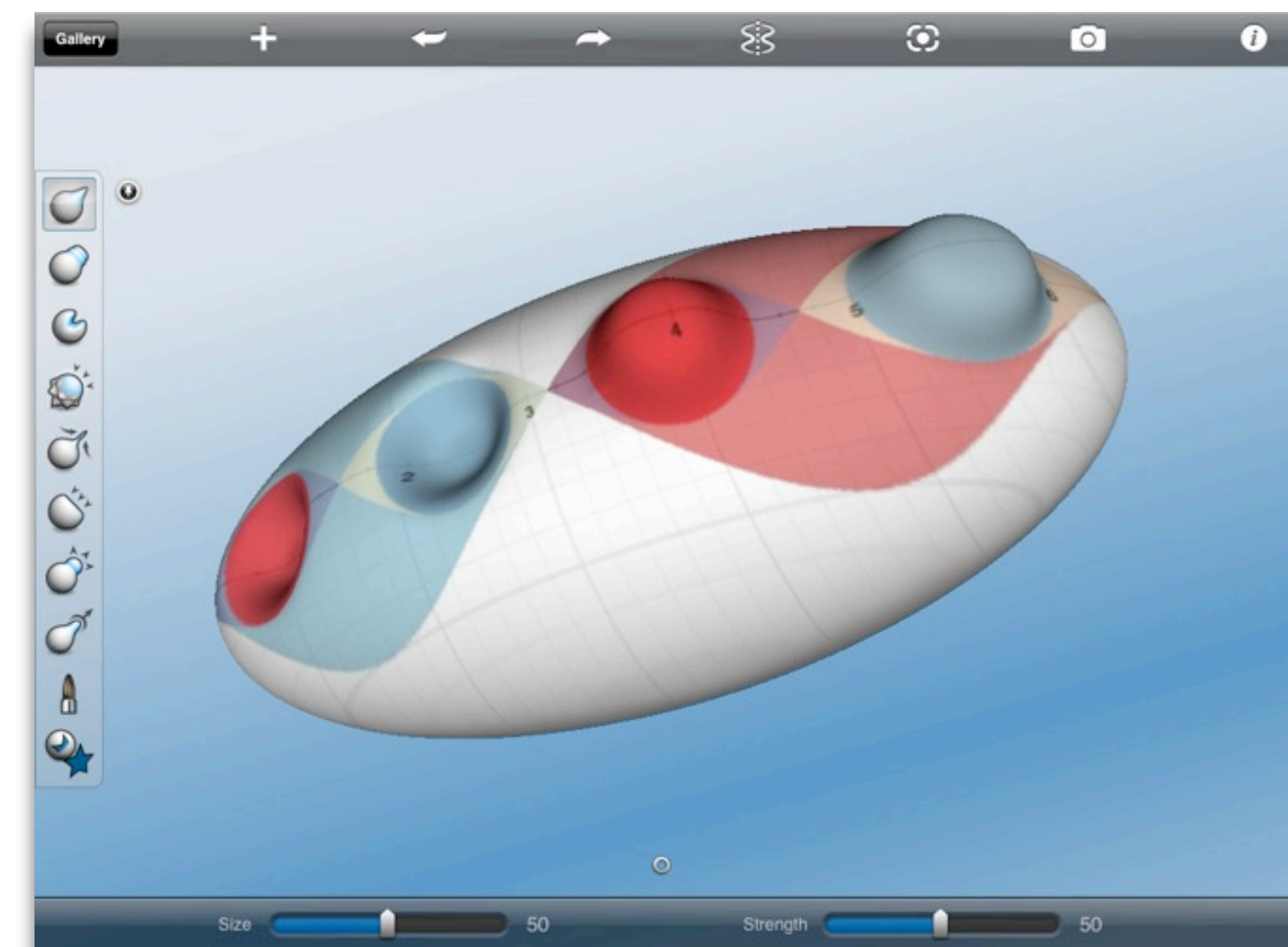
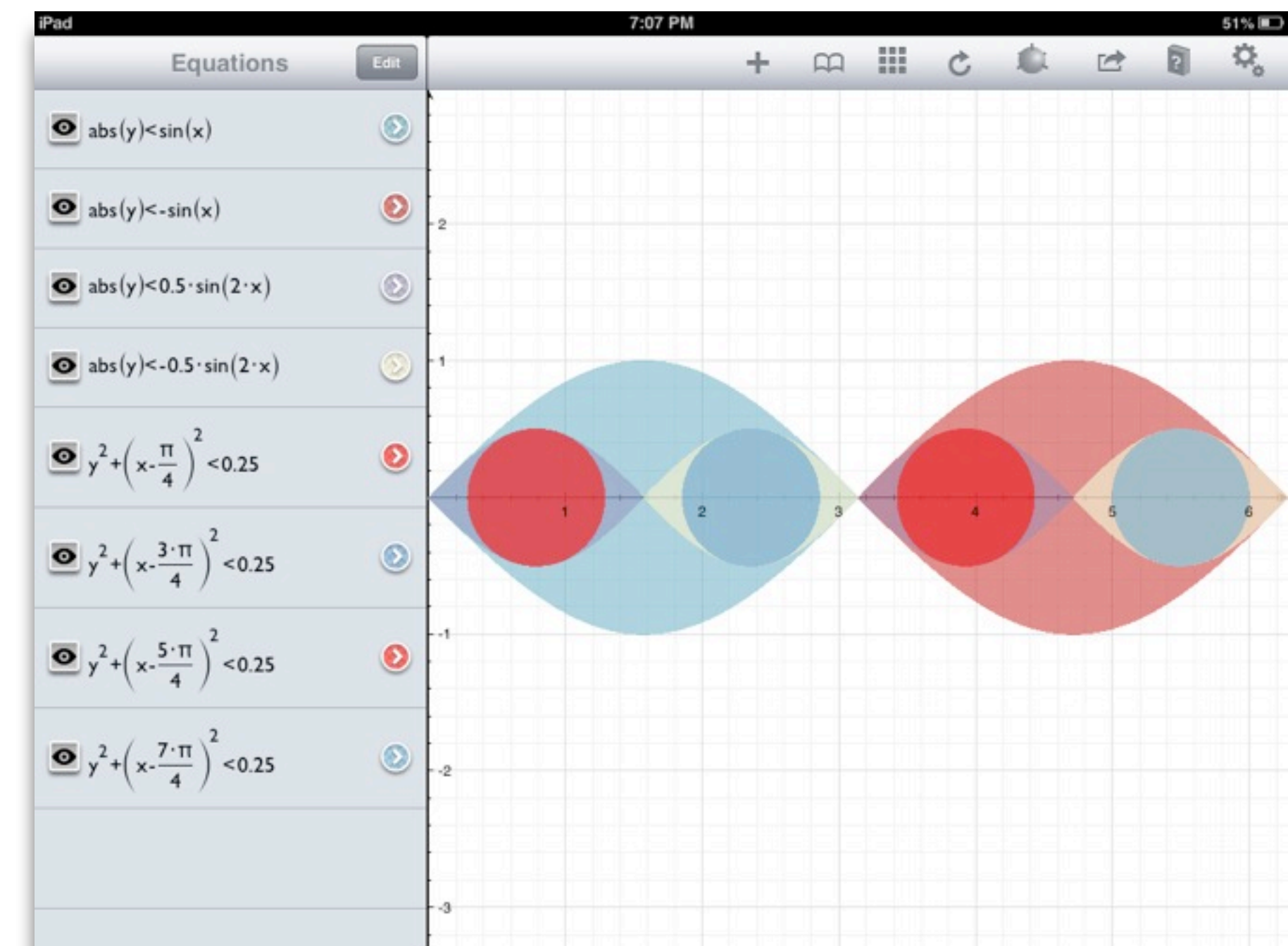
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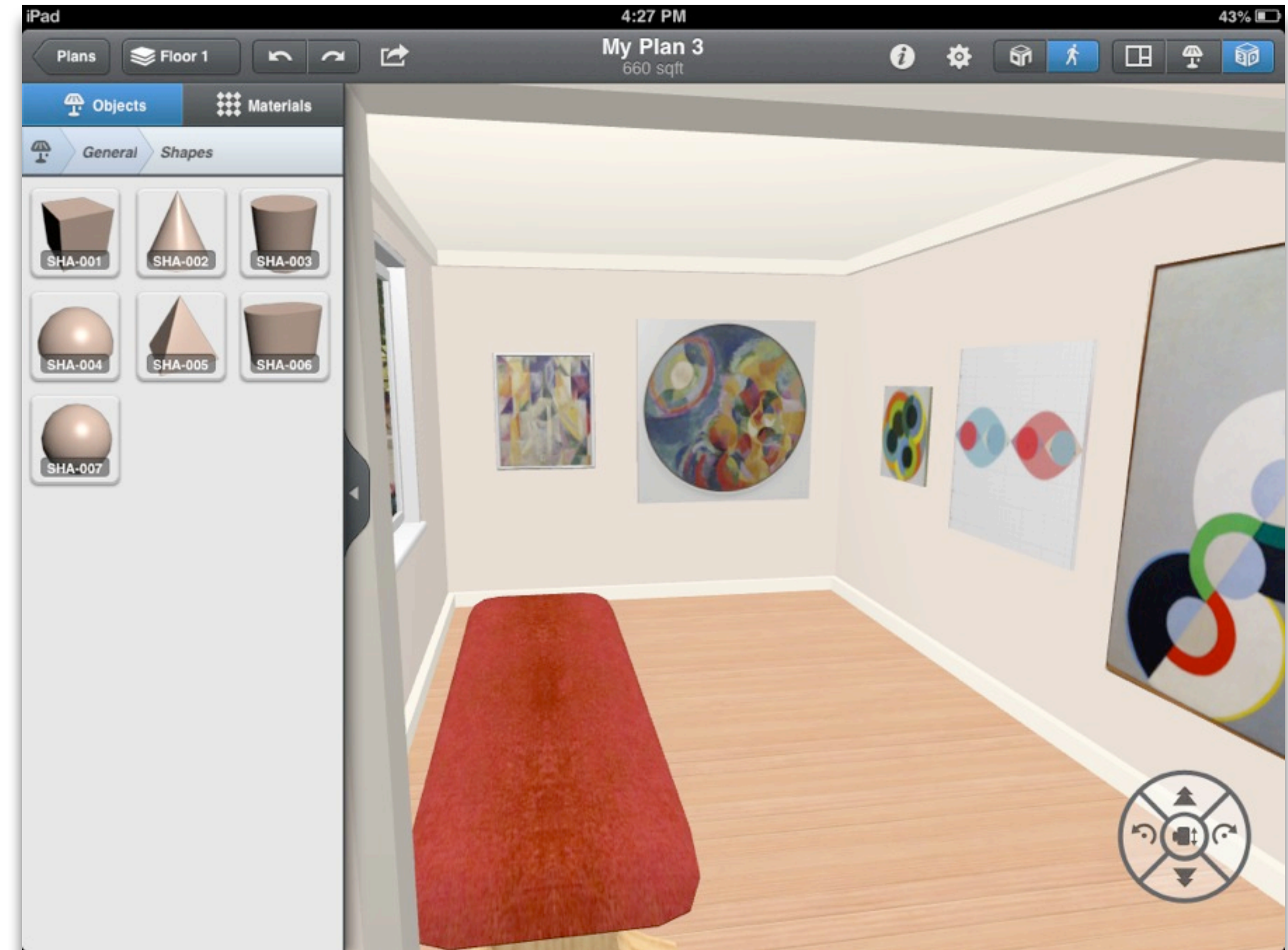
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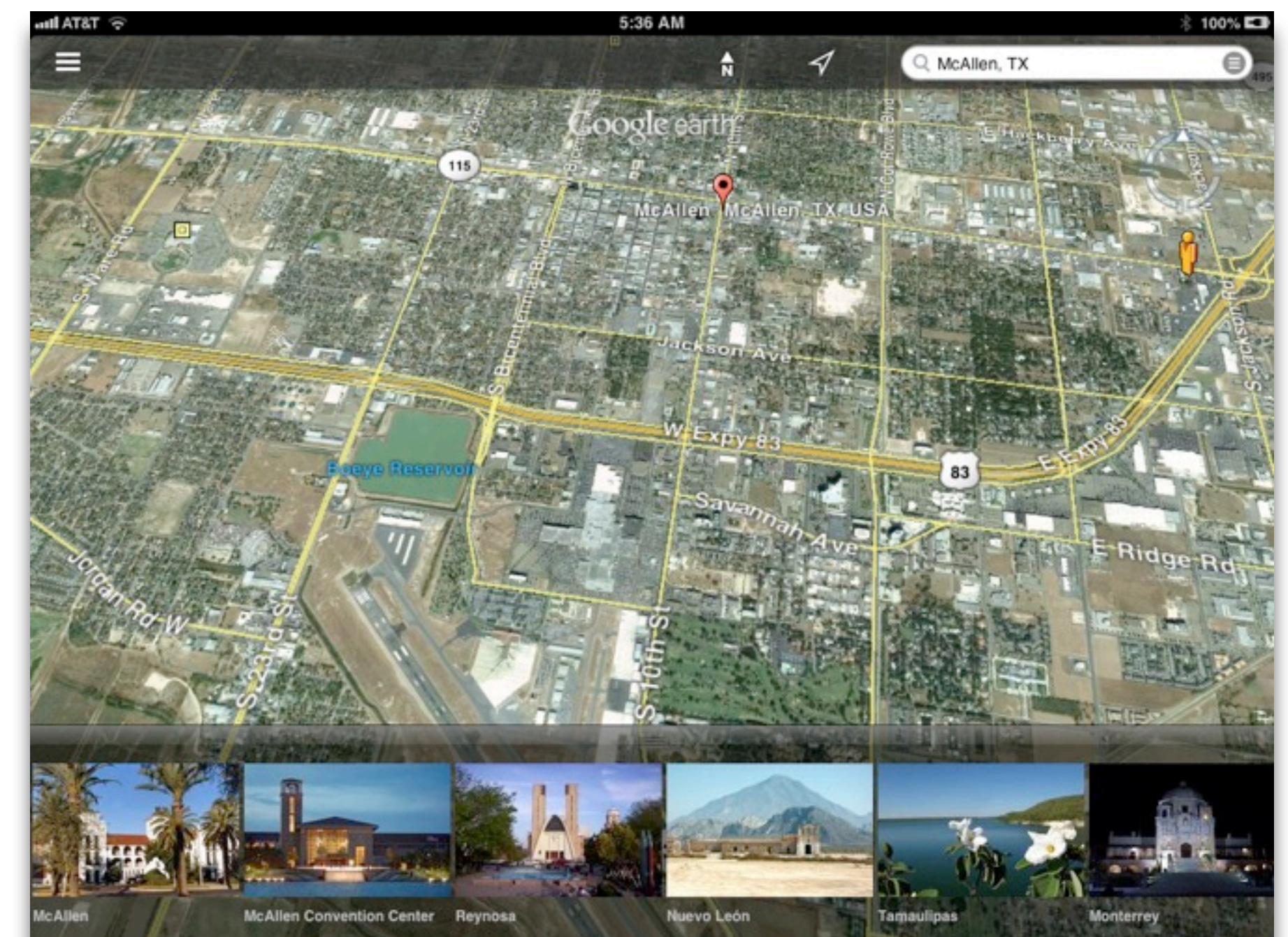
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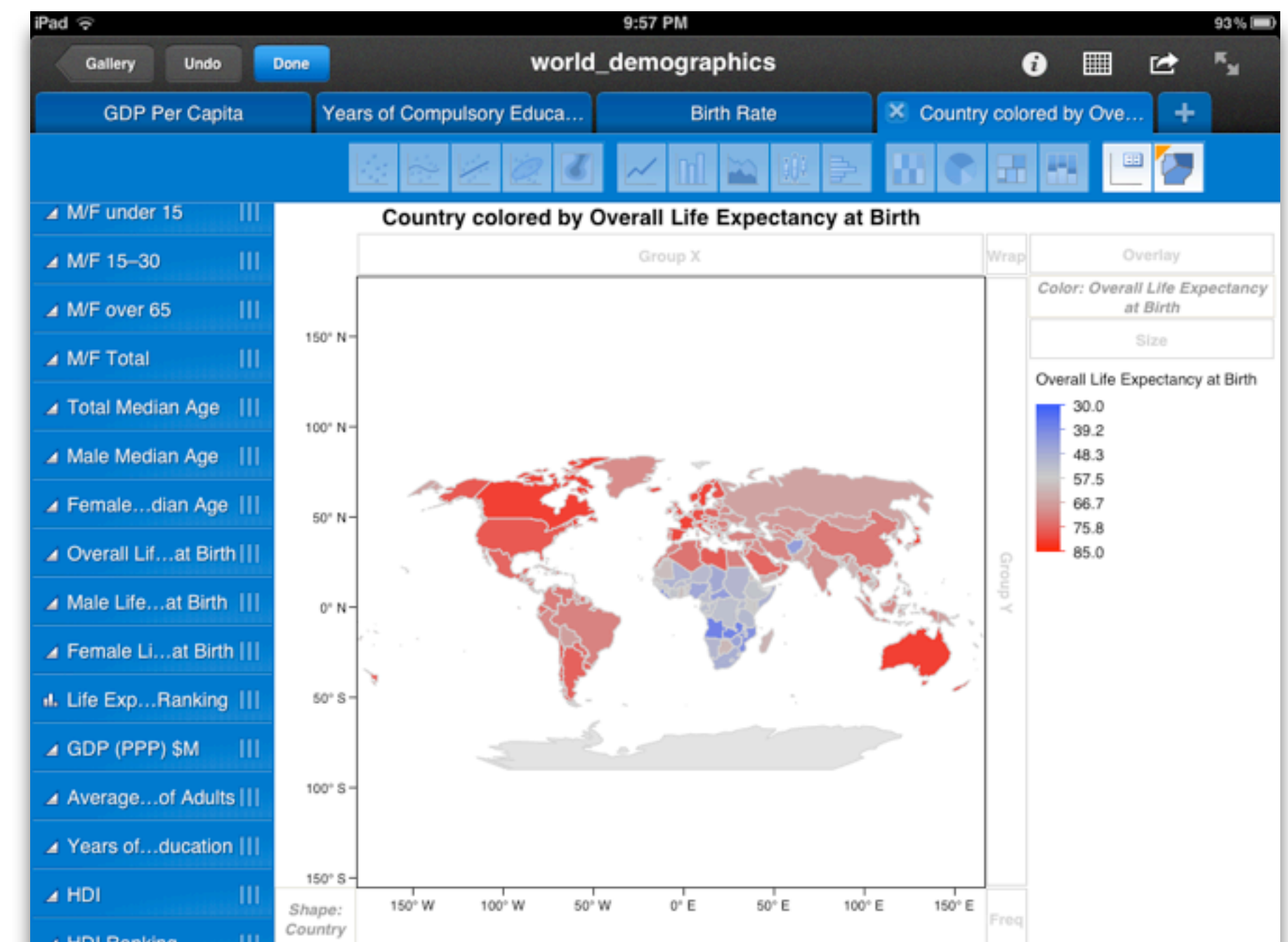
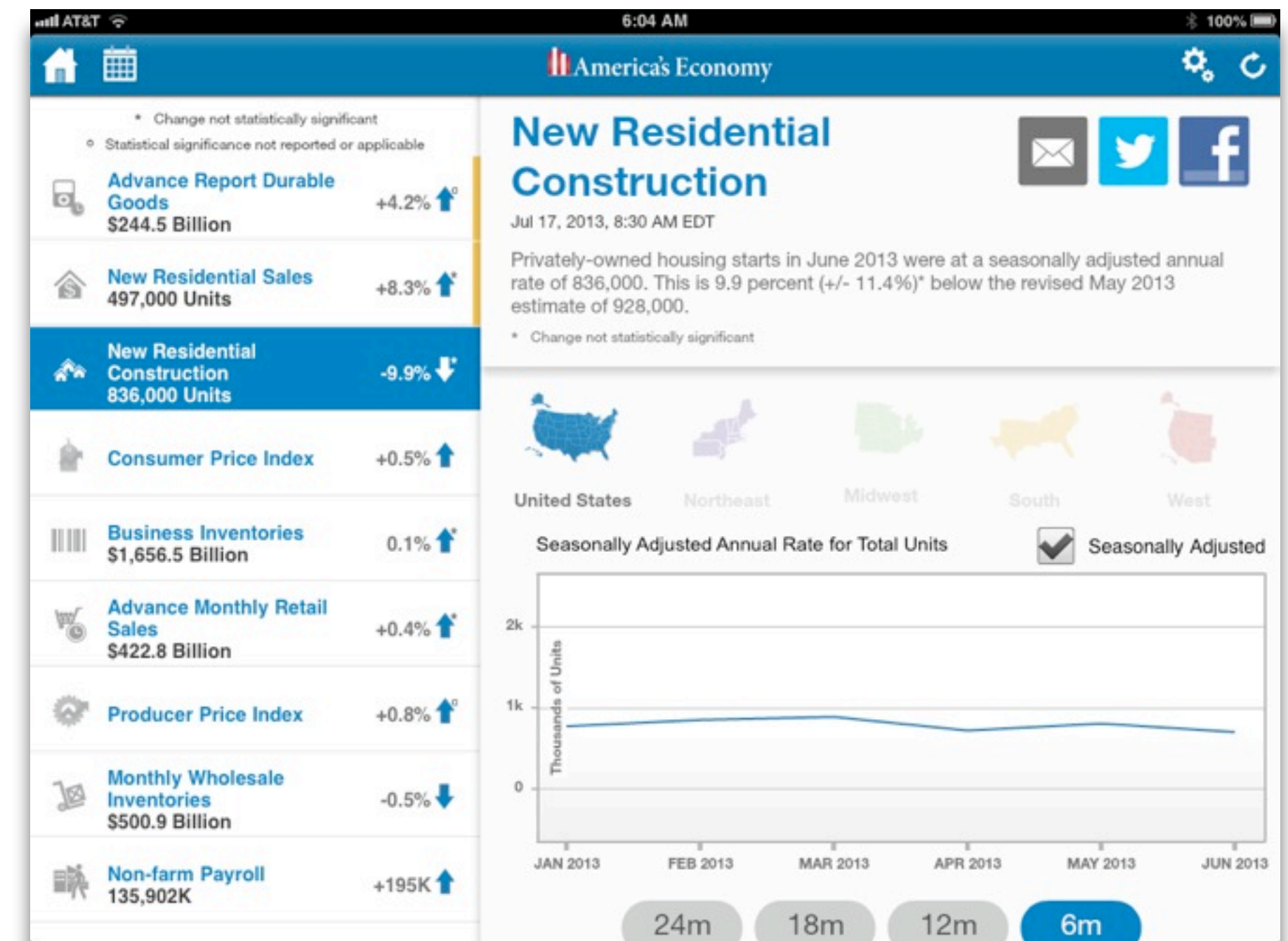
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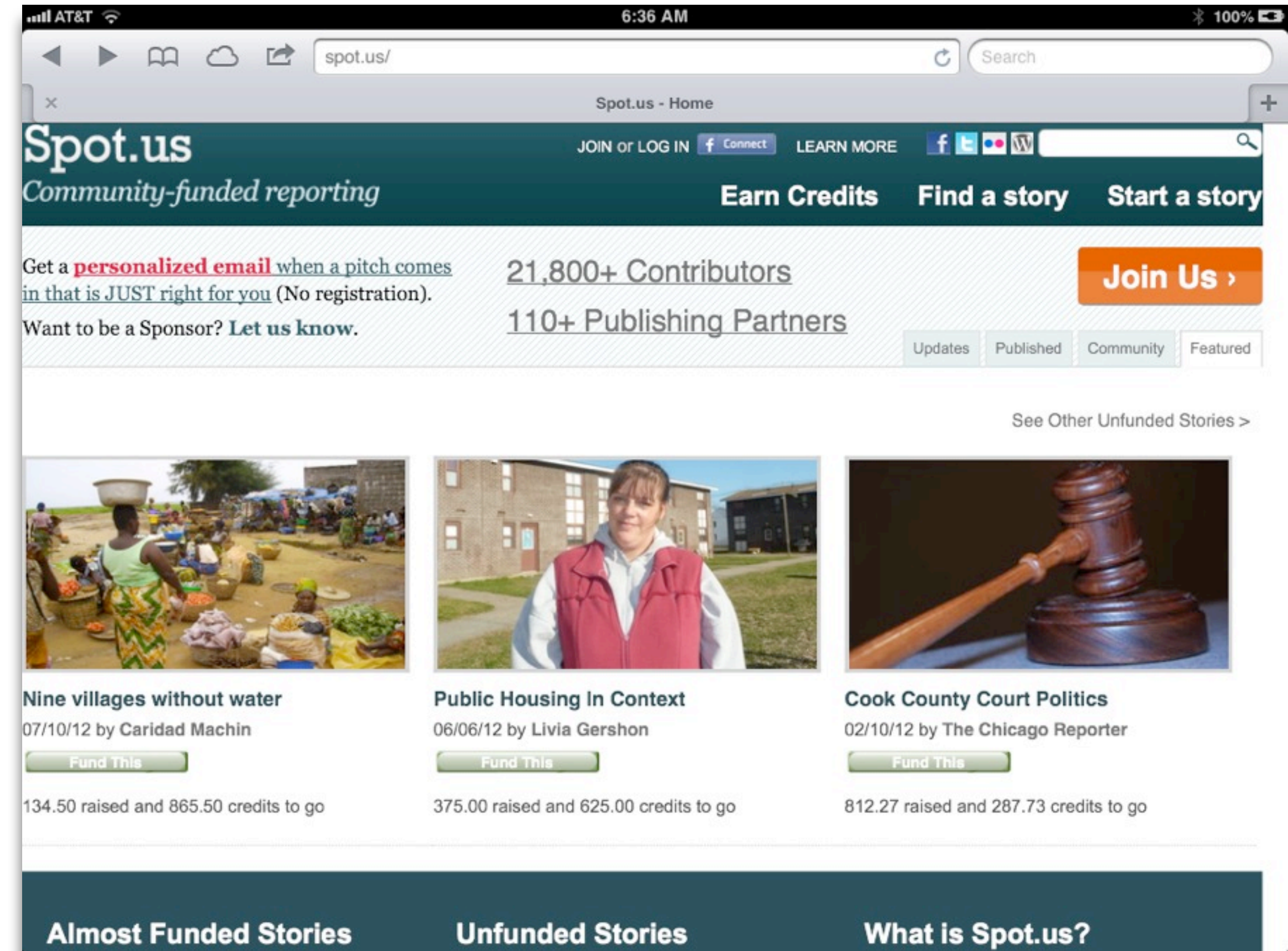
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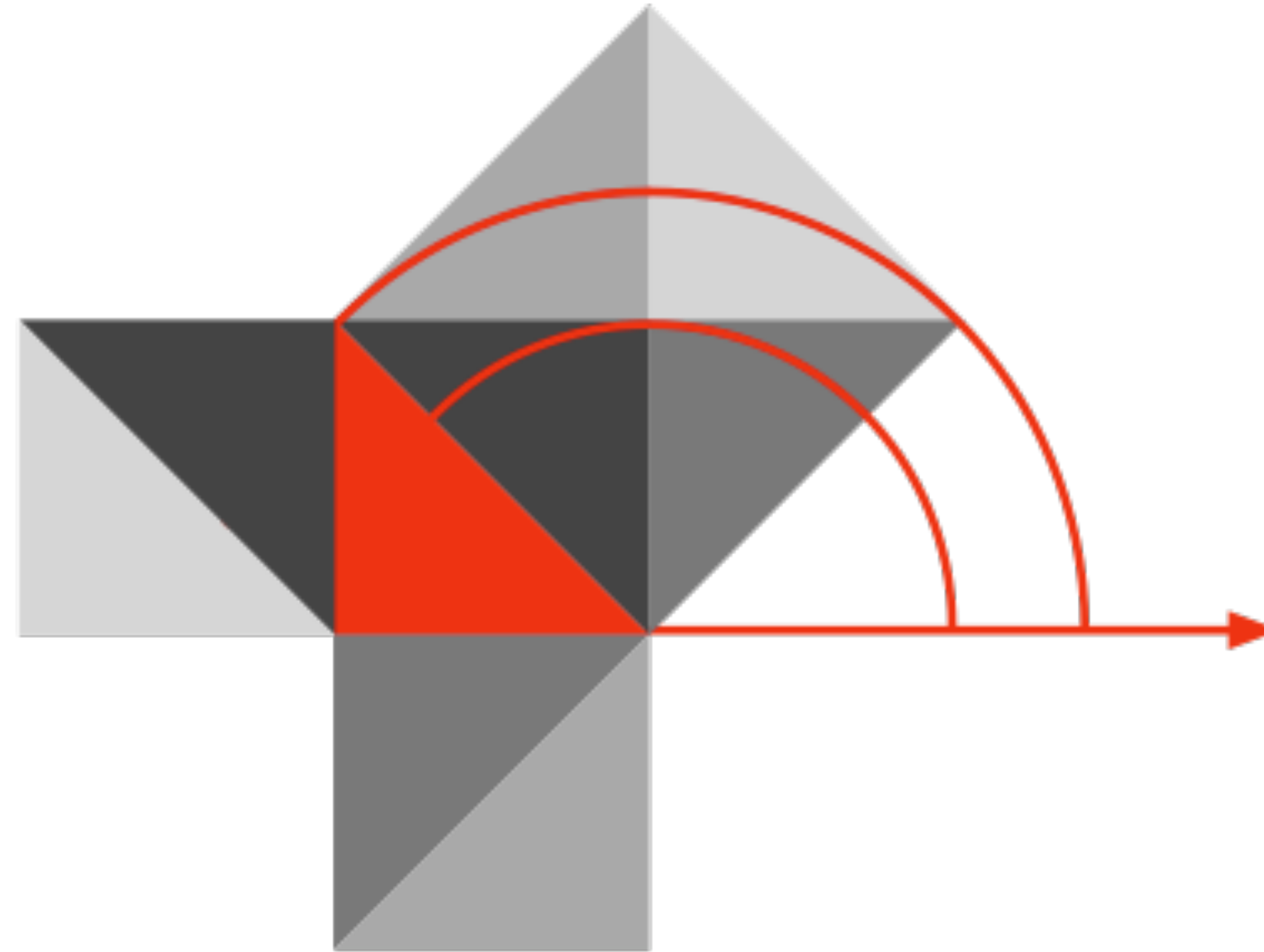
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Resources

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- Punya Mishra and Kristen Kereluik, “What is 21st Century Learning? A review and synthesis.” Paper submitted to the SITE2011 Conference. (2011) Online at:
http://punya.educ.msu.edu/publications/21stCenturyKnowledge_PM_KK.pdf
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Hippasus



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