

Paths to Technology Integration: SAMR & TPCK in Context

Ruben R. Puentedura, Ph.D.

Goals

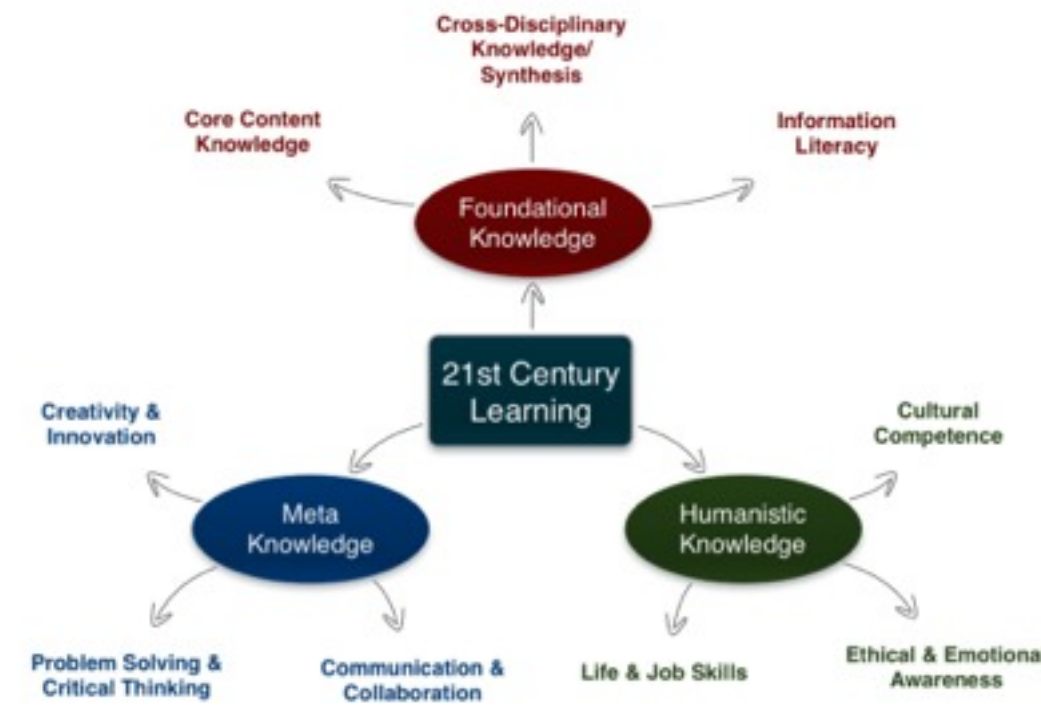
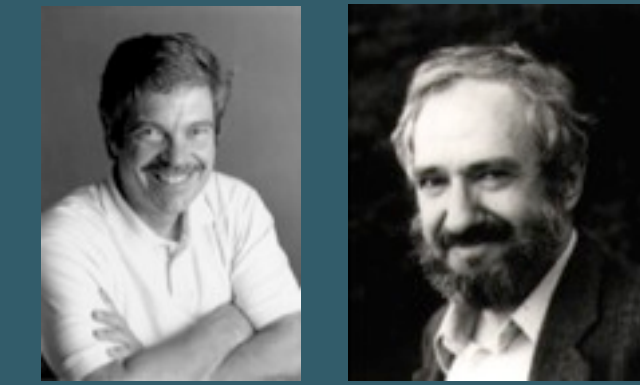
Focus

Models

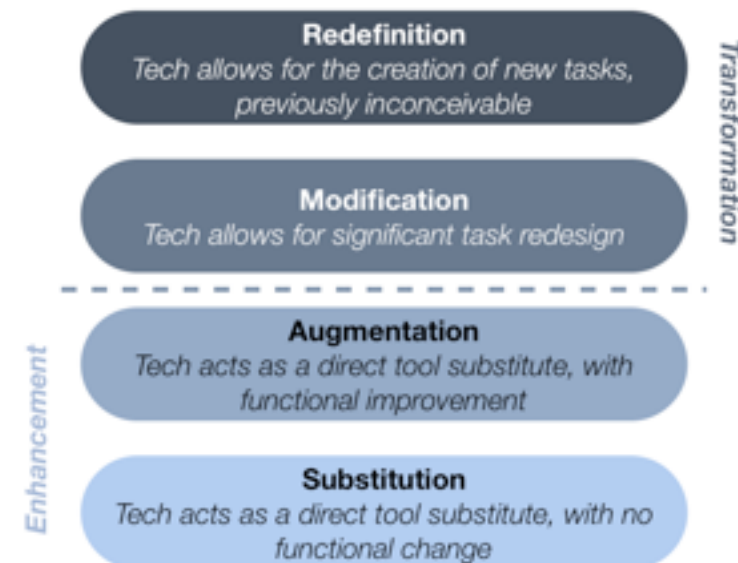
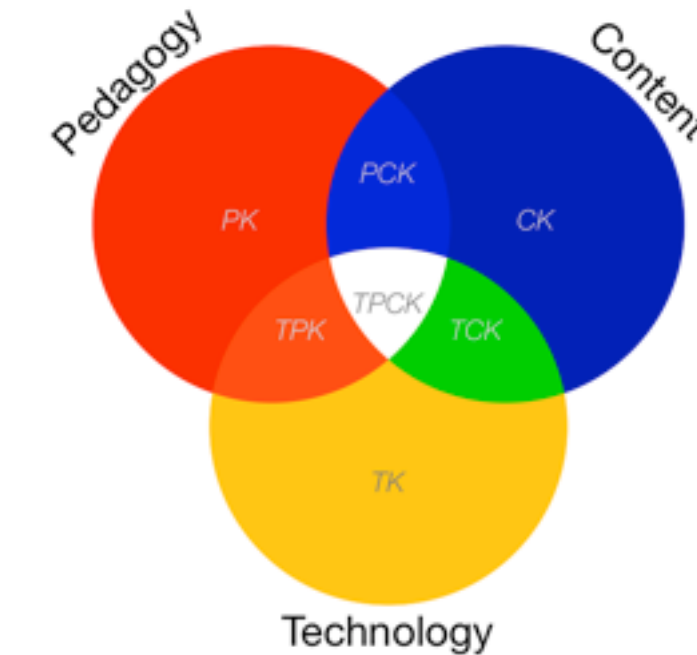
Technology



Augmenting Human Intellect & Learning Capacity

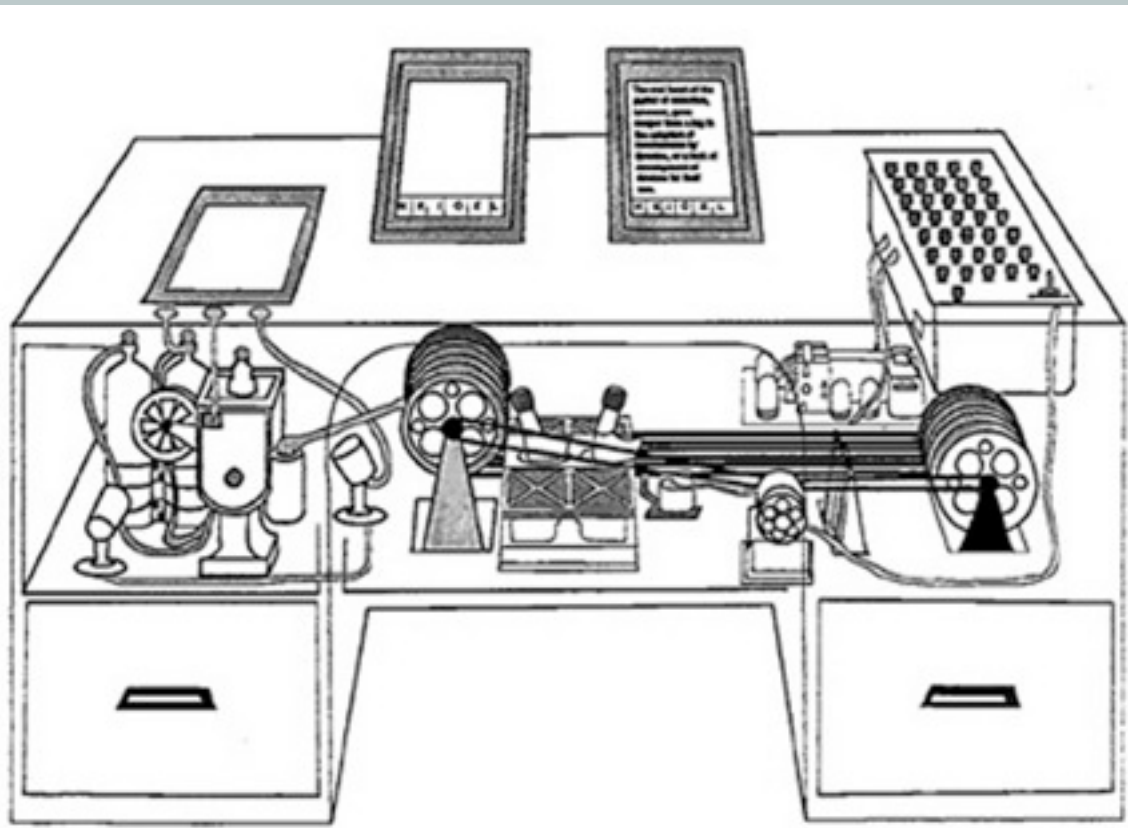


Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years



One-to-One Technologies

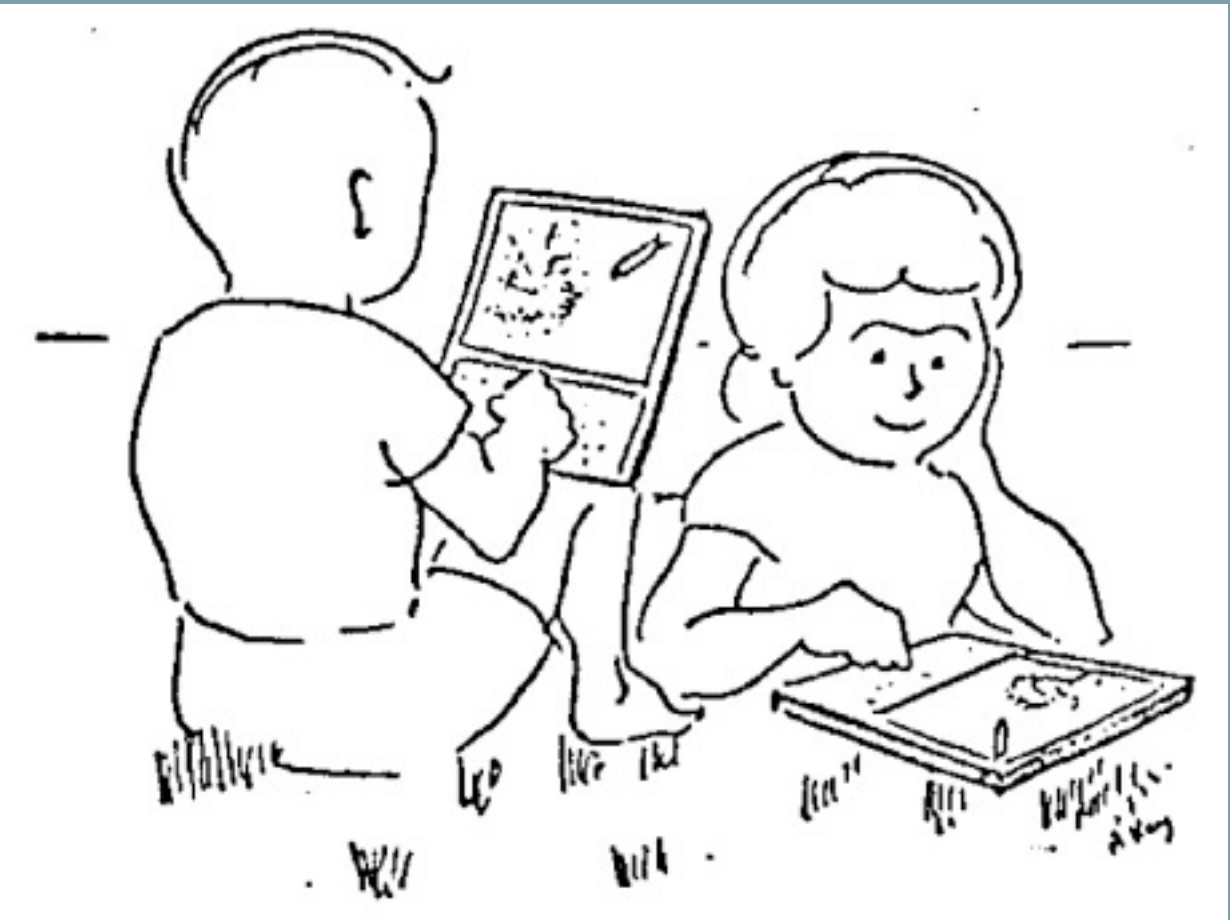




AS WE MAY THINK



a research center
for augmenting human
intellect

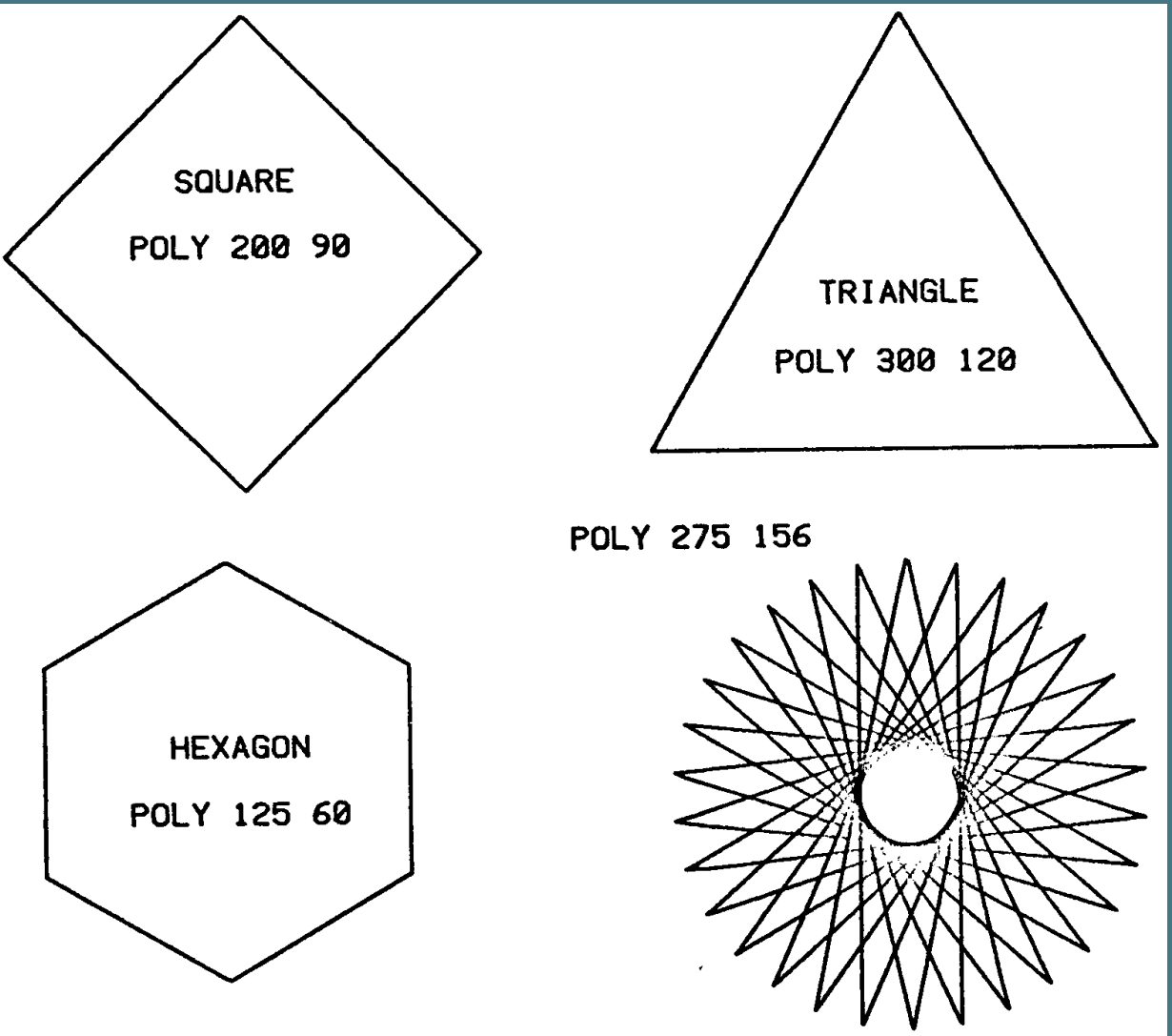
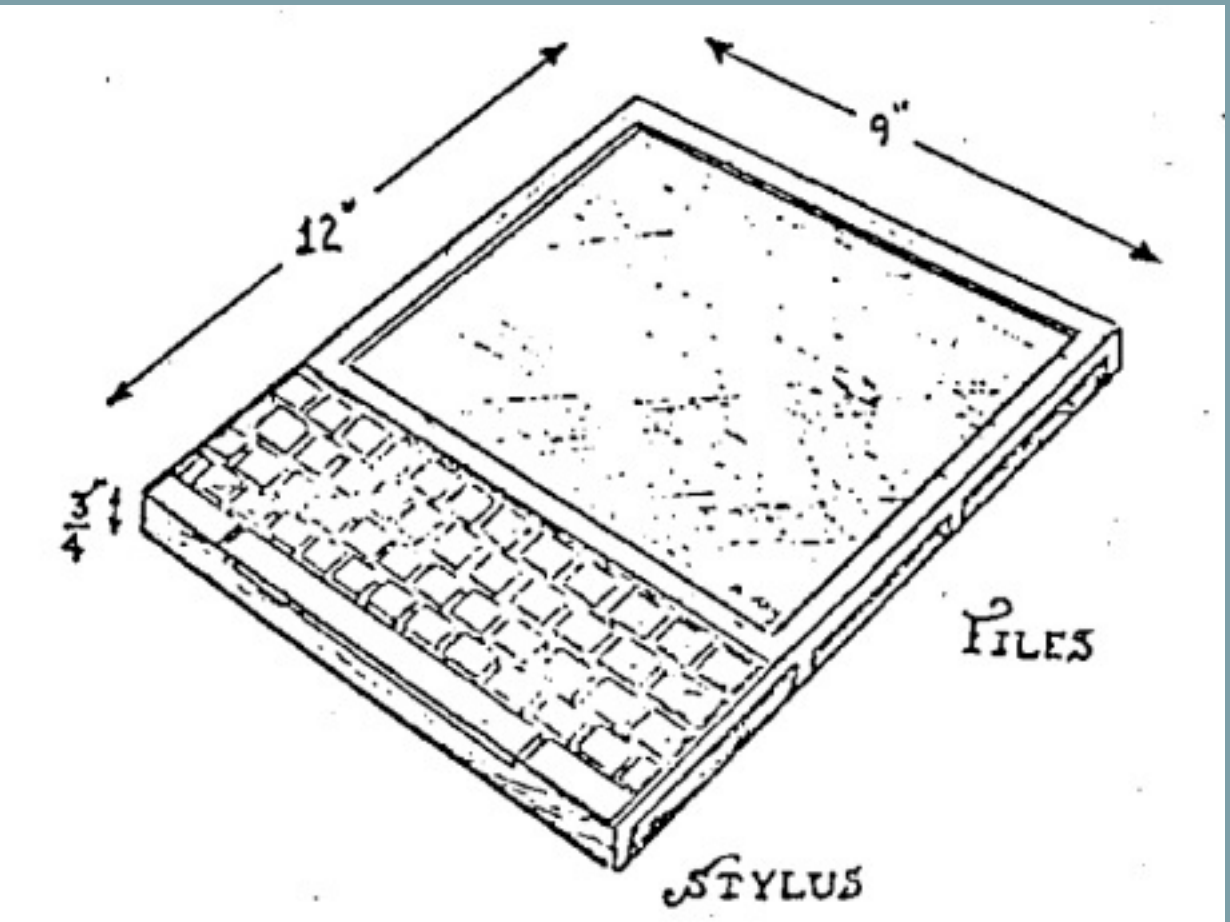
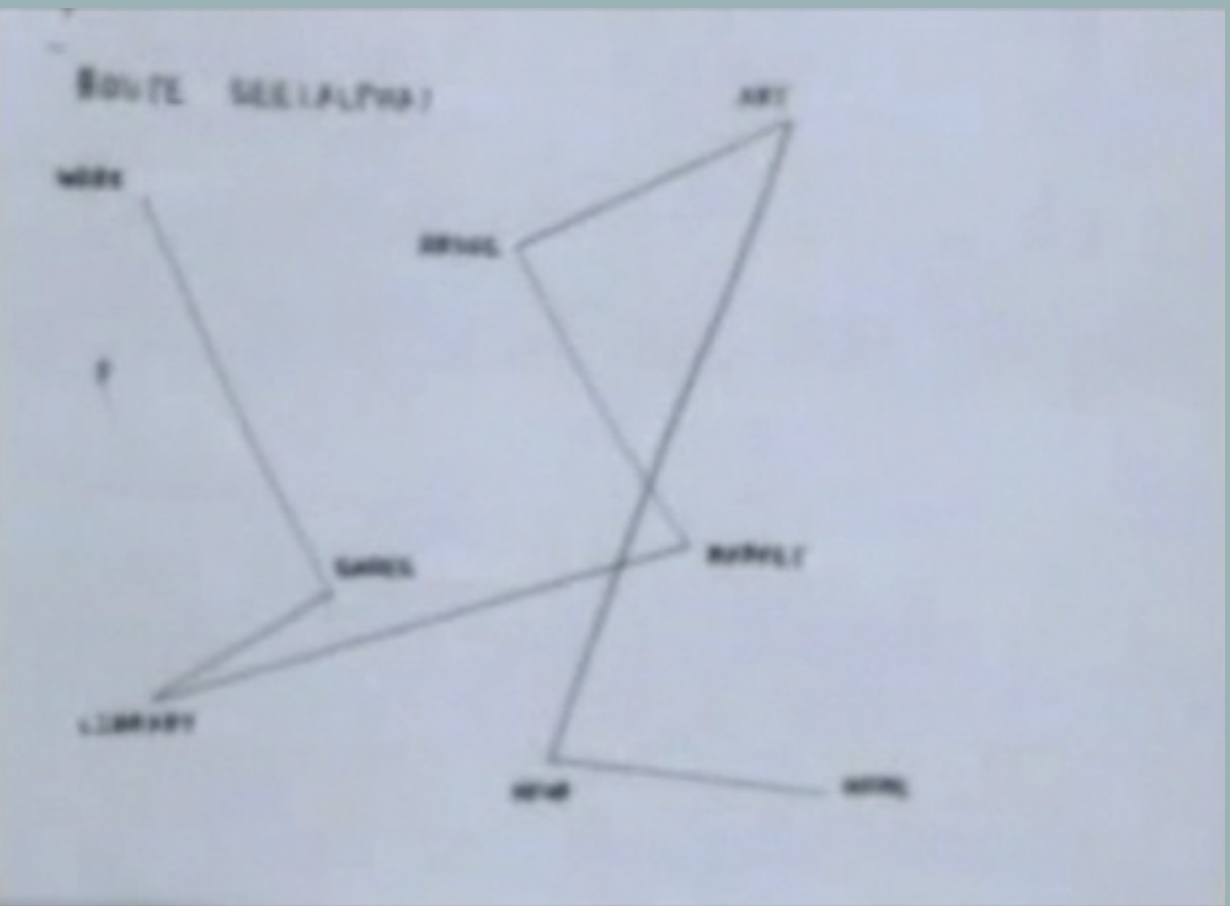
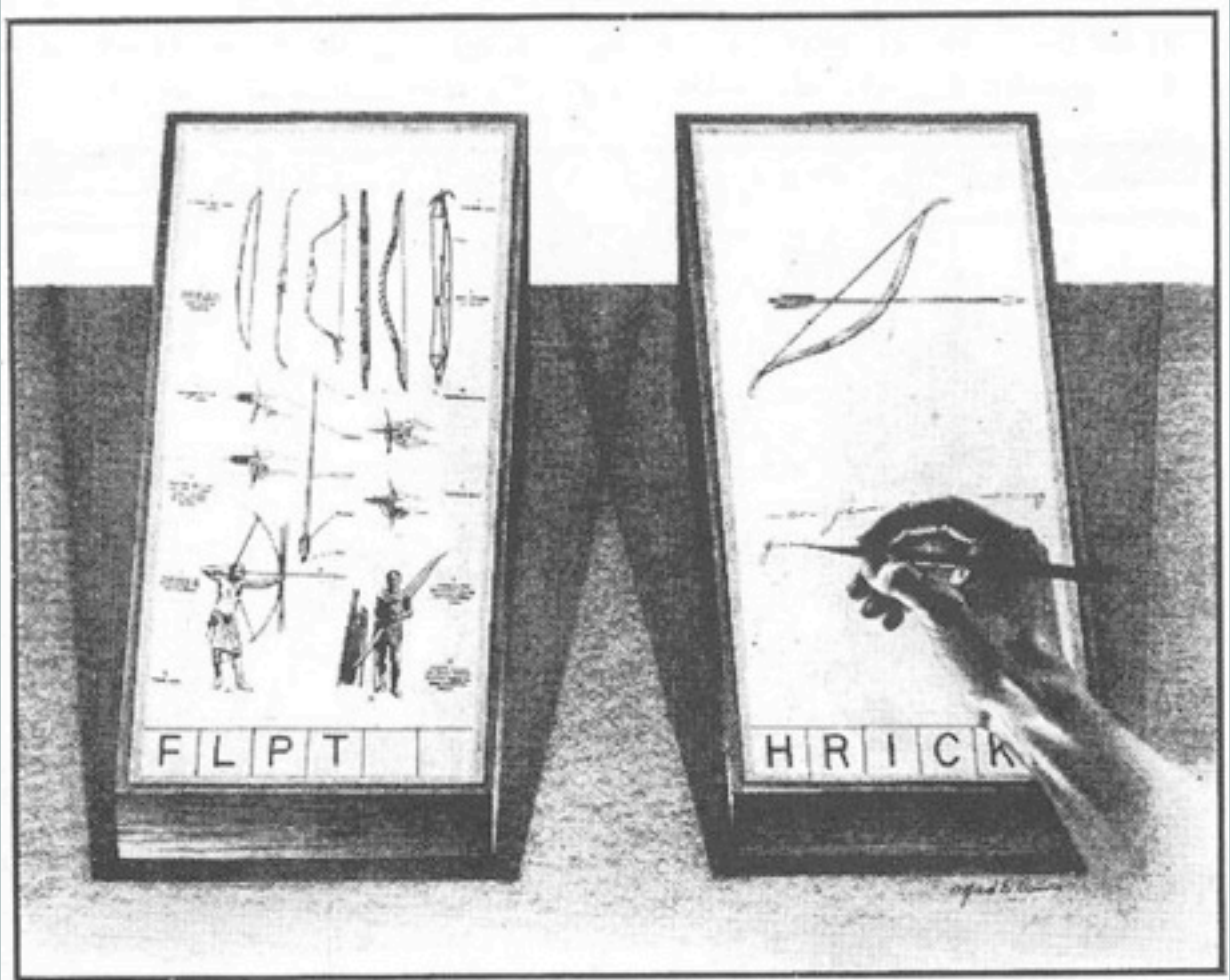


A Personal Computer for Children of All Ages

```
TO POLY :ANGLE :STEP
1. FORWARD :STEP
2. RIGHT :ANGLE
3. POLY :ANGLE :STEP

END
```

ON MAKING A THEOREM FOR A CHILD



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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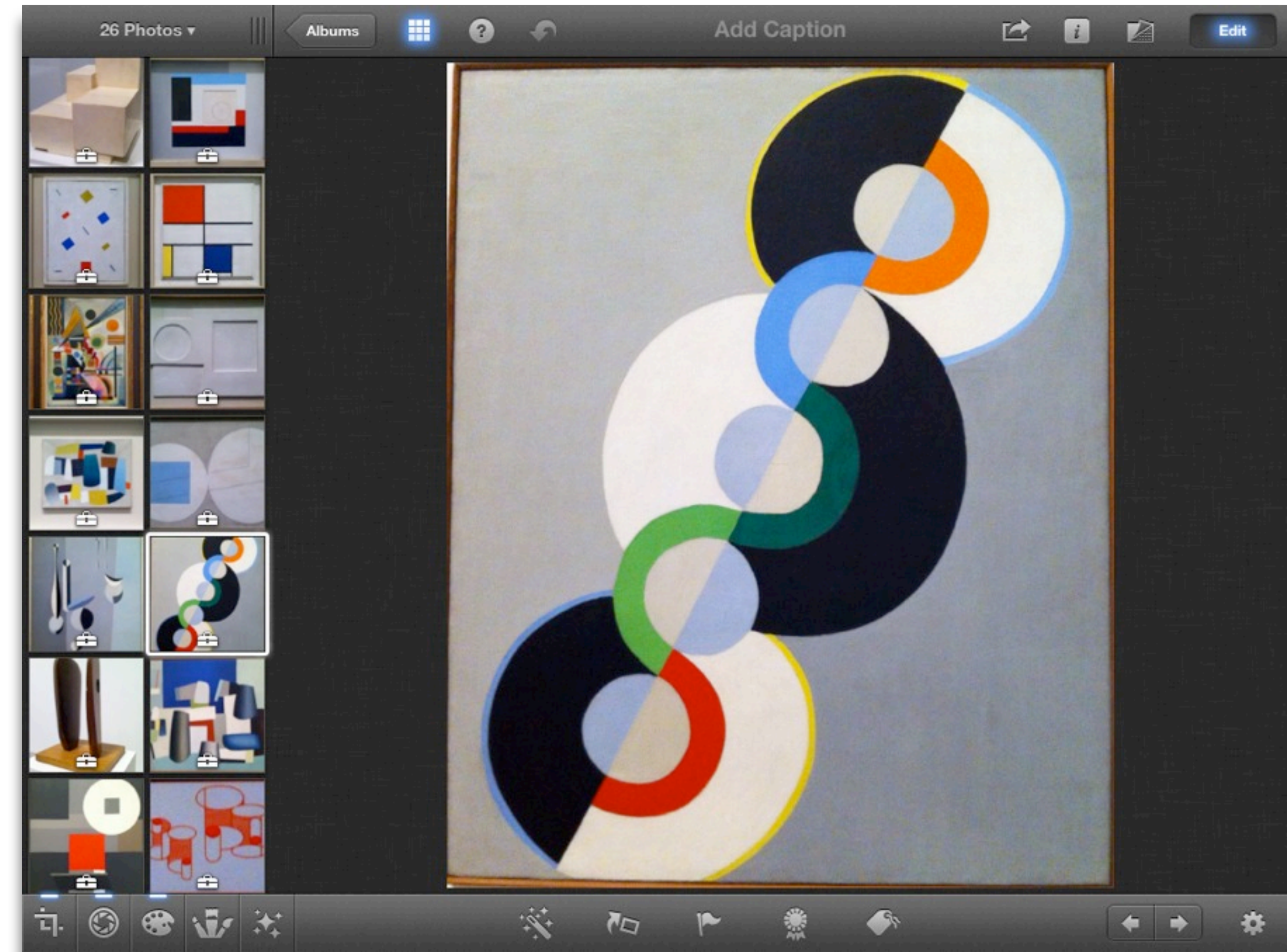
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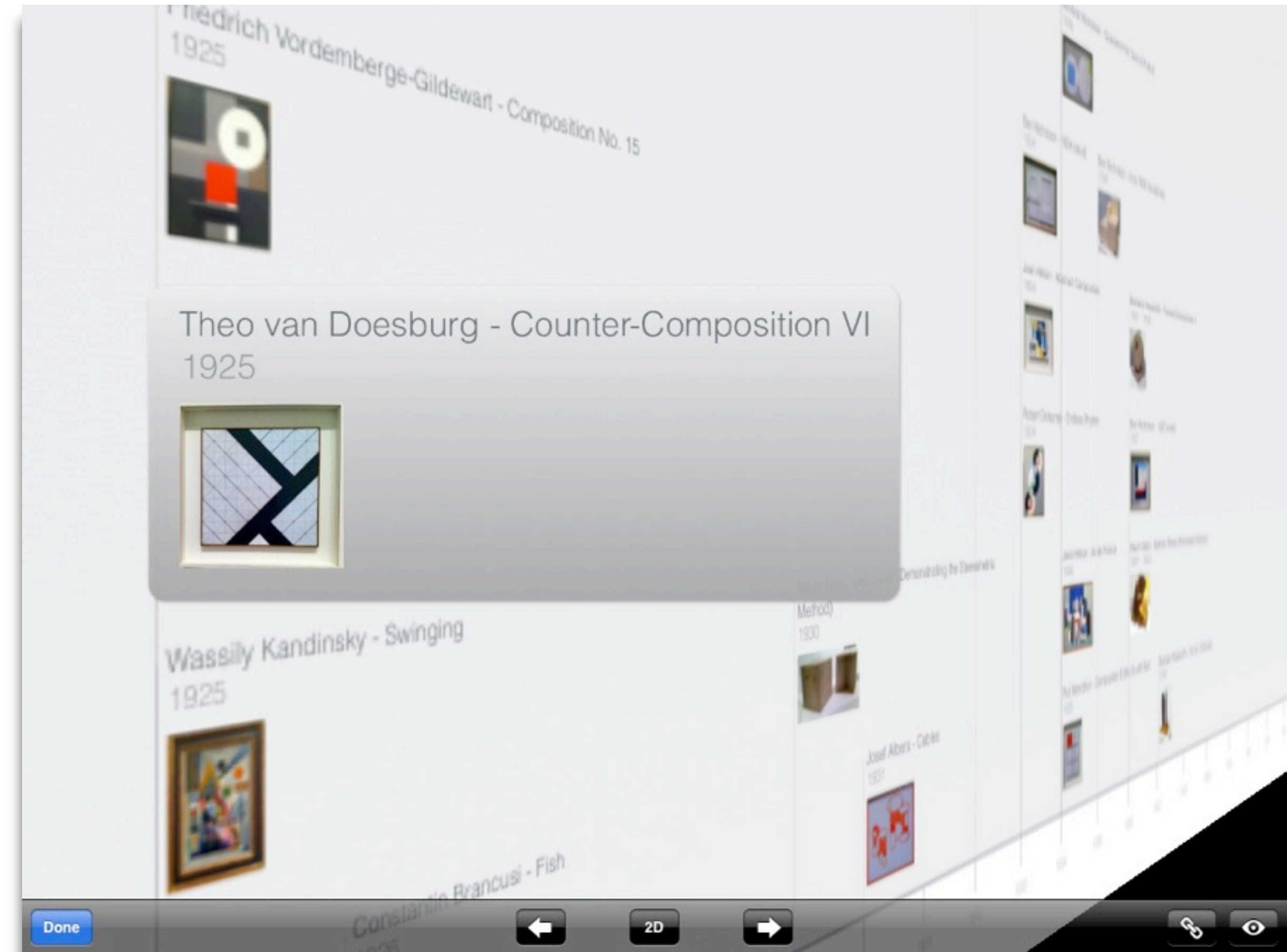
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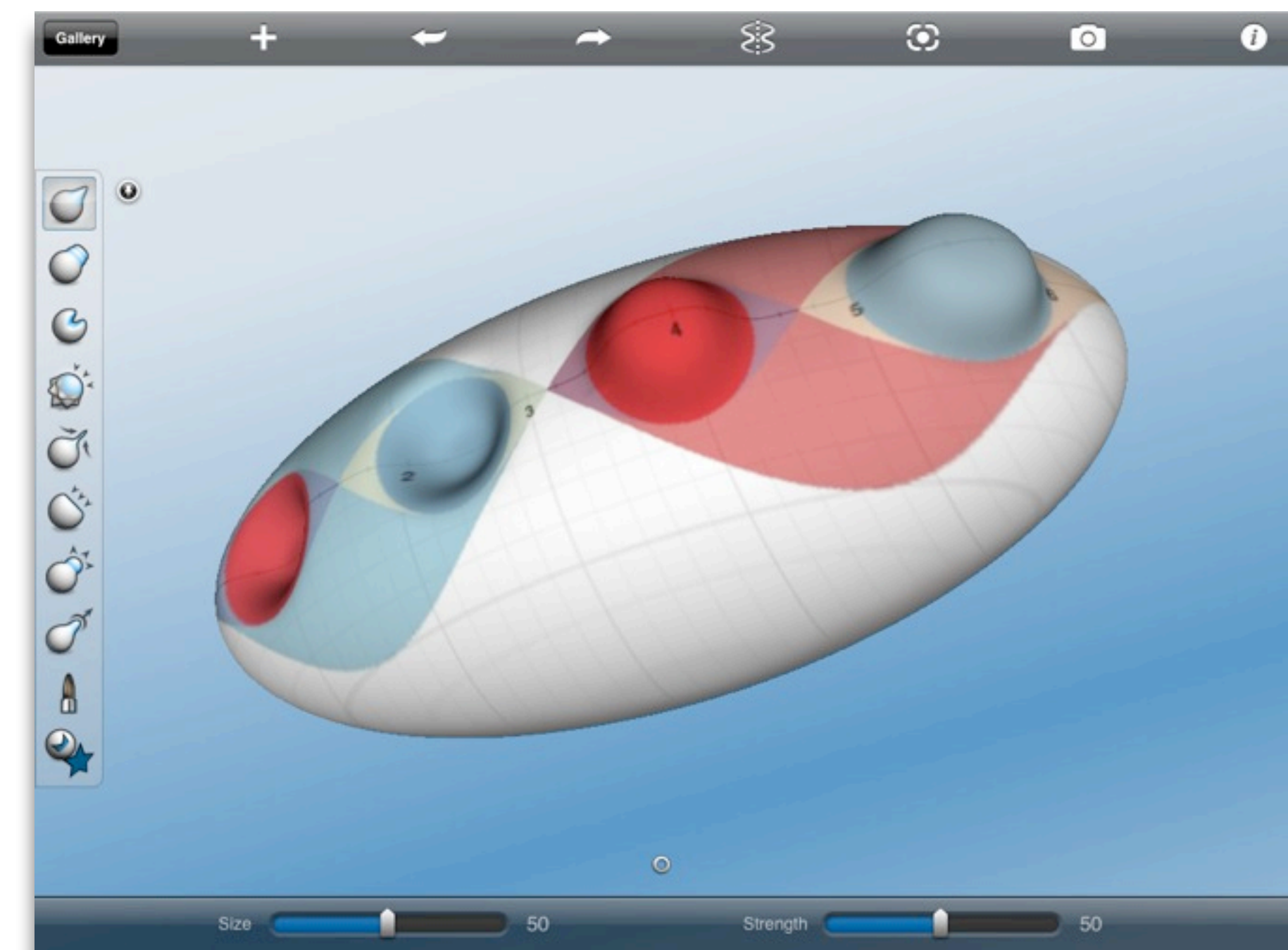
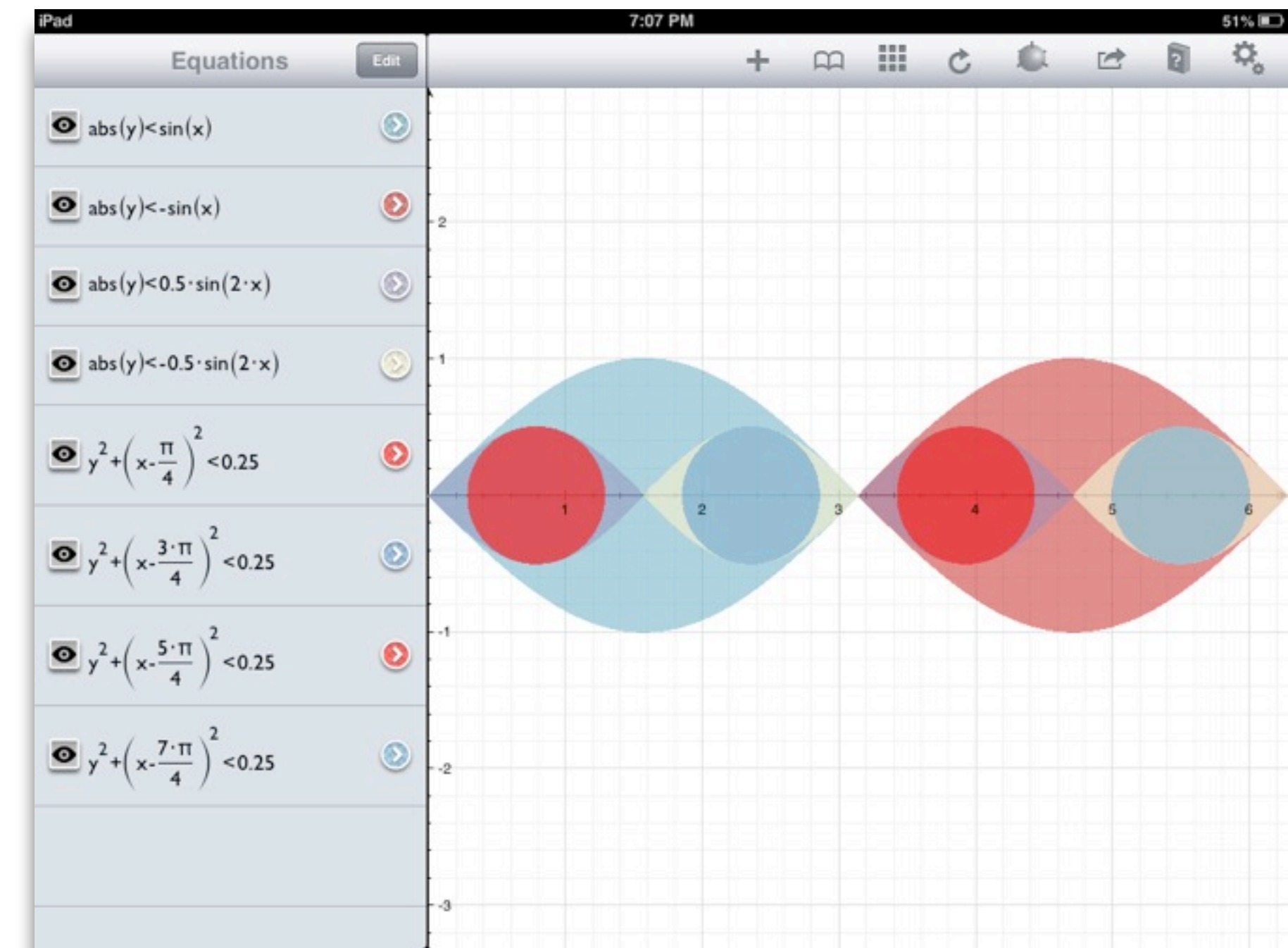
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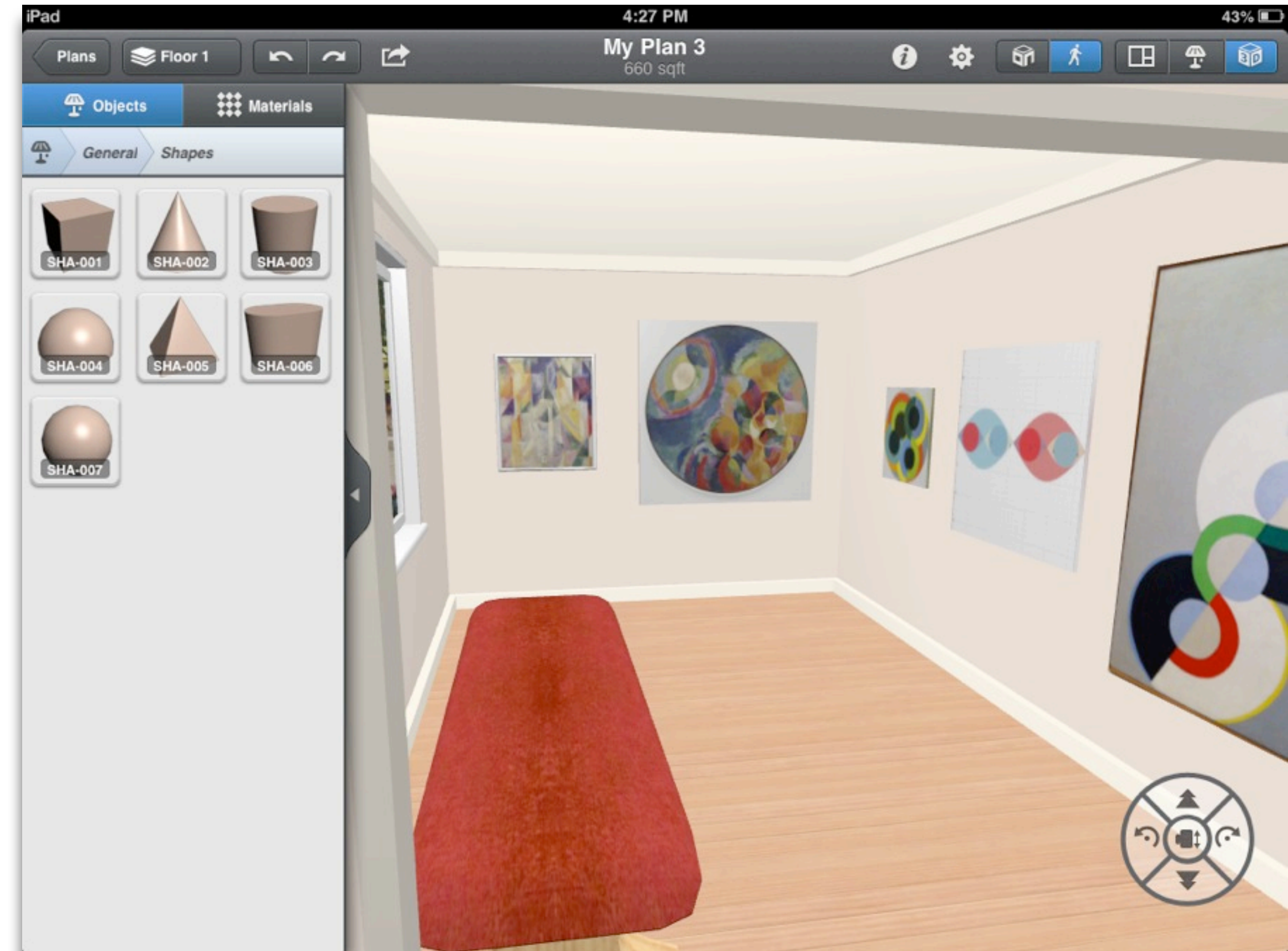
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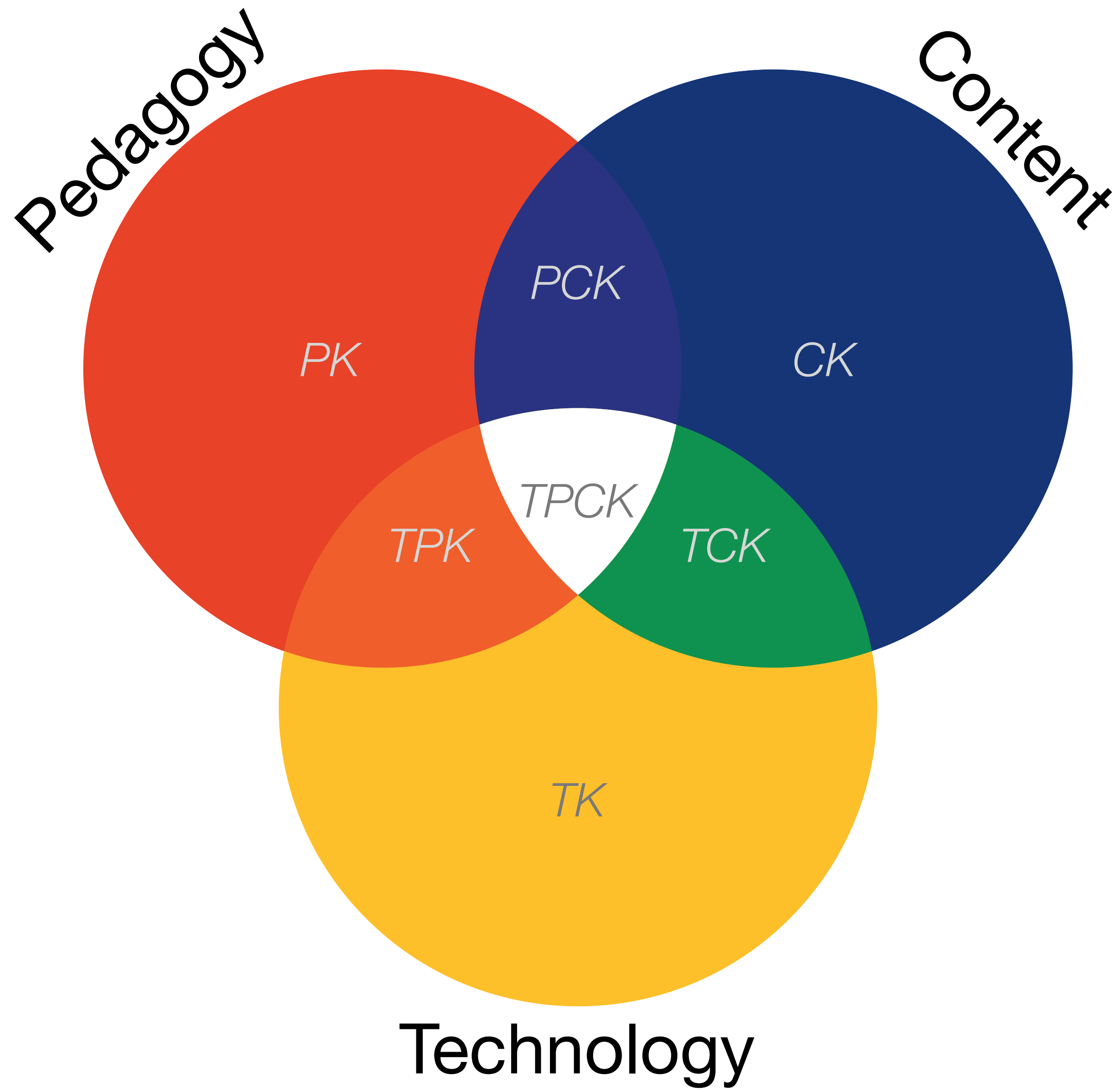
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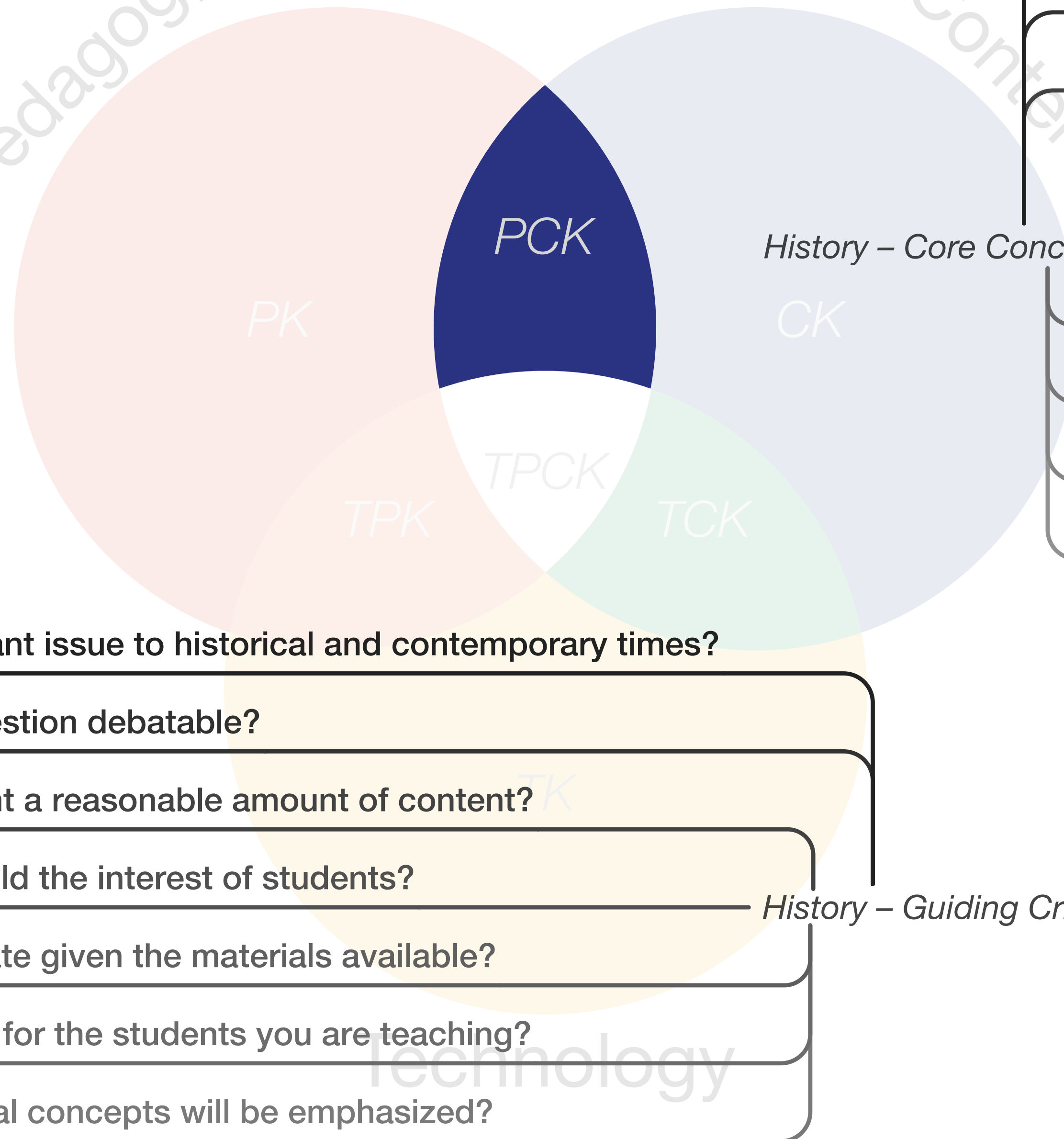
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Pedagogy

Content



Causality

Chronology

Multiple Perspectives

Contingency

Empathy

Change and Continuity Over Time

Influence/Significance/Impact

Contrasting Interpretations

Intent/Motivation

Does the question represent an important issue to historical and contemporary times?

Is the question debatable?

Does the question represent a reasonable amount of content?

Will the question hold the interest of students?

Is the question appropriate given the materials available?

Is the question challenging for the students you are teaching?

What organizing historical concepts will be emphasized?

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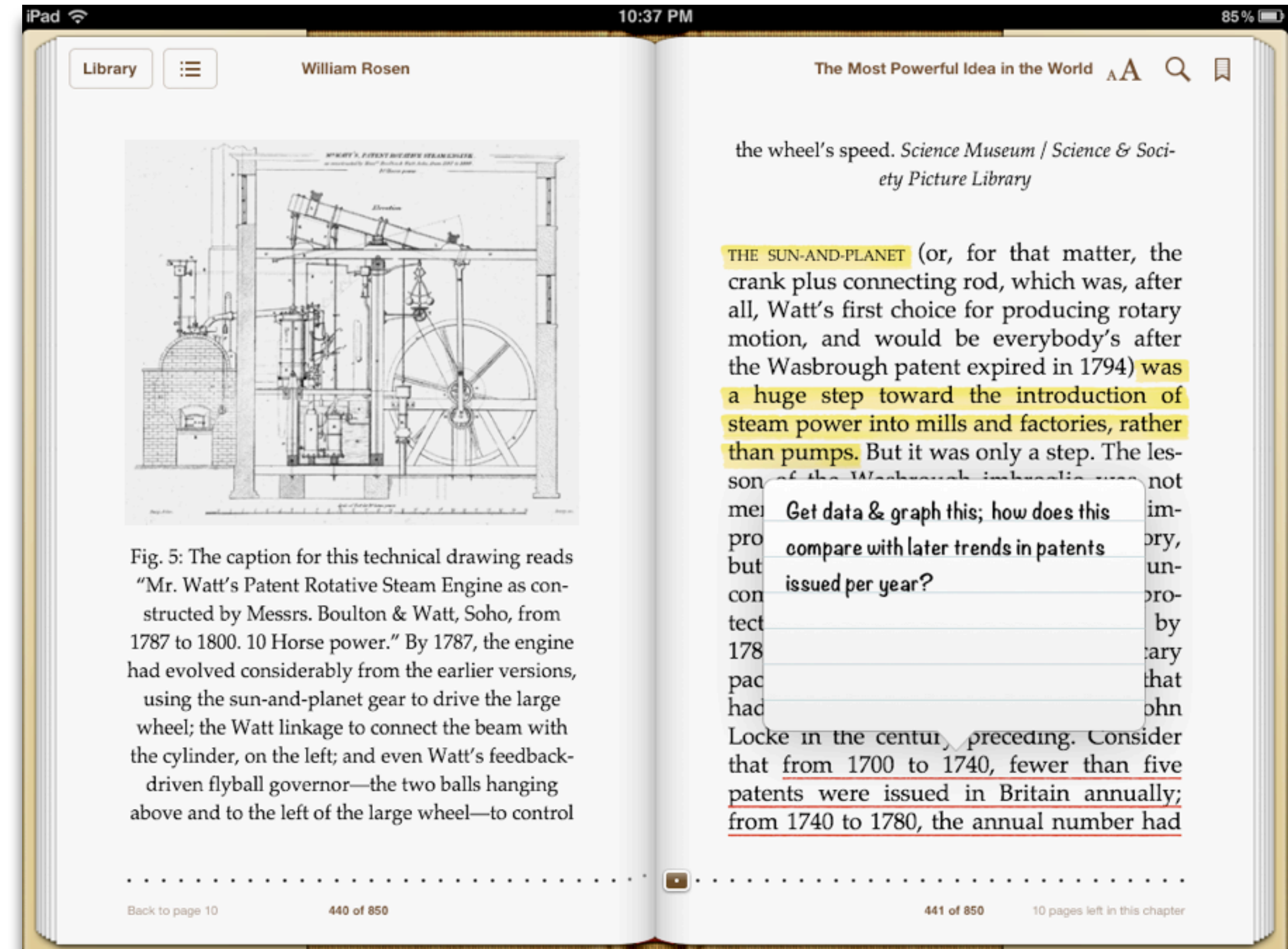
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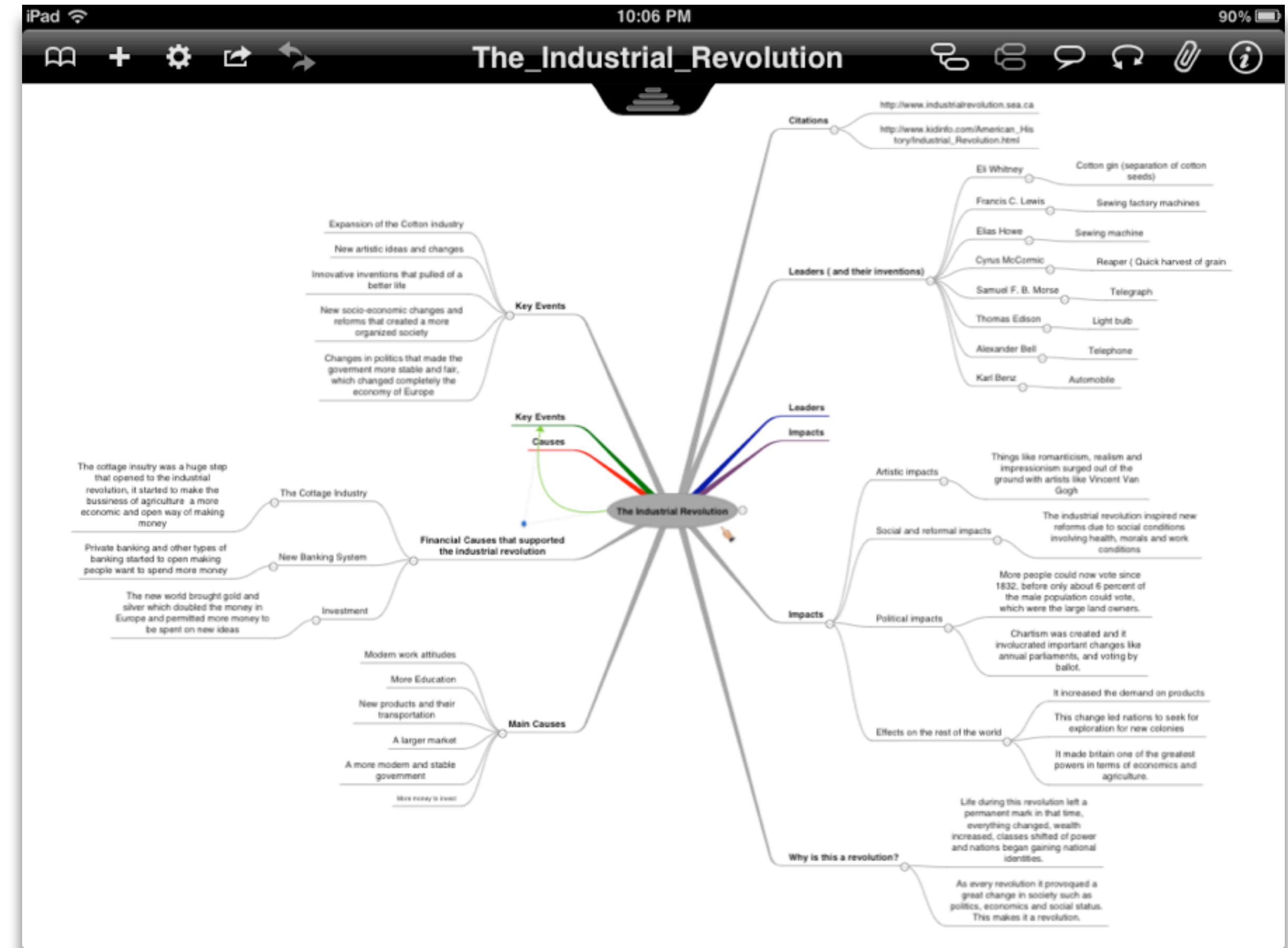
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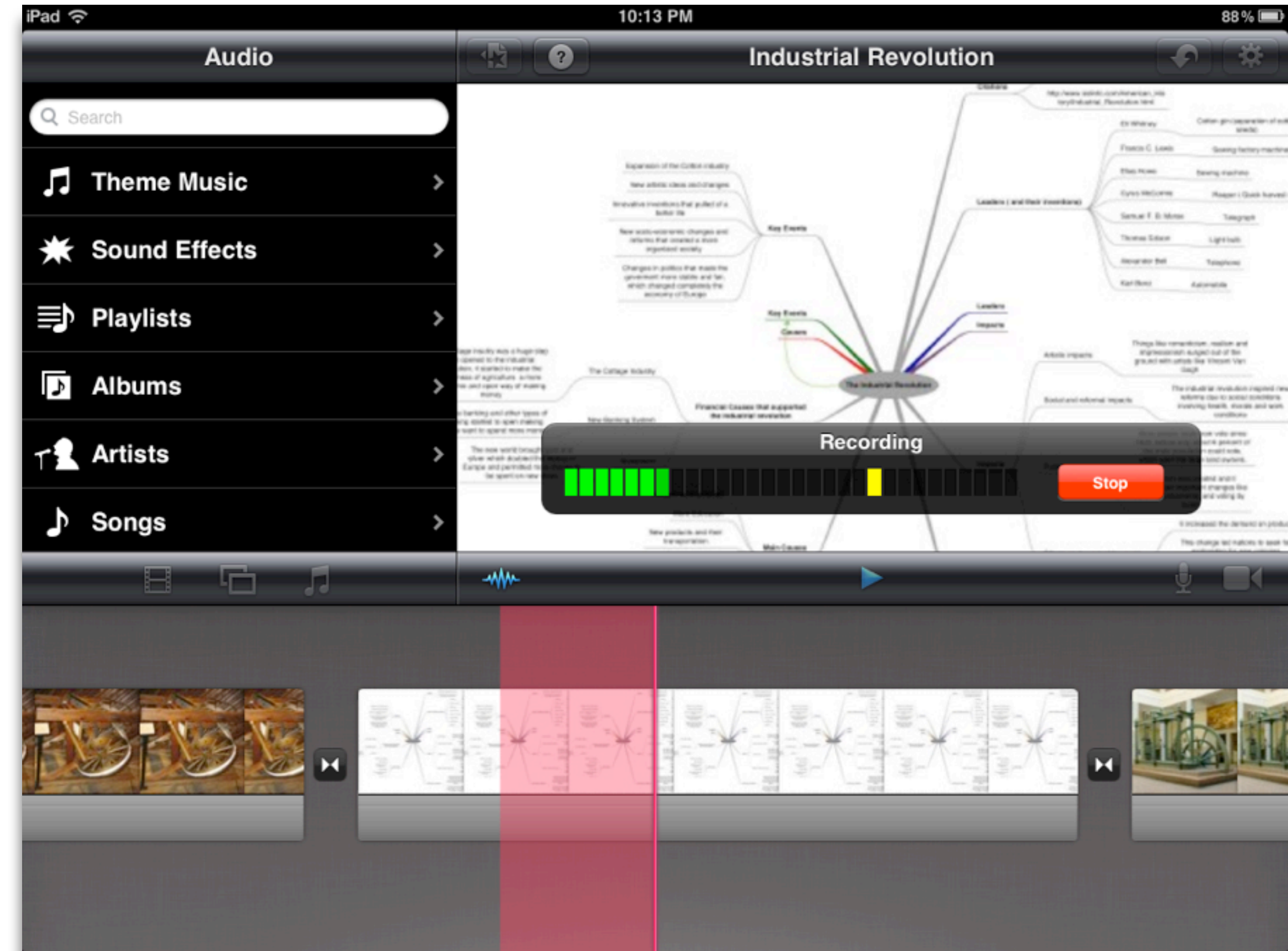
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Two-dimensio...

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

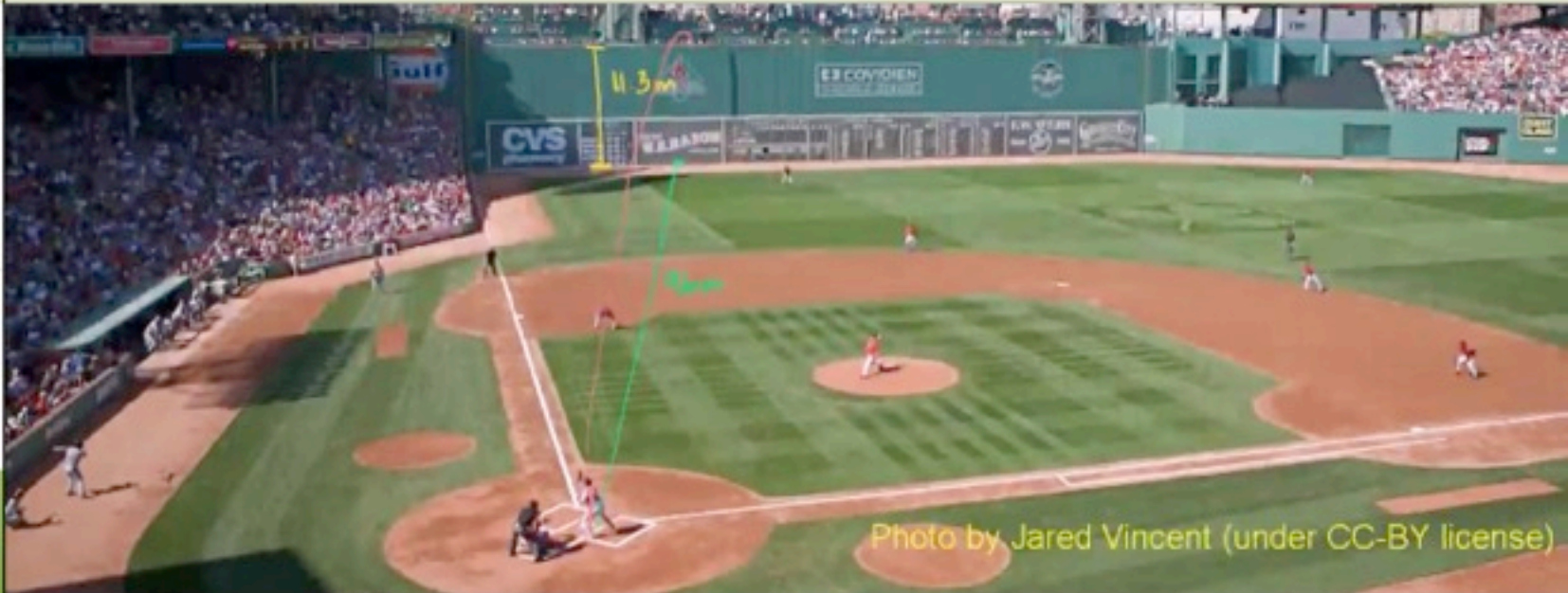


Photo by Jared Vincent (under CC-BY license)

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

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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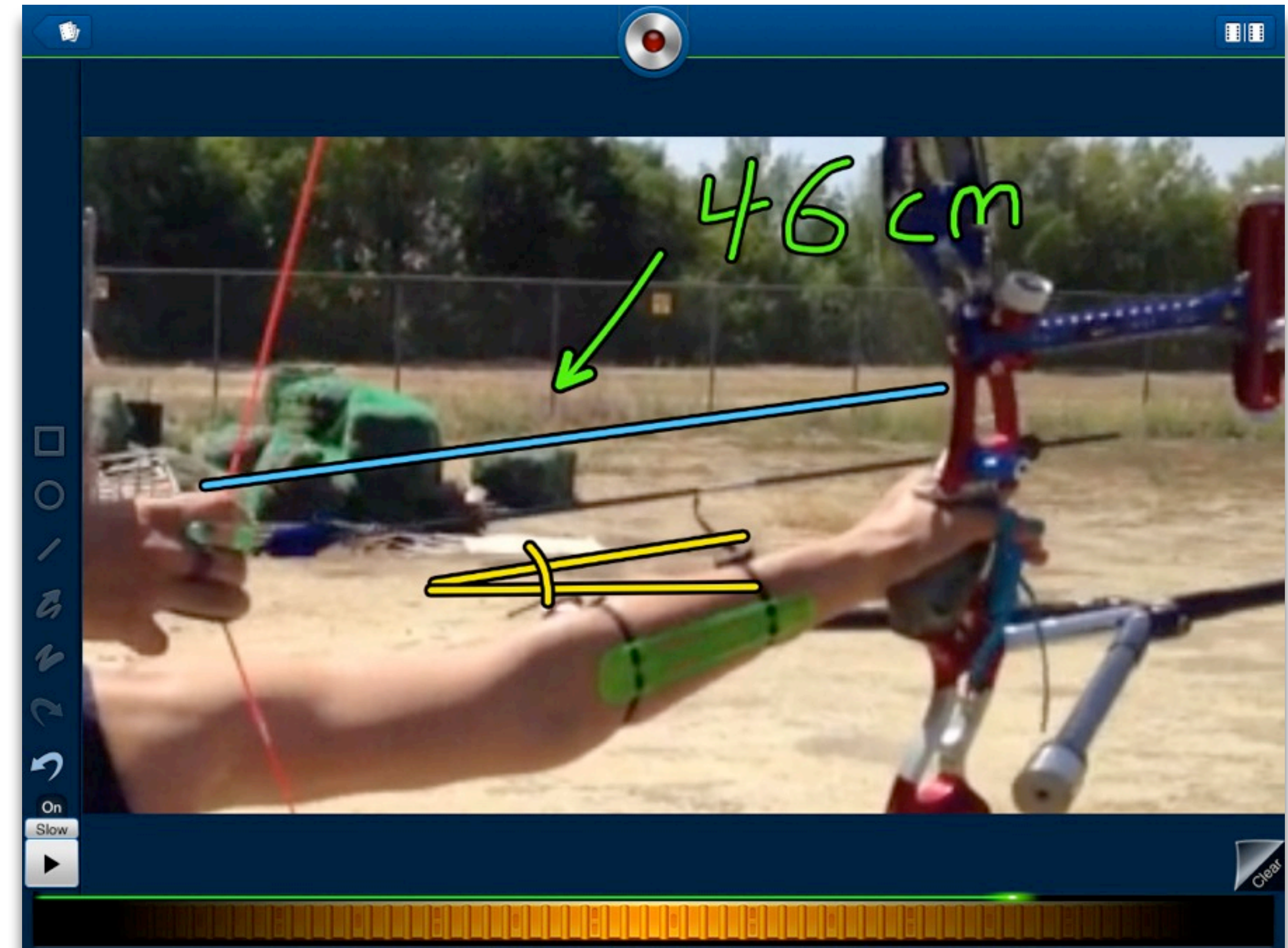
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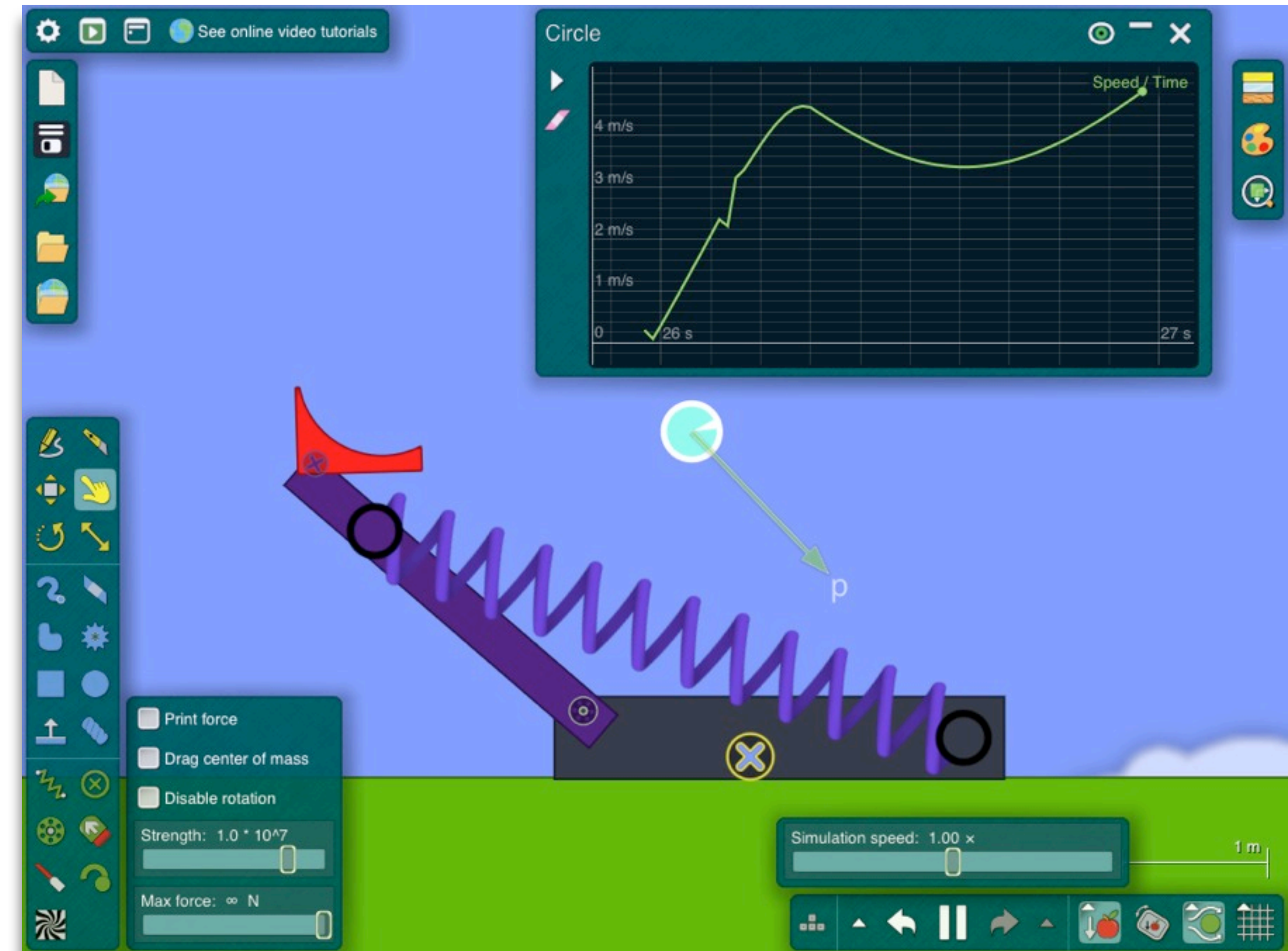
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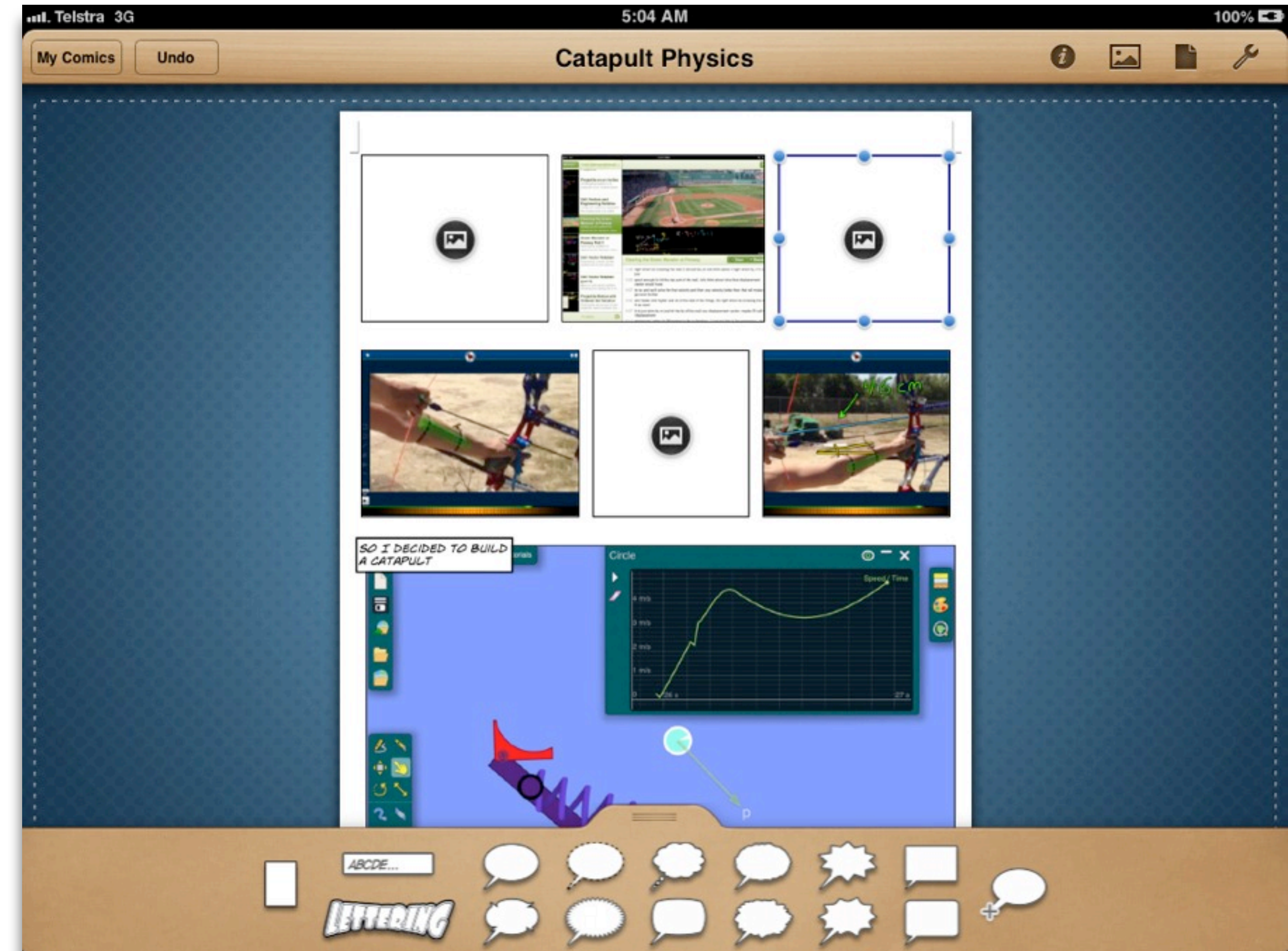
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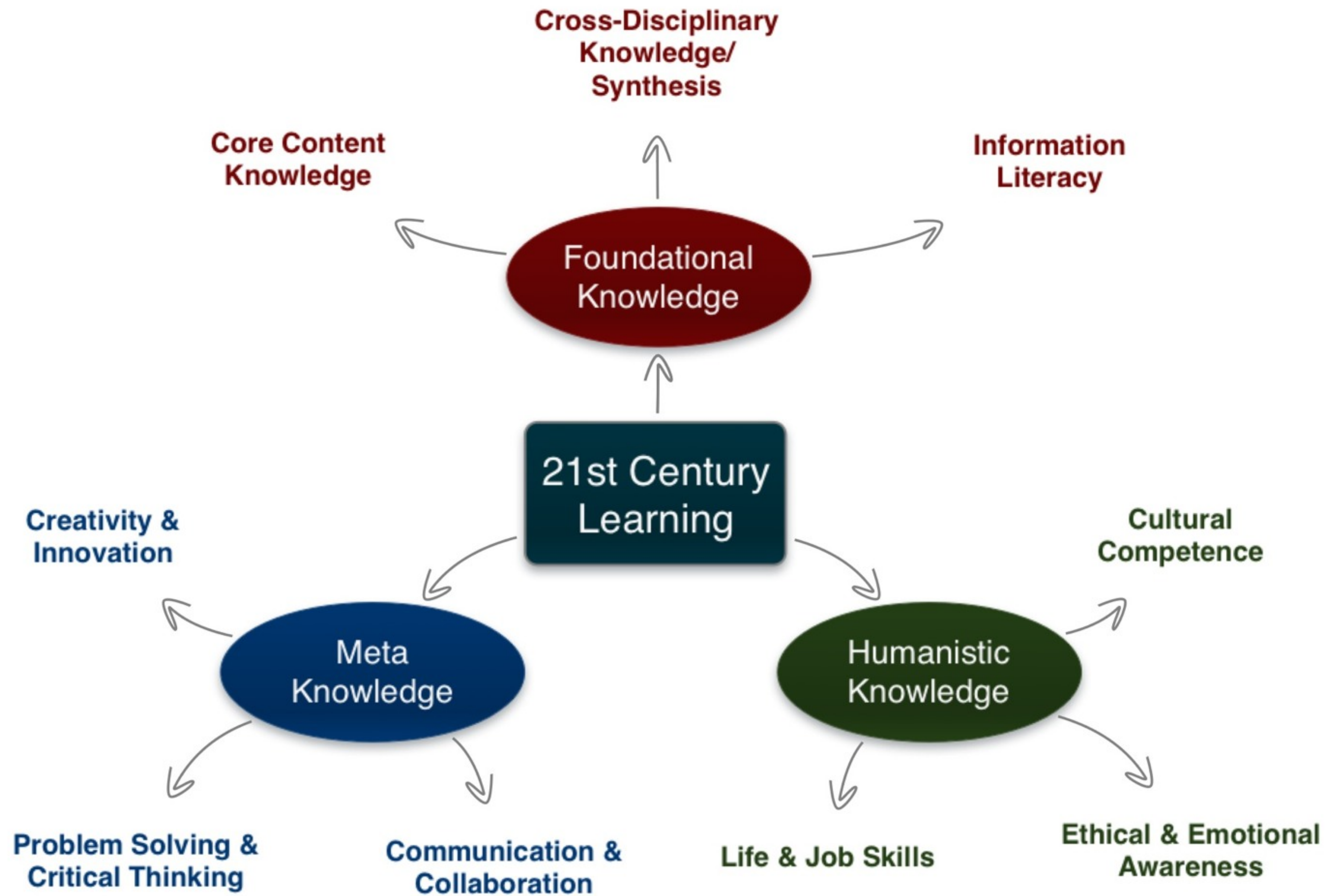
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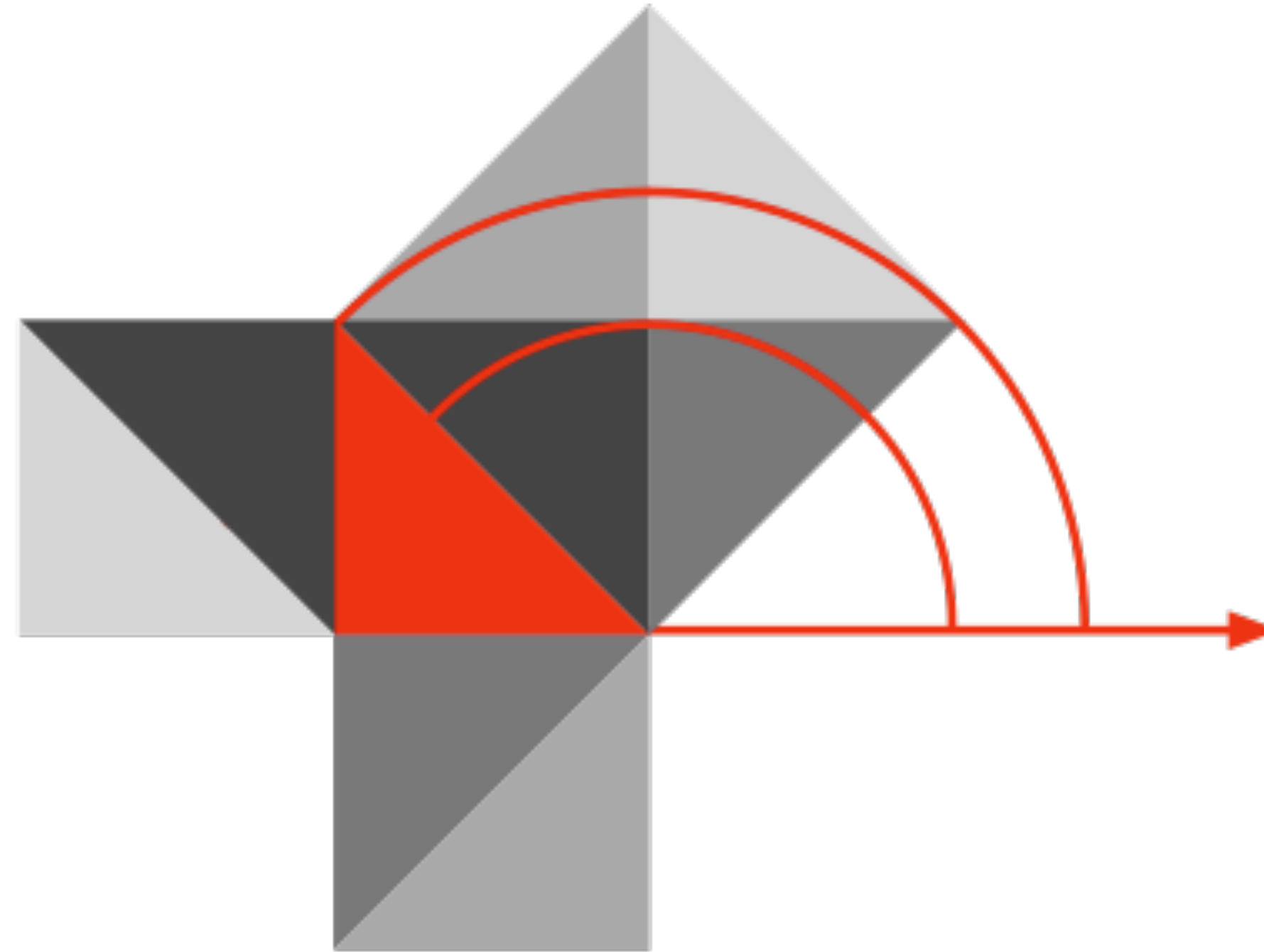




Resources

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