

Thinking About SAMR: Two-Pass Ladders

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

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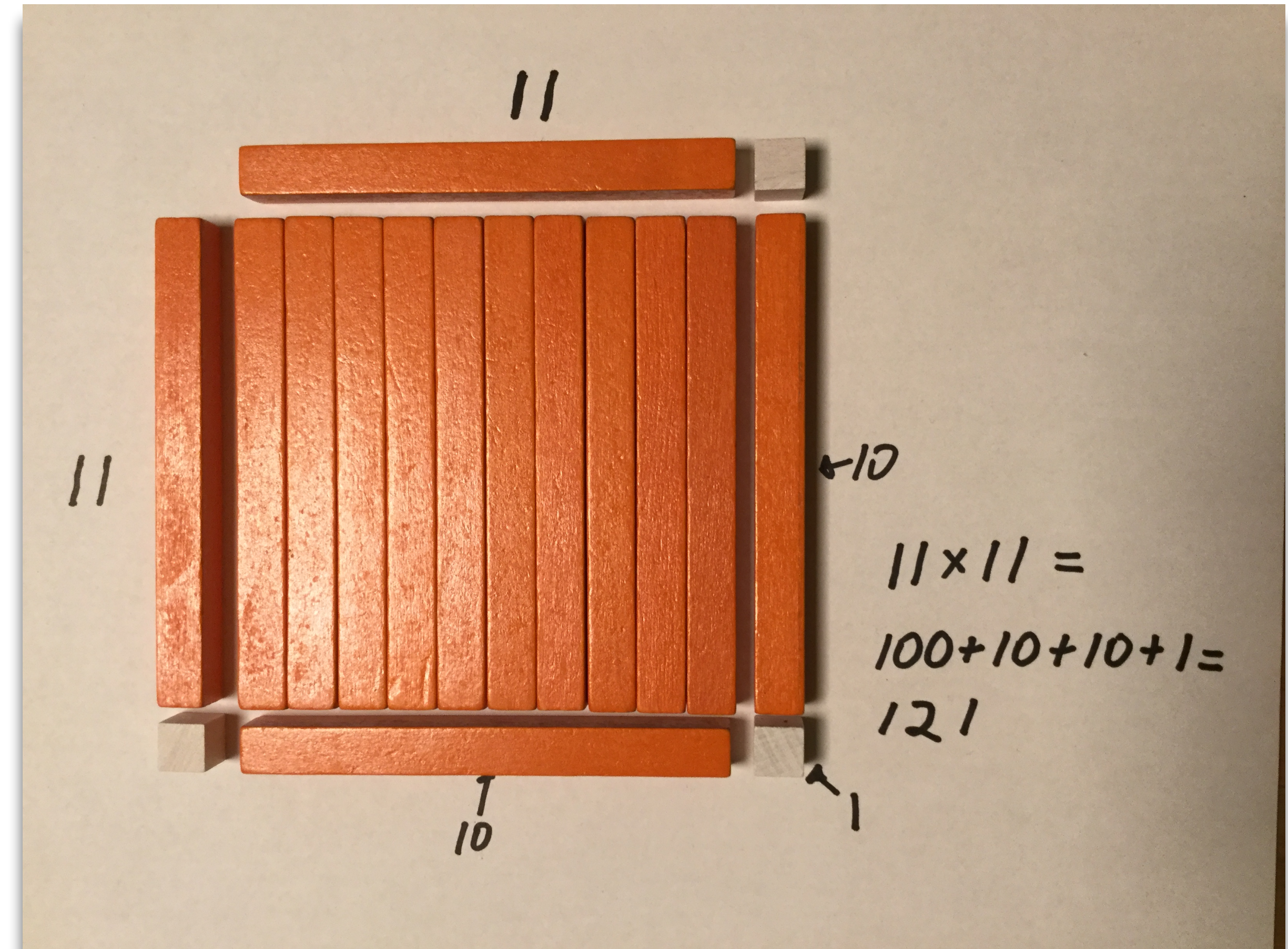
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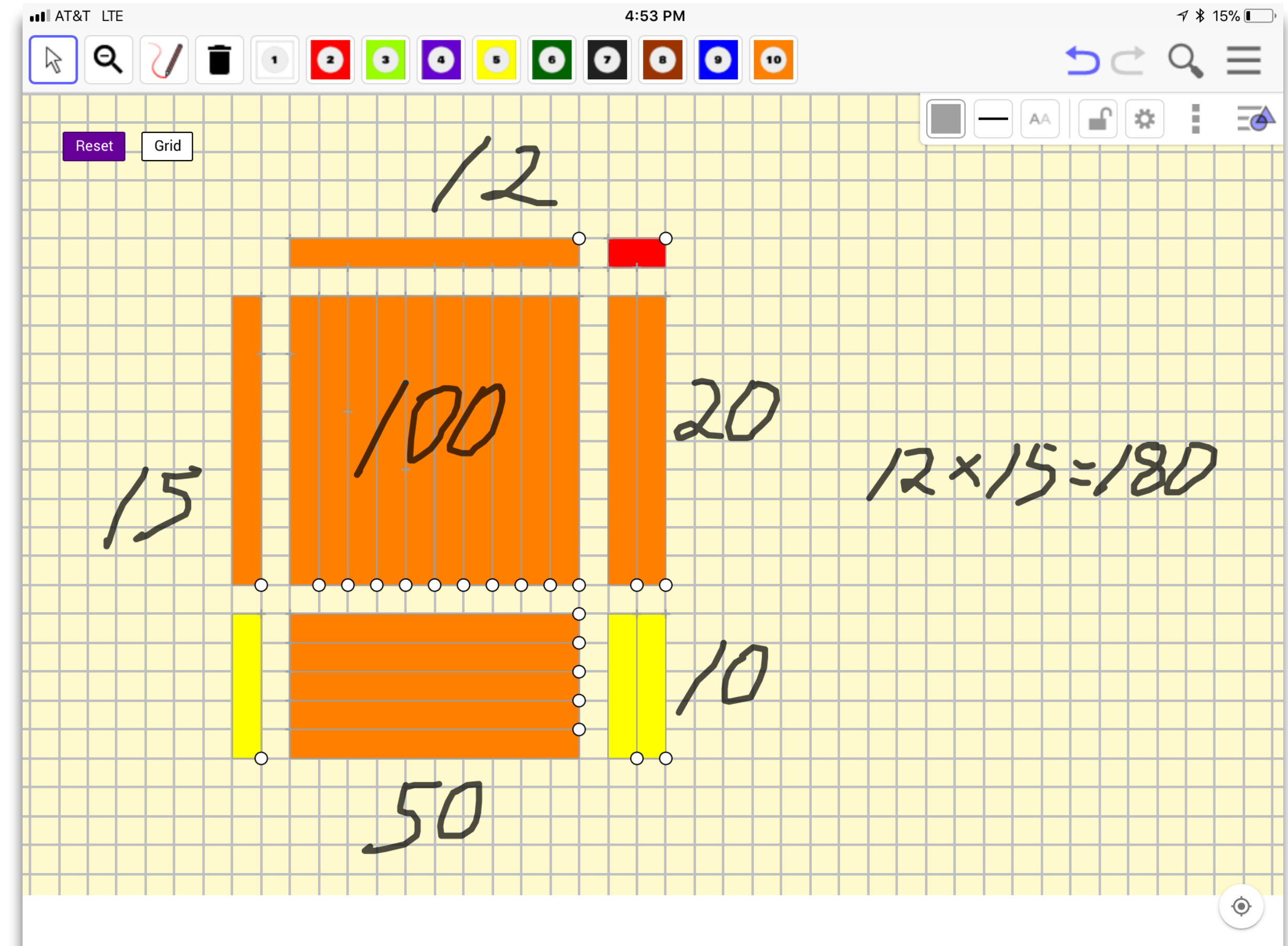
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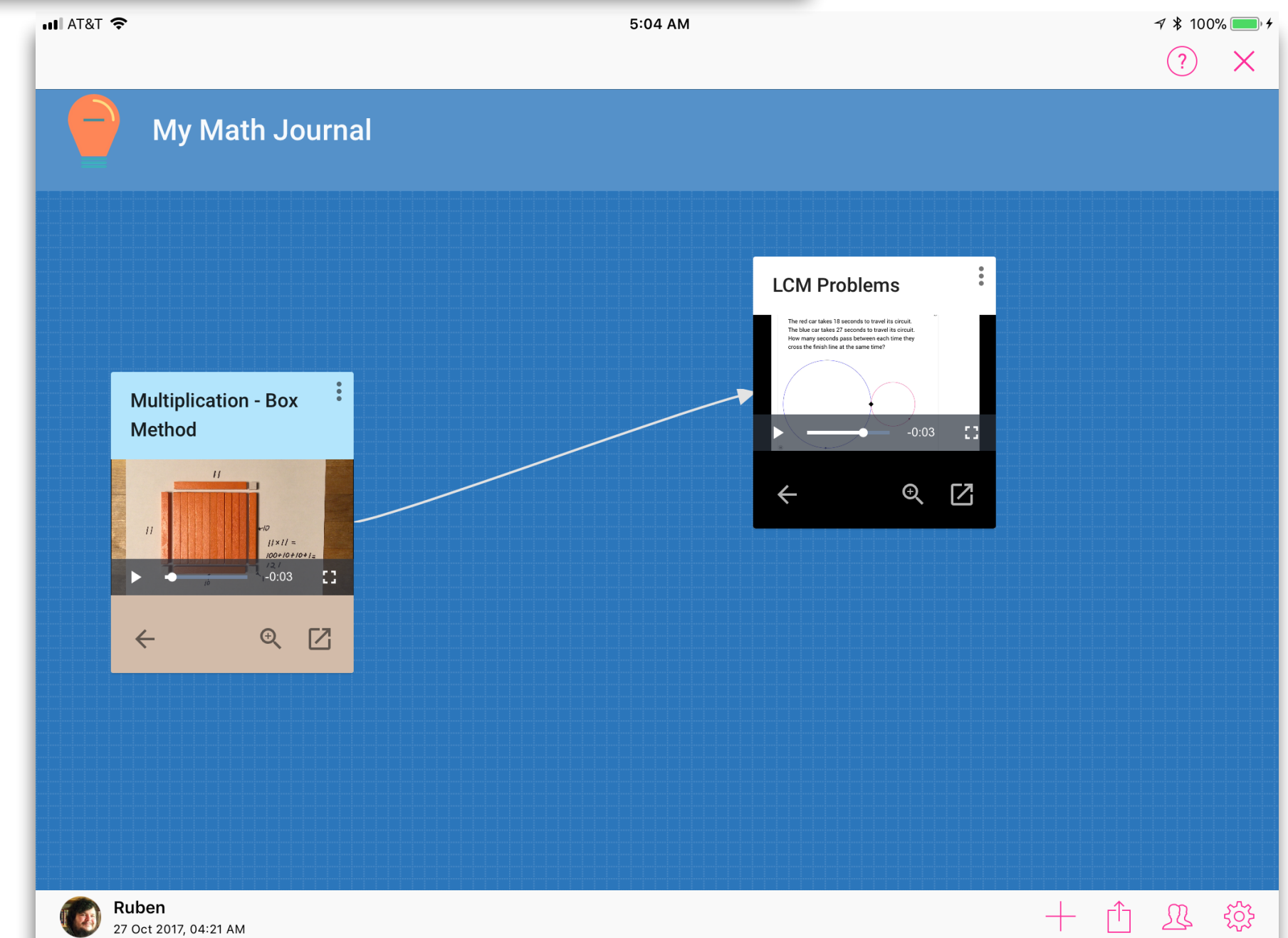
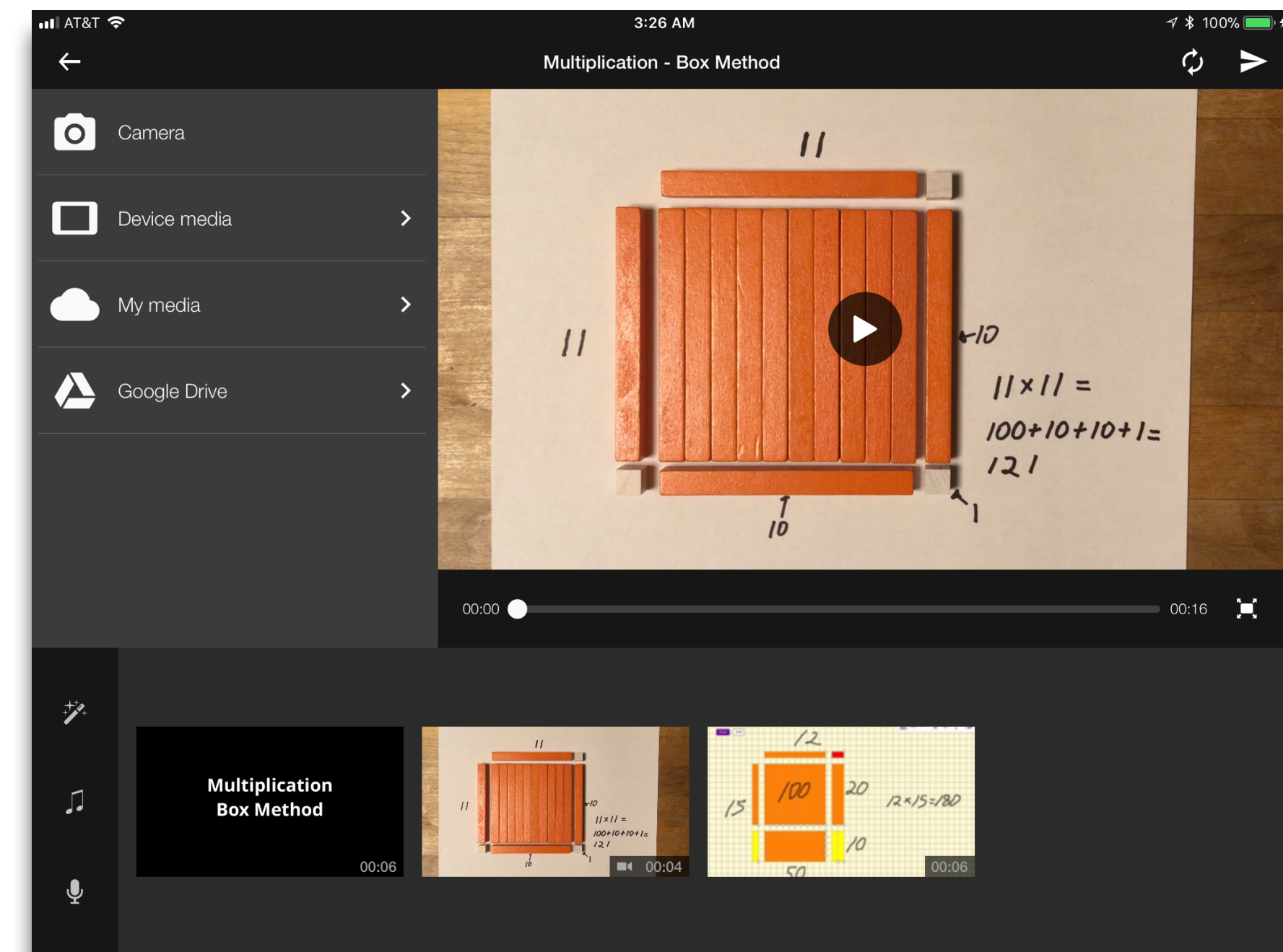
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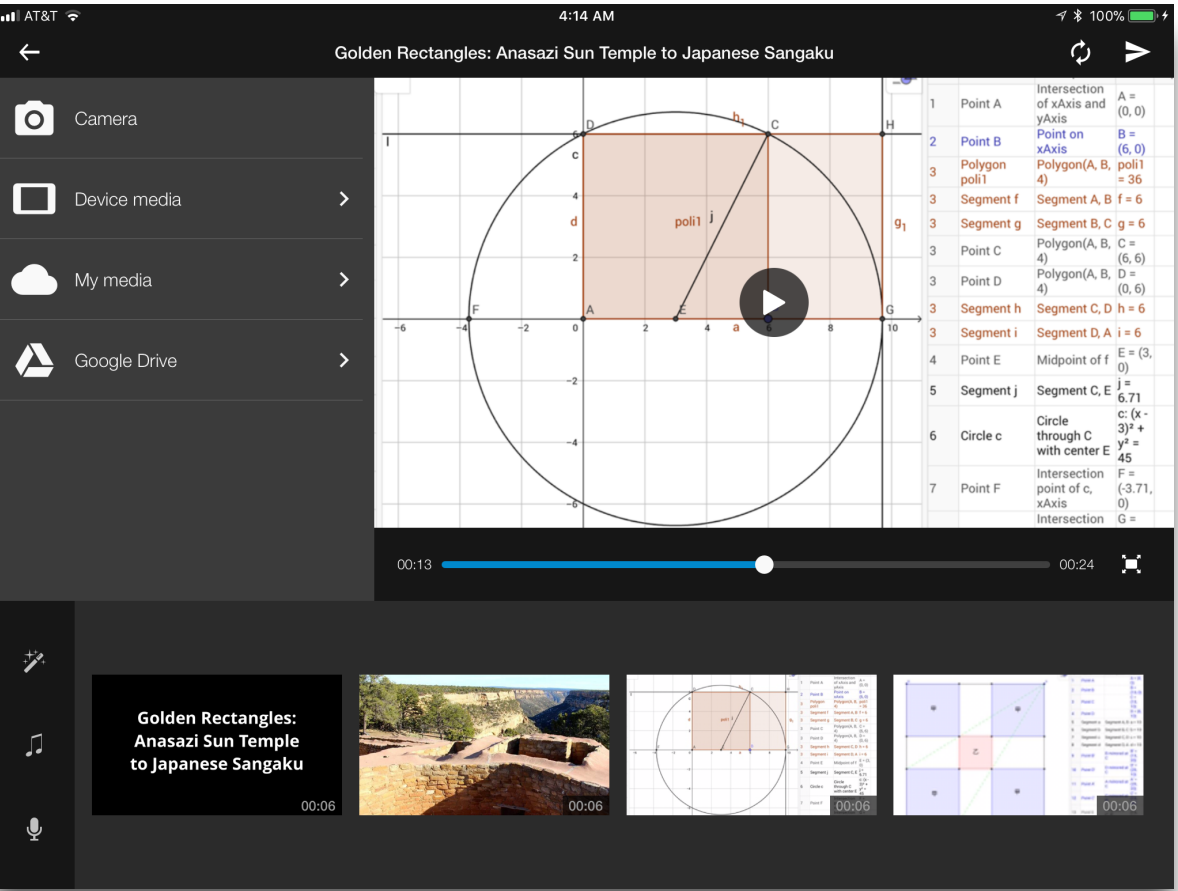
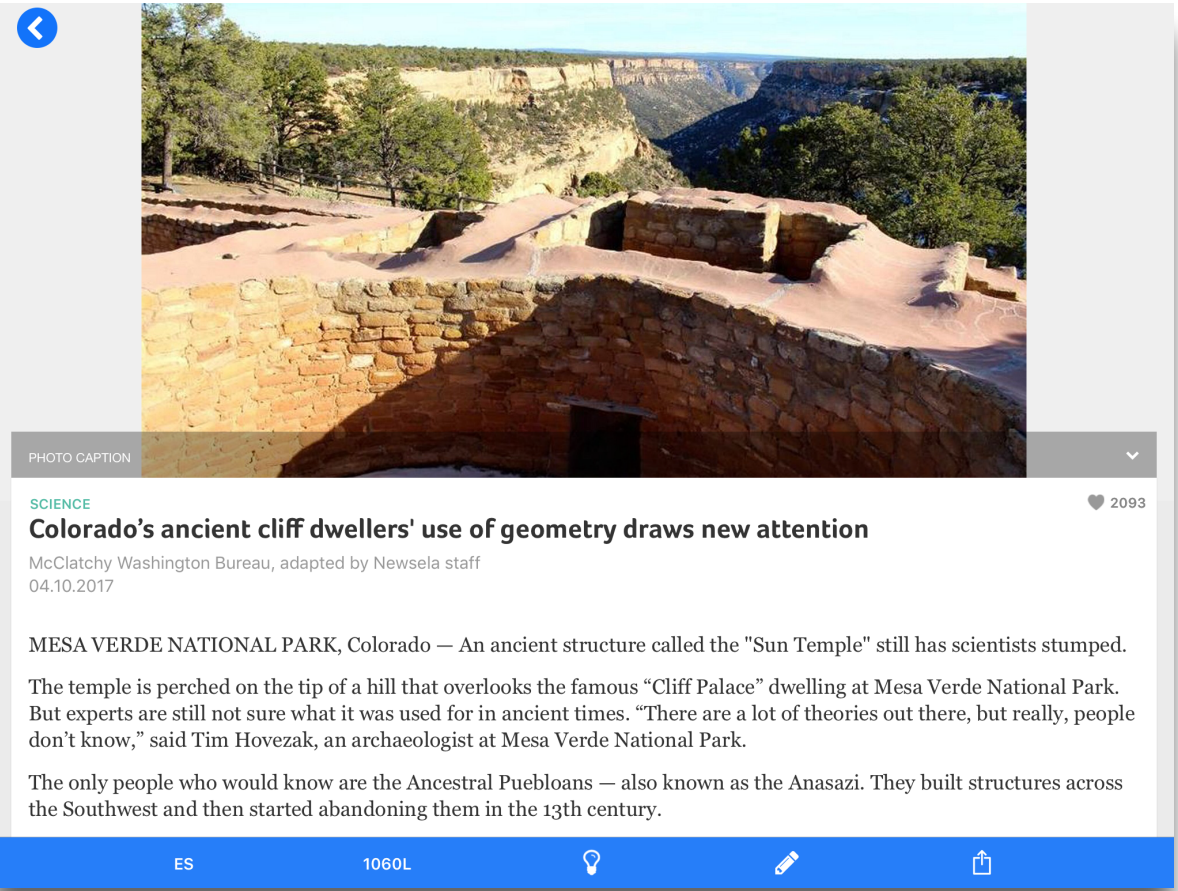
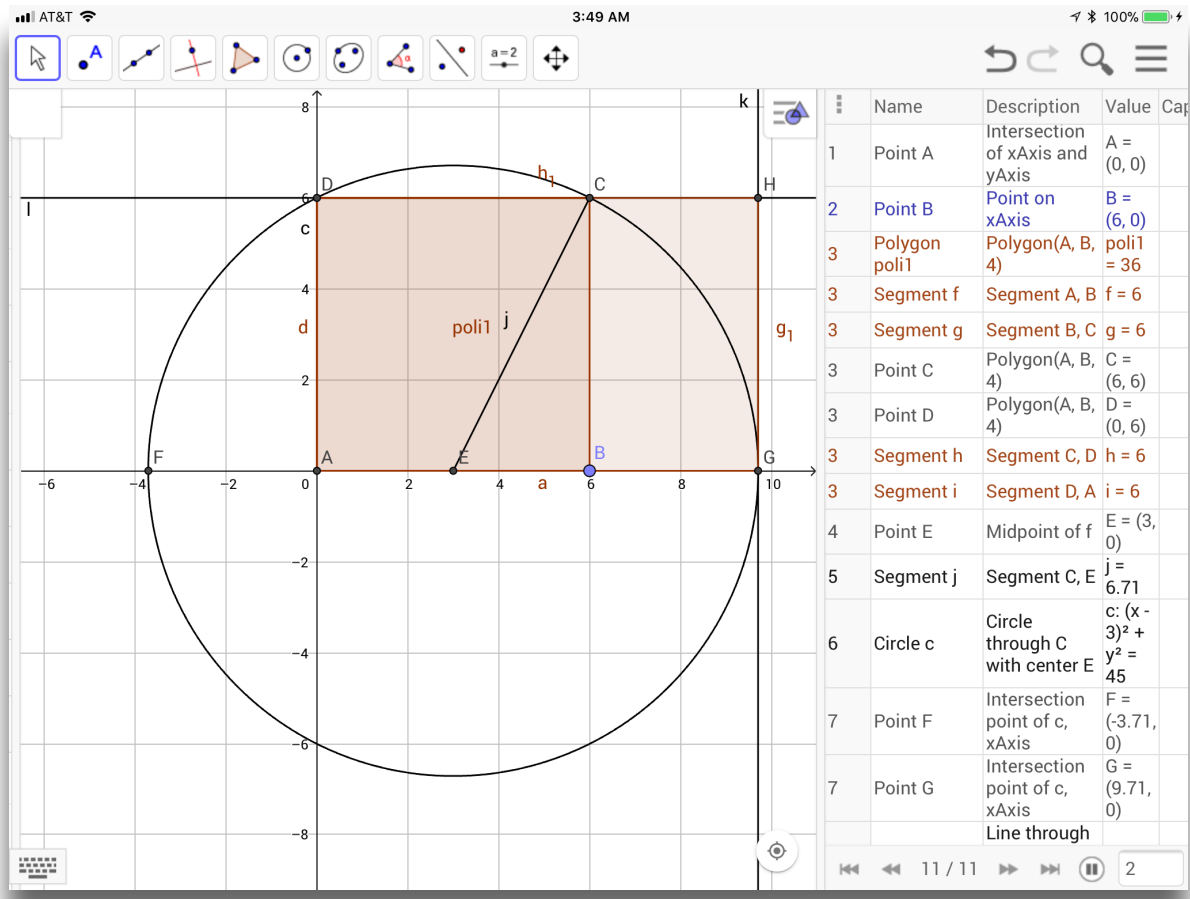
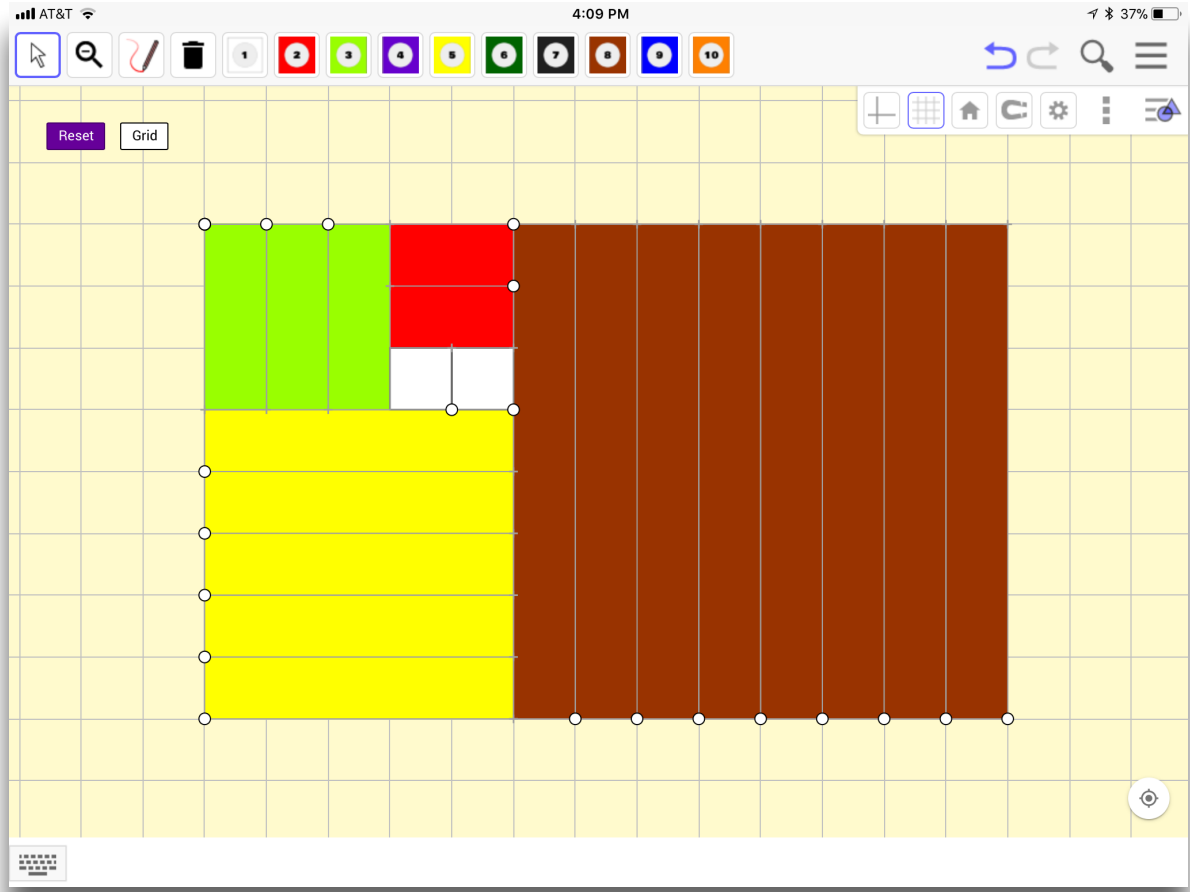
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Extended Thinking

Strategic Thinking

Skills and Concepts

Recall and Reproduction

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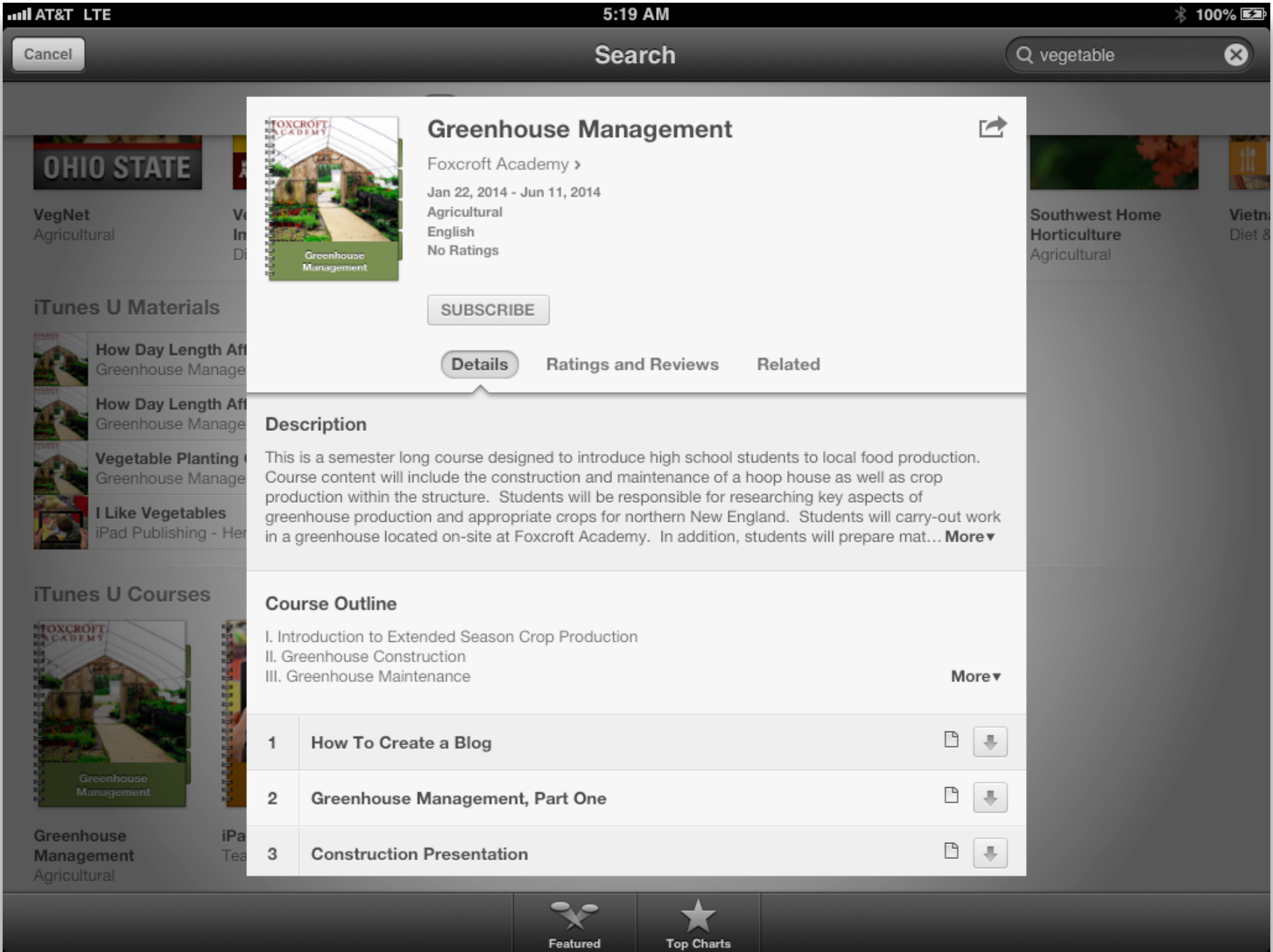
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**Recall and
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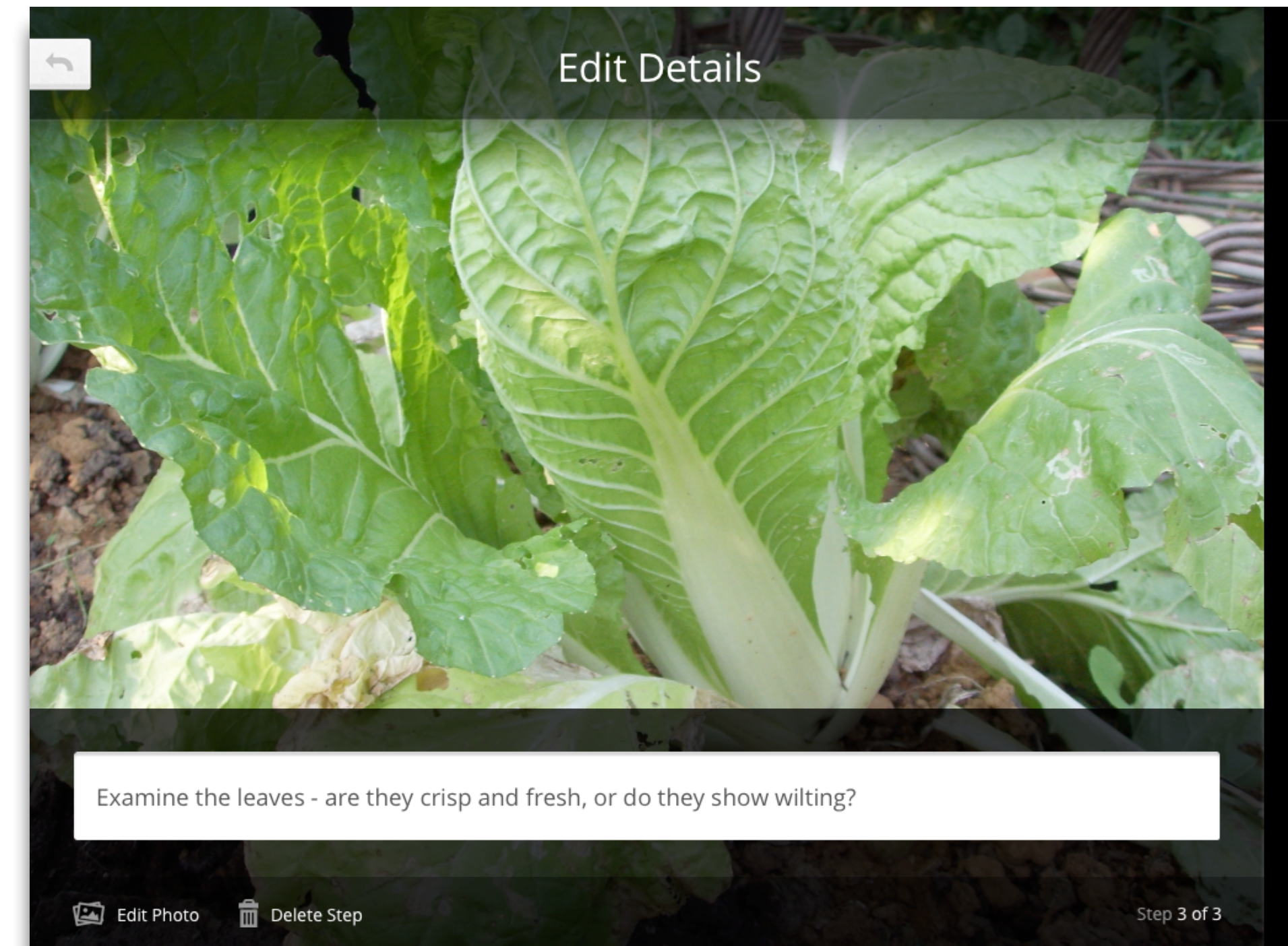
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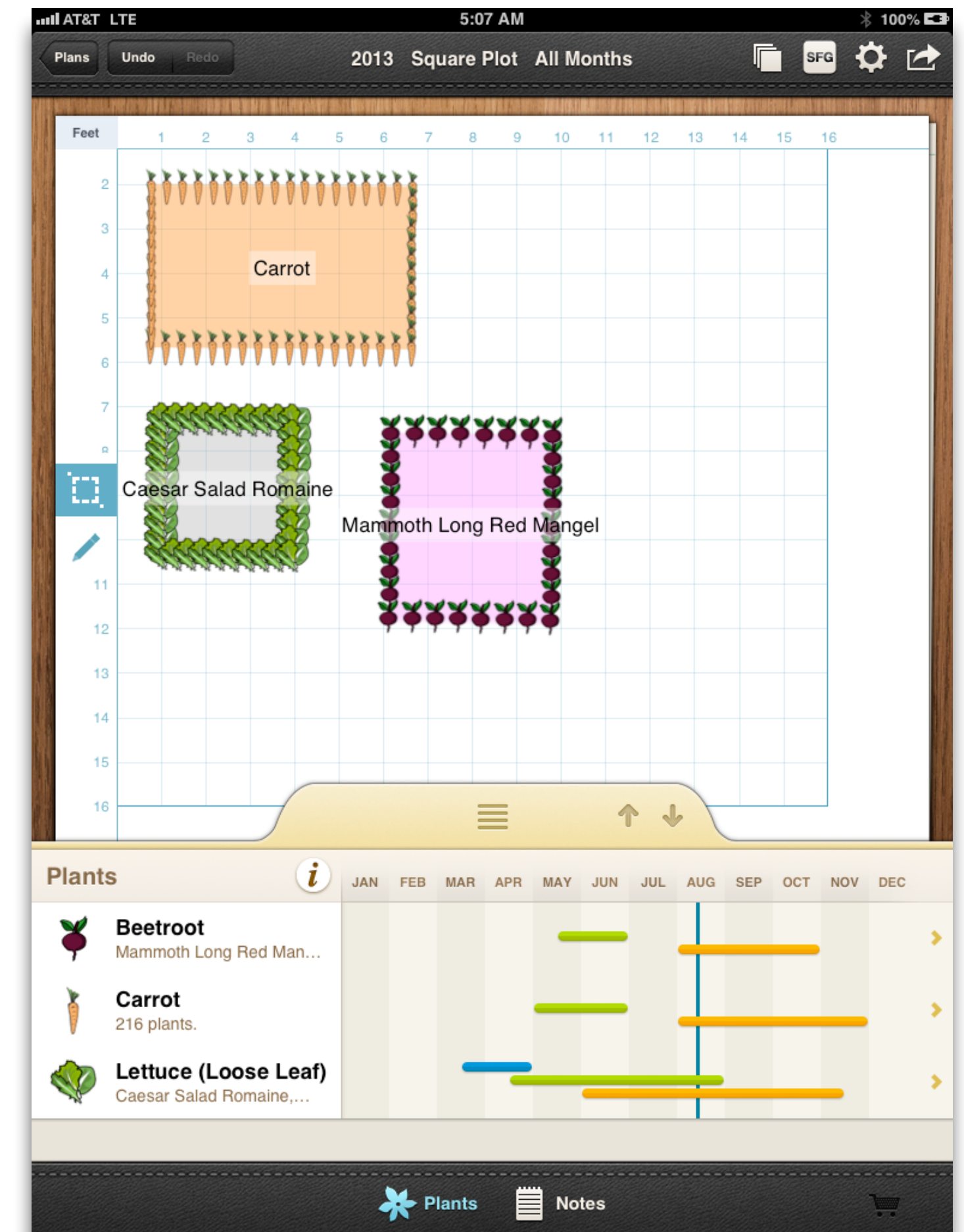
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**Extended
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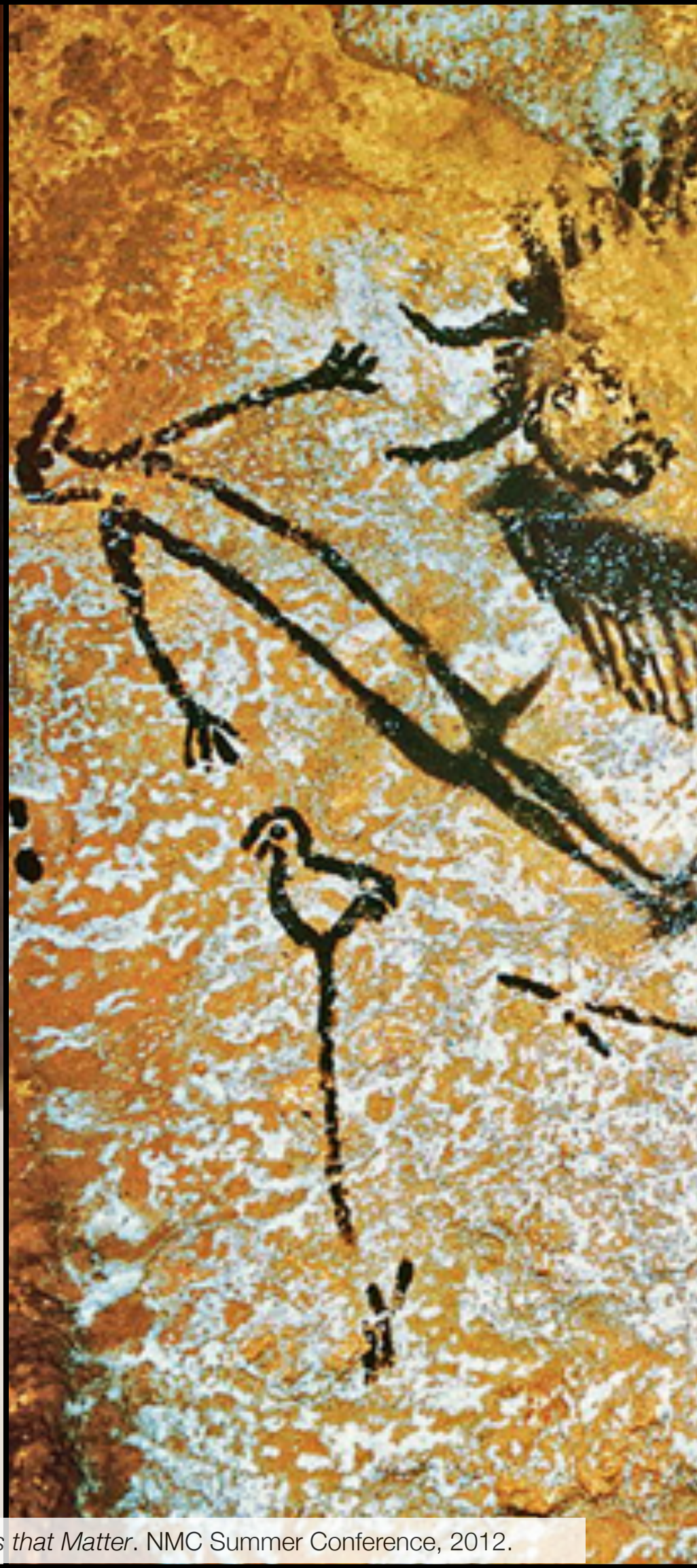

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Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years
				

Bookmarks



RSS Feeds

Discussions



Microblogging

Blogging

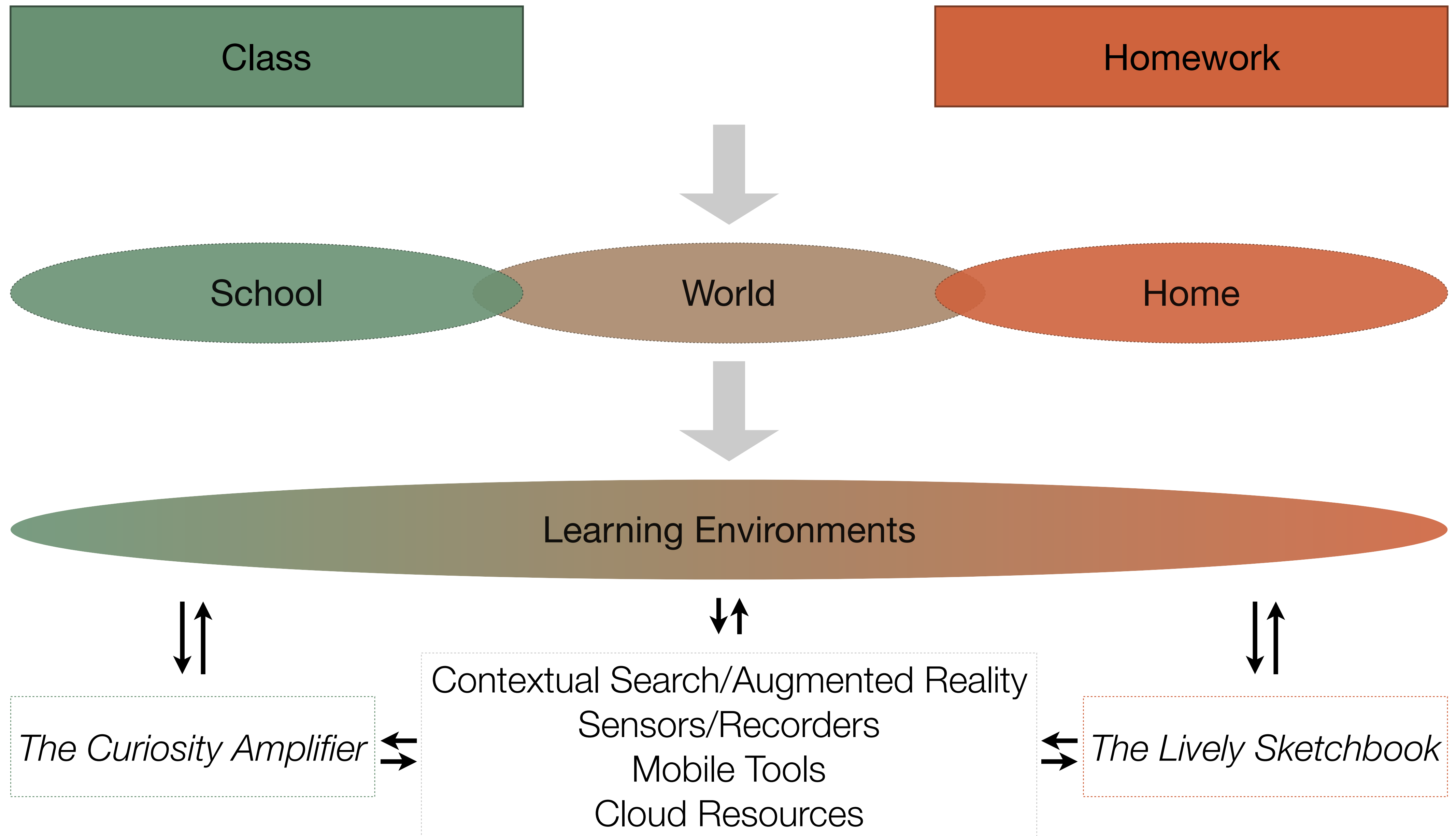


Wikis

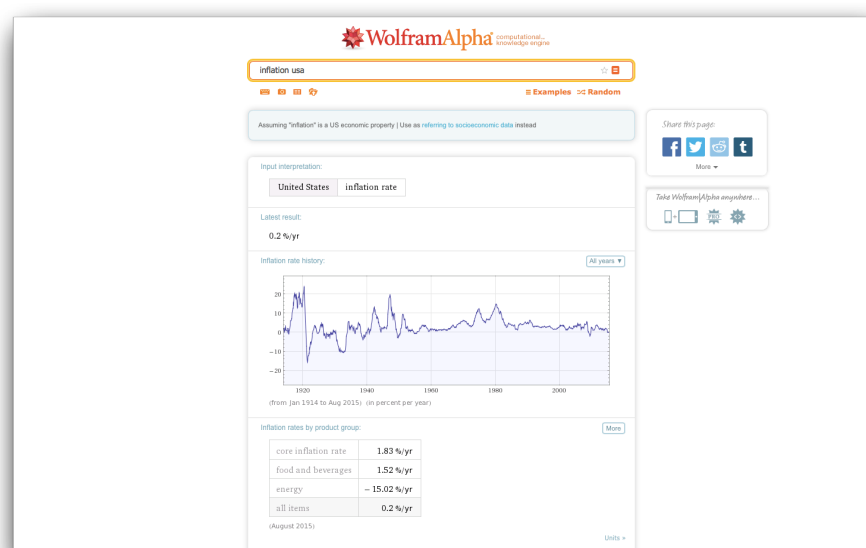
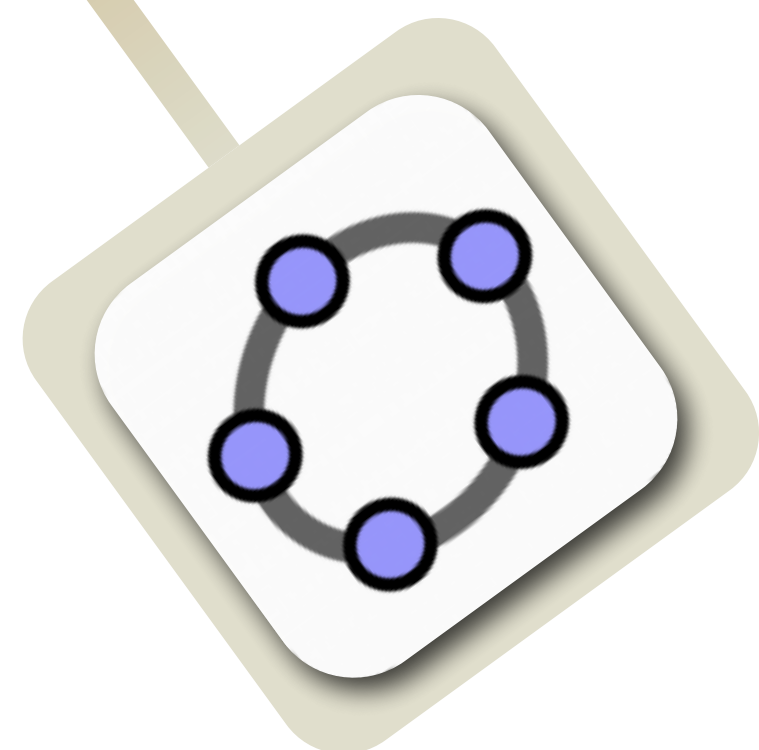
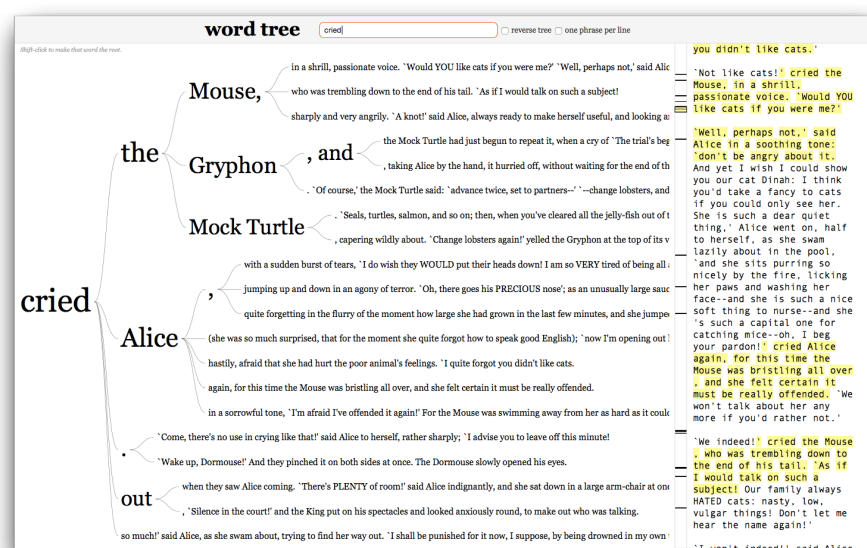
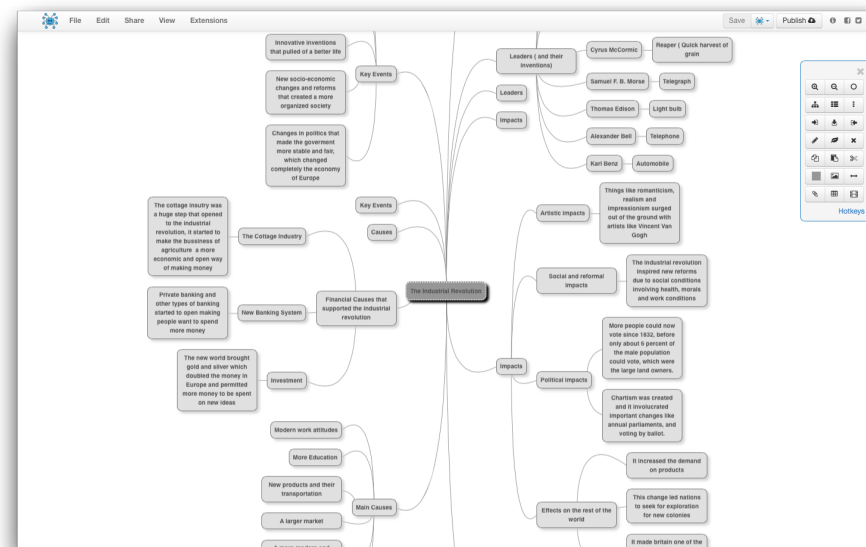
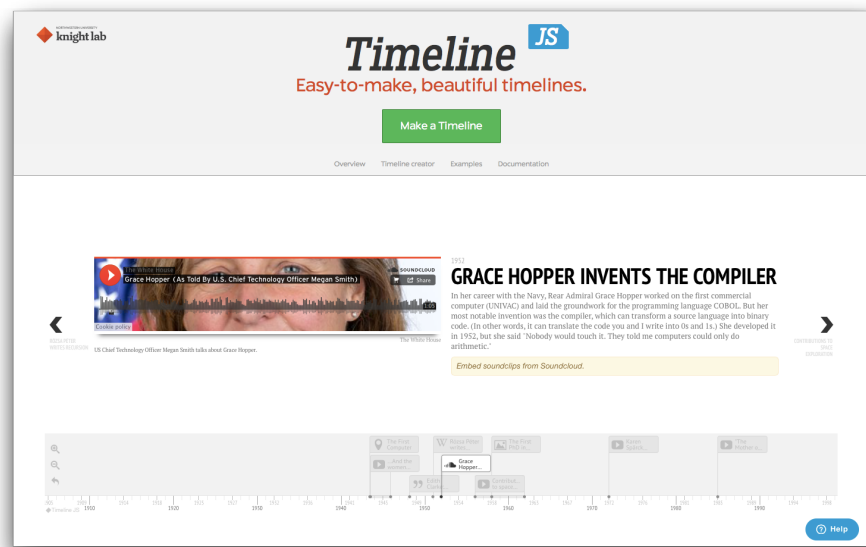
Telepresence



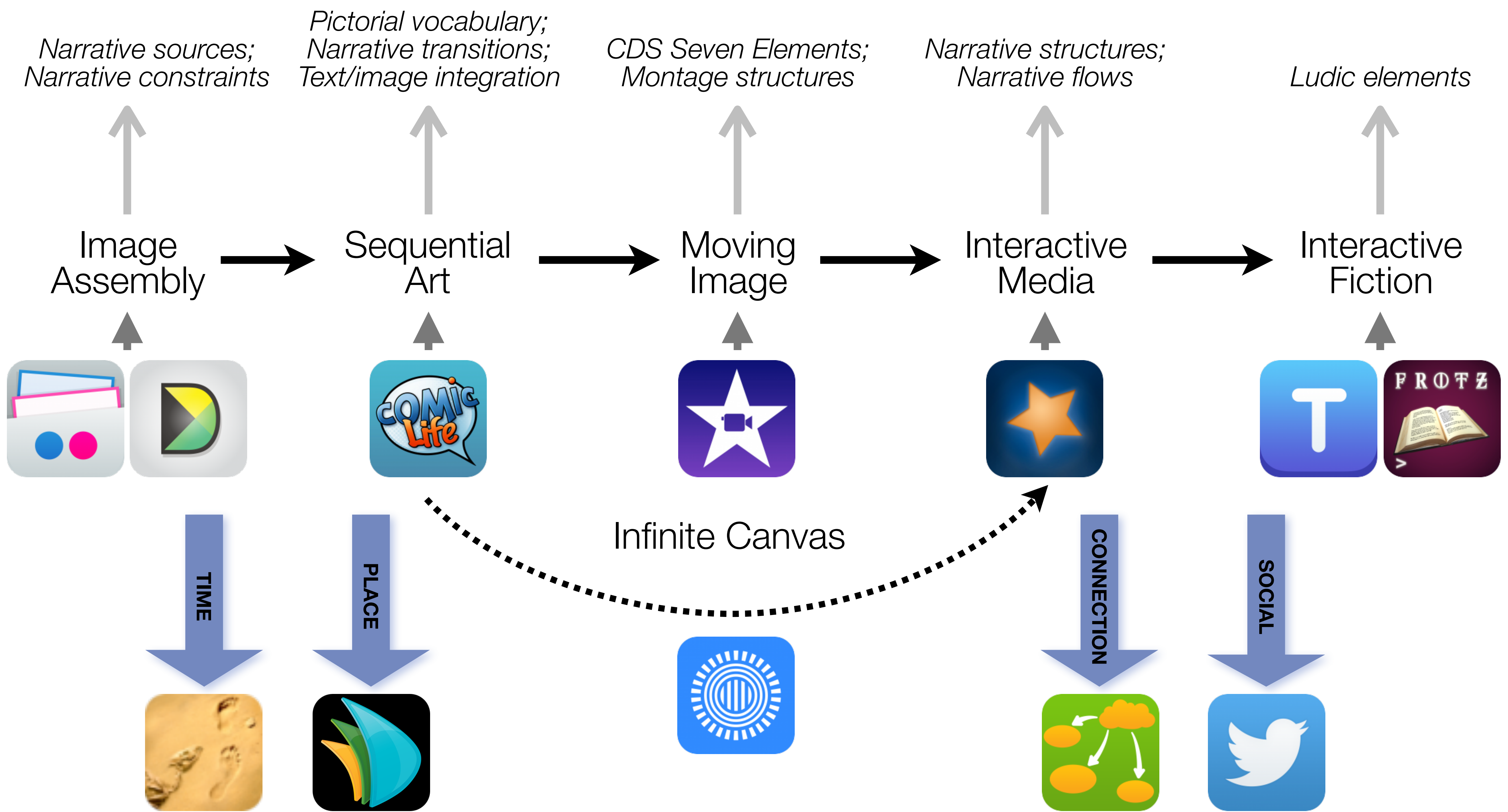
File Sharing



Visualization



Storytelling

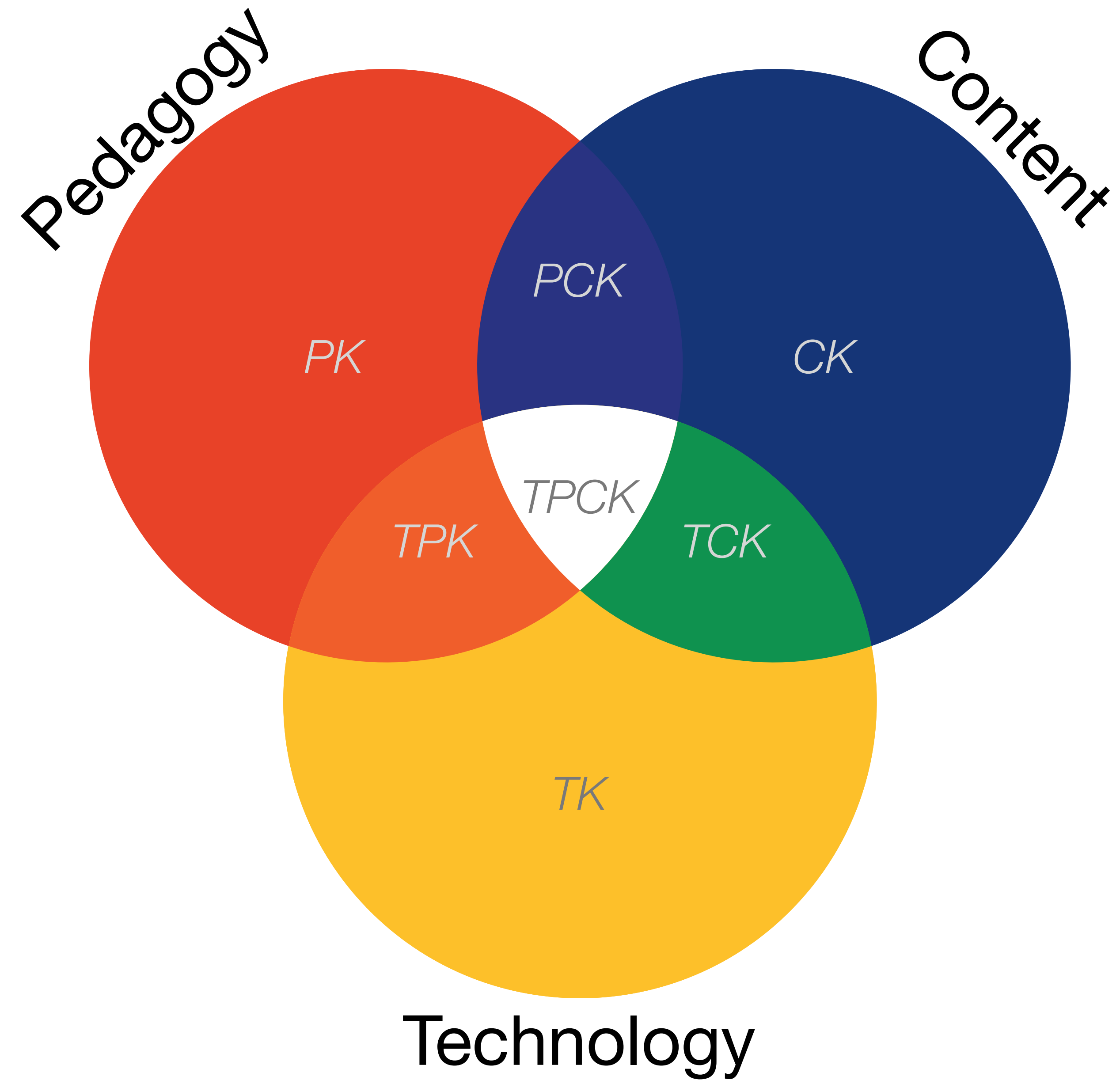


Formal Definition of **Game** (Salen & Zimmerman)

“A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.”

The EdTech Quintet – Associated Practices

Social	Communication, Collaboration, Sharing
Mobility	Anytime, Anyplace Learning and Creation
Visualization	Making Abstract Concepts Tangible
Storytelling	Knowledge Integration and Transmission
Gaming	Feedback Loops and Formative Assessment



Building a SAMR Ladder

- Four steps:
 - Select a unit of instruction
 - Redesign the intro to the unit (basic knowledge, materials) at the S level
 - Redesign the development of the unit at the A, M levels
 - Redesign/create a student culminating experience for the unit at the R level

Why Build a Ladder?

- Only one of many possible approaches to redesigning a unit of instruction using SAMR
- Particularly well-suited to “first efforts” in technology-based curricular redesign
- Some advantages in this context:
 - Proximity to existing practice
 - Sustainability of effort
 - Option for gradual implementation

Three Questions (and Followups)

- Which unit of instruction would you like to redesign?
 - Why?
- What did you do before in this unit that worked?
 - Why did you do it?
- What would you like to change or replace?
 - Why?

The Two-Pass Ladder – Pass 1

- Redesign at the S/A levels, using **one** of Technology, Pedagogy, or Content as your driver:
 - S: Go for low-hanging fruit, e.g.
 - access to resources
 - coordination of social environments
 - basic approaches to information management
 - A: Go for enhancing what you chose in S, e.g.
 - curation of resources
 - organization of peer discussion/instruction experiences
 - information analysis and visualization

The Two-Pass Ladder – Pass 2

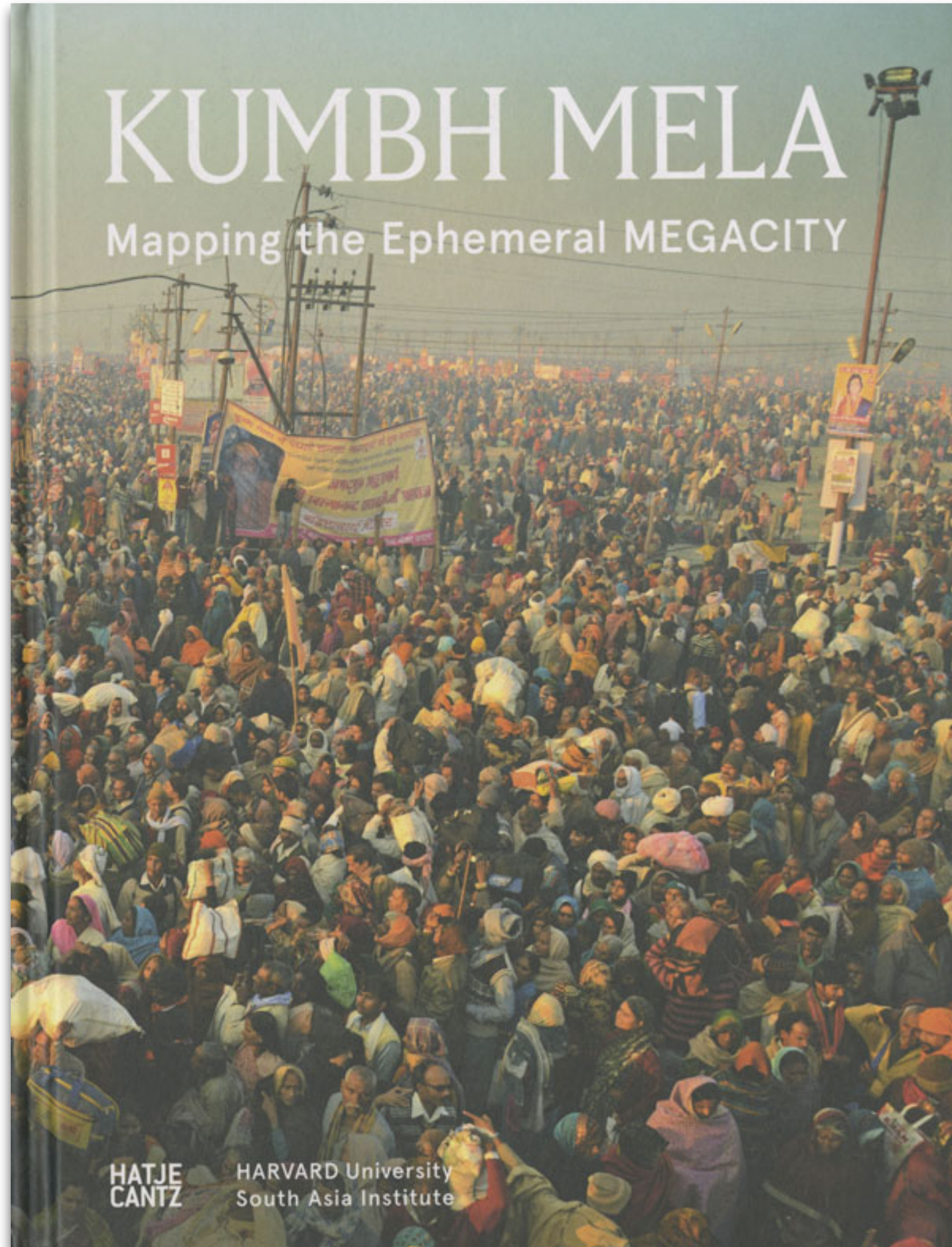
- Now, redesign at the M/R levels for a **different** driver (from Technology, Pedagogy, or Content), but **in light of** the first pass driver:
- M: Go for defining extended experiences in student exploration/creation that leverage the choices made for A
- R: Go for student agency, allowing them to build their own exploration/creation using the experiences developed at M

KUMBH MELA

Mapping the Ephemeral MEGACITY

HATJE
CANTZ

HARVARD University
South Asia Institute



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The screenshot shows a Jupyter Notebook environment. The left sidebar displays a file explorer with a list of notebooks: Data.ipynb (selected), Fasta.ipynb, Julia.ipynb, and Ripynb. The main area shows a Python script in a cell:

```
In [17]: import pandas
df = pandas.read_csv('../data/iris.csv')
df.head(5)
```

The output of the script is displayed as a table:

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	se
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

Below the table, another code cell is visible:

```
In [20]: from IPython.display import GeoJSON
GeoJSON(s, layer_options={'minZoom': 11})
```

The output of this cell is a map of the Washington D.C. area, showing various locations marked with blue pins. The map includes labels for areas like Bethesda, Takoma Park, College Park, and Washington.

The screenshot shows a Google Scholar search results page for the query "kumbh mela narrative". The search results are displayed in a list format, showing the title of the article, the author, the publication year, and the source. The first result is "Pilgrimage and power: the Kumbh Mela in Allahabad, 1765-1954" by K Maclean, published in 2008. The second result is "Making the colonial state work for you: The modern beginnings of the ancient Kumbh Mela in Allahabad" by K Maclean, published in 2003. The third result is "Conflicting spaces: The Kumbh Mela and the fort of Allahabad" by K Maclean, published in 2001. The fourth result is "Seeing, being seen, and not being seen: pilgrimage, tourism, and layers of looking at the Kumbh Mela" by K Maclean, published in 2009. The fifth result is "[CITATION] Panchayati Raj: a synthesis" by SK Dey, published in 1962.

Search results for "kumbh mela narrative" (About 872 results (0.06 sec))

- Pilgrimage and power: the Kumbh Mela in Allahabad, 1765-1954**
K Maclean - 2008 - books.google.com
... Page 4. Pilgrimage and Power The **Kumbh Mela** in Allahabad, 1765–1954 kama maclean 1 2008
Page 5 ... Library of Congress Cataloging-in-Publication Data Maclean, Kama, 1968– Pilgrimage and power : the **Kumbh Mela** in Allahabad, 1765–1954 / Kama Maclean. p. cm ...
☆ 99 Cited by 75 Related articles All 2 versions
- Making the colonial state work for you: The modern beginnings of the ancient Kumbh Mela in Allahabad**
K Maclean - The Journal of Asian Studies, 2003 - cambridge.org
... the Ancient **Kumbh Mela** ... Although some suggest that the **Kumbh Mela** in Allahabad goes back no further than the seventeenth or eighteenth centuries (Krasa 1965, 180), there has been no particular attempt to pinpoint a precise date and manner in which the festival began ...
☆ 99 Cited by 23 Related articles All 9 versions
- Conflicting spaces: The Kumbh Mela and the fort of Allahabad**
K Maclean - South Asia: Journal of South Asian Studies, 2001 - Taylor & Francis
... 538. 6 0 Allen's Indian Mail, 15 Feb. 1858, p. 125. 6 1 **Narrative** of events attending the outbreak of disturbances and the restoration of authority in the District of Allahabad in 1857-8; OIOC, L/MIL/17/2/496, p. 2. Page 15. **KUMBH MELA** AND THE FORT OF ALLAHABAD 149 ...
☆ 99 Cited by 3 Related articles All 4 versions
- Seeing, being seen, and not being seen: pilgrimage, tourism, and layers of looking at the Kumbh Mela**
K Maclean - CrossCurrents, 2009 - Wiley Online Library
... Seeing, Being Seen, and Not Being Seen: Pilgrimage, Tourism, and Layers of Looking at the **Kumbh Mela** ... the right to attend, photograph, and represent the event. The **Kumbh Mela**. The **Kumbh Mela** is a series of festivals that ...
☆ 99 Cited by 12 Related articles All 4 versions
- [CITATION] Panchayati Raj: a synthesis**
SK Dey - 1962 - Asia
☆ 99 Cited by 49 Related articles

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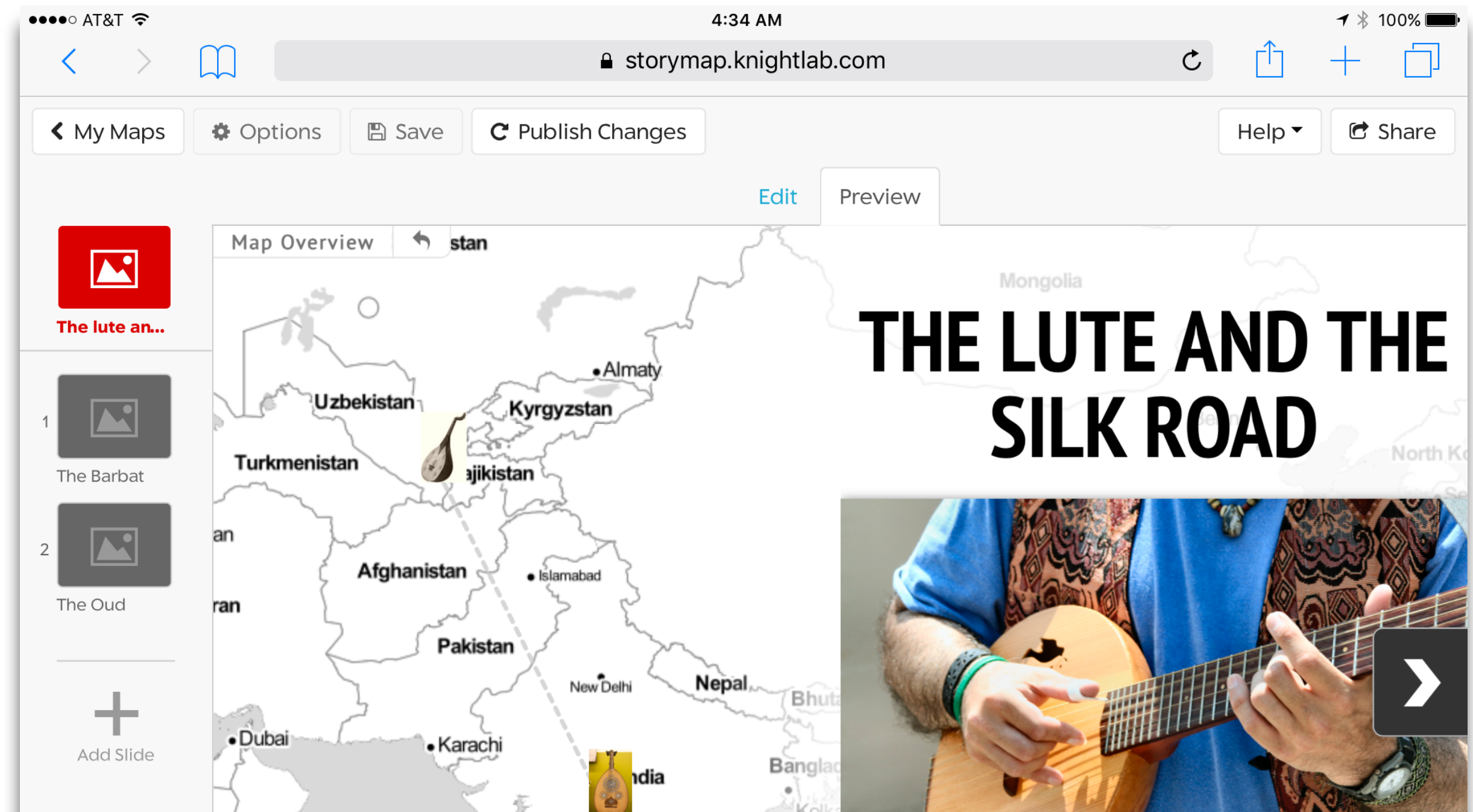
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Choosing the First SAMR Ladder Project: Three Options

- **Your Passion:**

- If you had to pick one topic from your class that best exemplifies why you became fascinated with the subject you teach, what would it be?

- **Barriers to Your Students' Progress:**

- Is there a topic in your class that a significant number of students get stuck on, and fail to progress beyond?

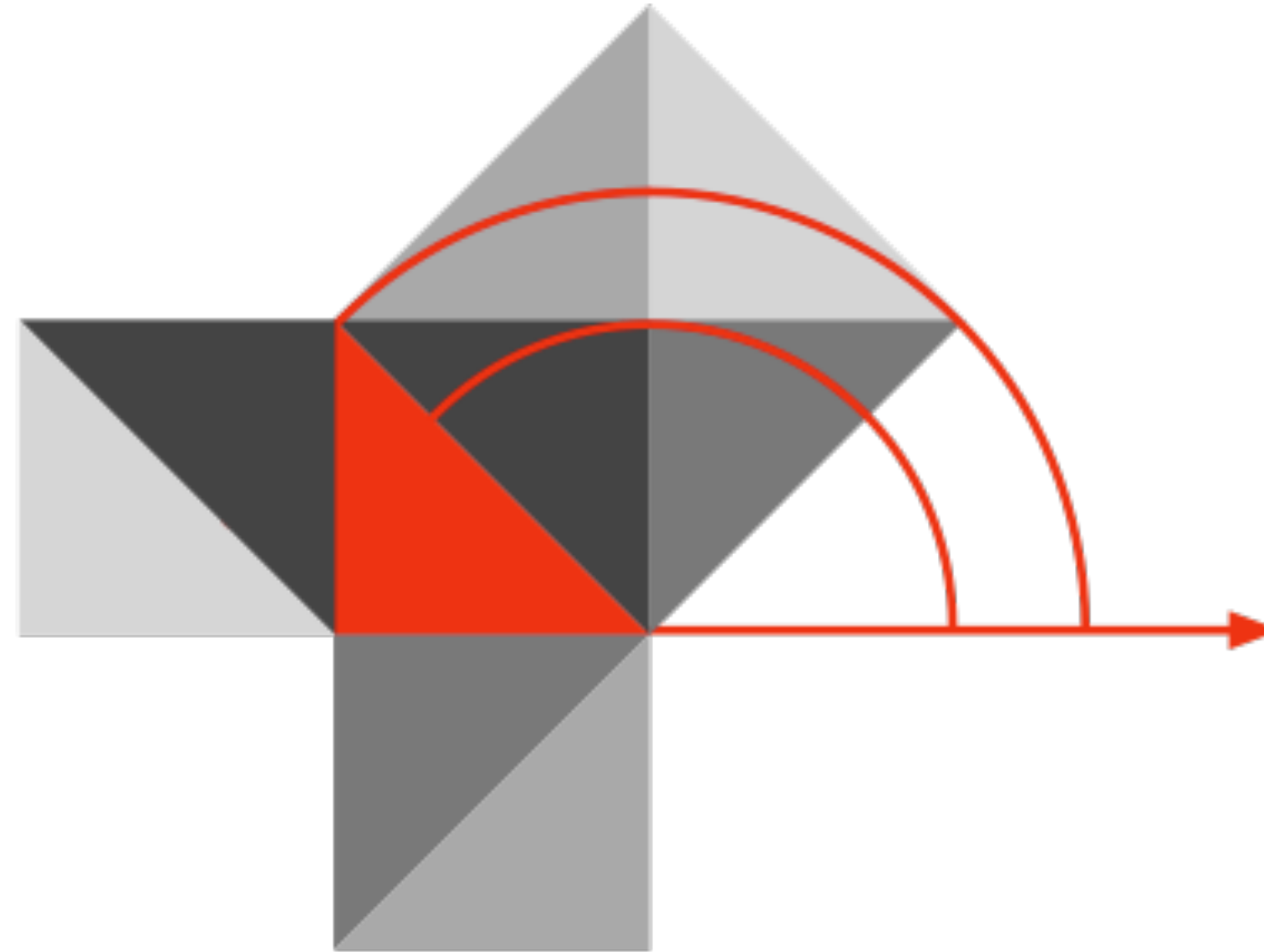
- **What Students Will Do In the Future:**

- Which topic from your class would, if deeply understood, best serve the interests of your students in future studies or in their lives outside school?

Determining SAMR Level: Questions and Transitions

- **Substitution:**
 - What is gained by replacing the older technology with the new technology?
- **Substitution to Augmentation:**
 - Has an improvement been added to the task process that could not be accomplished with the older technology at a fundamental level?
 - How does this feature contribute to the design?
- **Augmentation to Modification:**
 - How is the original task being modified?
 - Does this modification fundamentally depend upon the new technology?
 - How does this modification contribute to the design?
- **Modification to Redefinition:**
 - What is the new task?
 - Is any portion of the original task retained?
 - How is the new task uniquely made possible by the new technology?
 - How does it contribute to the design?

Hippasus



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Twitter: @rubenrp

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