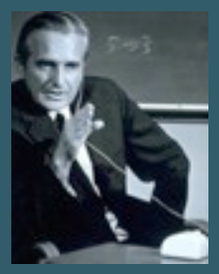
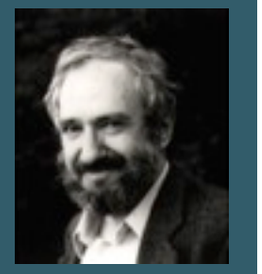
The SAMR Model:
Six Exemplars

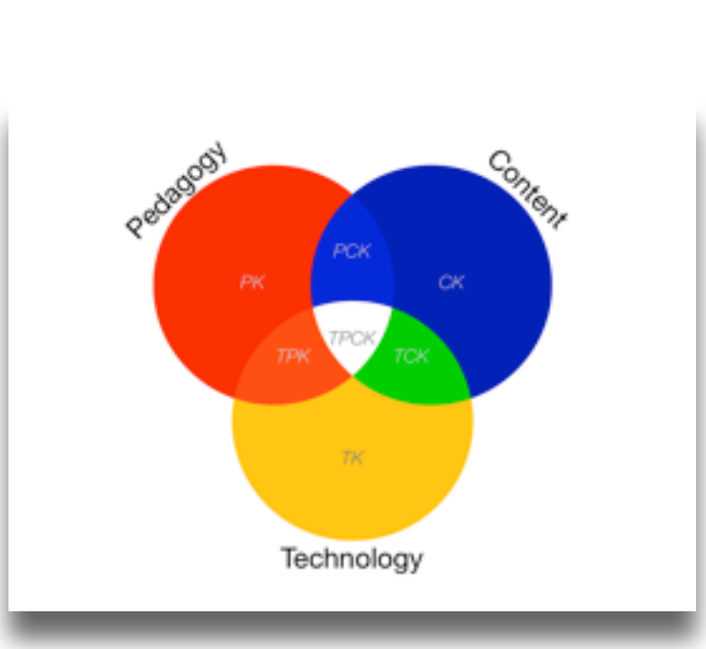
Ruben R. Puentedura, Ph.D.

Augmenting Human Intellect & Learning Capacity

21st Century Learning



One-to-One Technologies


Ubiquity

Intimacy

Embeddedness

Redefinition

Tech allows for the creation of new tasks, previously inconceivable

Modification

Tech allows for significant task redesign

Transformation

Enhancement

Augmentation

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Substitution

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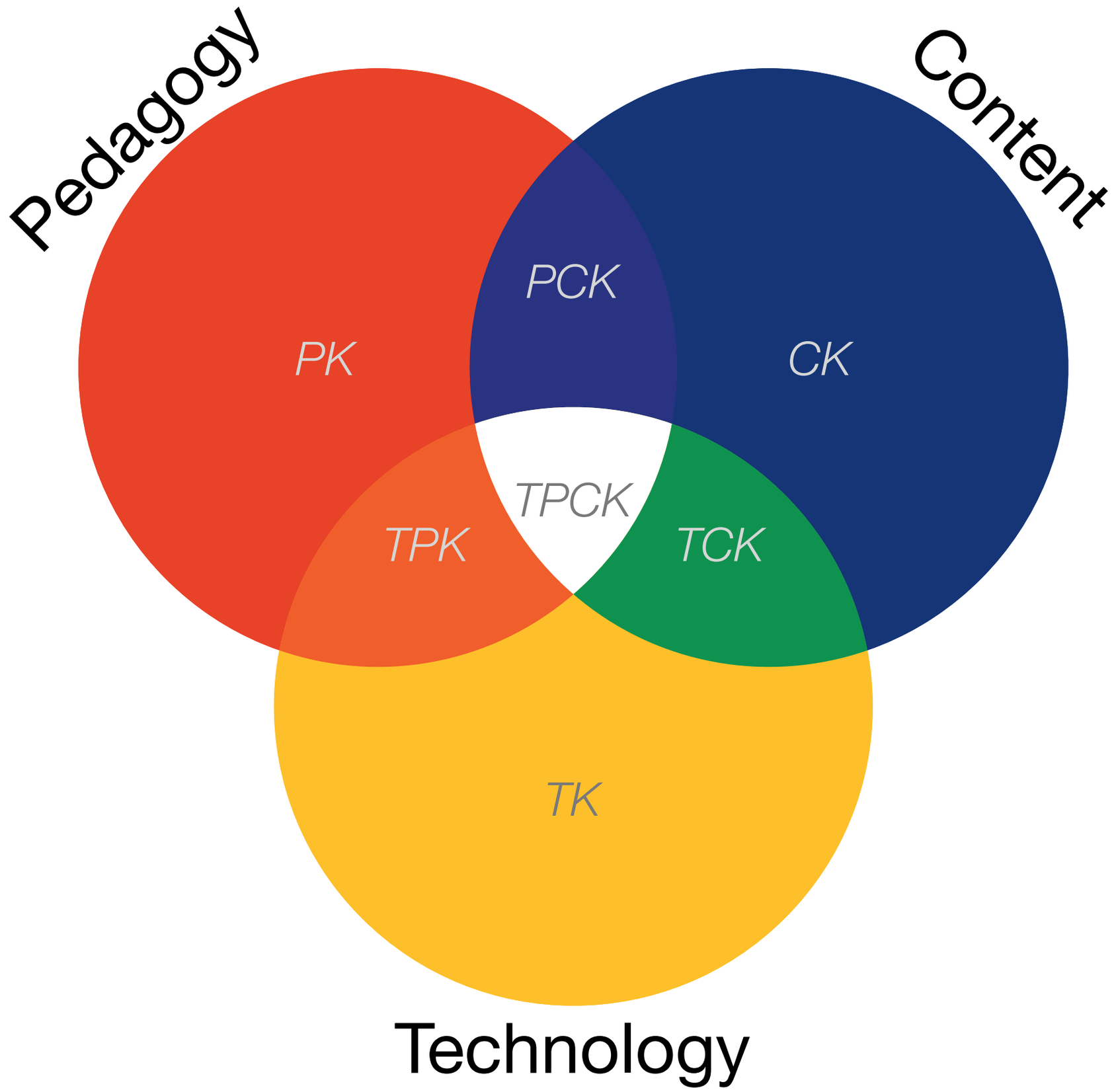
Podcasts on iTunes U: http://tinyurl.com/aswemayteach


Pedagogy
Content
PK
PCK
CK
TPCK
TPK
TCK
TK
Technology

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

English

Marzano:
Six Steps to Effective Vocabulary Instruction

- Step 1: The Teacher Provides a Description, Explanation, or Example of the New Term
- Step 2: Students Restate the Explanation of the New Term in Their Own Words
- Step 3: Students Create a Nonlinguistic Representation of the Term
- Step 4: Students Periodically Do Activities That Help Them Add to Their Knowledge of Vocabulary Terms
- Step 5: Periodically Students Are Asked to Discuss the Terms with One Another
- Step 6: Periodically Students Are Involved in Games That Allow Them to Play with the Terms

R.J. Marzano. *Building Background Knowledge for Academic Achievement: Research on What Works in Schools*. Alexandria, VA: ASCD, 2004

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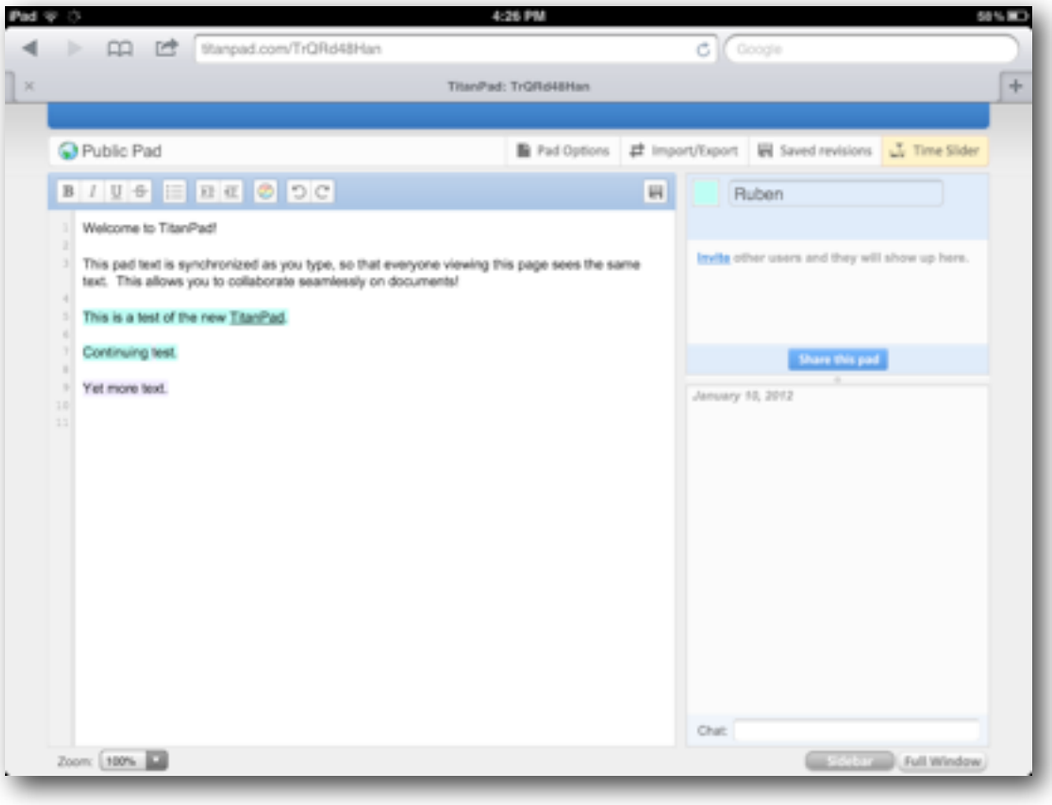

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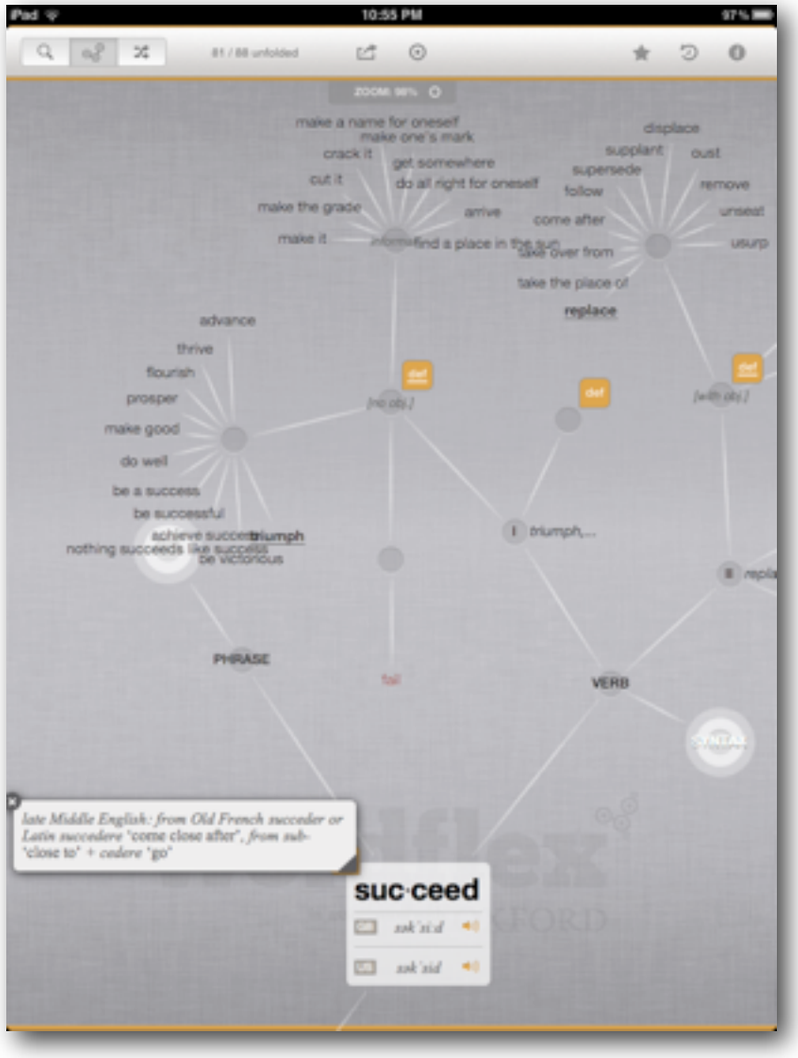

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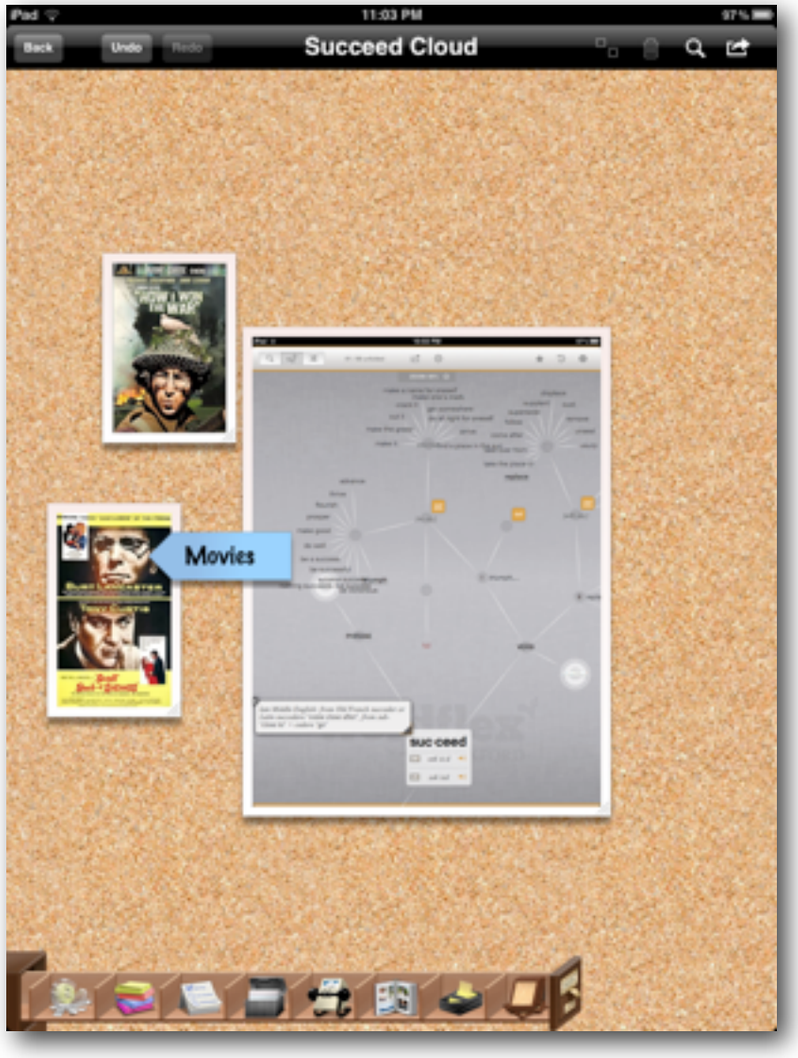

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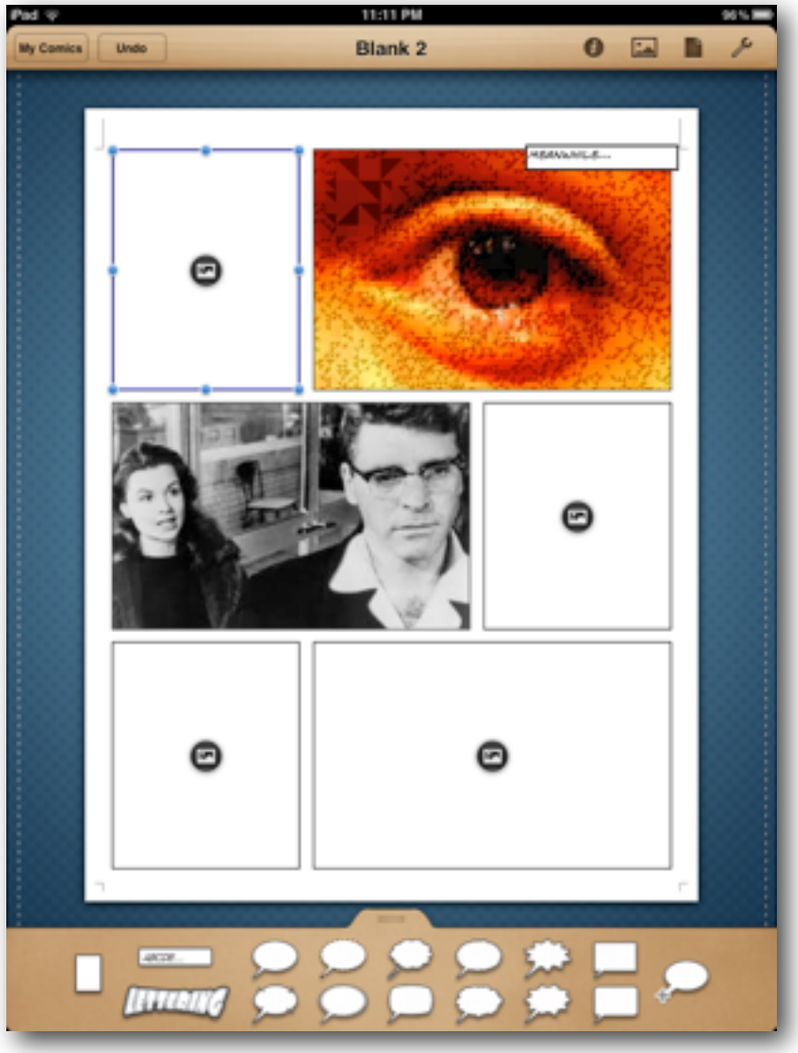
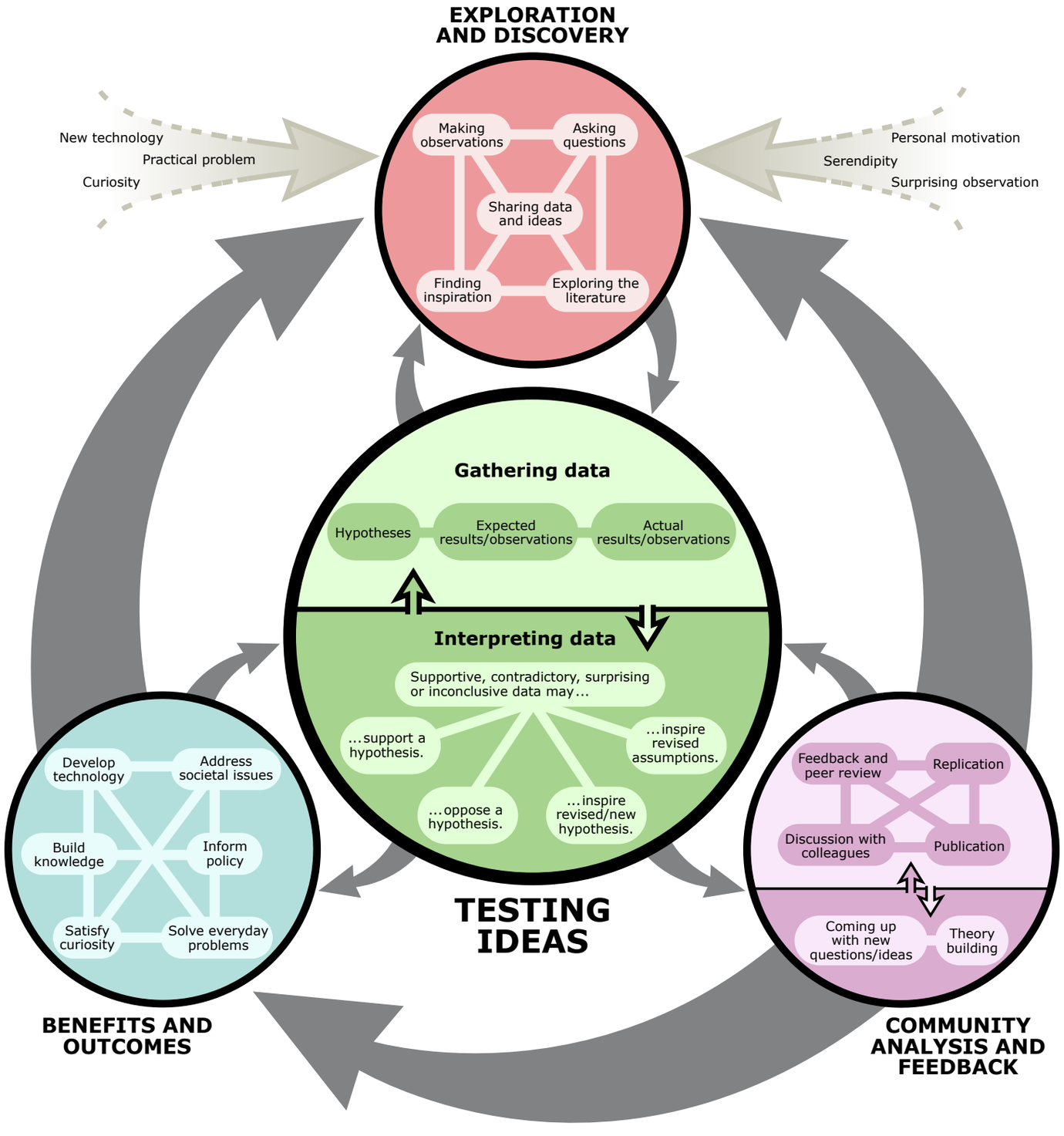


Biology and Physics

Understanding Science:
How Science Works



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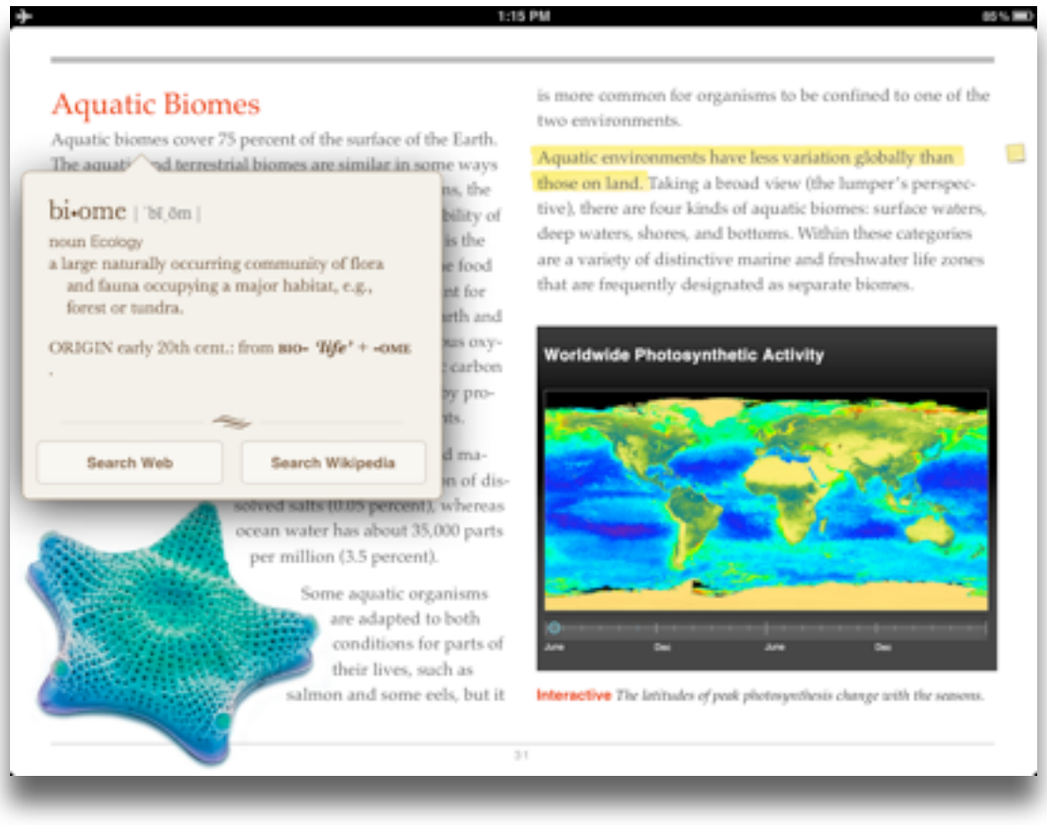

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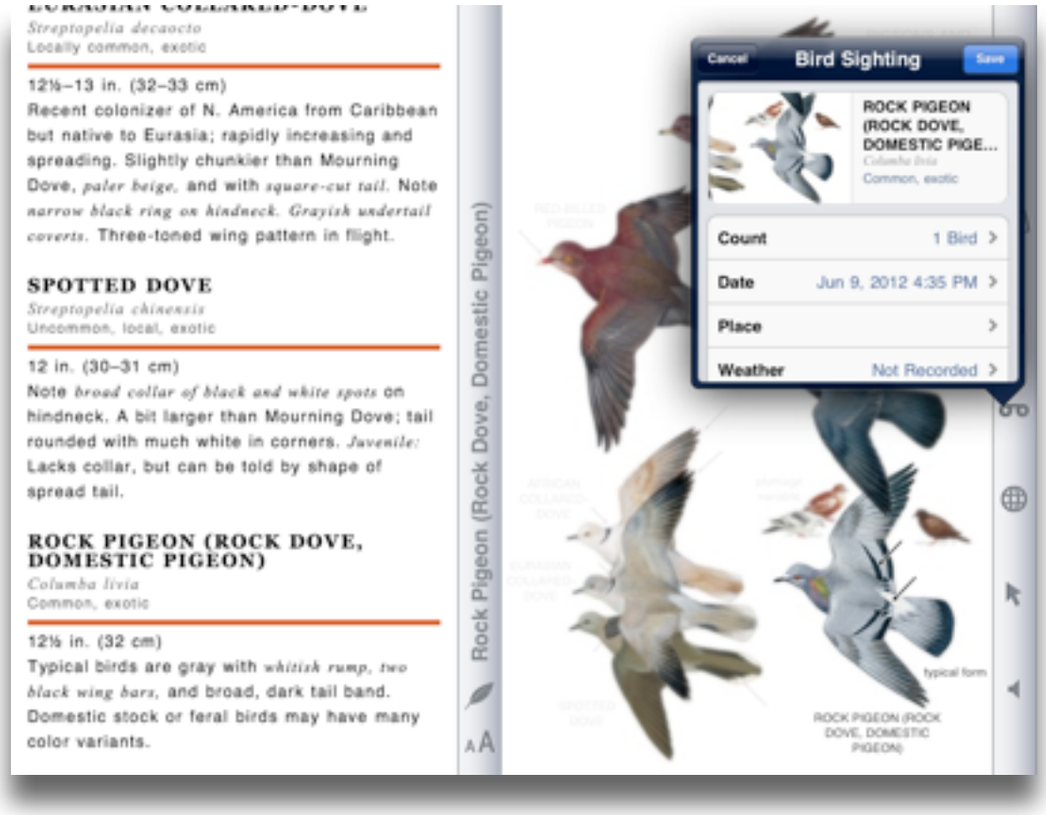

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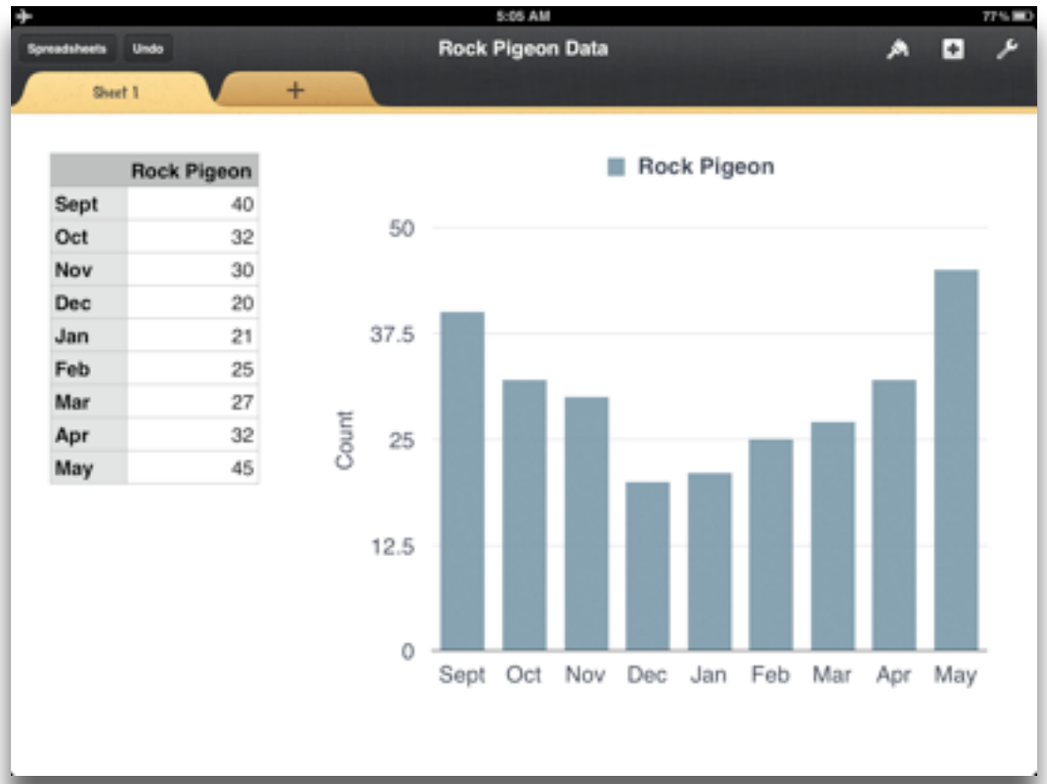

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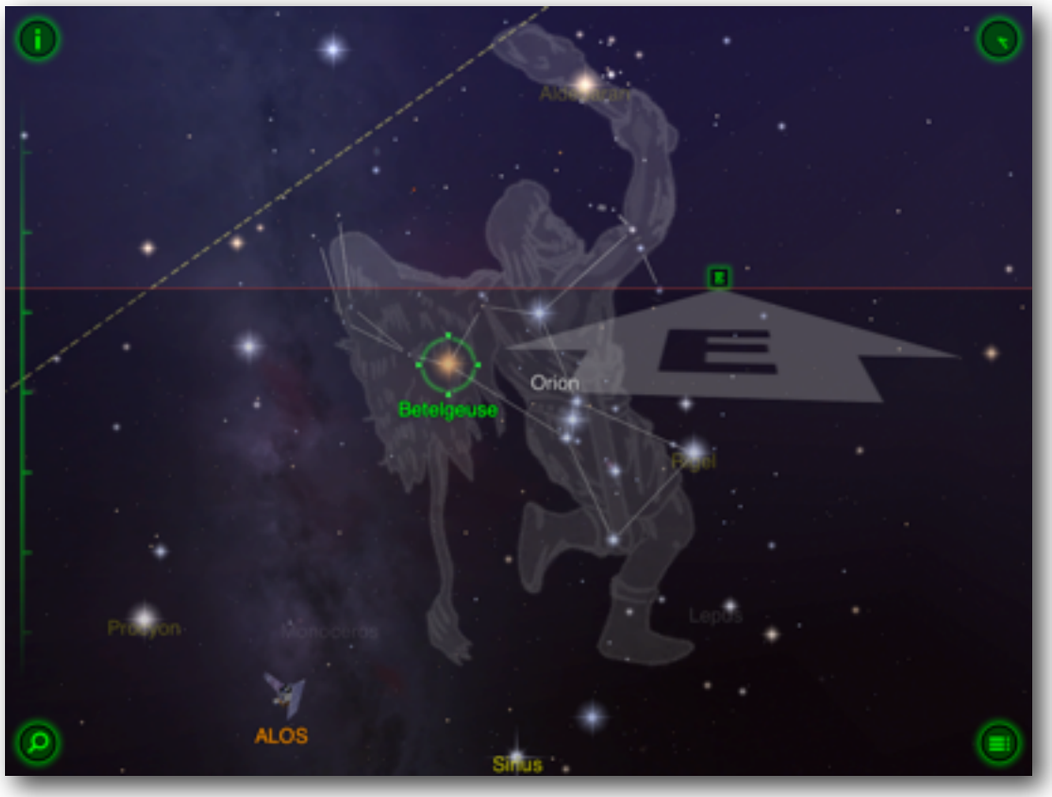

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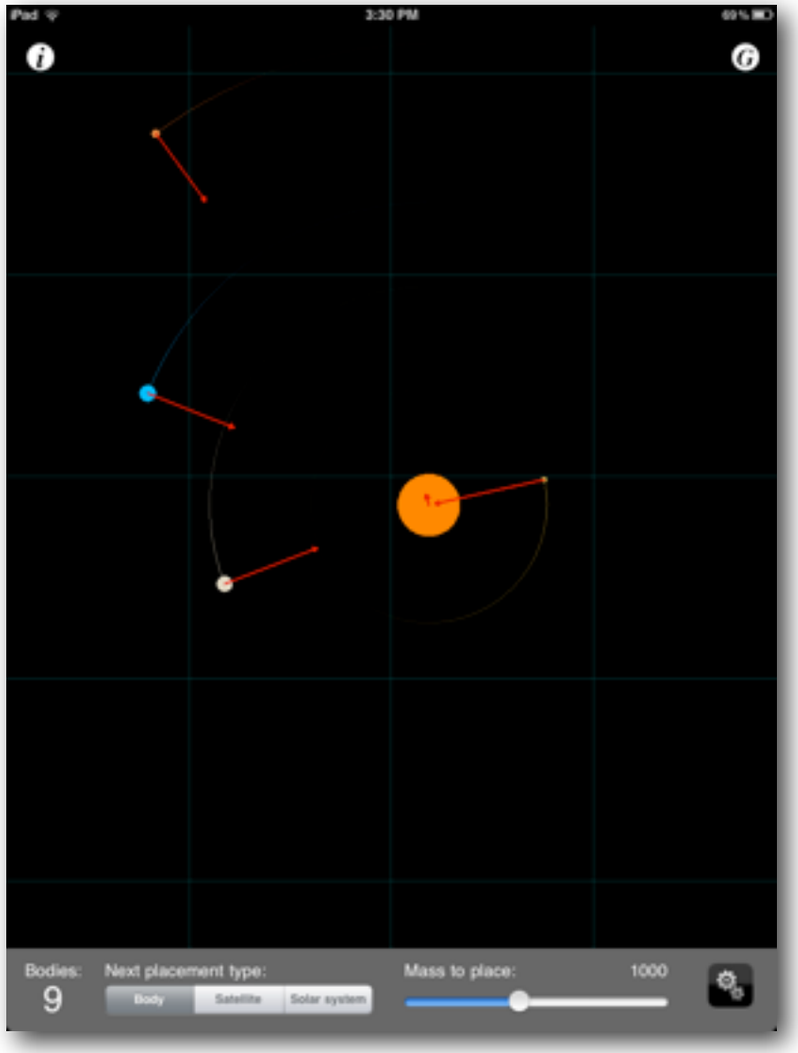

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Geography

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

Phil Gersmehl. *Teaching Geography*. The Guilford Press. (2005)

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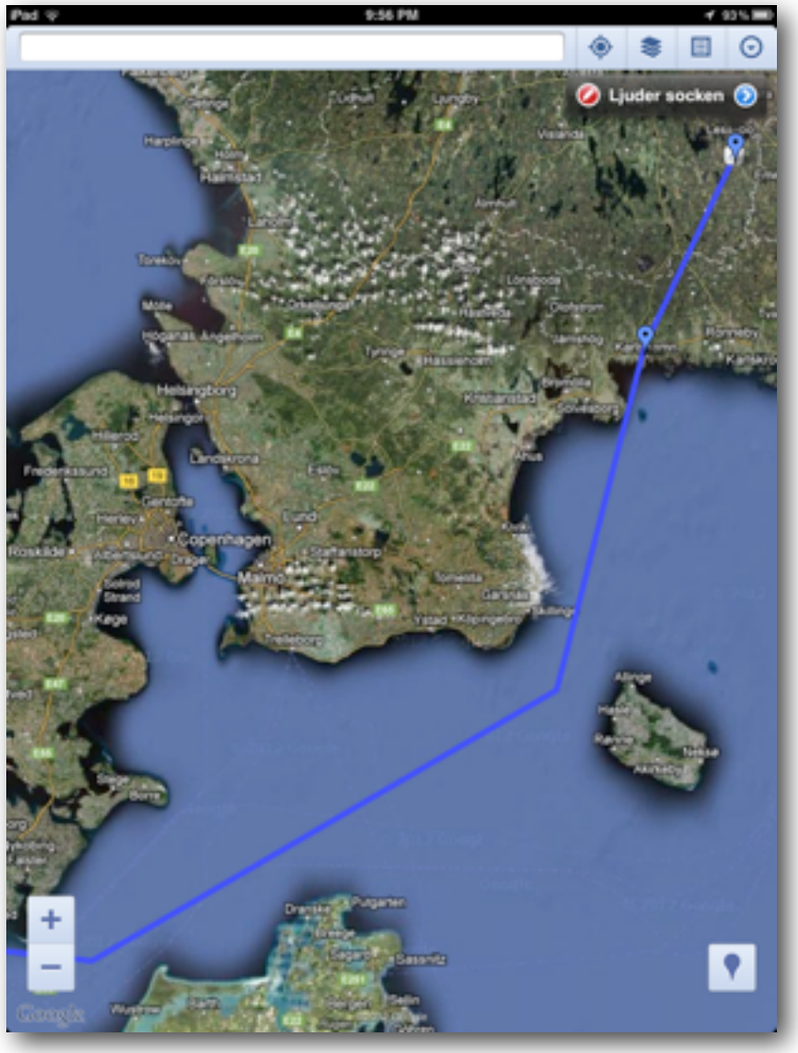

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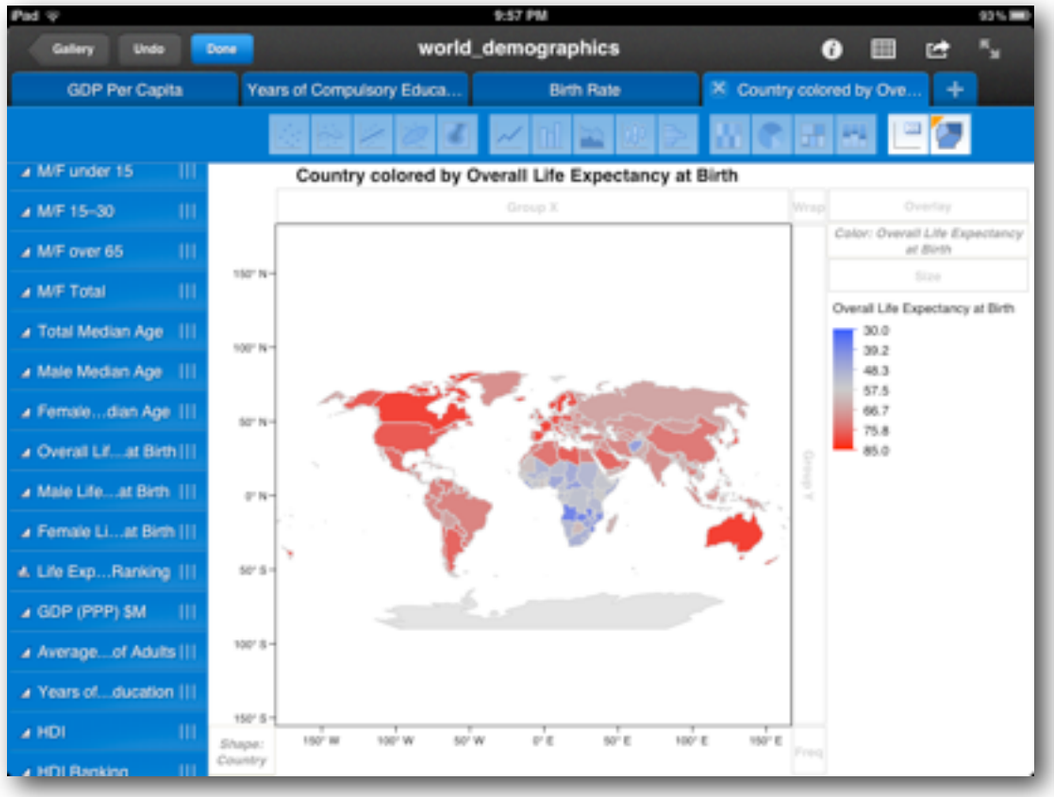

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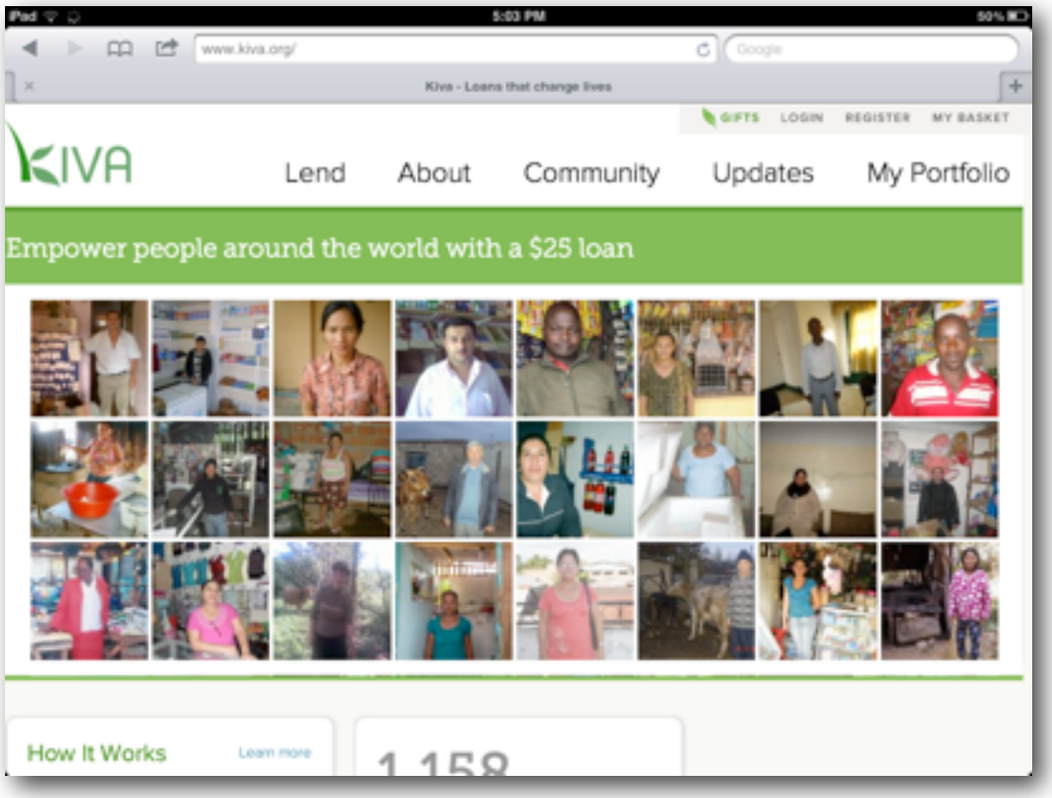

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Mathematics

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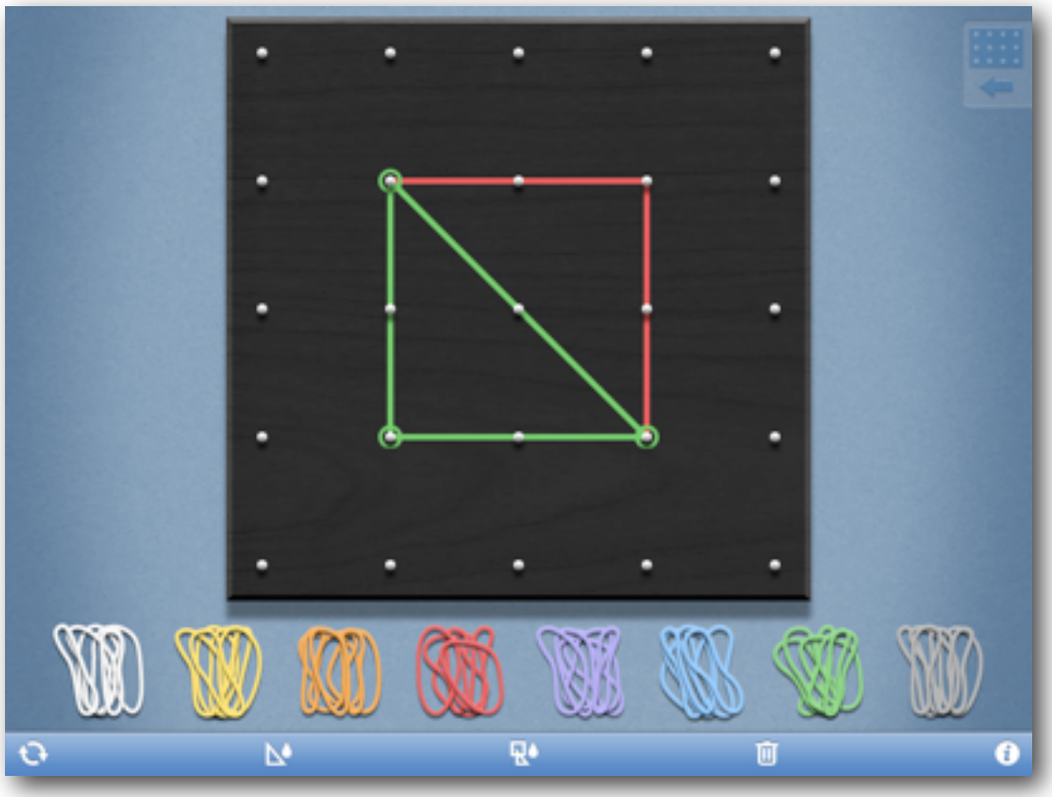

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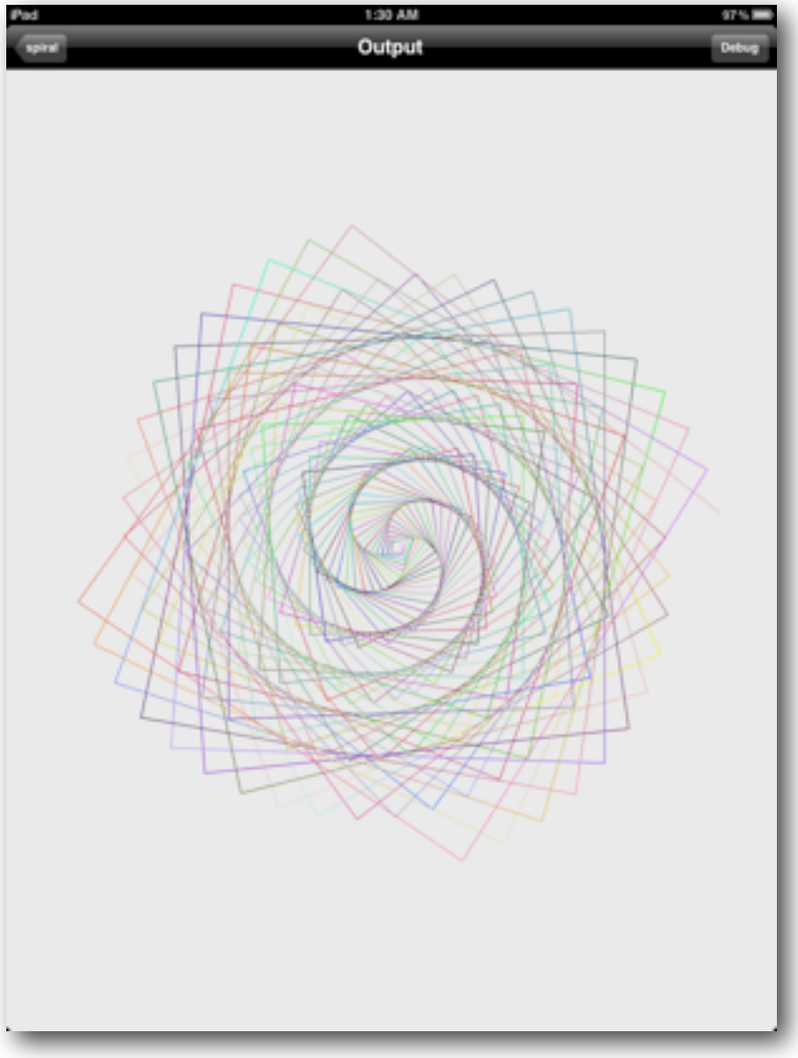

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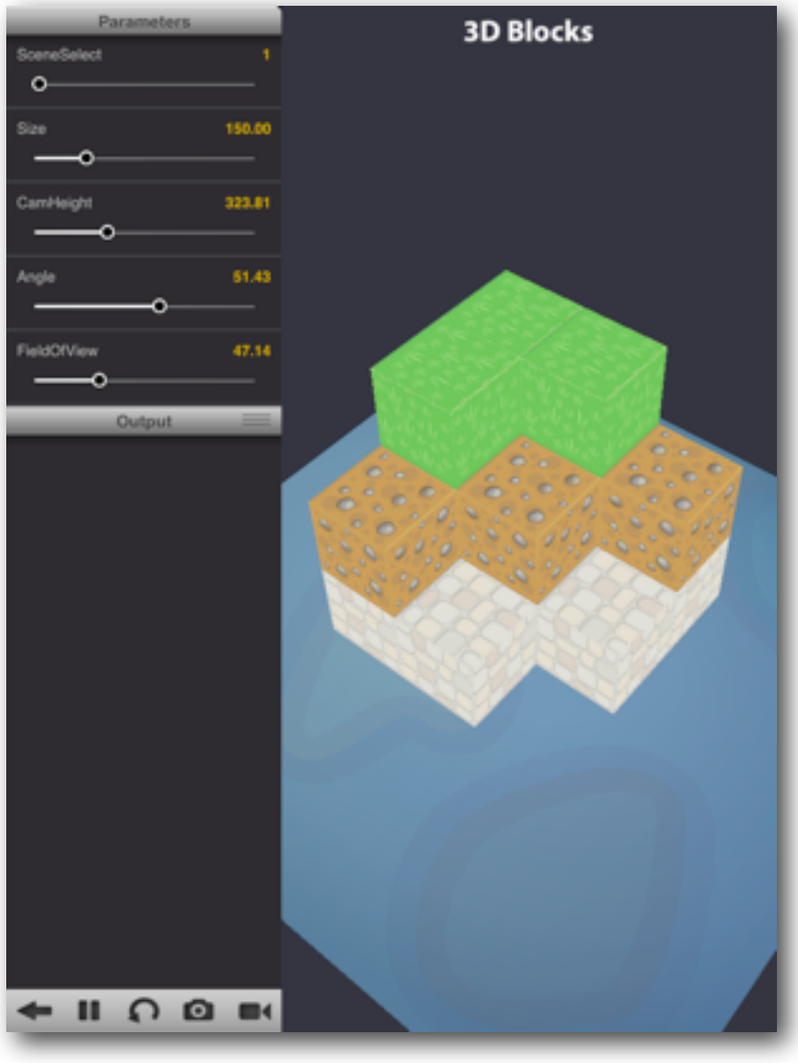

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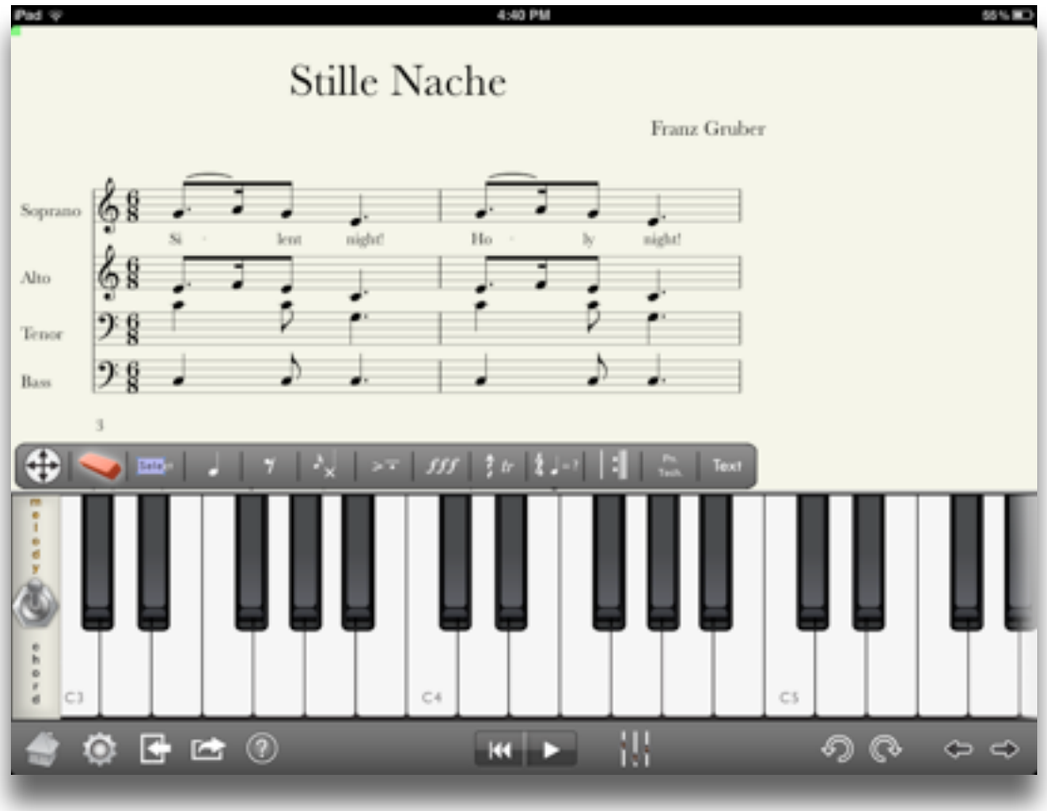

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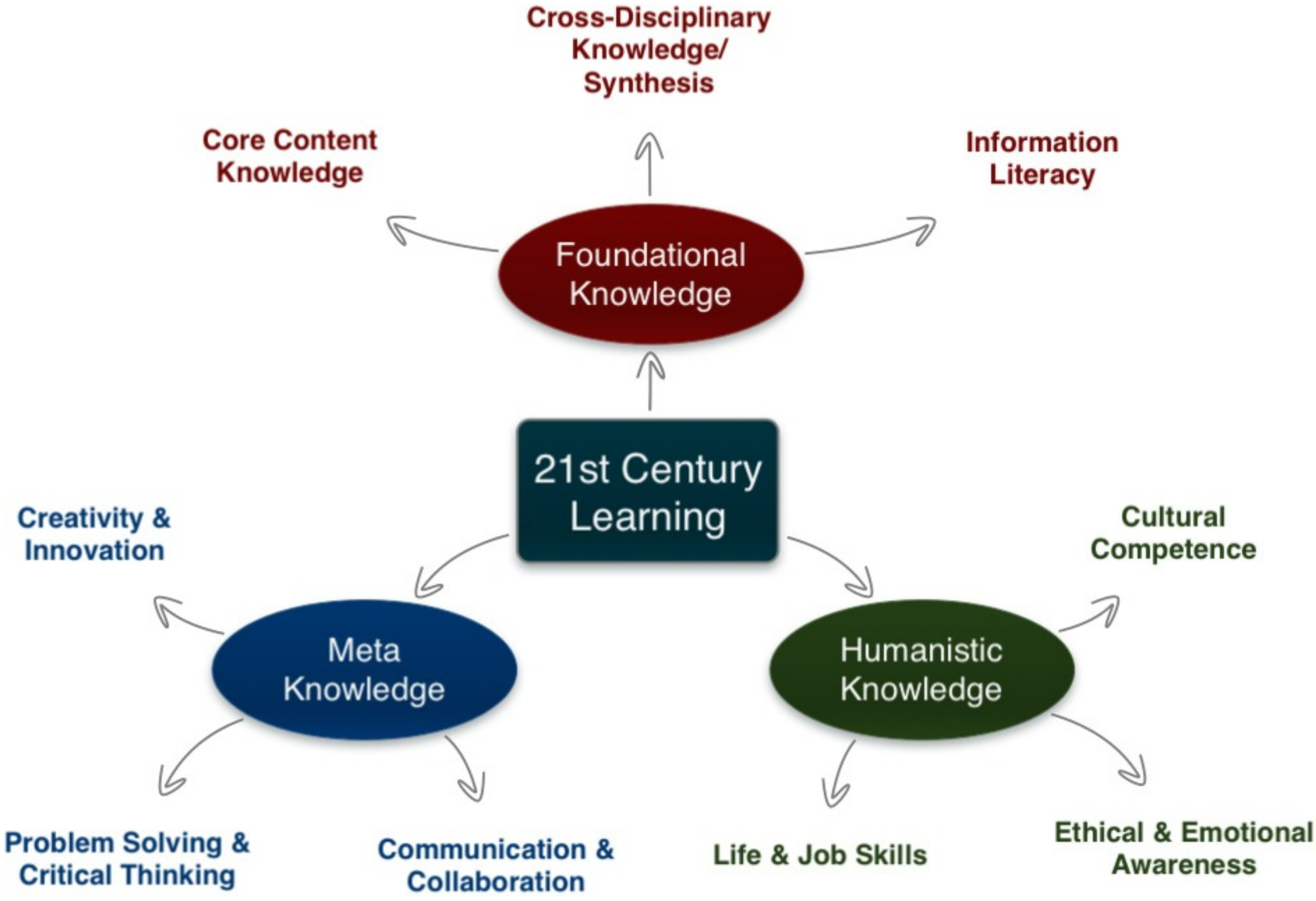
Focusing the Model



P. Mishra and K. Kereluik. “What is 21st Century Learning? A review and synthesis.” SITE2011 Conference Presentation. (2011)

P21 Common Core Toolkit

A Guide to Aligning the Common Core State Standards with the Framework for 21st Century Skills

Partnership for 21st Century Skills

It is imperative that the CCSS be considered the "floor"—not the "ceiling"—when it comes to expectations for student performance in the 21st century.

The SAMR Ladder:
Questions and Transitions

- **Substitution:**
  - What will I gain by replacing the older technology with the new technology?
- **Substitution to Augmentation:**
  - Have I added a feature to the task process that could not be done with the older technology at a fundamental level?
    - How does this feature contribute to my design?
- **Augmentation to Modification:**
  - How is the original task being modified?
  - Does this modification depend upon the new technology?
  - How does this modification contribute to my design?
- **Modification to Redefinition:**
  - What is the new task?
  - Will it replace or supplement older tasks?
  - How is it uniquely made possible by the new technology?
  - How does it contribute to my design?

Class

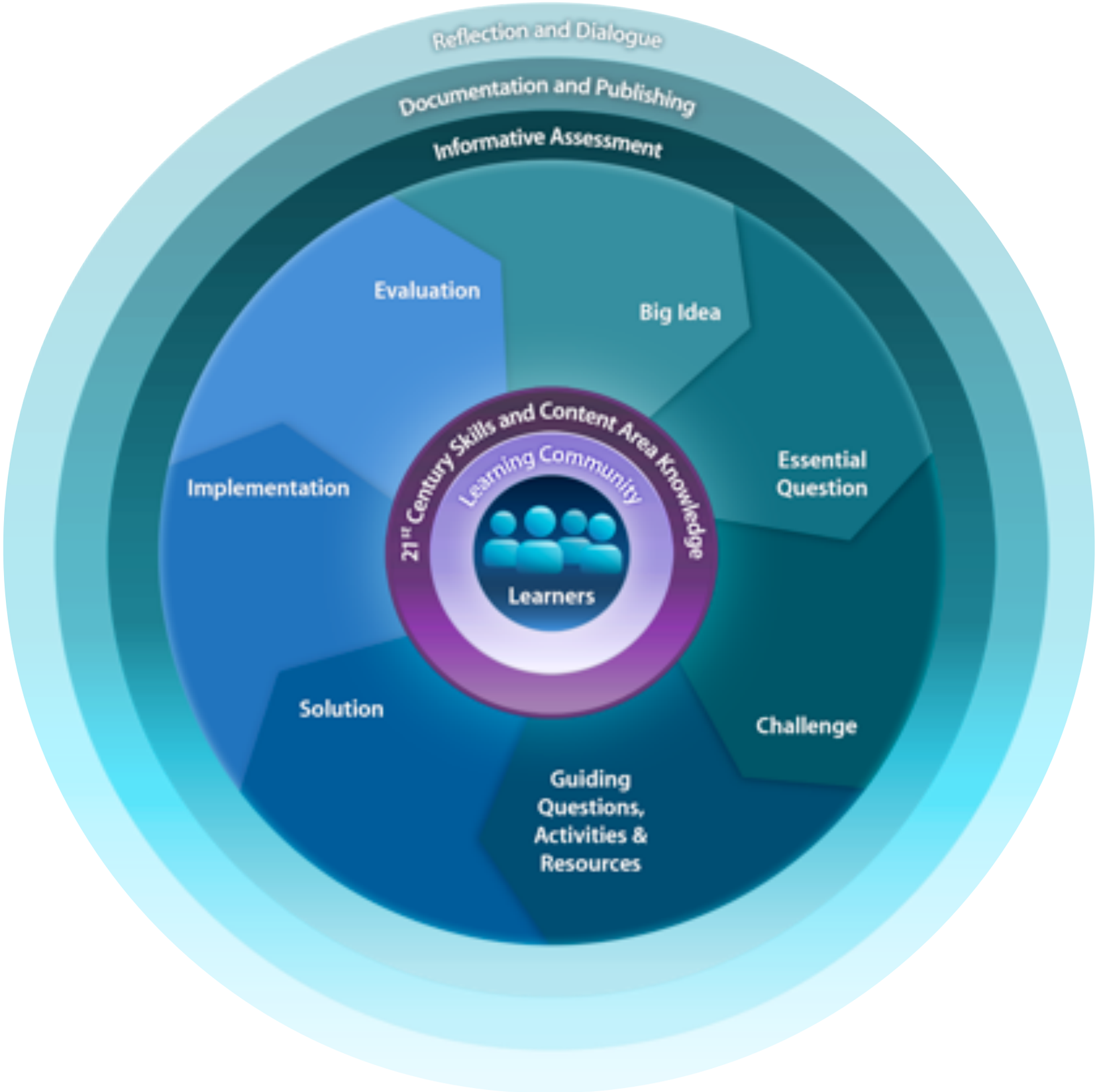
Homework

School

World

Home

Learning Environments


Reflection and Dialogue
Documentation and Publishing
Informative Assessment
Evaluation
Big Idea
Essential Question
Challenge
Guiding Questions, Activities & Resources
Solution
Implementation
21st Century Skills and Content Area Knowledge
Learning Community
Learners

The CBL Process

Collaborative Space

- How will the teams communicate?
- Where will resources be shared?

Introduction

- Why is this idea important to the students?
- Why is this idea important to the community?

Team Formation

- What makes up a productive design team?
- How do we capitalize on everyone's skills?

Assessment

- How will the process be assessed?
- How will the solution be assessed?

Guiding Questions

- What do we need to know in order to meet the challenge?

Guiding Activities

- What do we need to do to answer our guiding questions?
- What resources are needed?

Solution Development

- How do we meet the challenge?
- Is the solution justified?

Implement and Assess

- How can the solution be tested?
- Did the solution work?

Document/Reflect

- What did we learn?
- What would we do differently?

Publish

- How do we share our results?
- What is the story behind the solution?

Additional Resources

Resources

Background:

- Vannevar Bush, “As We May Think”. *The Atlantic Monthly*. (July 1945) Online at: http://www.theatlantic.com/magazine/archive/1969/12/as-we-may-think/3881/
- Douglas C. Engelbart, *A Research Center for Augmenting Human Intellect*. (December 1968 live demo) Archived online at: http://sloan.stanford.edu/mousesite/1968Demo.html
- Alan Kay, “A Personal Computer for Children of All Ages”. *Proceedings of the ACM National Conference*. Boston (August 1972) Online at: http://www.mprove.de/diplom/gui/Kay72a.pdf
- Seymour Papert, “On Making a Theorem for a Child”. *Proceedings of the ACM National Conference*. Boston (August 1972) Online at: http://portal.acm.org/citation.cfm?id=569942

SAMR and TPCK:

- Ruben R. Puentedura, *Transformation, Technology, and Education*. (2006) Online at: http://hippasus.com/resources/tte/
- Ruben R. Puentedura, *As We May Teach: Educational Technology, From Theory Into Practice*. (2009) Online at: http://tinyurl.com/aswemayteach
- *TPCK - Technological Pedagogical Content Knowledge*. (2008-2010) Online at: http://www.tpck.org/tpck/index.php?title=Main_Page
- AACTE (Eds.) *The Handbook of Technological Pedagogical Content Knowledge for Educators*. New York:Routledge, 2008.

Resources – Part II

Defining Mobile Devices/The Lively Sketchbook

- Ruben R. Puentedura, “Drawing On The Lively Sketchbook”. *Connect@NMC Talks*. (2010) Online at: http://www.nmc.org/connect/2010/april/16
- Ruben R. Puentedura, “The Lively Sketchbook”. (2010) Online at: http://www.hippasus.com/rrpweblog/archives/2010_01.html

The Curiosity Amplifier

- John Seely Brown. “A New Culture of Learning”. NMC Summer Conference, Closing Keynote. (2010) Online at: http://www.nmc.org/2010-summer-conference/jsb-keynote-video

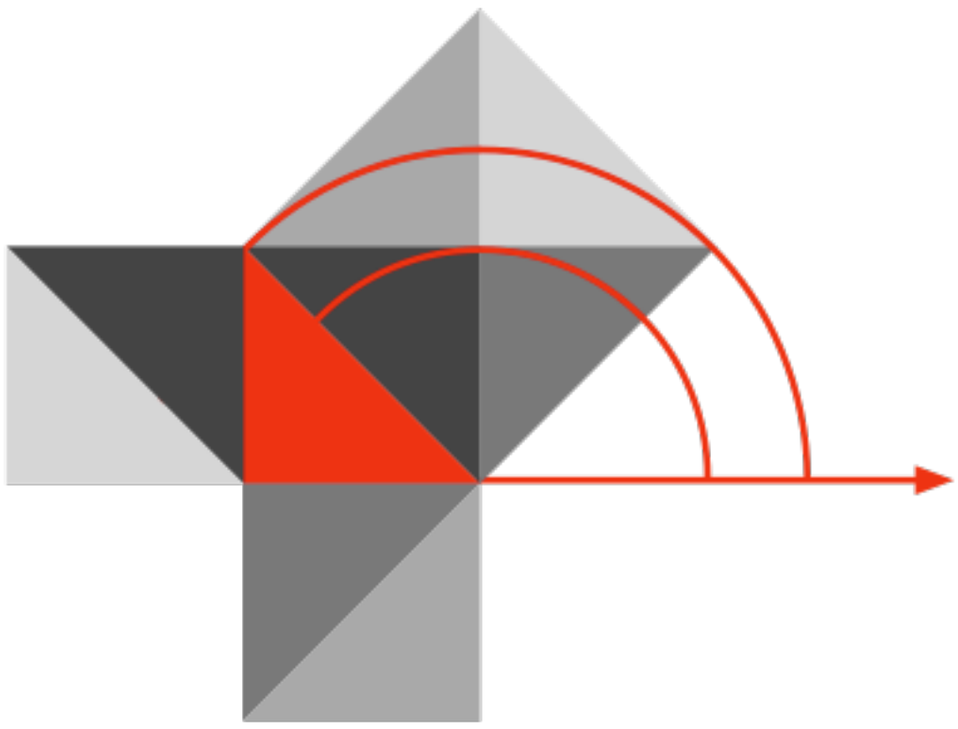
Technology In Education: The First 200,000 Years

- Ruben R. Puentedura. “Technology In Education: The First 200,000 Years”. NMC Summer Conference, *Ideas that Matter* Presentation. (2012) Online at: http://www.hippasus.com/rrpweblog/archives/000069.html

Photo Credits

- *iPad in Subway*: Takashi M
- *YouTube + iPad + Hanalei = Happiness*: Wayan Vota
- *Parcours-jeu multimedia : Les métiers du musée*: Jean-Pierre Dalbéra

Hippasus



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Email: rubenrp@hippasus.com
Twitter: @rubenrp