

# Intentional, Appropriate, and Effective Uses of Technology: Tools to Transform Learning and Early Development

Dr. Mark Bailey

Handout At:

<http://fg.ed.pacificu.edu/cldc/baileytw14handouts>





# Intentional, Appropriate, & Effective Uses of Technology: Beginning Thoughts

- It is not all about technology
- Teach to make a difference; to change the world
- Advocate for equity & social justice
- Empower your students
- Active learning, projects & play







# Mark Bailey

## Distinguished University Professor

### Pacific University





# Early Learning Community



ECE Teaching & Learning Environment  
Pacific University College of Education  
Forest Grove, Oregon  
<http://fg.ed.pacificu.edu/elc>





# Intentional, Appropriate, & Effective Uses of Technology:

## Overview

- Teaching, Learning, DAP and Technology
- Listen, Go Deep, and Empower
- Exploring Digital Tools
- Case study
- Best Practices





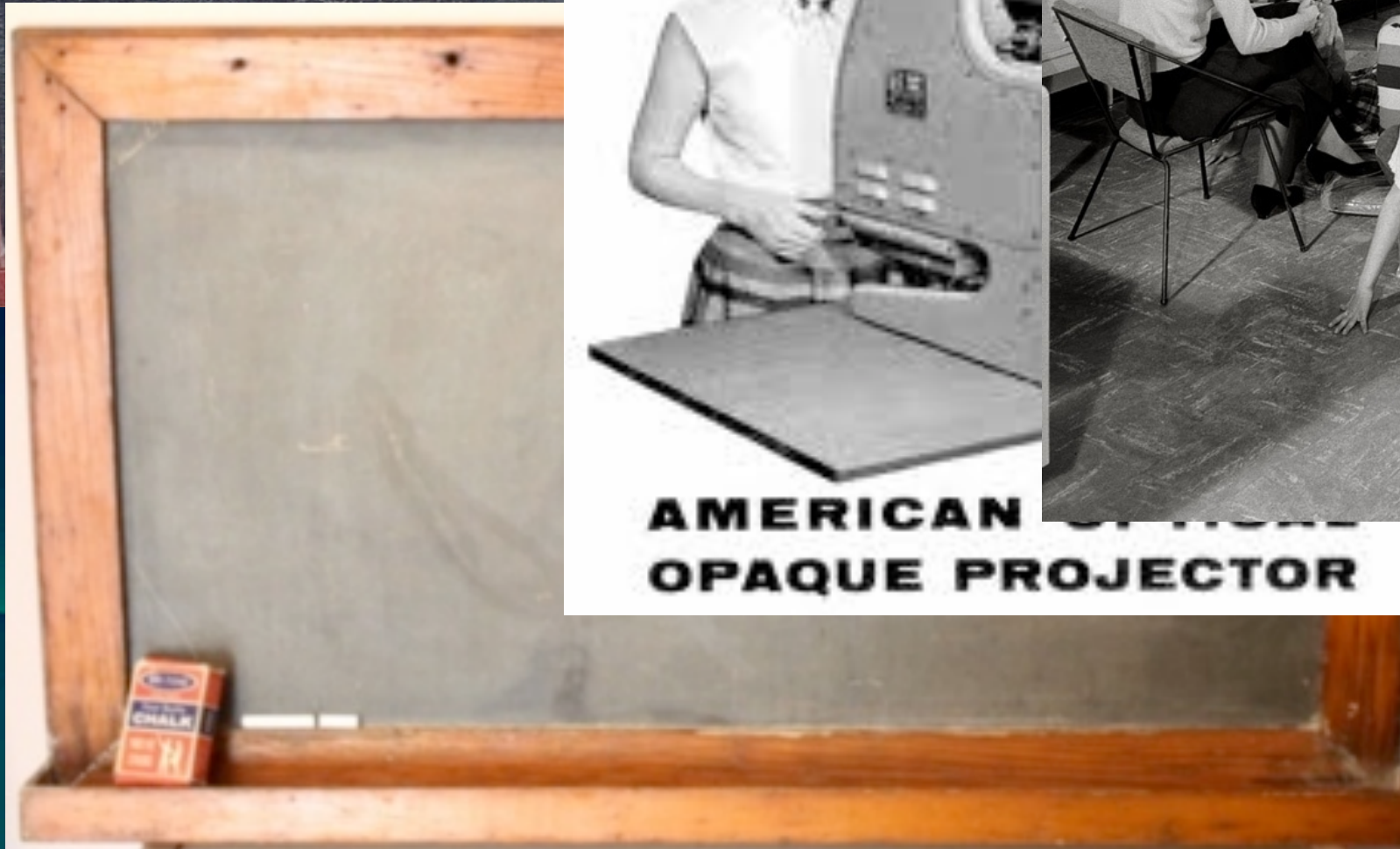
# Teaching, Learning, DAP and Technology

## What is Technology?

- Tools that empower, enhance, & transform
- Digital technologies defined
- Technologies across time



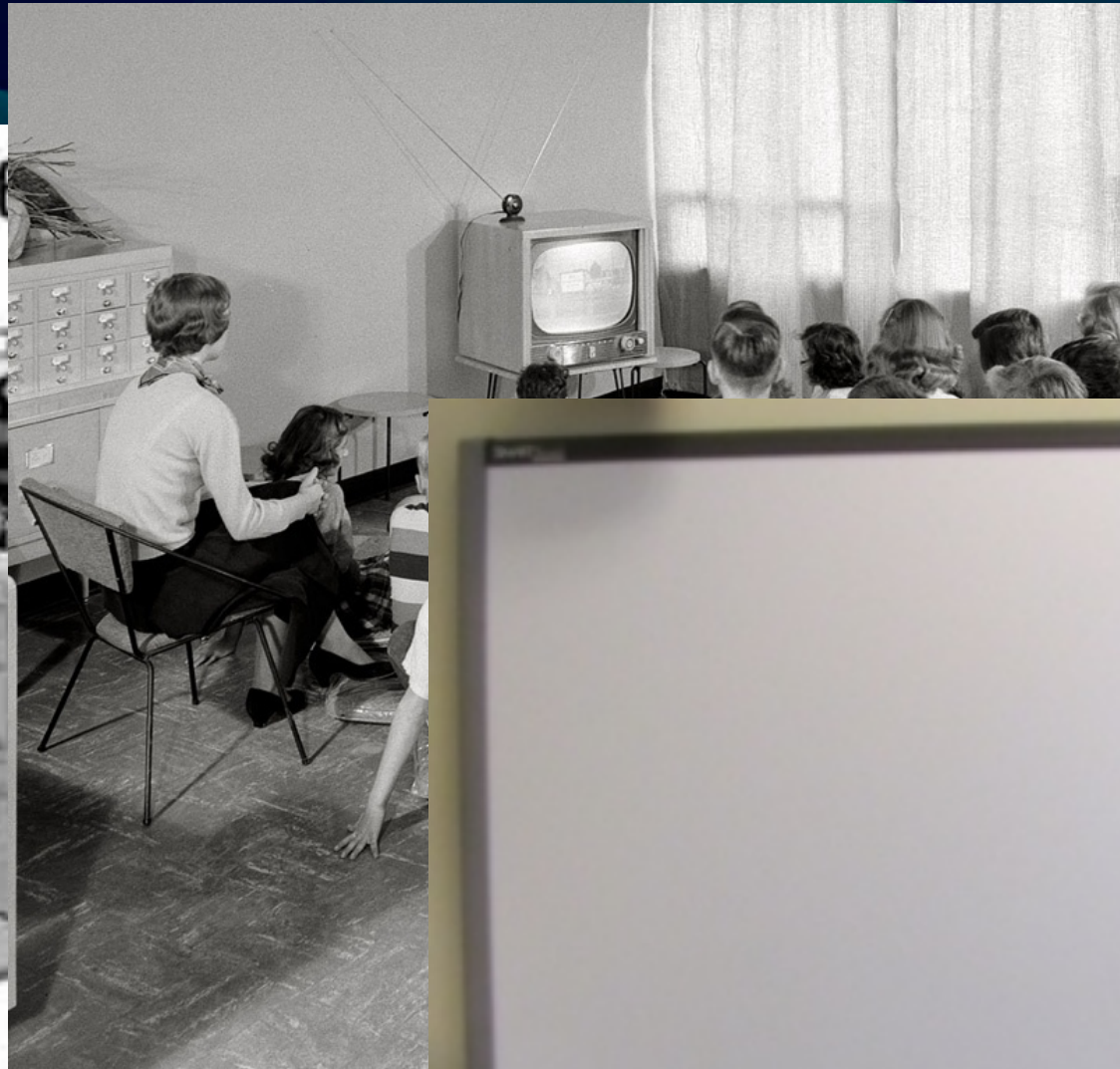
# Historical Context



Dramatic NEW T



AMERICAN OPTICAL  
OPAQUE PROJECTOR





# Teaching, Learning, DAP and Technology

## Educational Technologies:

- Reflective of scientific innovation
- Based on learning theory
- Framed by pedagogy
- Implemented with intentionality by teachers

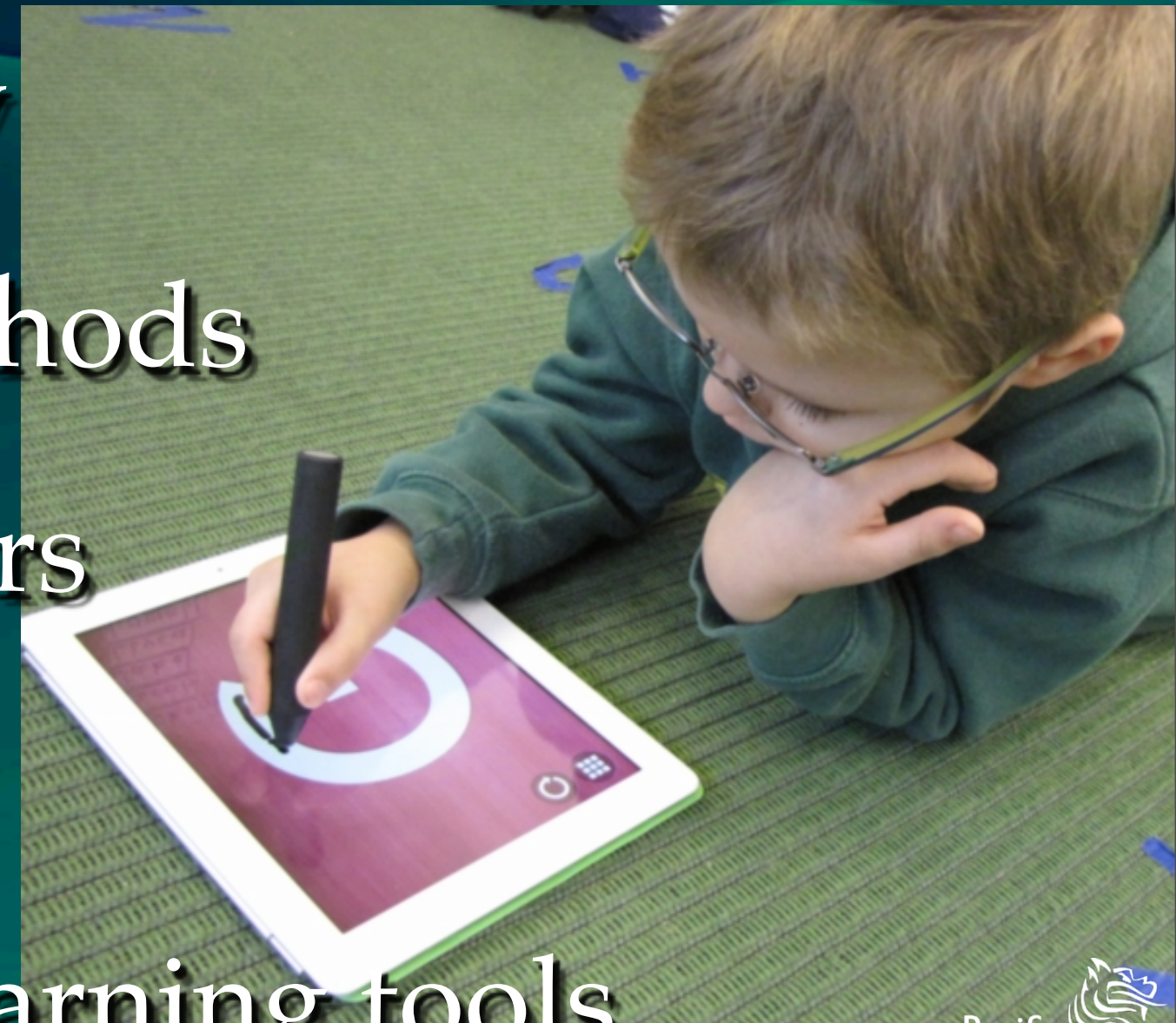
# Teaching, Learning, DAP and Technology

It's not the technology,  
it's how you use it.



## Begin with Development and Pedagogy

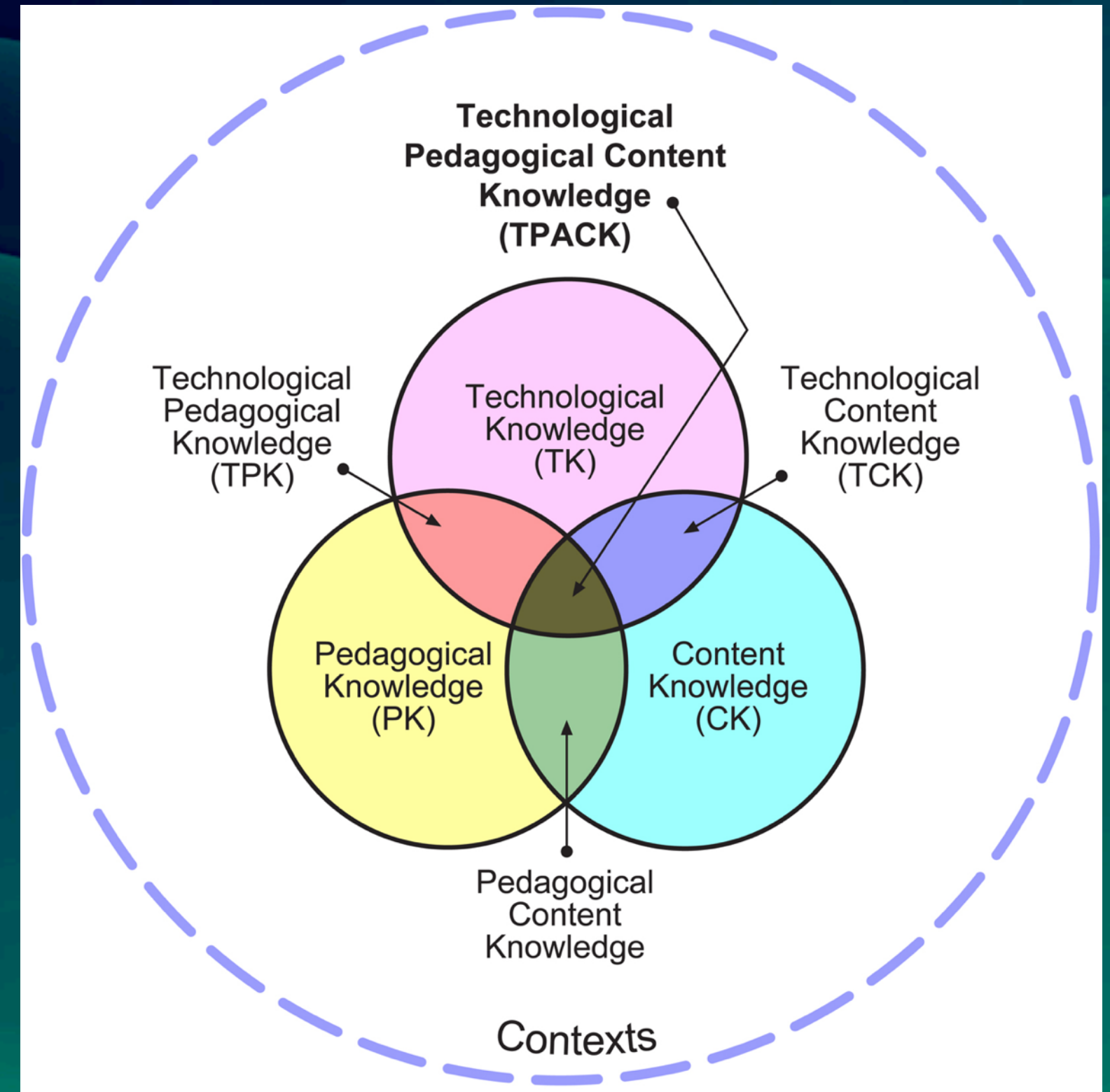
- Constructivist learning theory
- Best practice pedagogical methods
- Thoughtful intentional teachers
- Student-centered curriculum
- Technology as one of many learning tools





# Teaching, Learning, DAP and Technology

Apply TPCK  
Technological  
Pedagogical  
Content Knowledge



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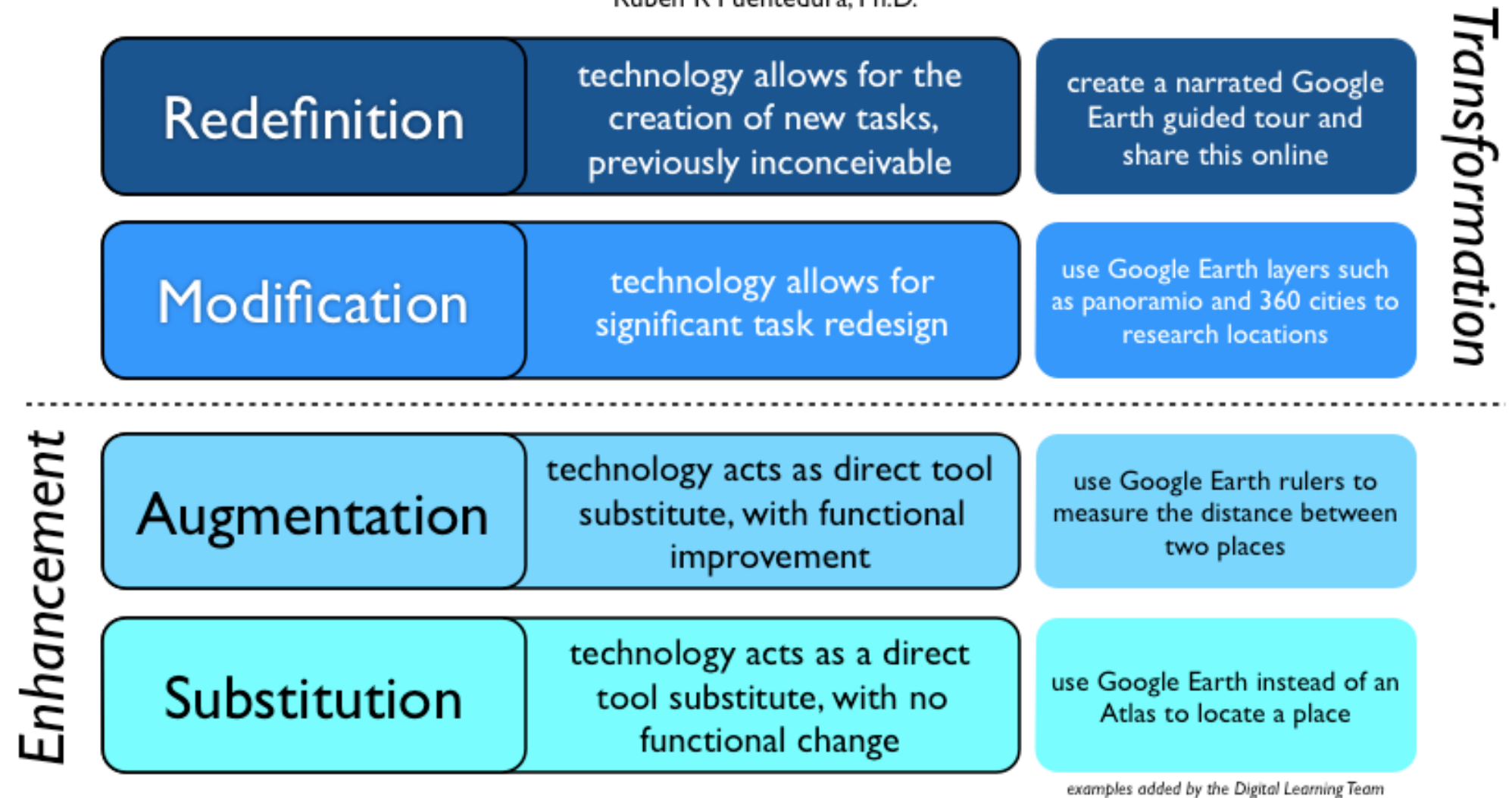


# Teaching, Learning, DAP and Technology

## Recognize Taxonomically Hierarchical Applications

### The SAMR Model *enhancing technology integration*

Ruben R Puentedura, Ph.D.



examples added by the Digital Learning Team

<http://www.hippasus.com/rrpweblog/>



## SAMR: When considering technology:

- What is gained with new tool?
- Is there functional improvement?
- Is this task a significant redesign?
- Are there newly conceivable tasks?



PuenteDura (2014)



# Teaching, Learning, DAP and Technology

Teach Your Heart Out

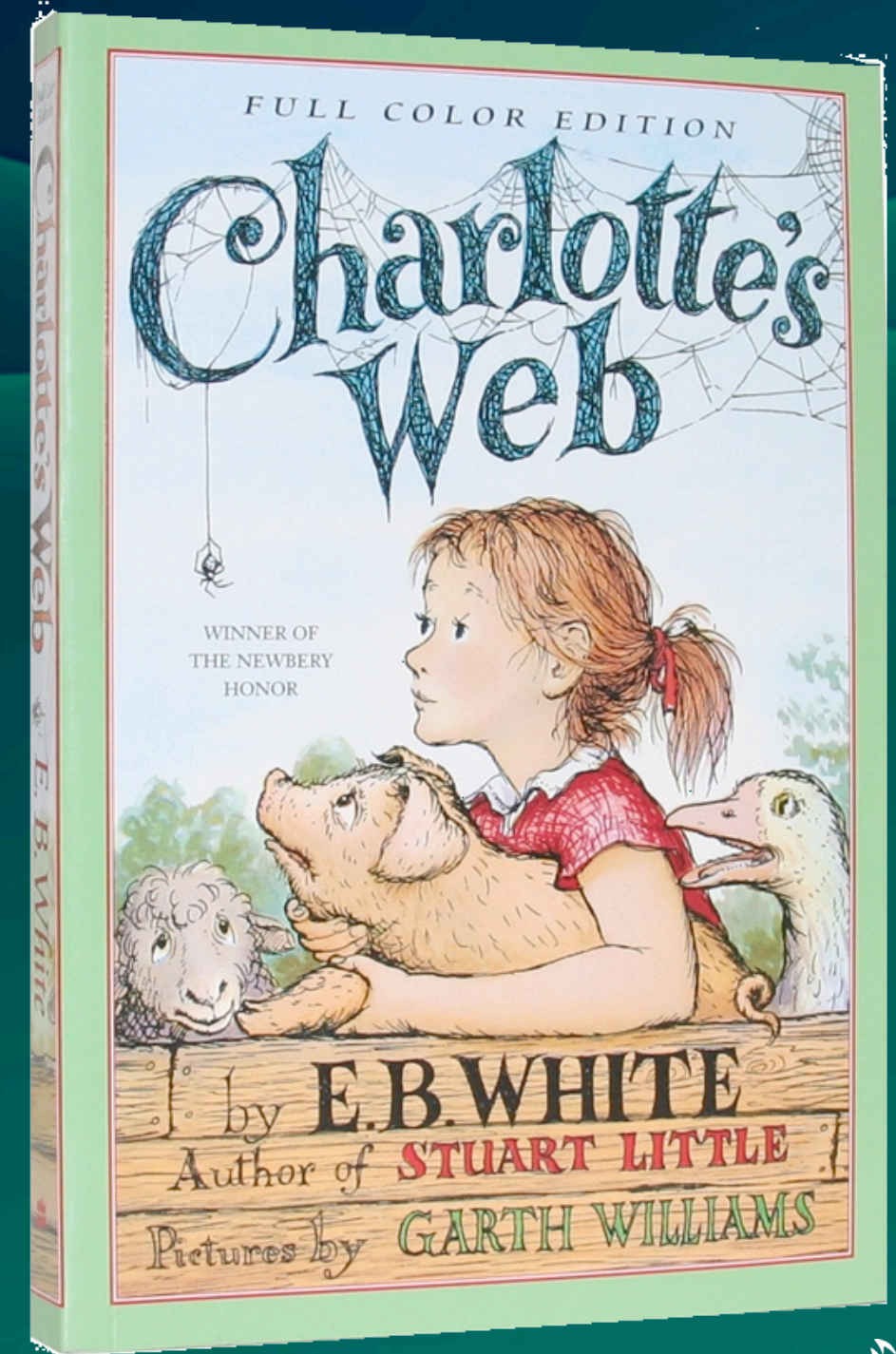




# Teaching, Learning, DAP and Technology

Imagine a technology:

- portable device
- single user (most frequently)
- user generally uncommunicative
- steep learning curve (years to mastery)
- not upgradable
- can precipitate deep change in user





# Teaching, Learning, DAP and Technology

## Screen Time:

- Its not eyes on screen, but students' actions
- Passive is problematic
- Active engagement, same as any tool





# Teaching, Learning, DAP and Technology

## Screen Time:

- Be intentional
- What does it add
- Child controls
- Visual system development



<http://www.educationnews.org>



# Teaching, Learning, DAP and Technology



<http://www.youtube.com/watch?v=kPLdCIhAU8U>







# Teaching, Learning, DAP and Technology

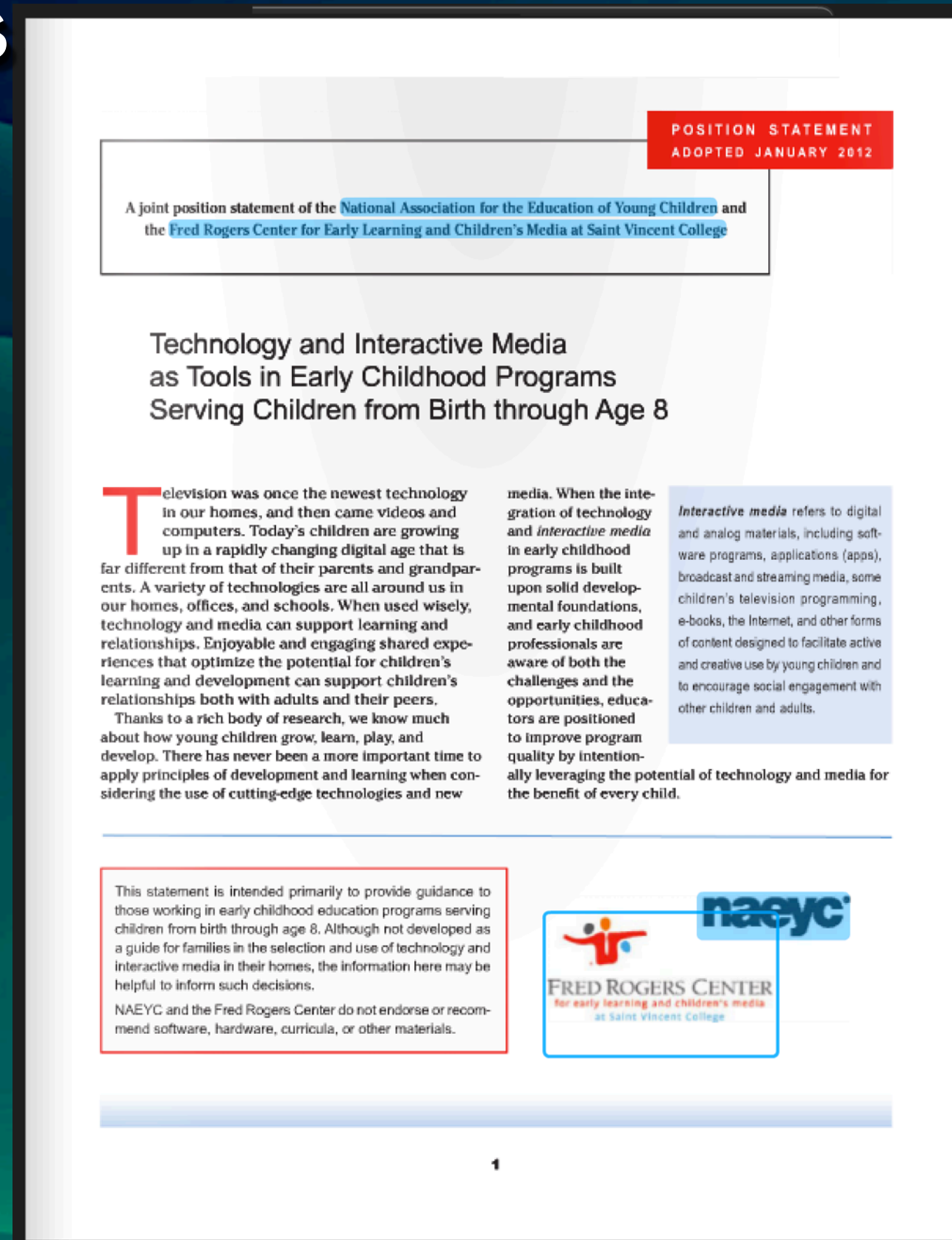


We Are the Nightmare



# Teaching, Learning, DAP and Technology Best Practices

## Become Familiar with NAEYC/FRC Technology Position Statement





# Teaching, Learning, DAP and Technology Best Practices

**Technology and Interactive Media as Tools  
in Early Childhood Programs Serving  
Children from Birth through Age 8**

**Supports:**

- child initiated,
- child directed,
- teacher supported,
- play with digital devices





# Teaching, Learning, DAP and Technology Best Practices

## Effective uses of technology and media:

- Match developmental level
- Are active, engaging & hands-on
- Give the child control
- One of many options





# Teaching, Learning, DAP and Technology

## Best Practices

When used appropriately

- Playful, foster co-engagement
- Extends learning
- Supports not supplants essential activities
- Helps children save, document, revisit, & share
- Supports creativity, exploration, & active play





# Teaching, Learning, DAP and Technology

## Best Practices

### Intentionality is Key

- Consider your goals.
- Will a digital tool add value?
- Does technology extend learning in ways not otherwise possible?
- Observe, assess & reflect

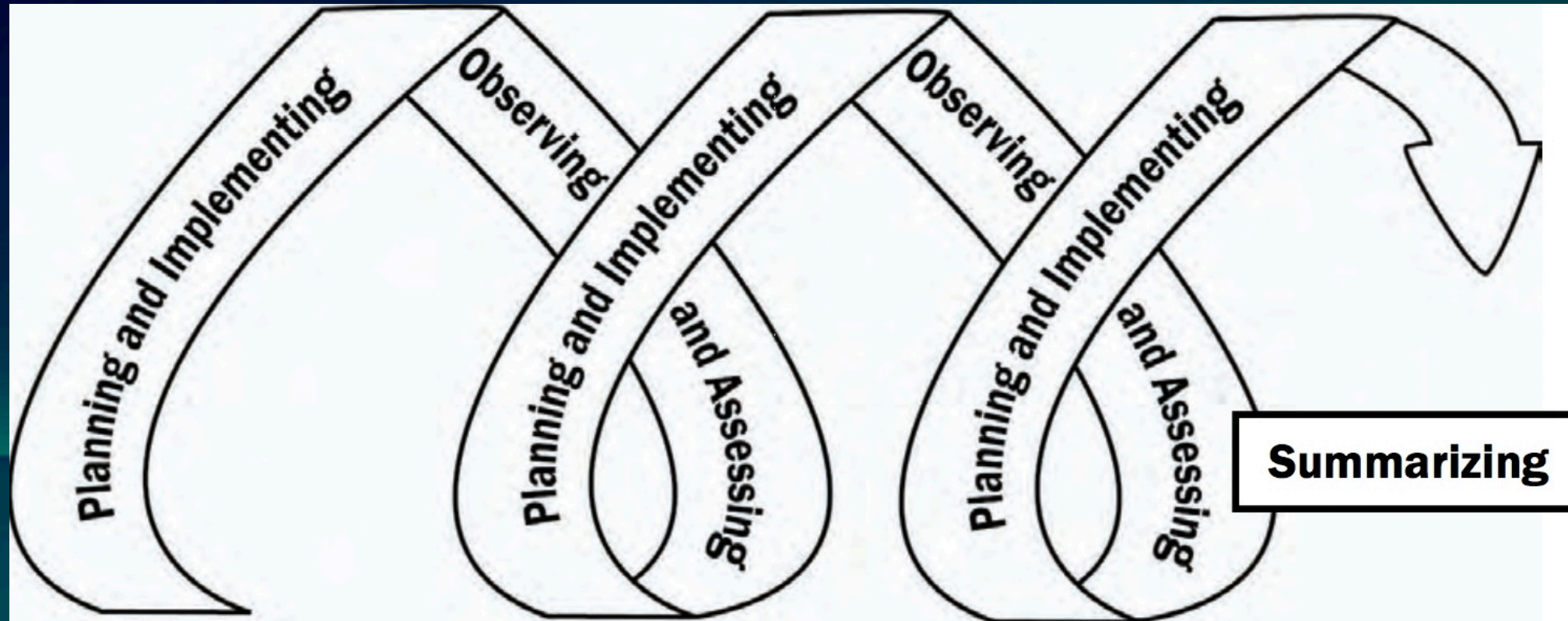




# Teaching, Learning, DAP and Technology

## Best Practices

### Cycle of Intentional Teaching



[www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Early/Preschool Assessment Framework.pdf](http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Early/Preschool%20Assessment%20Framework.pdf)



[www.sde.ct.gov/sde/lib/sde/PDF/DEPS/early/TW.pdf](http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/early/TW.pdf)



# Teaching, Learning, DAP and Technology Best Practices

## Universal Design For Learning

I. Provide Multiple Means of Representation	II. Provide Multiple Means of Action and Expression	III. Provide Multiple Means of Engagement
Perception	Physical action	Recruiting interest
Language, expressions, and symbols	Expression and communication	Sustaining effort and persistence
Comprehension	Executive function	Self-regulation

How can we design learning experiences to  
universally support the needs of learners?



# Teaching, Learning, DAP and Technology

## Best Practices

### Universal Design For Learning

- Learning needs and preferences
- Tools for differentiation





# Teaching, Learning, DAP and Technology

## Best Practices

In summary, teachers ask:

- What are the **objectives**?
- Which **tools** best support objectives?
- How can tools be used **appropriately**?
- How can we use them **intentionally**?
- What will tell me they are being **effective**?



# Teaching, Learning, DAP and Technology

This approach has always been  
the hallmark of good teaching





# Teaching, Learning, DAP and Technology

## Questions? How are we doing?





# Intentional, Appropriate, & Effective Uses of Technology:

## Listen, Go Deep, Empower

- Start with students' needs & interests
- Extend, enhance, & transform (SAMR)
- Integrate thematically



# Intentional, Appropriate, & Effective Uses of Technology: **Exploring Digital Tools**

- Microscopes
- Tablet Computers
- Cameras
- Whiteboards
- Assorted Software
- Assorted Hardware





# Exploring Digital Tools: Microscopes

## Microscopes: *Empowering New Perspectives*

- Wired, wireless, or affixed
- Computer screen
- Intentional provocation
- Visually interesting realia





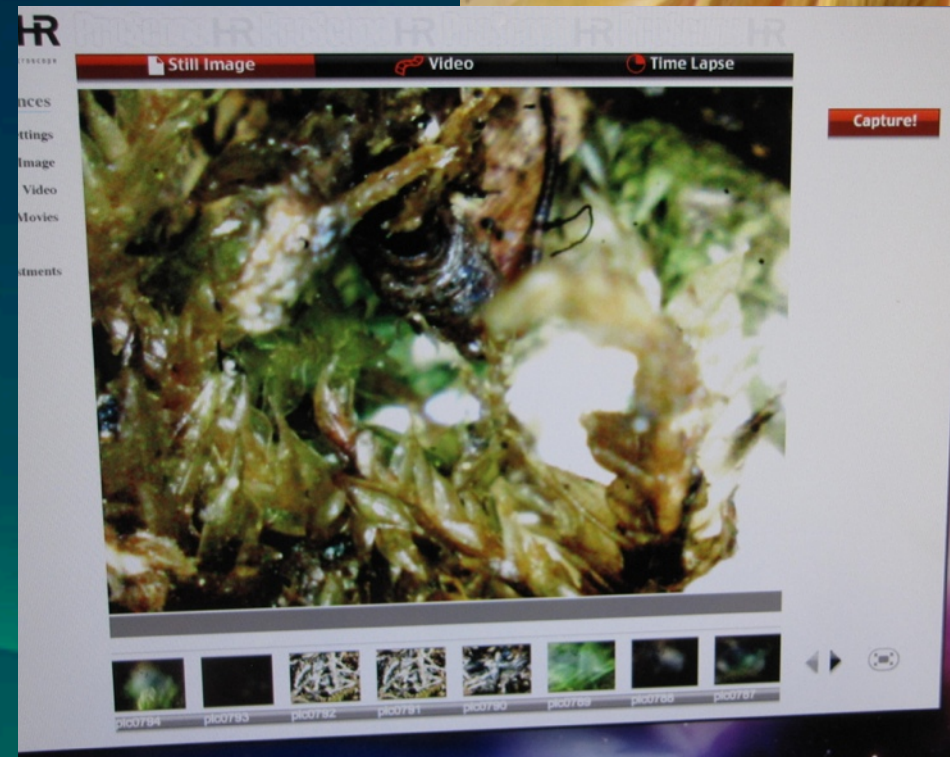
# Exploring Digital Tools: Microscopes

## Proscope HD



## Wired

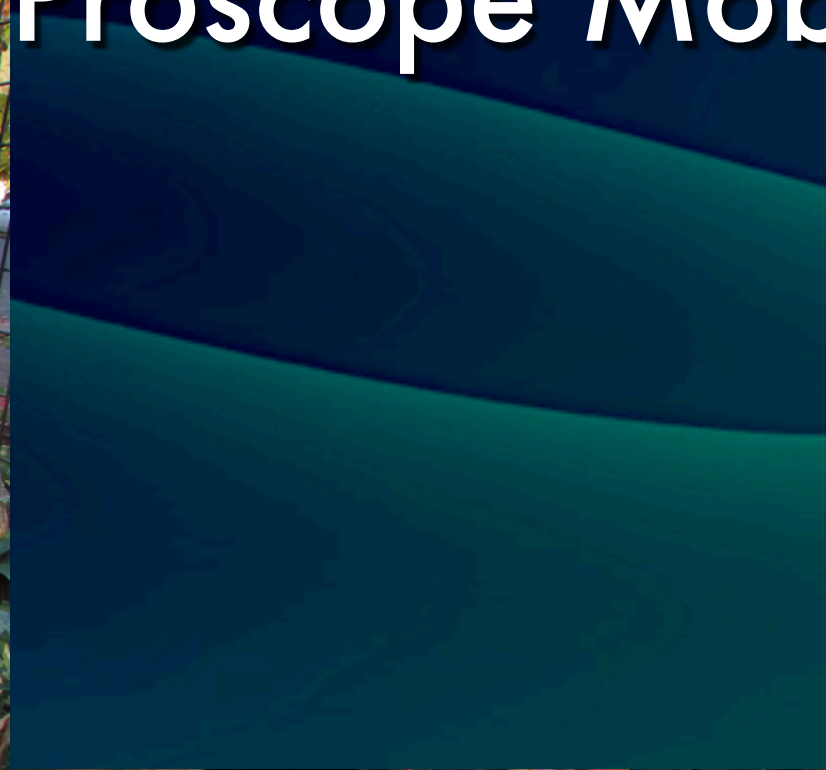
- Need computer
- Tied to place
- Least expensive





# Exploring Digital Tools: Microscopes

## Proscope Mobile



Wireless

- Need iPad
- Portable, network





# Exploring Digital Tools: Microscopes

## Proscope Mobile





# Exploring Digital Tools: Microscopes

## Proscope Micro-Mobile

### Proscope Micro Mobile

- iPad, iPhone, iTouch
- Attaches to lens
- 20x - 80x
- Displays as photo/video
- One scope, different sleeves





# Exploring Digital Tools: Microscopes

## Proscope Micro-Mobile





# Exploring Digital Tools: Microscopes

## Proscope Micro-Mobile





# Exploring Digital Tools: Microscopes

## Proscope Micro-Mobile

### Provocation:

In what ways does the surface of a leaf, look the same and different from the surface of your skin?





# Exploring Digital Tools: Microscopes

## Microscopes: Quintessential ECE Tool

- Effective in supporting wondering
- Extend authentic learning
- Empower exploration
- Multiple platforms
- Inherently motivating
- Not inexpensive





# Exploring Digital Tools: Tablets Hand-held Computing

## Handheld: *Child-Friendly Format*

- Multiple platforms: tablets, pods & phones
- Portable
- Small and manipulable
- Supports range of software





# Exploring Digital Tools: Tablets

## Intentional Use

### Tablets: *The Children's Machine*

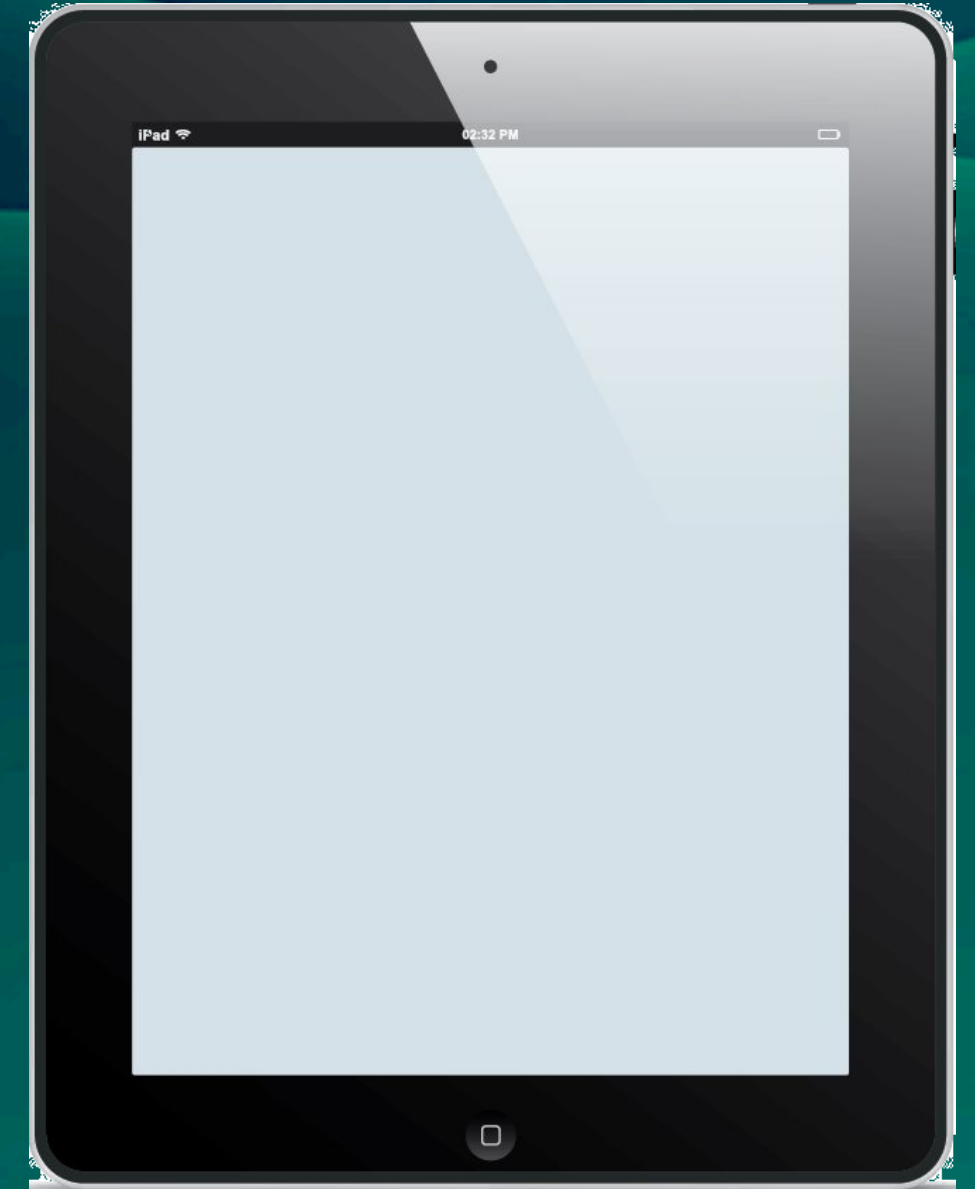




# Exploring Digital Tools: Tablets Hand-held Computing

## Quality Tablet Software

- Reconceptualizing Books & Reading
- Digital Storymaking
- Spatial/Creative
- Multidimensional and Assistive
- Intentional Use





# Exploring Digital Tools: Tablets

## Tablets and Literacy





# Exploring Digital Tools: Tablets

## Reconceptualizing Books



Aunt Annie's alligator . . . . .

A . . a . . A

- ABC Book
- Hop on Pop
- The Monster at the End of the Book
- Cinderella
- Numberlys
- Just Grandma & Me
- and many more



# Exploring Digital Tools: Tablets

## New Generation of Books



Walking slowly inside he discovered the most mysterious and inviting room he had ever seen. It was filled with the fluttering of countless pages, and Morris thought he could hear the faint chatter of a thousand different stories, as if each book was whispering an invitation to adventure.



## The Fantastic Flying Books of Mr Morris Lessmore

## Interactive Animated Hyperbooks



# Exploring Digital Tools: Tablets Literacy

Multiple Apps:  
*Empowering Voice  
Through Storymaking*





# Exploring Digital Tools: Tablets Literacy

## School and Sister and Me



## Storykit

Field Recording:

“A long time ago my sister and me went to the ELC and it’s the one we’re in right now and when she came out a lot of time she would pick me up and we would talk together.”





# Exploring Digital Tools: Tablets Literacy

## Using StoryKit

- Create story
- Illustrate or capture photo
- Type or write captions
- Record Audio
- Share

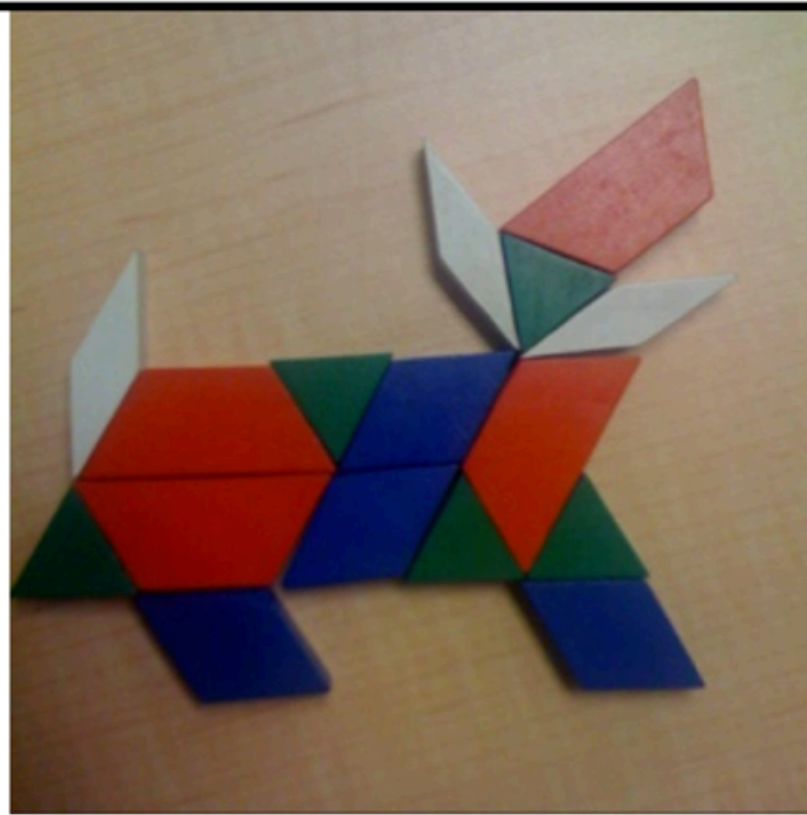




# Exploring Digital Tools: Tablets

## Literacy

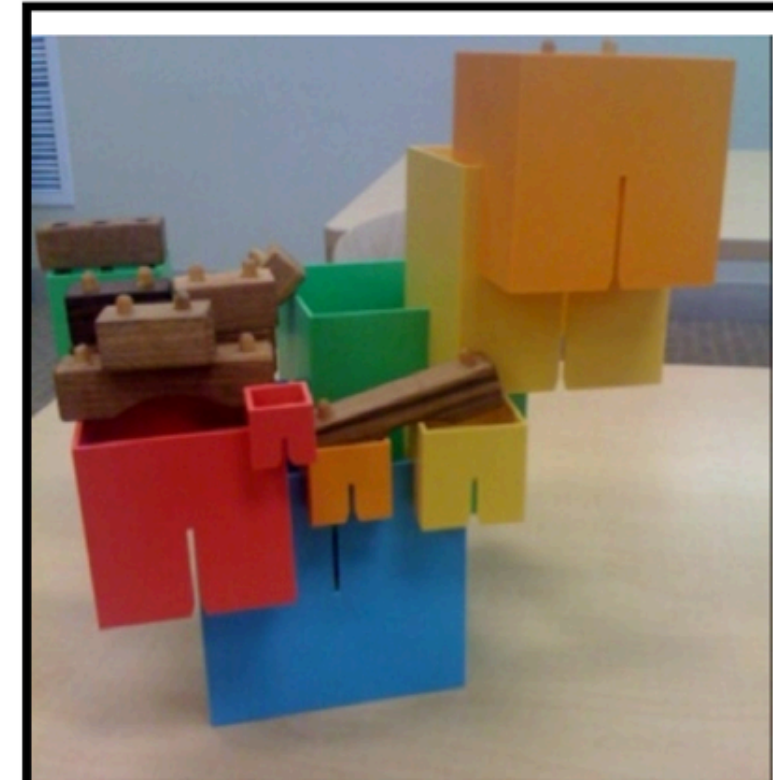
### The Princess The King And The Dog



Wunc upon atim ther was a dog  
nam fin



The was a dog nam fin. I likt him  
vere much. Sns I likt him vere  
much, I wod lik to tak him for a  
wok.



They wnt on a wok urwnd the kasl.  
Thn tha wnt hugre. Thn tha wnt for a  
pinik. The dog had dog fud the prncus  
had humn fud. The end

<http://iphone.childrenslibrary.org/cgi-bin/view.py?b=4gke6lffn6fax6jqwx5l>



# Exploring Digital Tools: Tablets Literacy

## Doodlecast

### Features

- Drawing as movie
- Audio narrative
- Exportable video



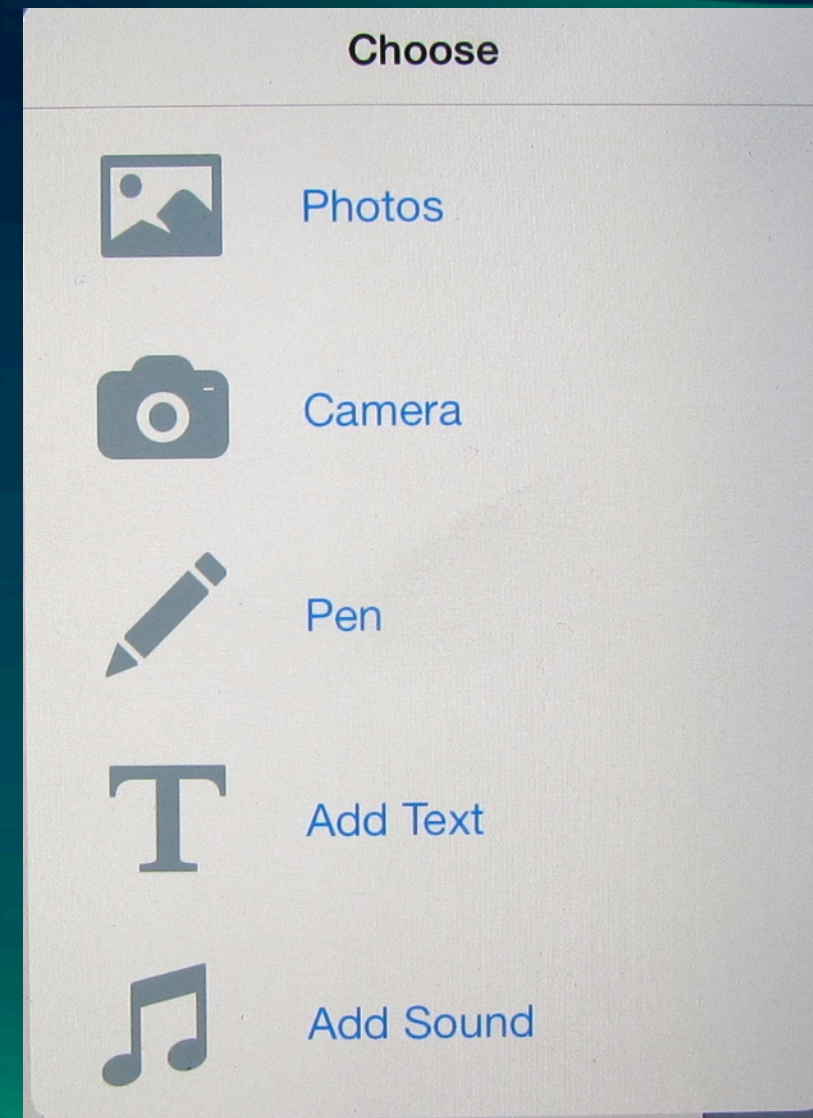


# Exploring Digital Tools: Tablets Literacy

## Book Creator

### Features

- Photos
- Drawing
- Audio
- Text
- Exportable formats





# Exploring Digital Tools: Tablets

## Literacy

### Storymaking Apps

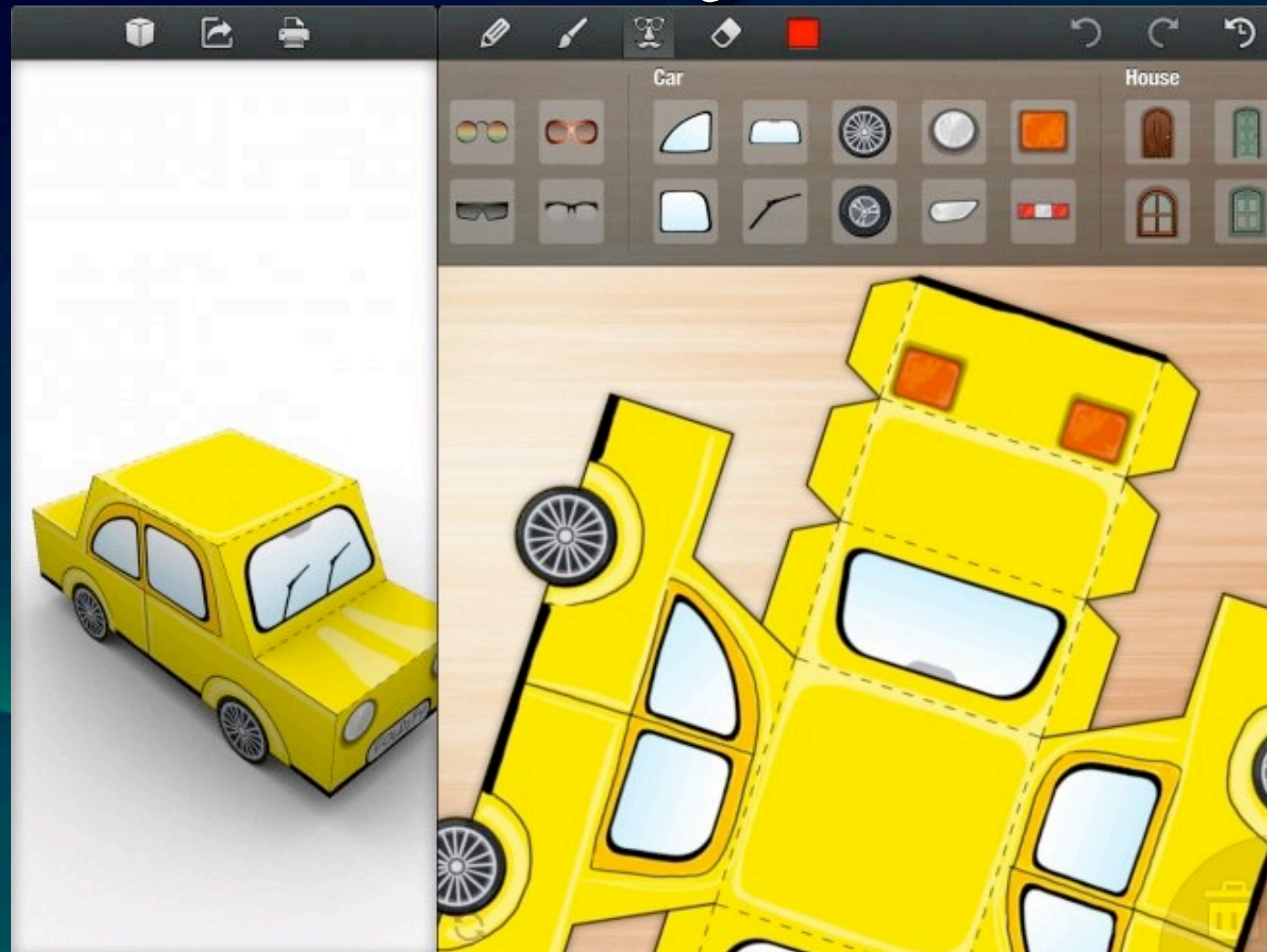
- Inspire creativity
- Extend learning
- Support sharing
- Create connections
- Empower narrative





# Exploring Digital Tools: Tablets Spatial/Creative

## Foldify: *Exploring Dimensionality*



**Foldify**





# Exploring Digital Tools: Tablets Spatial/Creative

## Using Foldify

- Design a structure
- Print
- Cut and fold
- Play





# Exploring Digital Tools: Tablets Spatial/Creative

## Evaluating Foldify

- Promotes creativity
- Fosters collaboration
- Extends numeracy
- Inspires play
- Encourages problem-solving





# Exploring Digital Tools: Tablets

## Multidimensional

### Tapikeo:

*AAC and Multidimensionally  
Creative Tool*

- Social stories
- Augmentative & Alternative Communication
  - Visual Schedules
  - Memory Aids
  - Labels & Items

### Tapikeo HD





# Exploring Digital Tools: Tablets

## Multidimensional

### Requires:

- Application
- iPad, iPhone, iPod Touch
- Computer for Sharing





# Exploring Digital Tools: Tablets

## Multidimensional

### In Classroom:

- Create Grid
- Photograph & document
- Add sound
- Share





# Exploring Digital Tools: Tablets

## Multidimensional





# Exploring Digital Tools: Tablets

## Multidimensional

### Augmentative Alternative Communication

- Storyboards, Pictureboards
- Flashcards
- Match pictures to words or sounds





# Exploring Digital Tools: Tablets

## Multidimensional

Storymaking





# Exploring Digital Tools: Tablets

## Multidimensional

 **tapikeo!**  
**Dragons live forever and princesses**

  
**Textitl**

  
**My castle**

  
**I'm working hard on it**

  
**Castle**

  
**Treasure chest box**

  
**A dragon turned mean**



# Exploring Digital Tools: Tablets

## Multidimensional

### Evaluating Tapikeo

- UDL & Assistive technology
- Extends & supports work
- Scaffolds Adaptive Complexity
- Encourages sharing & revisiting





# Exploring Digital Tools: Tablets

## Intentionality

### Tips for Introducing Tablet Computers

- Intentionally introduce one app at a time
- Allow ample time to explore
- Support collaboration
- Create “Tech Expert” team
- Rule of thirds





# Exploring Digital Tools: Tablets

## Intentionality

Name: \_\_\_\_\_

### iPad Plan

1. Which program will you be using?



2. What will you be learning, practicing, or researching?



Reading



Writing



Science



Math



Researching



Art

3. Will you be collaborating with a partner?



Yes



No



# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

Digital Cameras:  
*Documenting, creating,  
and demonstrating learning*





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

Storyography:  
*Empowering children's voices  
through multimedia storymaking*





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

### Storyography

- Storymaking emerges from imaginative play
- Student directed & documented narrative
- Supported by intentional teacher

### Requires

- Close teacher scaffolding
- Bookbinding materials
- Digital camera, computer, printer





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

### Process:

- Student creates
- Teacher transcribes
- Student photographs
- Teacher prints
- Book constructed
- Digitized?





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

Student Creates





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

Story Dictated





# Exploring Digital Tools: Digital Cameras Supporting Literacy

## Teacher Scaffolding





# Exploring Digital Tools: Digital Cameras Supporting Literacy

Photographing  
Each Image





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

The dragonfly is guarding the house.



He doesn't want anybody to come because the baby horse is eating his food.





# Exploring Digital Tools: Digital Cameras

## Supporting Literacy

### Evaluating Storyography

- UDL with adaptive scaffolds
- Effectively inspires literacy
- Extends experiences
- Intentionality & creativity
- Sharing & revisiting





# Exploring Digital Tools: Digital Cameras

## Supporting Social Studies

### Flat Stanley: Cultivating Connections





# Exploring Digital Tools: Digital Cameras

## Supporting Social Studies

### Flat Stanley Process

- Create flat people
- Penpal exchange
- Maps, photos, letters

### Requires

- Digital Cameras
- Internet Connection([www.flatstanley.com](http://www.flatstanley.com))





# Exploring Digital Tools: Digital Cameras Supporting Social Studies

## MapSkip: Sharing Our Adventures

The screenshot shows a web browser window with the address <http://www.mapskip.com/>. The browser's address bar and tabs are visible. The website's header includes a search bar with the text "keynote" and a navigation menu with links: ELC, Blog, Squarespace, Webmail, Library, Ms Aja, Webmail, Really Big Numbers, You Tube, Gmail, and Calendar. The main content area features a map of Oregon with a red hand icon marking a location. A pop-up window titled "Aumsville Tornado" displays a story by "ELC Whales" from 2010. The story includes two paragraphs of text and two photographs of damaged buildings. Below the story, there are links to "Track Comments for this Story", "Send This Story to a Friend", "Permanent Link for this Story", "Track Author", and "Translate Story". The map in the background shows various towns and landmarks, including Long Beach, Astoria, Hammond, Longview, West, Hood River, Lyle, Chenoweth, The Dalles, Dufur, Wasco, Mt Hood National Forest, Pine Hollow, Maupin, Madras, Metolius, Culver, Terrebonne, Redmond, Pineville, Sisters, and Bend. The map is credited to "Map data ©2011 Google" and includes a "Terms of Use" link.

MapSkip - Places Have Stories!

<http://www.mapskip.com/>

ELC Blog Squarespace Webmail Library Ms Aja Webmail Really Big Numbers You Tube Gmail Calendar



Filter Places Map

**Aumsville Tornado** Place marker added by ELC Whales

2010: Tornado in Aumsville by [ELC Whales](#) in [Aumsville Tornado](#) [Make this a Favorite](#)

I used to think that they only had tornados in other countries or in other states. That was when I was little (about 4 or 3 I would say). Everybody is talking about the tornado. When I mean everybody, I mean teenagers (some kids). I think alot of people didn't know about tornados at this school. People who hunt down tomadoes and this guy (in this video we watched on tomadoes), Tim, had 10 seconds to videotape the tornado and run back in the car. It was a probe to give information and over that was a thing to protect it. If your little kids are scared about this, tell them that usually it doesn't happen that often. It happens not here, but in Tornado Alley. Instructions to be safe (tell your kids this): When you go for the door jam it makes them safer. It is just hard enough. When we were watching this video I really thought it was crazy that some people thought it was funny. It was just really sad. - Francis, 6 years old

There are fire tomados and plain tomadoes. But the fire tomados are usually in warmer, drier places like Hawaii. Hawaii is really sunny. Tornados twirl around like in the toilet when you flush and the water goes down. They are just like that. Stay away from windows because we watched a show and we know about tomados. 90 people get killed every year from tomados (90 is almost to 100). -Naomi, 6 years old

[Track Comments for this Story](#) [Track Author](#)  
[Send This Story to a Friend](#) [Translate Story](#)  
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Add Your Comment

Map data ©2011 Google - [Terms of Use](#)

[User Guidelines](#)



# Exploring Digital Tools: Digital Cameras

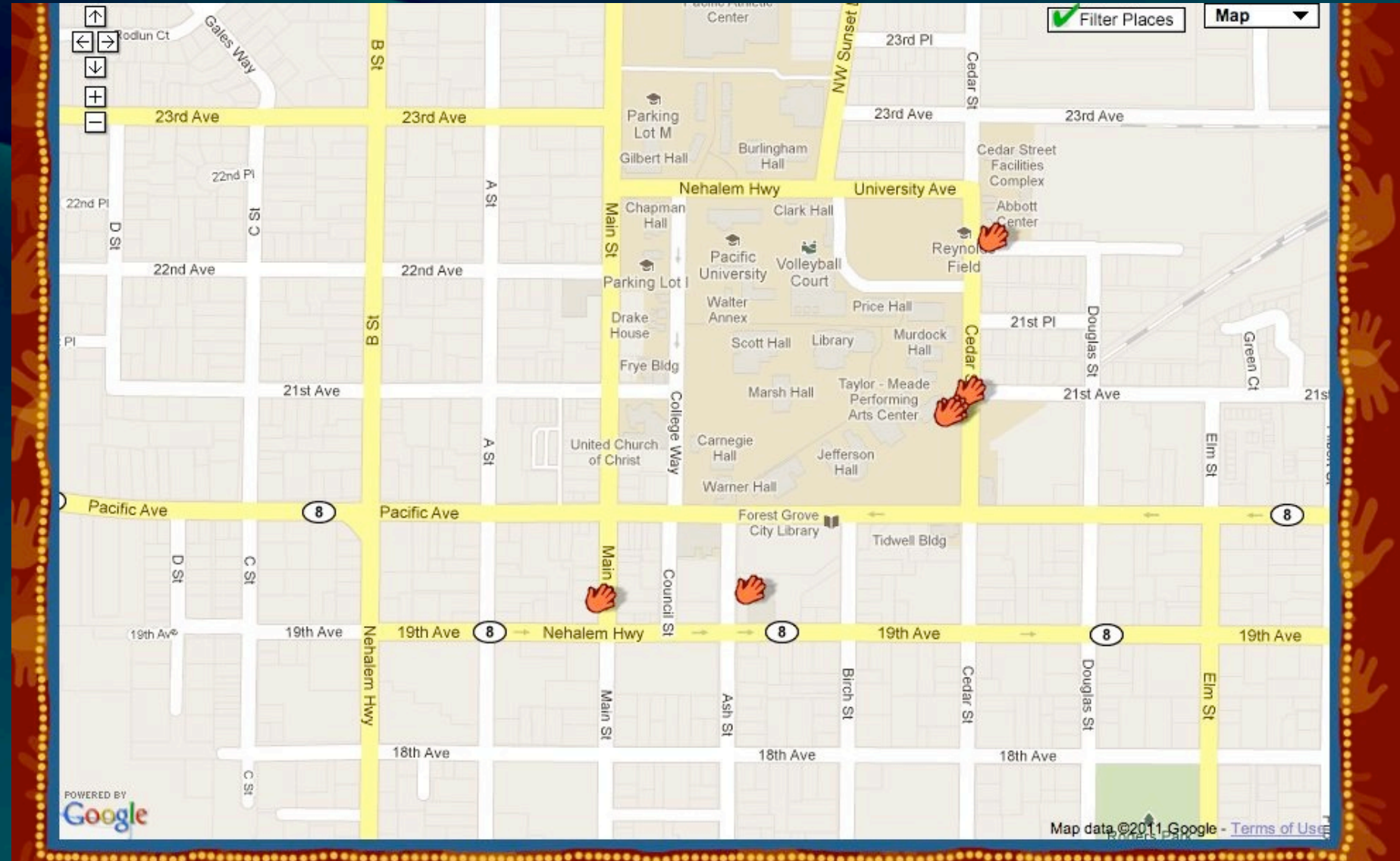
## Supporting Social Studies

### Using MapSkip

- Explore new places
- Upload photos & stories

### Requires

- Computer with Internet  
([www.mapskip.com](http://www.mapskip.com))
- Digital camera (optional)





# Exploring Digital Tools: Digital Cameras Supporting Social Studies

## Evaluating Flat Stanley & MapSkip

- Low-cost high-return project
- Students as documenters
- Fosters social connections
- Empowers exploration
- Invites story sharing
- Ties in with books
- Enhances geo-literacy





# Exploring Digital Tools: White Boards

## Supporting Literacy

SMART Board:  
*Fostering  
Authentic Literacy*

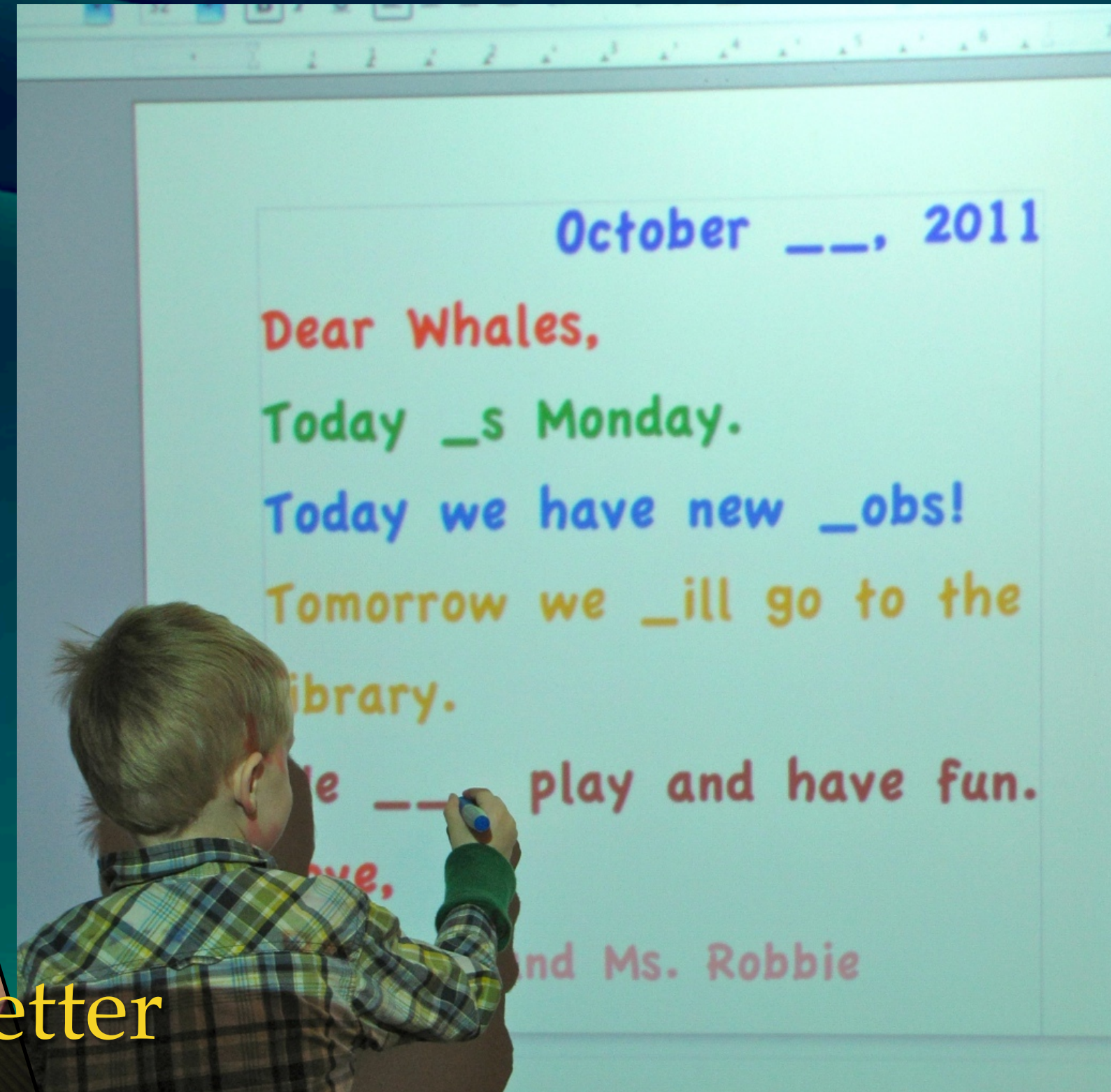




# Exploring Digital Tools: White Boards

## Supporting Literacy

### SMART board



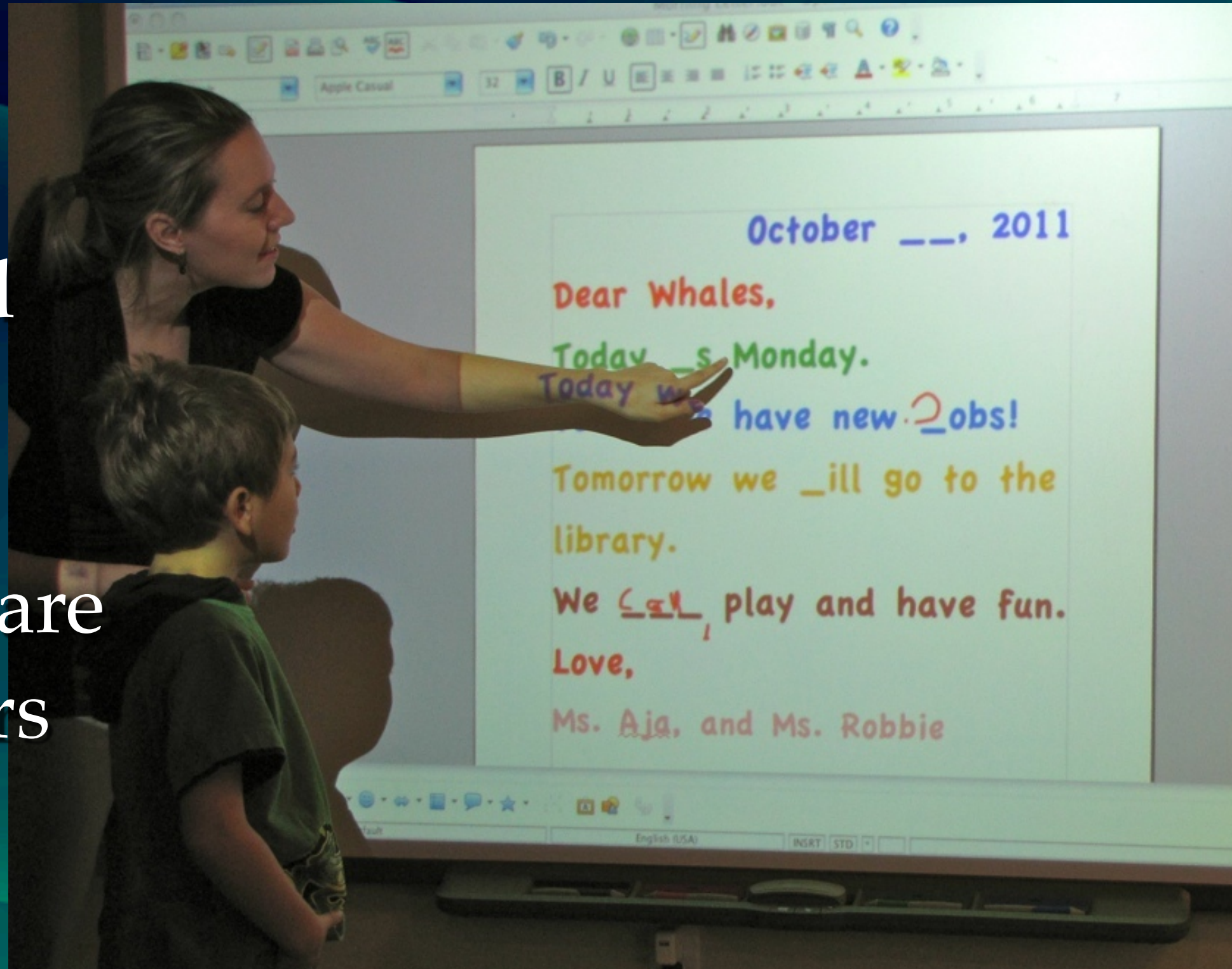
### Morning Letter



# Exploring Digital Tools: White Boards Literacy

## Requires

- Interactive Whiteboard
- Computer
- Projector
- Smart Notebook software
- Whiteboards & Markers





# Exploring Digital Tools: White Boards Literacy

## Using Interactive Whiteboard

- Authentic letter
- Strategic words
- Enticing graphics
- Student leader
- Active engagement

February 5, 2014



Dear Whales,

Today is Tuesday.

Yesterday \_\_\_\_ Monday.

Today is our \_\_\_\_ (ninety-third) day of school.

\_\_\_\_ can see fog.

We will \_\_\_\_alk to the library today.

We will get a n\_\_\_\_ tool in Writer's Workshop today.



Love,

Ms. Aja and Ms. Lacey





# Exploring Digital Tools: White Boards

## Literacy

February 5, 2013



Dear Whales,

Today is Tuesday.

Yesterday was Monday.

Today is our 93 (ninety-third) day of school.

I can see fog.

We will walk to the library today.

We will get a new tool in Writer's Workshop today.



Love,  
Ms. Aja and Ms. Lacey



we learned how  
to use ten sticks



93

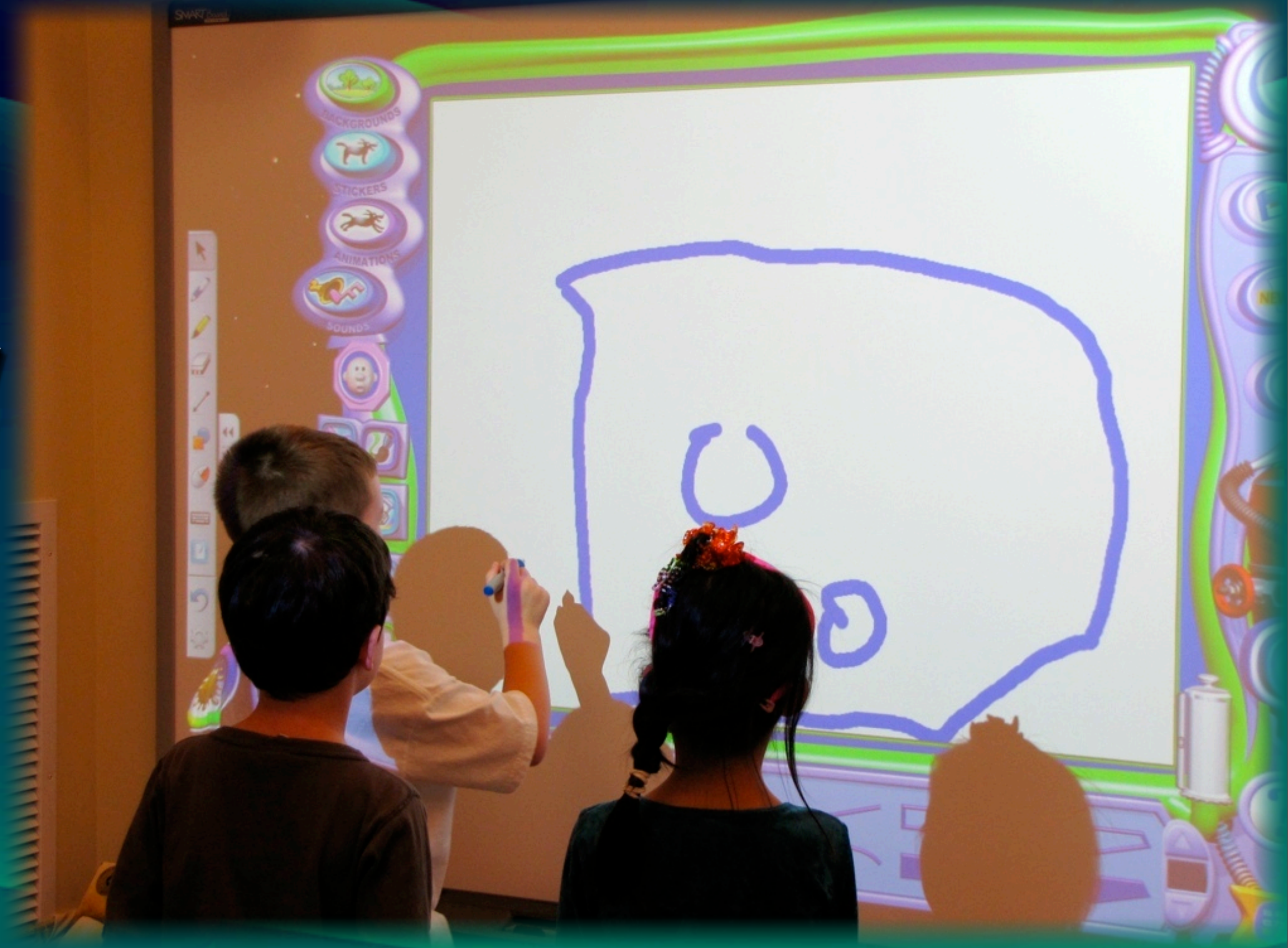


Save and  
Revisit Work



# Exploring Digital Tools: White Boards Literacy

KidPix:  
*Encouraging creativity  
and collaboration*





# Exploring Digital Tools: White Boards

## Literacy



Supports  
& Extends



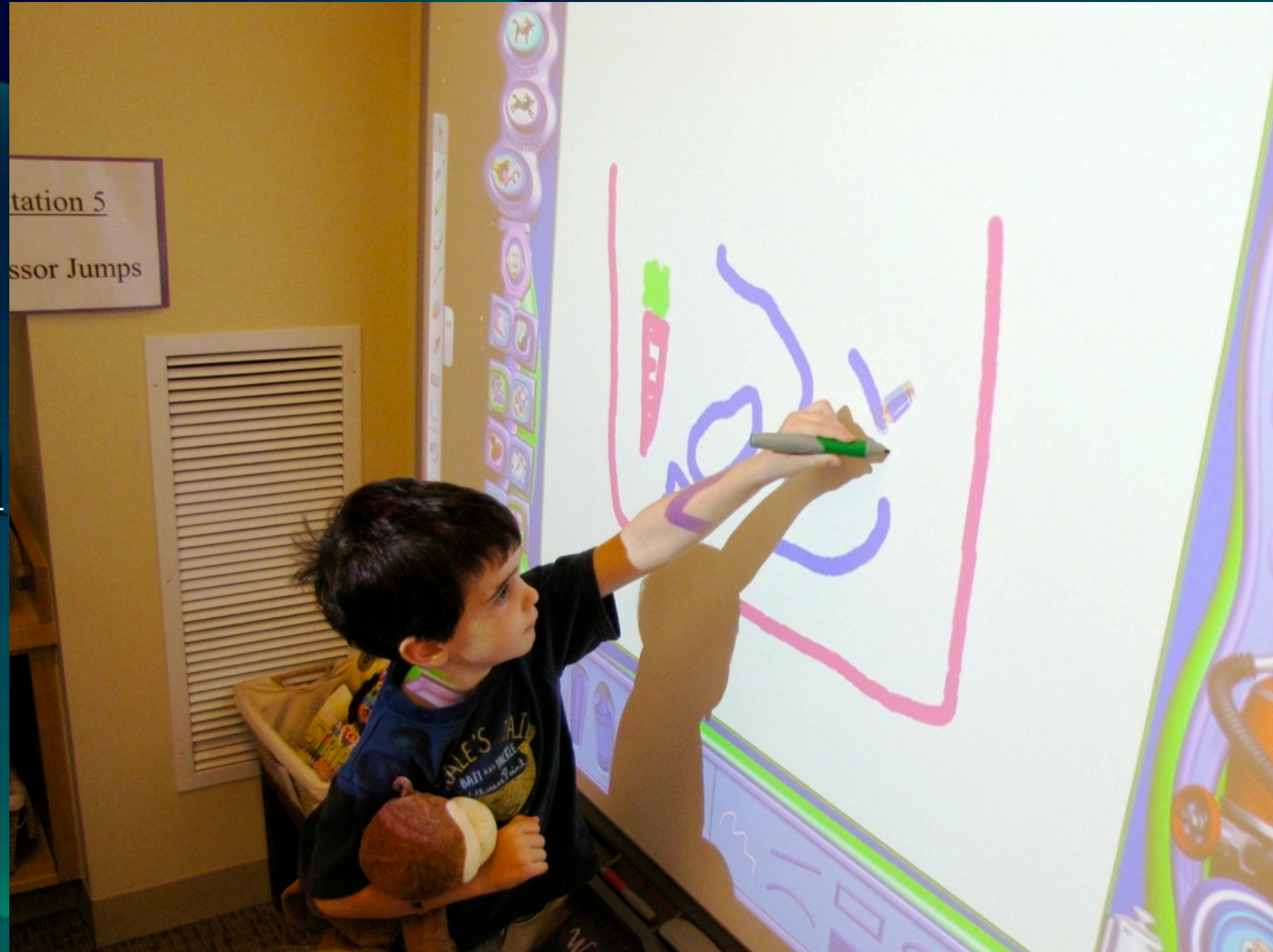
Stone Soup



# Exploring Digital Tools: White Boards Literacy

## Requires

- Computer
- Kidpix Software
- Interactive White Board (optional)

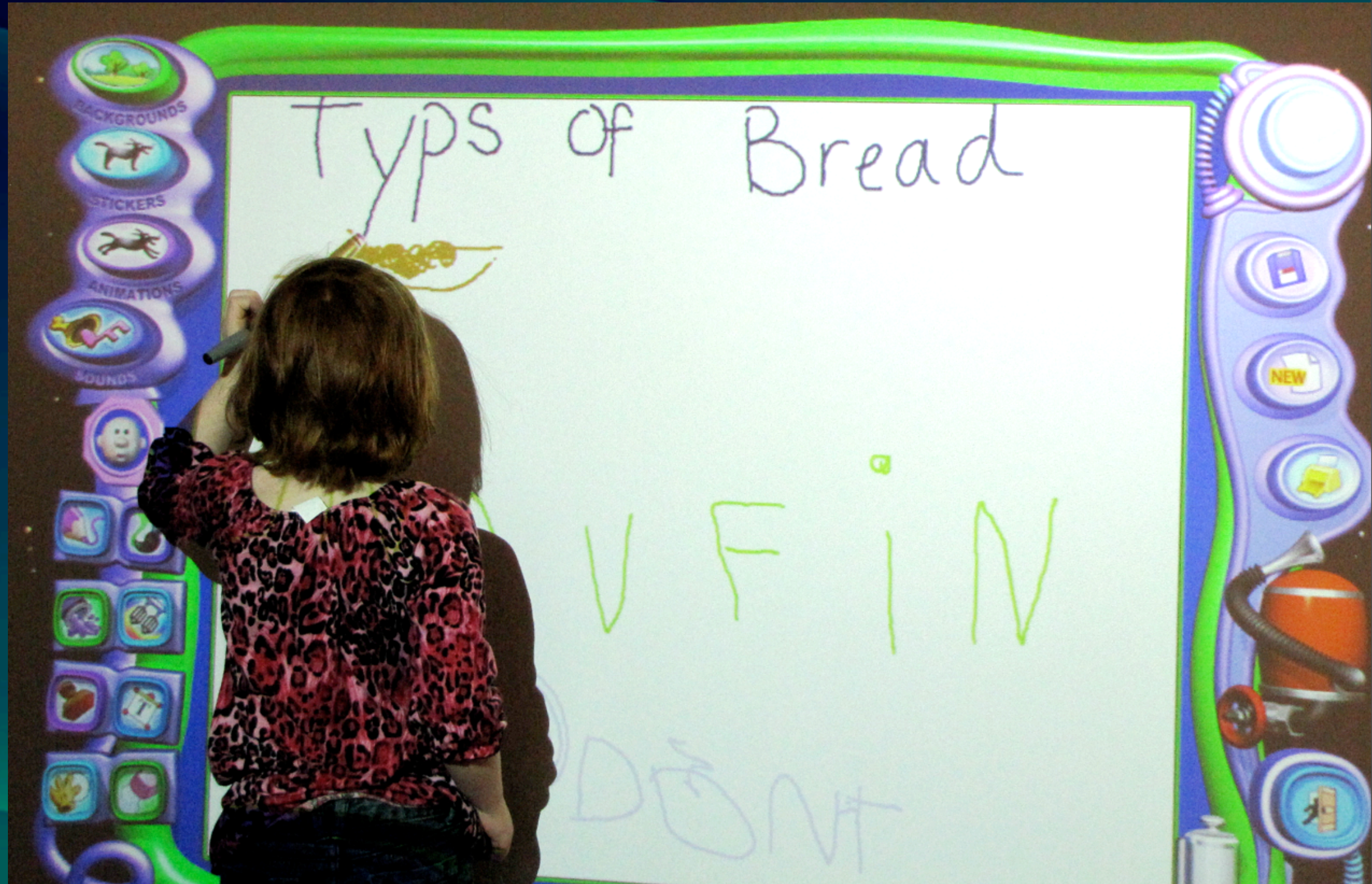




# Exploring Digital Tools: White Boards Literacy

## Using Kidpix

- Small groups
- Large canvas
- Create & play
- Modify & revisit
- Share





# Exploring Digital Tools: White Boards

## Literacy

### Evaluating Kidpix

- Inspires hands-on learning
- Encourages creativity
- Invites self-expression
- Extends literacy
- Encourages dwelling
- Supports gross-motor





# Exploring Digital Tools: White Boards

## Numeracy

Virtual Manipulatives:  
*Investigating  
Mathematical Concepts*





# Exploring Digital Tools: White Boards

## Numeracy

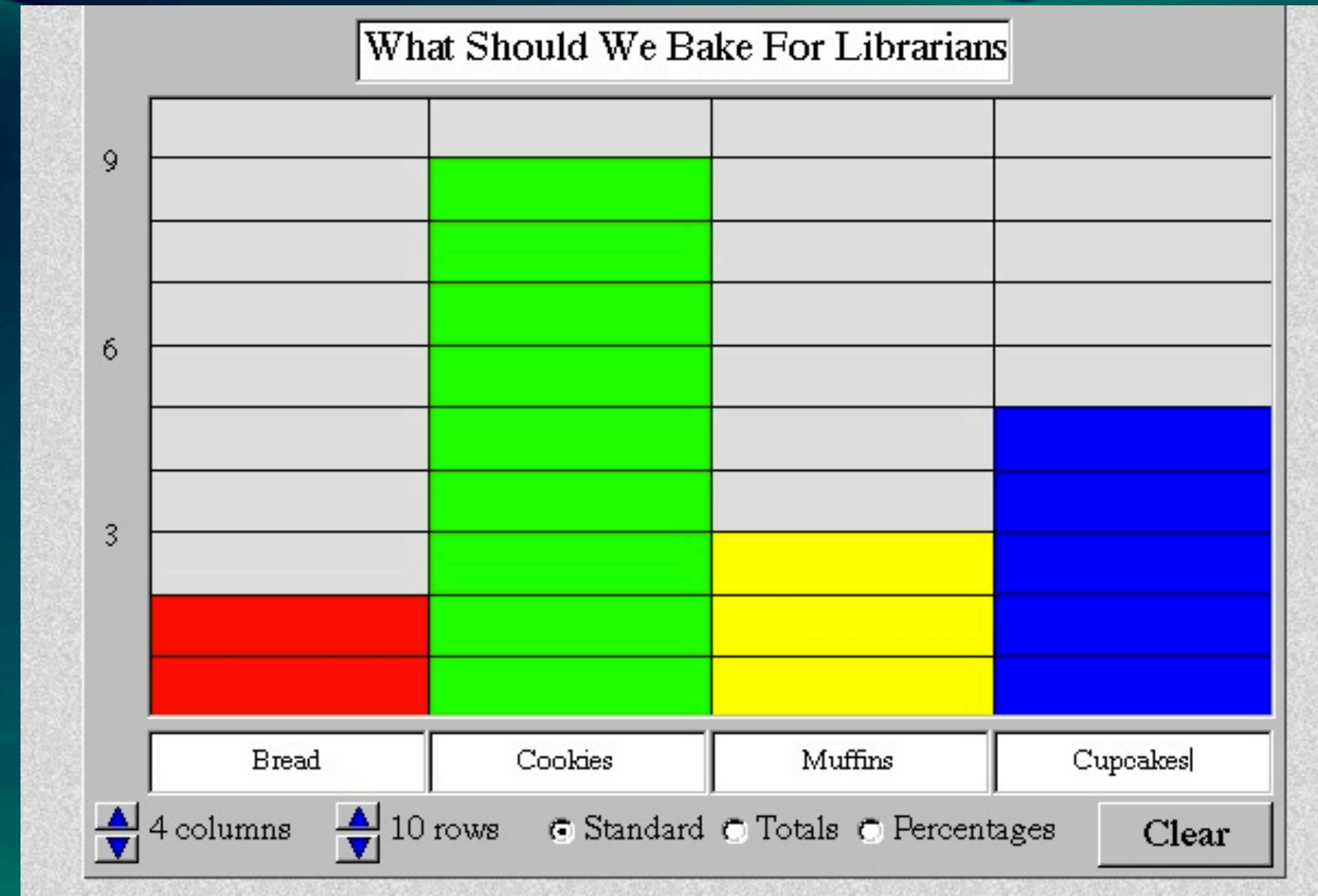
### Using Virtual Manipulatives

- Java-based math tools
- Data display

### Requires

- Computer with internet

(<http://nlvm.usu.edu/en/nav/vlibrary.html>)



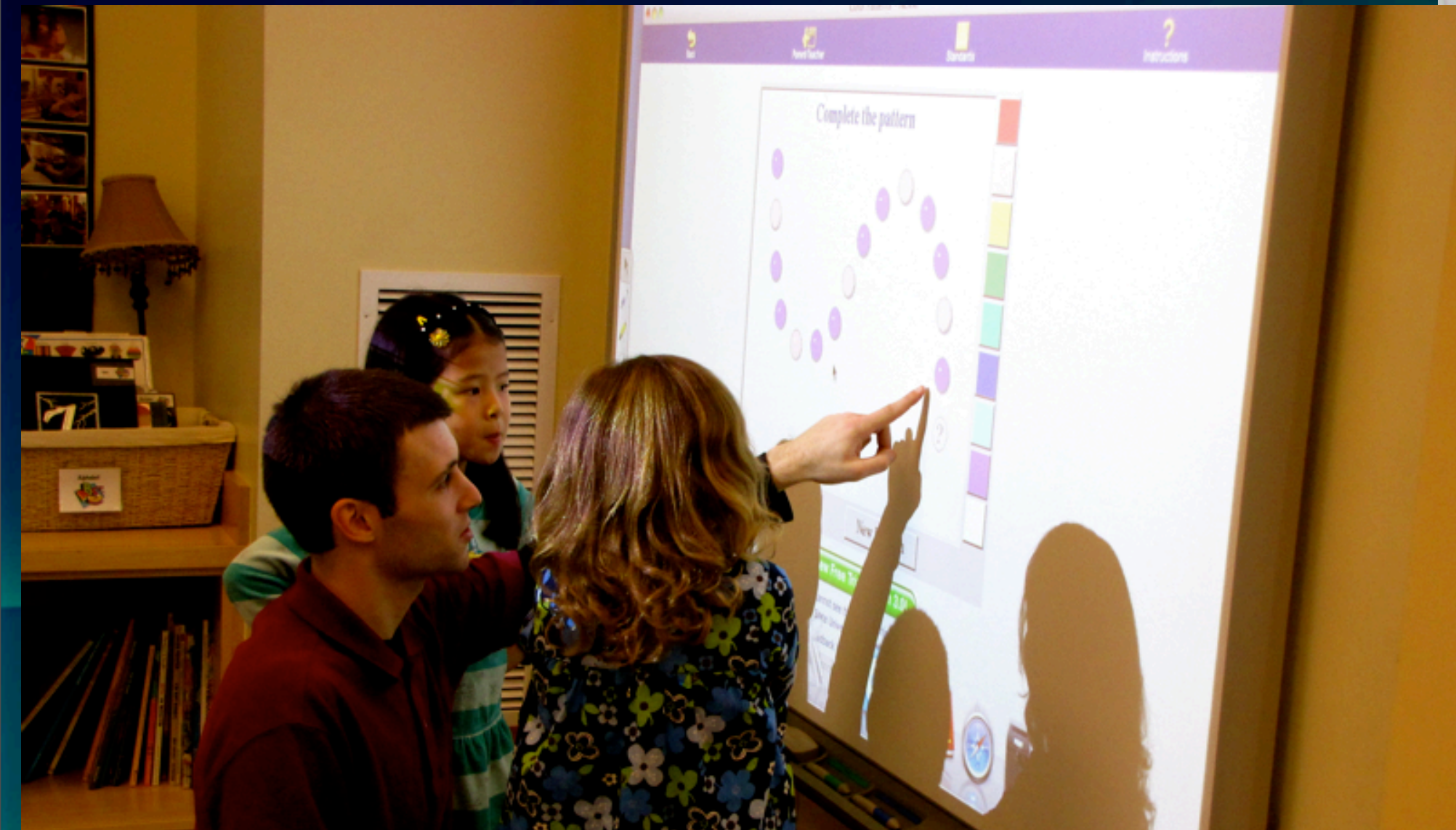
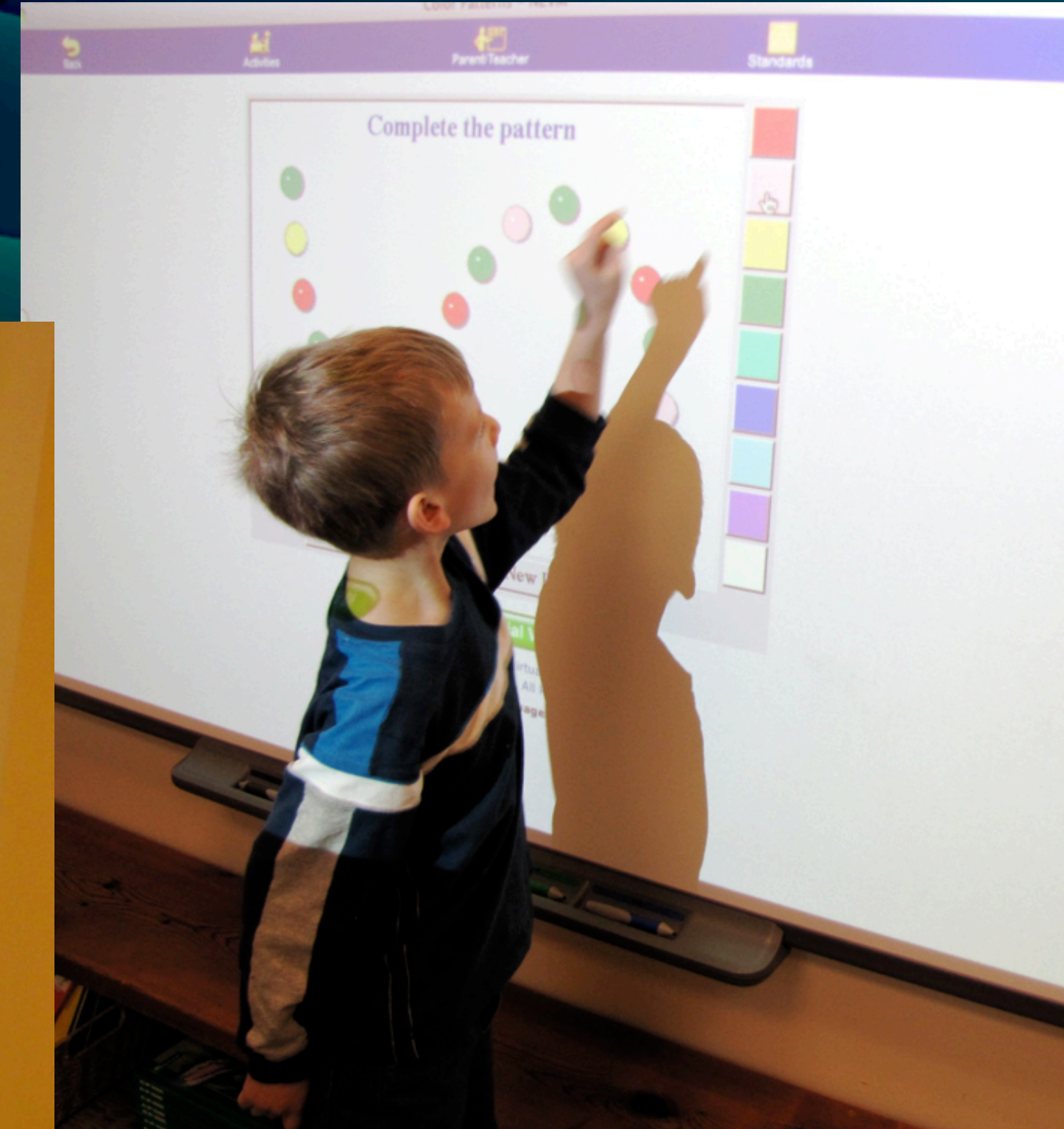


# Exploring Digital Tools: White Boards

## Numeracy

## Virtual Manipulatives

- Many different modules





# Exploring Digital Tools: White Boards

## Numeracy

### Virtual Manipulatives

- Numbers and operations
- Data Analysis & Probability
- Pre-algebra
- Geometry
- Measurement

#### Number & Operations (Grades Pre-K - 2)



**Bar Chart** – Create a bar chart showing quantities or percentages by labeling columns and clicking on values.



**Base Blocks** – Illustrate addition and subtraction in a variety of bases.



**Base Blocks Addition** – Use base ten blocks to model grouping in addition.



**Base Blocks Decimals** – Add and subtract decimal values using base blocks.



**Base Blocks Subtraction** – Use base ten blocks to model separation of groups in subtraction.



**Chip Abacus** – Learn about carrying and digits using chips.



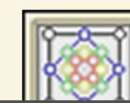
**Circle 99** – A puzzle involving adding positive and negative integers to sum to ninety nine.



**Color Chips - Addition** – Use color chips to illustrate addition of integers.



**Color Patterns** – Arrange colors to complete a pattern.



**Diffy** – Solve an interesting puzzle involving the differences of given numbers.



# Exploring Digital Tools: White Boards

## Supporting Social Studies

Google Earth:  
*Exploring Our World*





# Exploring Digital Tools: White Boards

## Supporting Social Studies

### Requires

- Google Earth Software
- Computer with Internet

### Using Google Earth

- Virtual travel
- Photos, videos
- Zoom-in feature





# Exploring Digital Tools: White Boards

## Social Studies

### Evaluating Google Earth

- Provides hands-on experiences
- Enables unique, 3D perspective
- Encourages exploration
- Inspires research



Salve!  
[By francy58](#)  
[Fly to this photo's location](#)  
[Misplaced?](#)  
[Inappropriate](#)  
[Comment it](#)  
  
Panoramio  
[Upload your photos](#)



# Exploring Digital Tools: White Boards

## Evaluating Interactive White Boards

- Increases engagement
- Empowers students
- Fosters discussions
- Provides scaffolds
- Enables saving & revisiting
- Not inexpensive





# Exploring Digital Tools: Web Tools Literacy & Documentation

## Classroom Blogging: *Documenting and Sharing*



**vimeo**



# Exploring Digital Tools: Web Tools

## Literacy & Documentation

### Process:

- Document learning
- Students reflect
- Writing text
- Adding photographs & video
- Reading and responding to comments
- Fosters discussions





# Exploring Digital Tools: Web Tools Literacy & Documentation



## A Whale of a Tale

the kindergarteners of the Early Learning Community at Pacific University

[BLOG](#) [PHOTOS](#) [CALENDAR](#) [SONGS](#) [OUR TEACHERS](#) [OUR CLASSROOM](#) [OUR SCHOOL](#)  
[COMMUNICATION](#) [RECIPES](#) [STUDENT WORK](#)

Welcome to the Early Learning Community at Pacific University. We invite you to explore our site and see this reflection of our school life. Feel free to share comments- we love to read and reply to them!

### Writers workshop

TUESDAY, OCTOBER 25, 2011 AT 4:49PM



Today in writers workshop we discussed adding pages to our work. Ask your child to describe what he or she worked on today.



Early Learning Community at Pacific University



Pacific University Oregon  
COLLEGE of EDUCATION

Search

Find posts by topic

- Janis
- Katelyn
- Outline
- Technology
- Writing
- Zenzo

#### Contact Me

This form will allow you to send a secure email to the owner of this page. Your email address is not logged by this system, but will be attached to the message that is forwarded from this page.

Your Name \*

# Documenting Learning





# Exploring Digital Tools: Web Tools Literacy & Documentation

## Reflecting





# Exploring Digital Tools: Web Tools Literacy & Documentation

## Creating the Blog





# Exploring Digital Tools: Web Tools Literacy & Documentation

## Replying to Readers' Comments





# Exploring Digital Tools: Web Tools Literacy & Documentation



## Mapping Readers' Comments



# Exploring Digital Tools: Web Tools

## Literacy & Documentation

...third, as parents, we really appreciate the time Laurel puts in to posting on the blogs and communicating some of what goes on during the day. We recently discovered another great use of the blog -- it has helped Michael with some of his separation anxiety around drop-off. Since he only goes 2 days a week, it seems easy for him to forget how much fun he has at school. We've found that by looking at the blog and pictures on the mornings he goes to school, it has helped him get excited again and tempered some of his sadness.

*blessings,*  
*Brenda*

Dear Mr. Mark,

As the mother and grandmother of Canadian children living 3000 miles away in the United States I am constantly looking for the blessings in the situation. If it were up to me of course they would all be living down the street. Since this does not seem likely to happen anytime soon I have to be content with visiting often and keeping in close touch in other ways.

This year one of the very best means of communication has been Rachelle Mejia's blog. My granddaughter, Kylie, is in Rachelle's class and through the blog I am able to keep a daily check on what has been happening so that when I talk to Kylie on the phone I am right up to date and have something to talk about.

You have our utmost admiration and thanks.

Sincerely,  
Carol H \_\_\_\_\_,  
On behalf of the \_\_\_\_\_ family

## Family & Blogging



# Exploring Digital Tools: Web Tools

## Literacy & Documentation

### Classroom Blogging

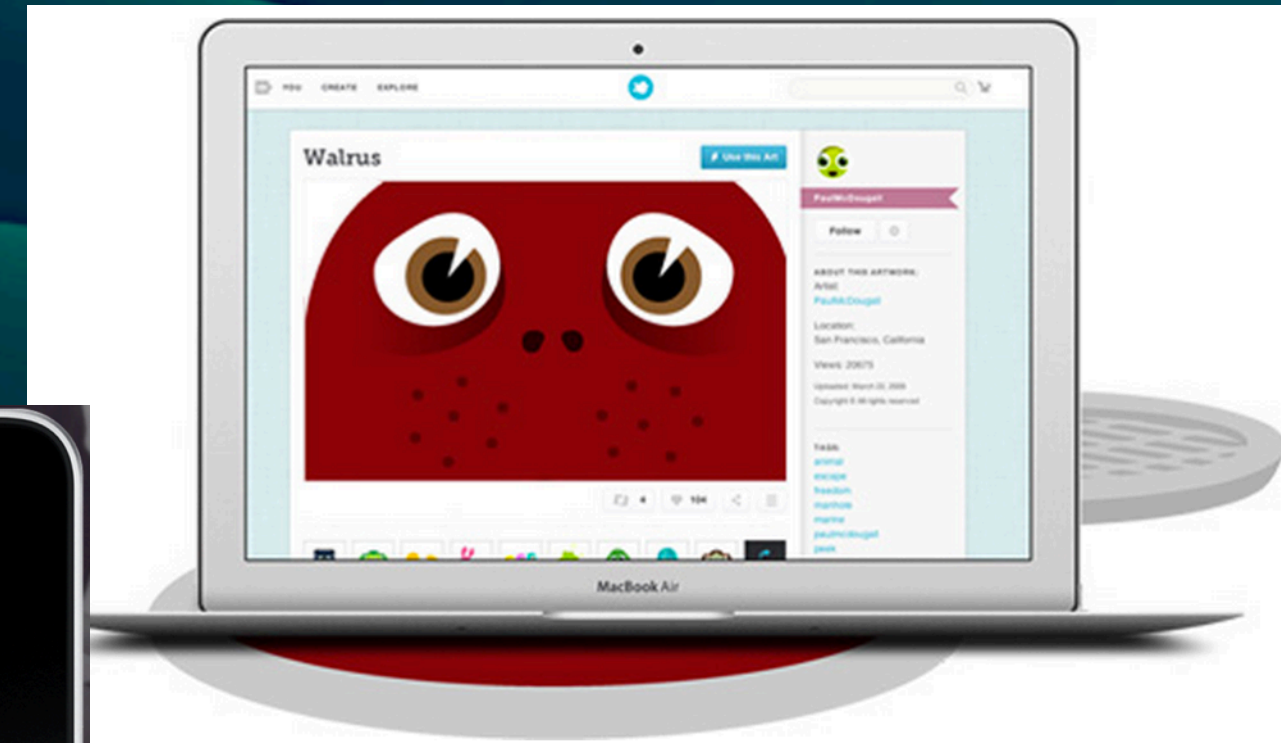
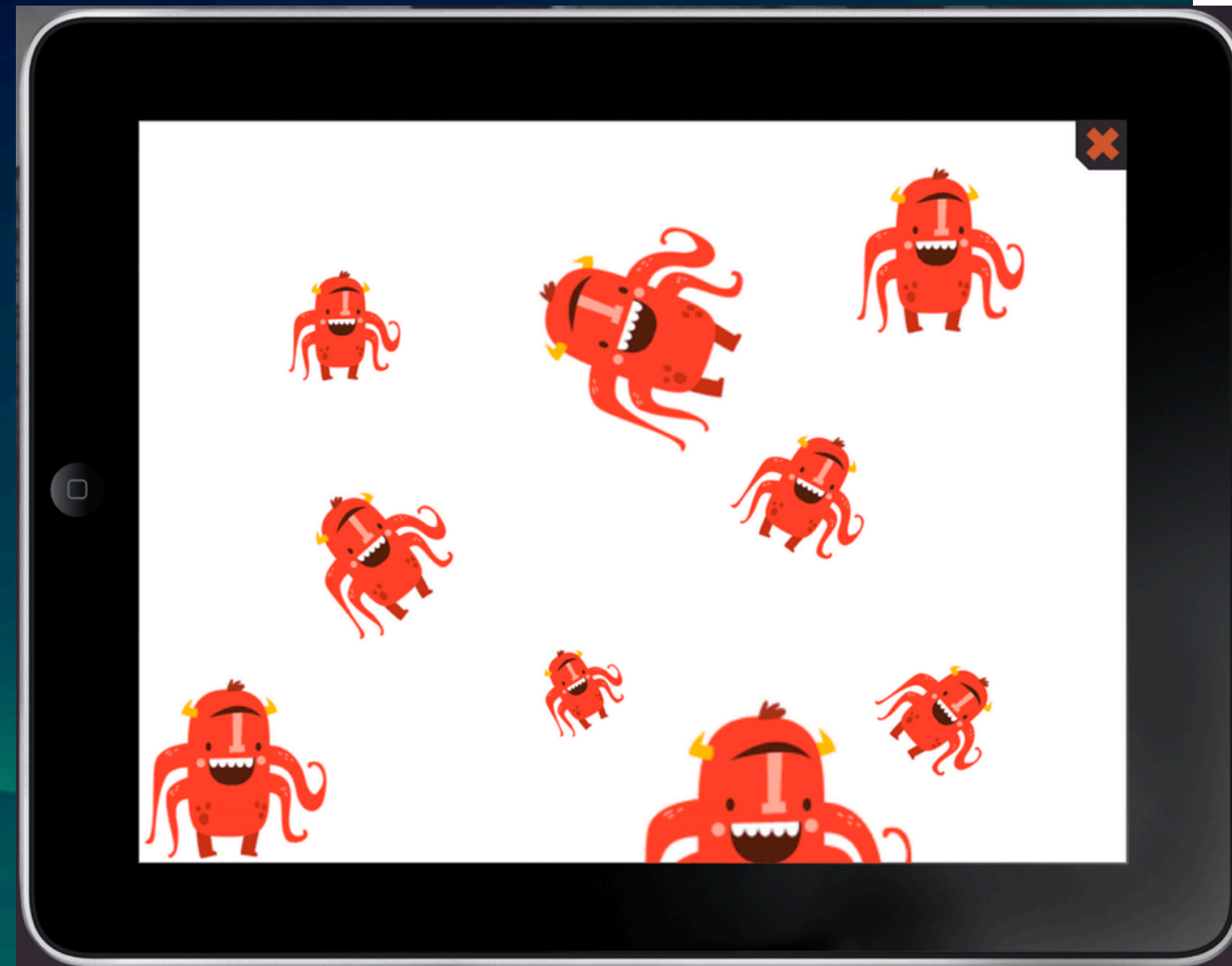
- Great for sharing: photos, text, videos, links, audio
- Documenting learning projects
- Enabling reflection & feedback
- Sharing pedagogy
- Informing of events
- Extending community





# Showcasing Powerful Technologies: Other Software

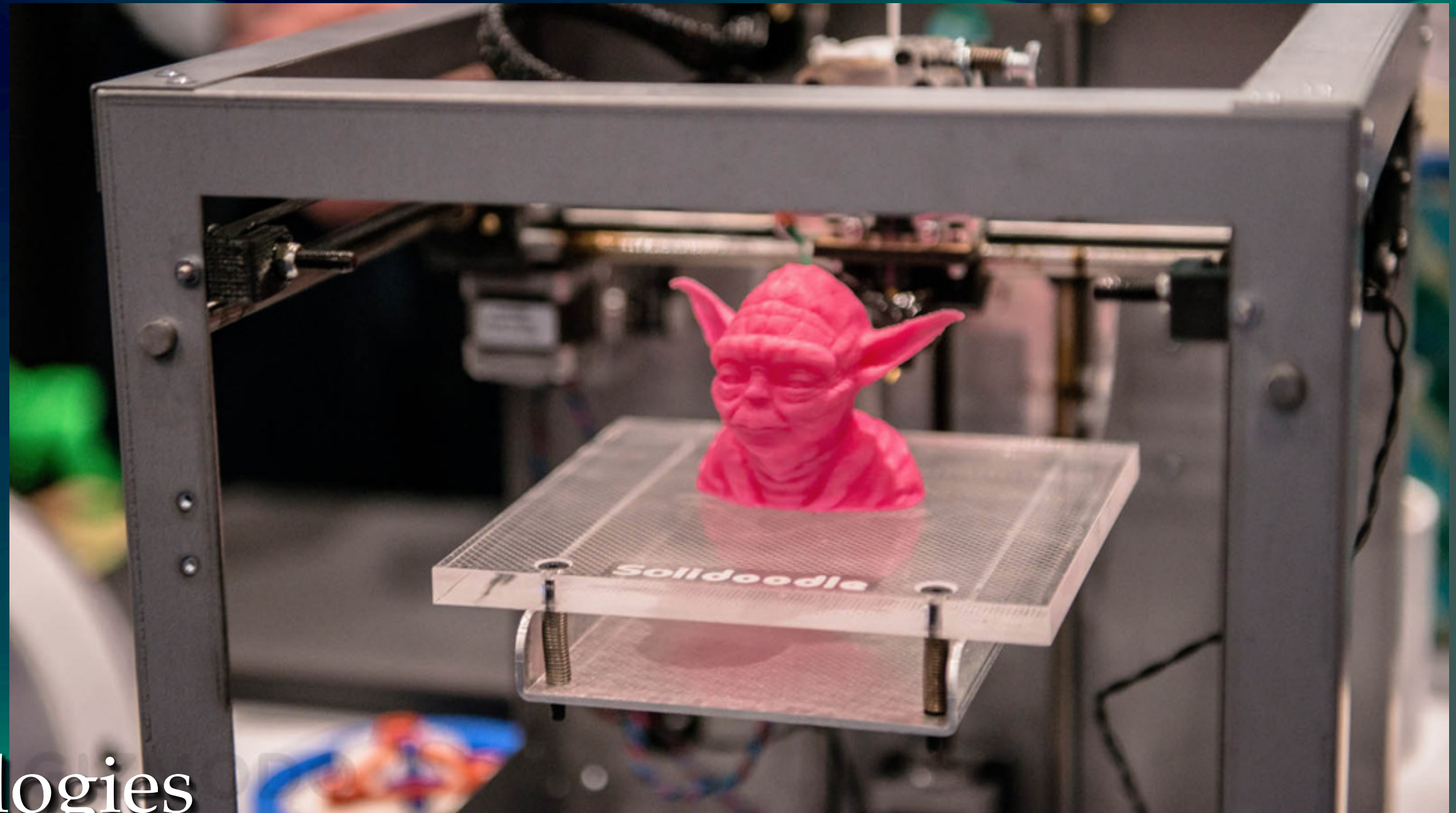
- Speech to Text
- Storybird
- Hopscotch





# Showcasing Powerful Technologies: Other Hardware

- 3D Printers
- Sifteo
- Little Bits
- Ludos
- Bo & Yana
- Future Technologies





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study

- Listen to children, all their languages
- Support their work
- Intentionally select tools
- Empower their learning

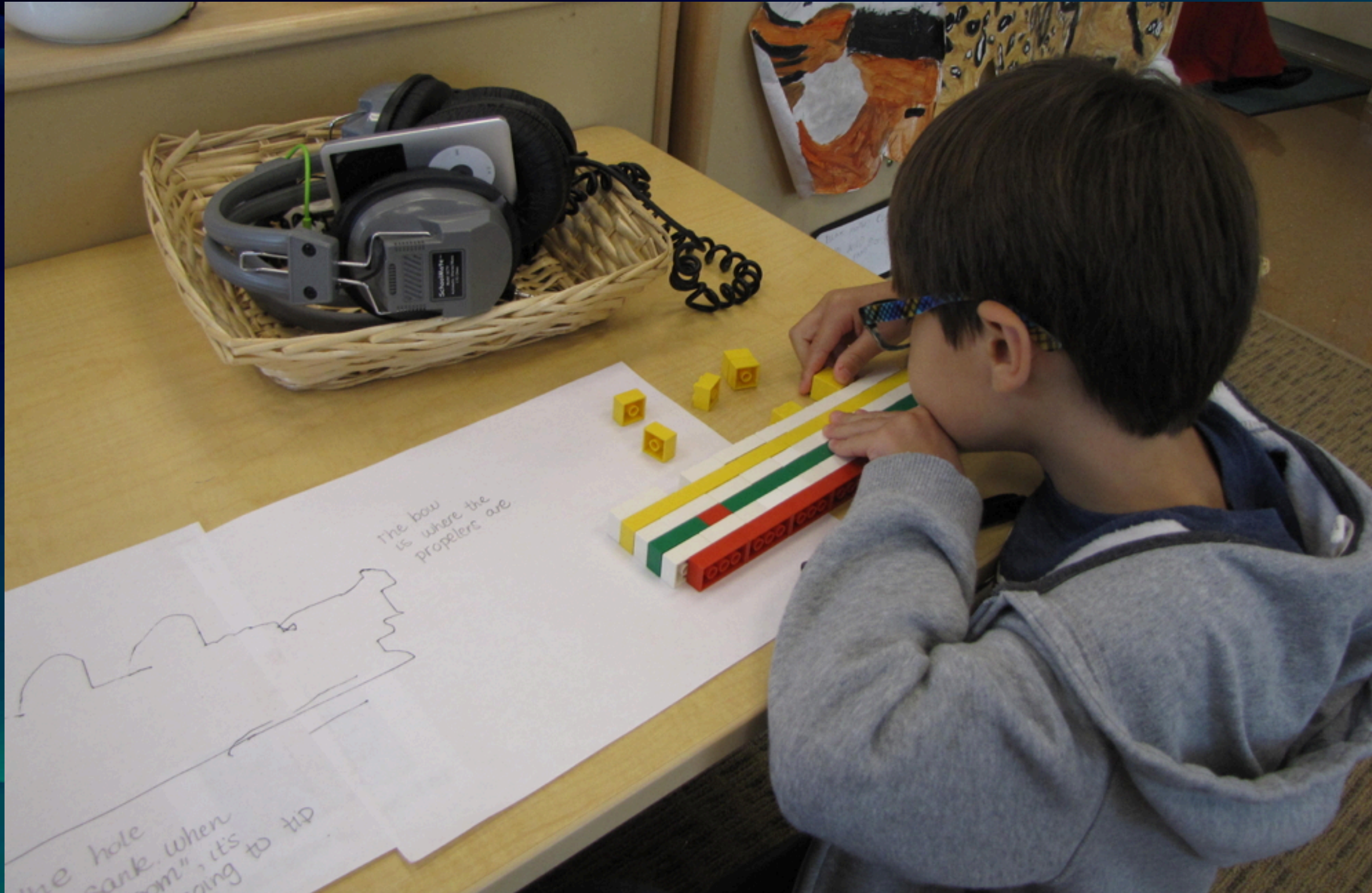


# Listen, Go Deep, Empower: Case Study



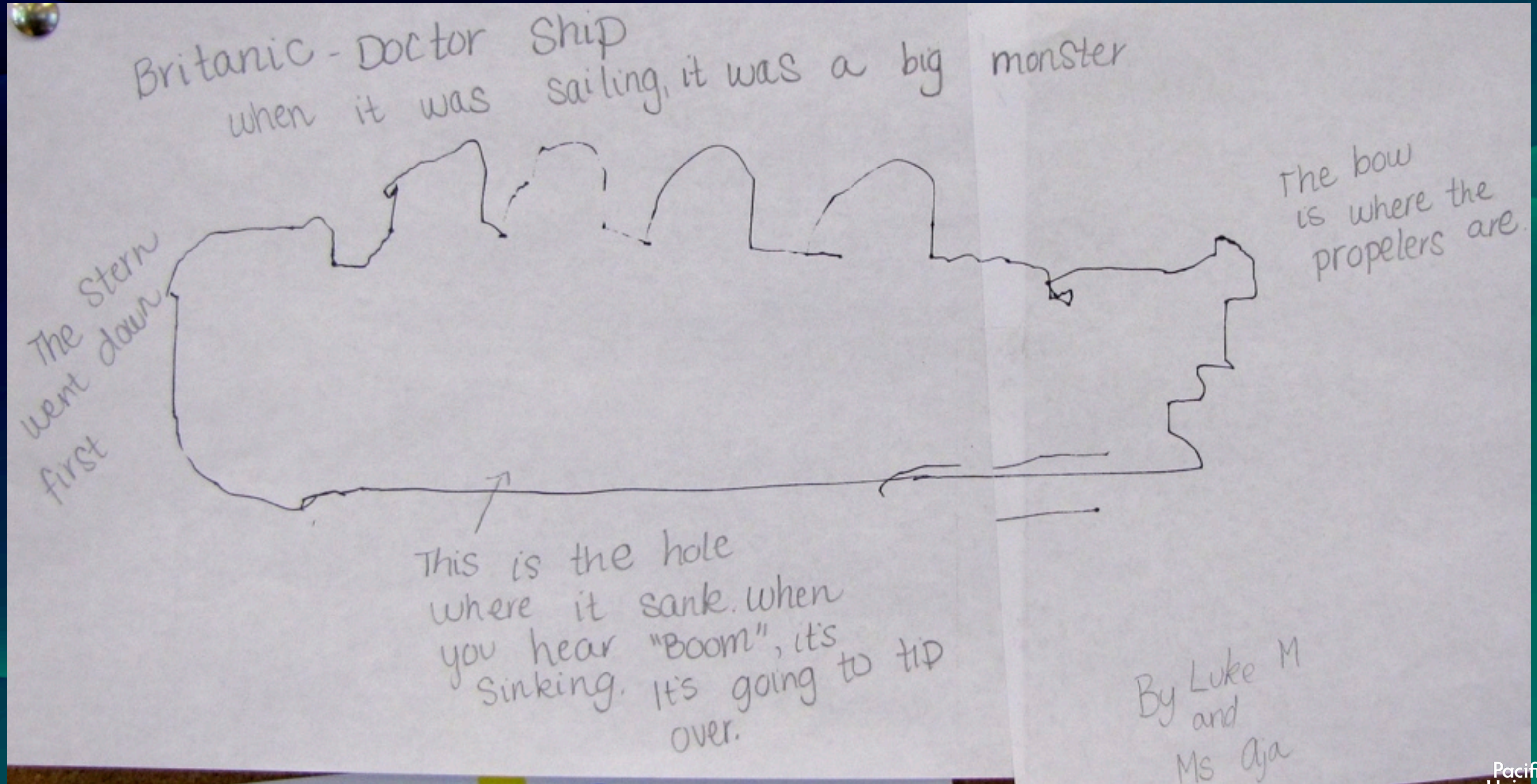


# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study



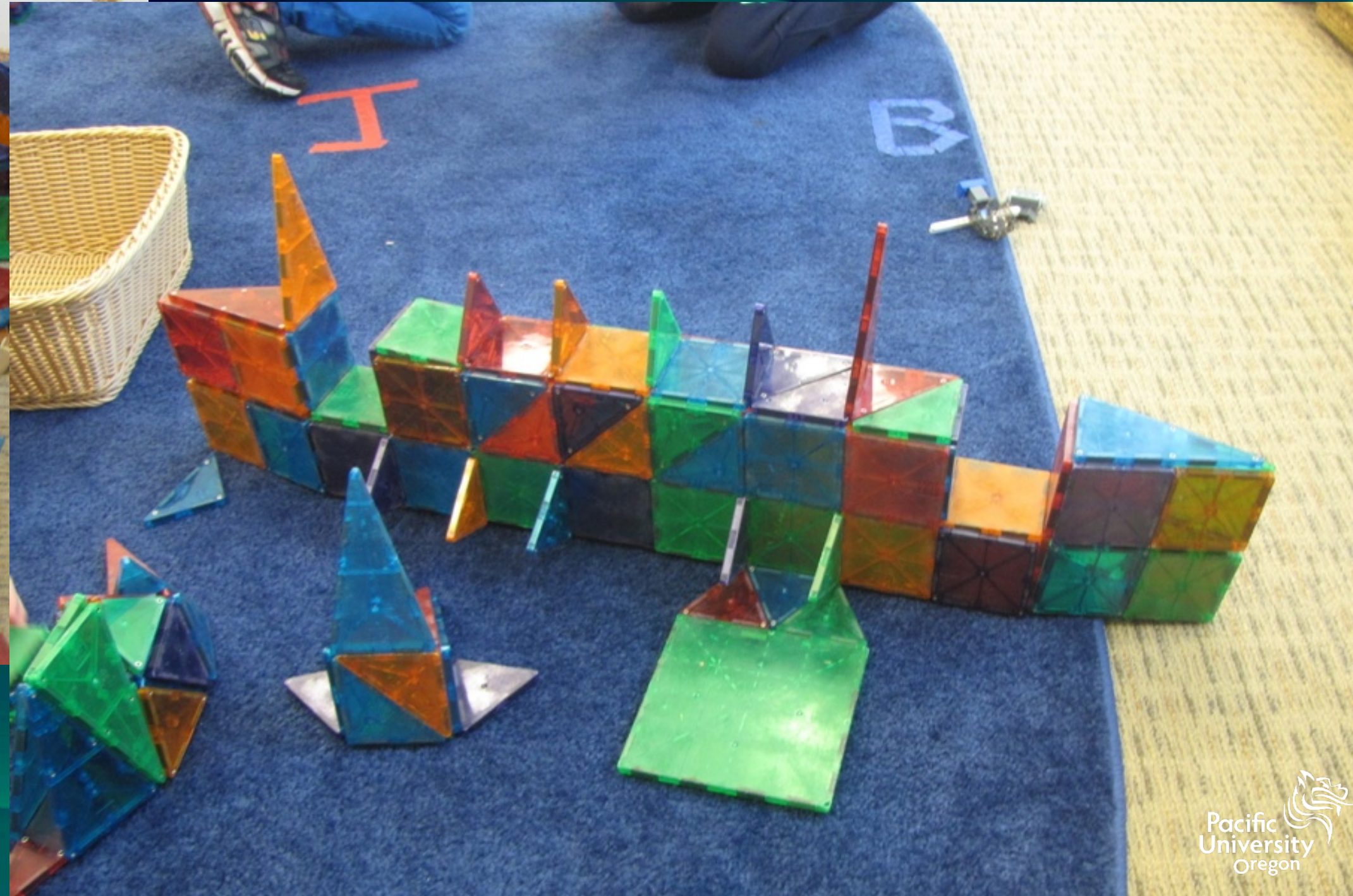


# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study



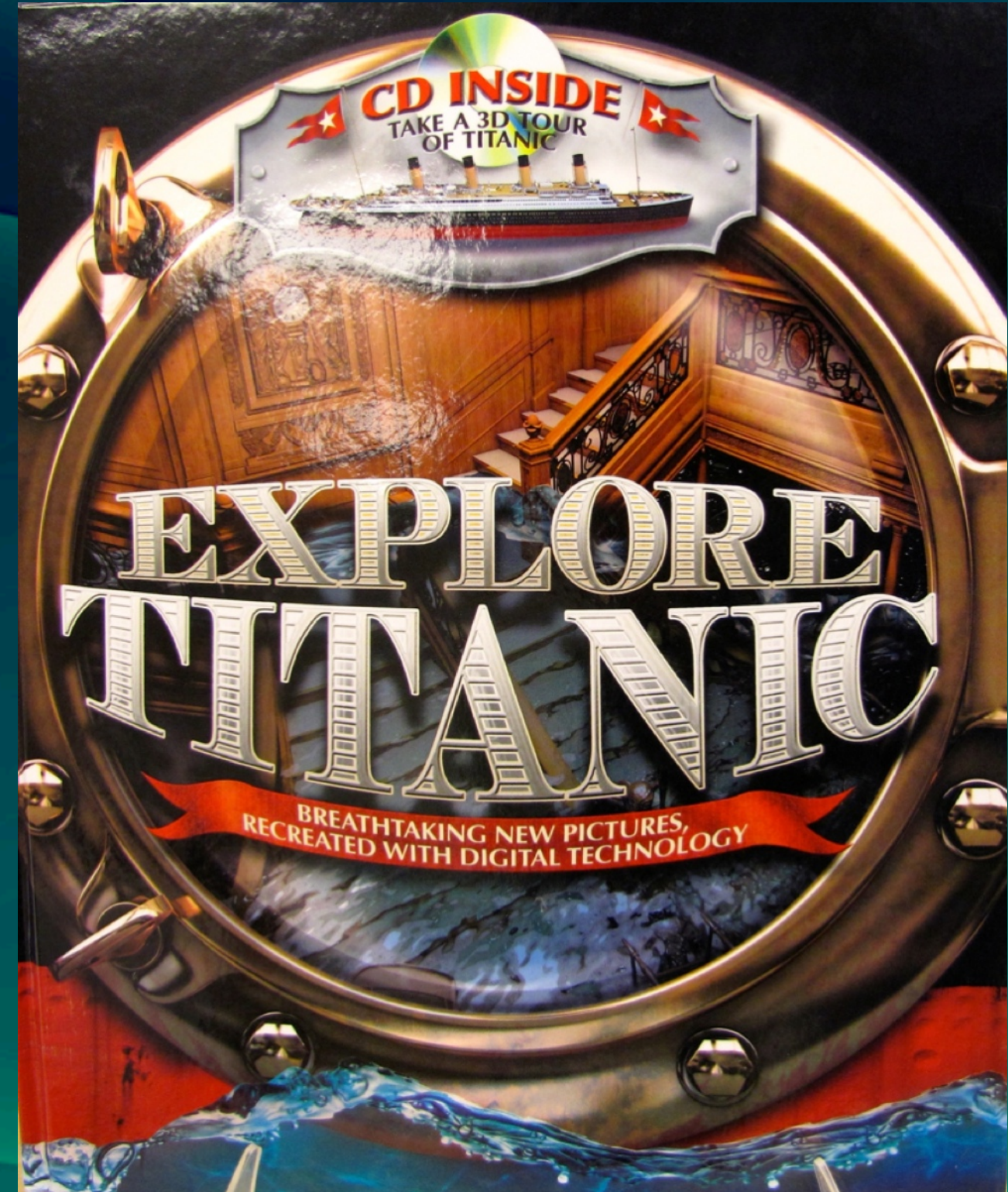


# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study



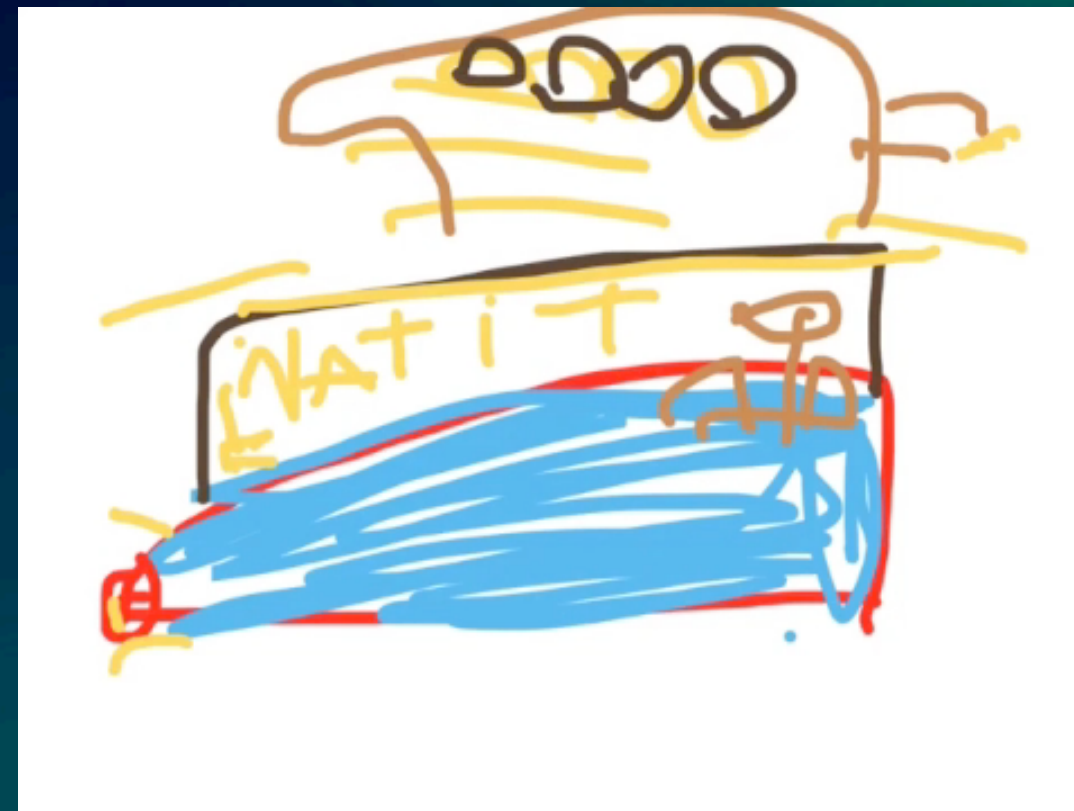


# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study



Doodlecast



Book Creator



# Listen, Go Deep, Empower: Case Study



“gears that will  
pump water out  
of the hull”



# Listen, Go Deep, Empower: Case Study



“A mop to swab  
the deck”



# Listen, Go Deep, Empower: Case Study



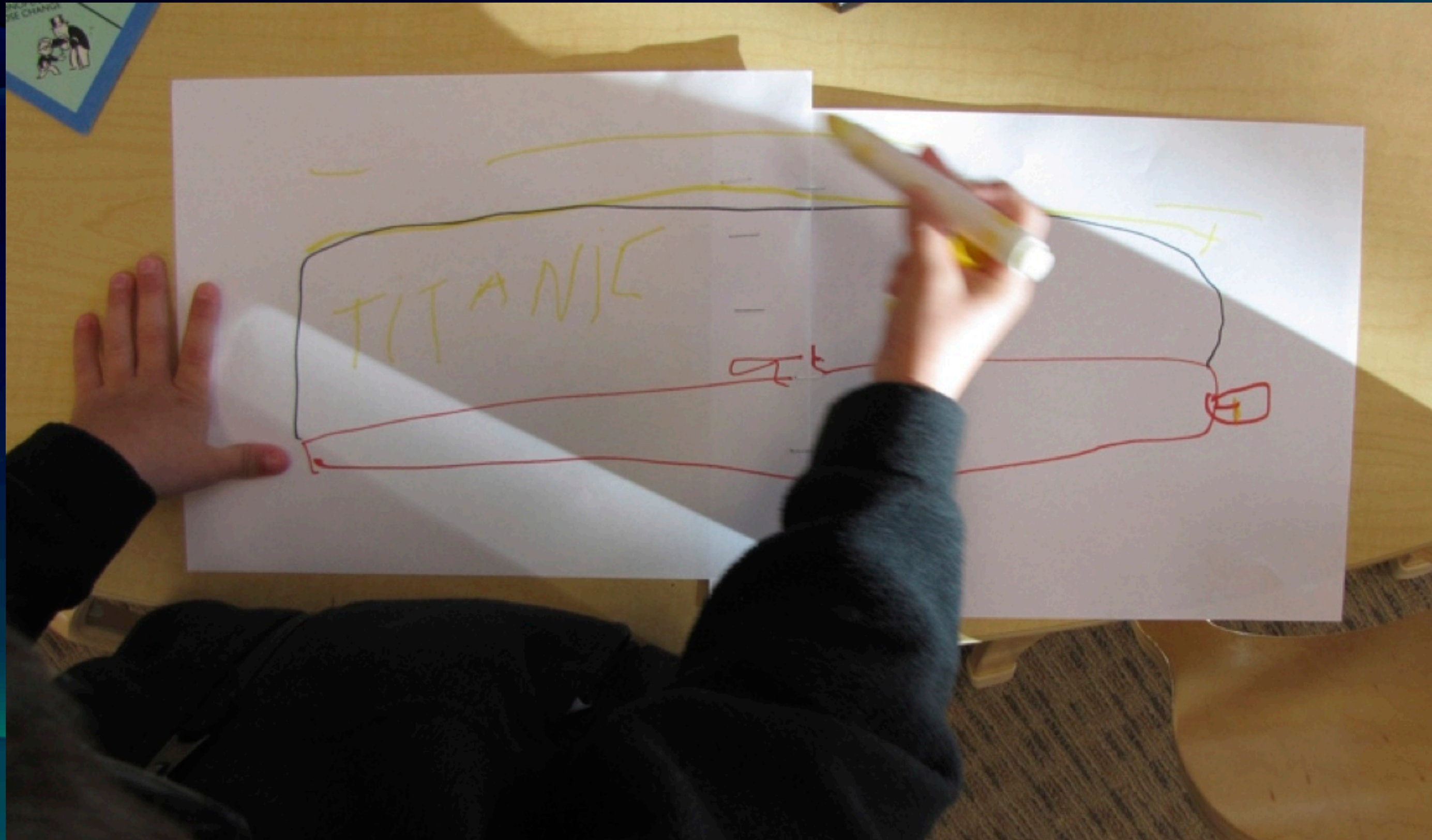


# Listen, Go Deep, Empower: Case Study



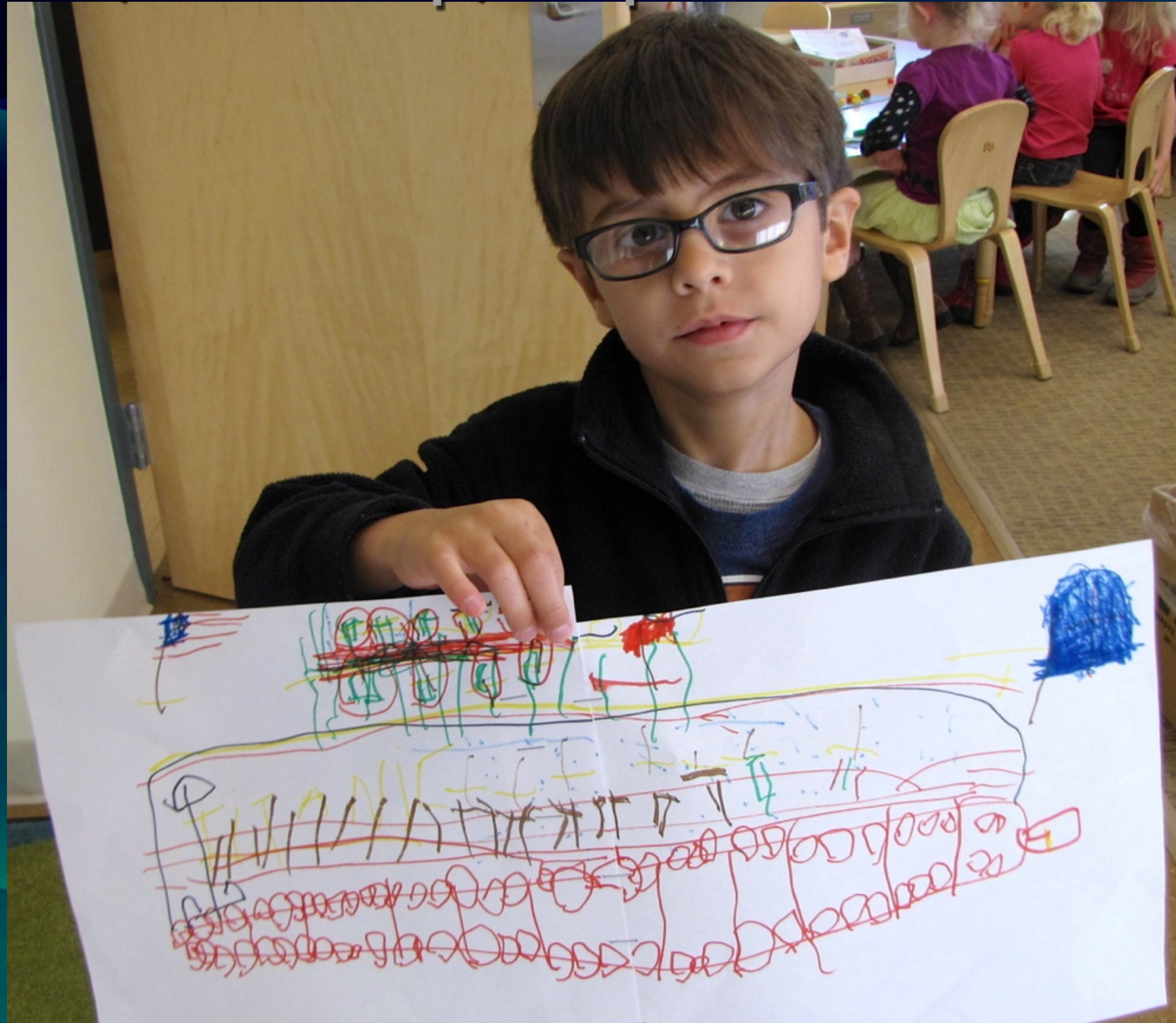


# Listen, Go Deep, Empower: Case Study



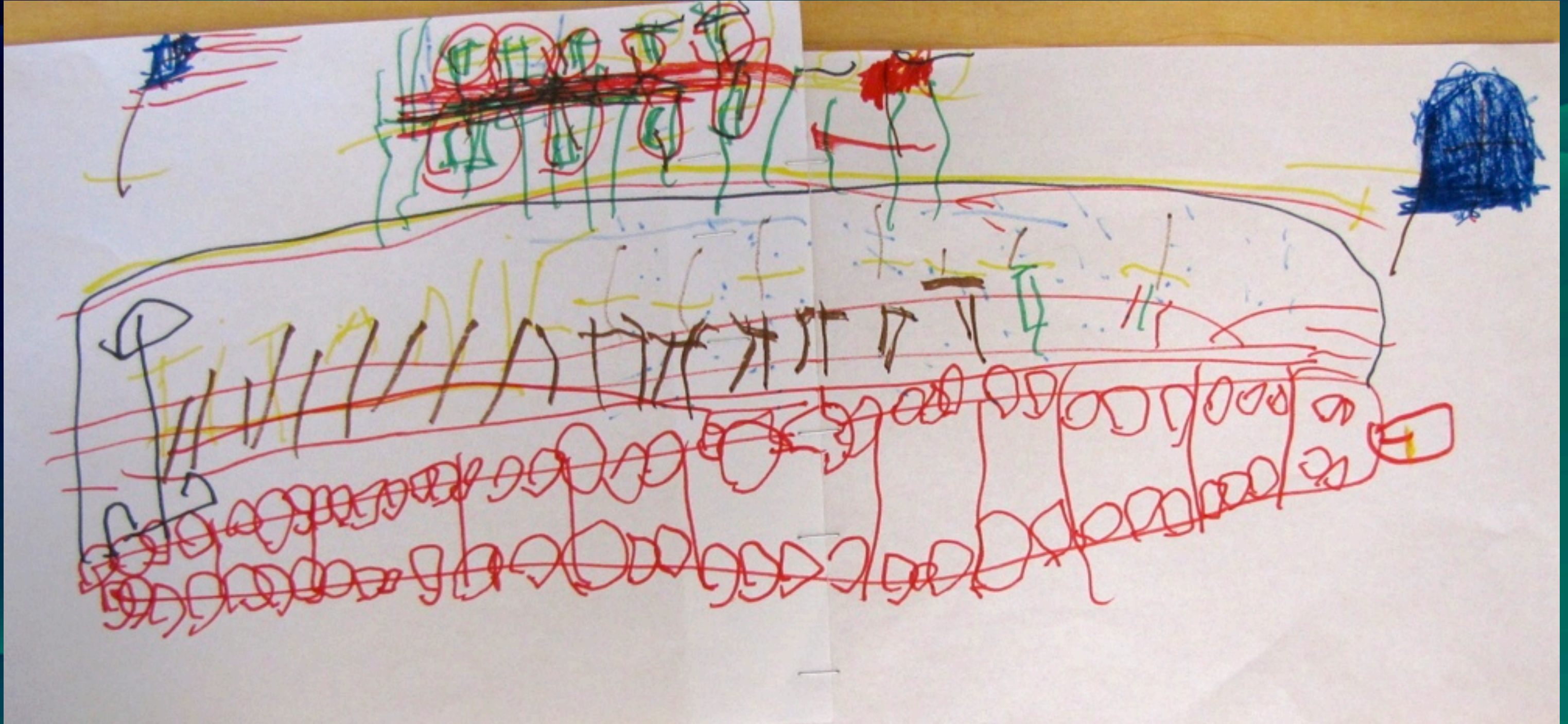


# Listen, Go Deep, Empower: Case Study



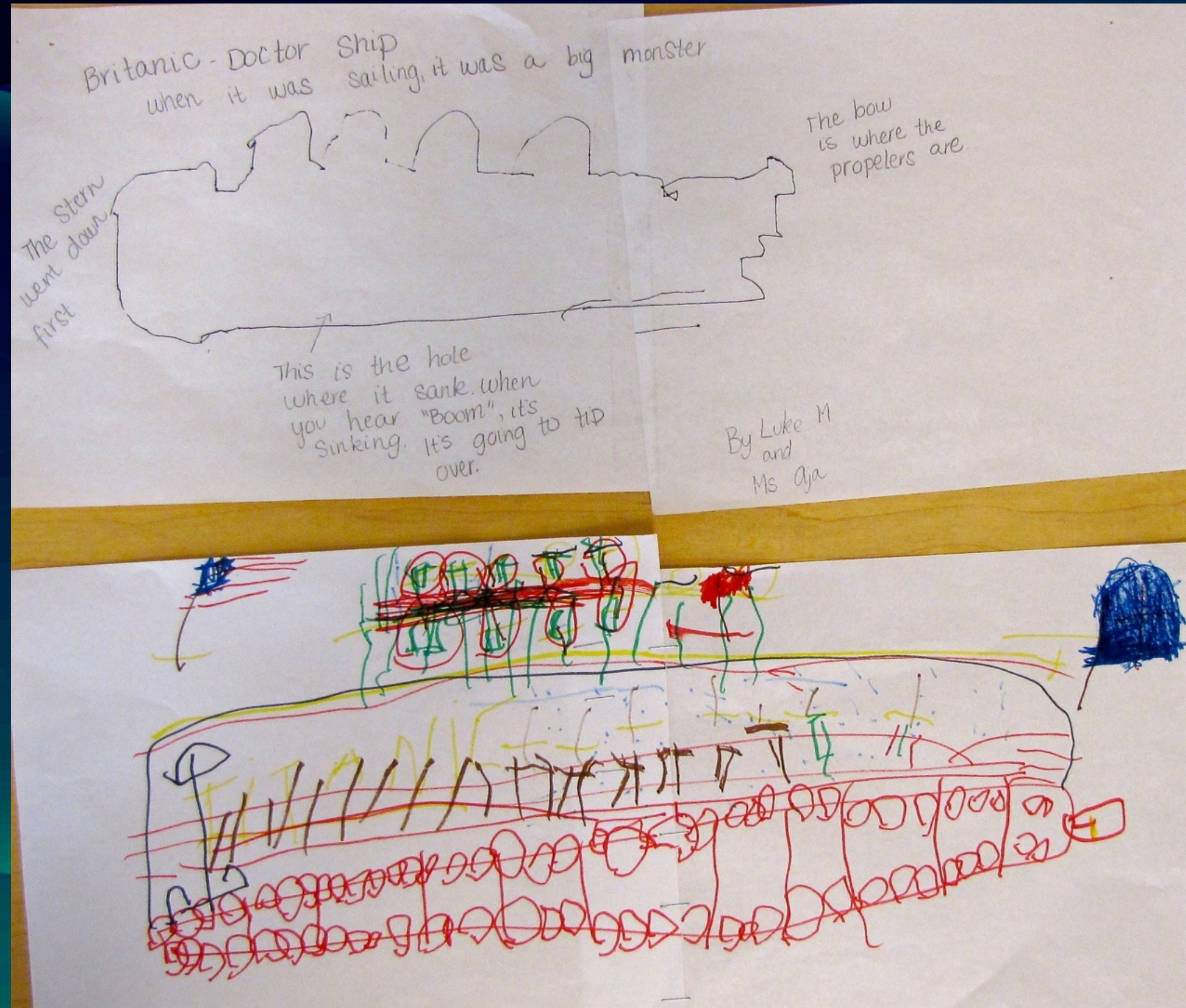


# Listen, Go Deep, Empower: Case Study





# Listen, Go Deep, Empower: Case Study





## Titanic - Transmedia Learning

- Teachers listened to all languages
- Supported across range of media
- Intentional selection of materials
- Deep exploration of relevant concepts
- Empowered new forms of learning
- Social, emotional, physical, conceptual





# Intentional, Appropriate, & Effective Uses of Technology:

## Things to Look for in an Educational Technology:

- Embodies Universal Design
- Utilizes Developmentally Appropriate Features
- Empowers, Enhances, and Transforms Classroom Experiences
- Requires Active Engagement
- Scaffolds Adaptive Complexity
- Encourages Revisiting & Sharing
- Models Multiple Diversities
- Empowers Exploration & Creativity
- Fosters Thinking & Problem Solving
- Supports Playful Use





# Intentional, Appropriate, & Effective Uses of Technology: Best Practices Database







[tinyurl.com/ecebestpractices](http://tinyurl.com/ecebestpractices)





# Digital Microscopes



## Description

One of the great joys of early learning occurs when young children experience seeing the world in new and unexpected ways. Digital Microscopes can provide such a perspective. They empower children's insight when they are used as a manipulative tool that provides them with perspectives that are engaging and unique.

Most digital microscopes must be connected to a screen such as a computer. The best way to begin to use a digital microscope is to simply turn it on and hand it to a child. Almost without exception children (of all ages) will point it at their bodies (ear, eye, tummy...) and be fascinated with what they see. Providing learners with items that contain interesting textures and surfaces will allow them to connect their sense of touch with the image of the surface they are sensing.

Our preferred tool is a ProScope HD microscope. These can be connected to a computer in a classroom, at an exploration station, or outside in the natural environment. This microscope not only displays high definition digital images on the computer screen, but with the push of a button, it can capture photographs of what is being displayed for later discussion, story writing, or posting on a blog.



## Suggestions for use

**Classroom** - Set up a computer (desktop or laptop or tablet) with HD software and microscope. Orient screen so that it is easy for the students to manipulate the scope and view the screen simultaneously. The scope can be particularly powerful when used for explorations of the human body as there is nothing more concrete than one's own body

Scope is also excellent for explorations of all manner of surfaces including

- Natural materials such as rocks and minerals, shells, wood, insects, and plants such as molds.
- Man made materials such as Metals, plastics, fabrics, various types of papers,
- Interesting small details such as dates on coins or bills, watch parts, facets of jewelry.





# Intentional, Appropriate, & Effective Uses of Technology: Conclusions

When considering using a tool:

- Determine student interest & need
- Envision what will be learned
- Recognize what is appropriate
- Be intentional & deliberate
- Support not supplant essential activities





# Intentional, Appropriate, & Effective Uses of Technology: Conclusions

## Listen, Go Deep, Empower

- Listen to your students
- Encourage deep explorations that empower
- Use transformative technologies
- Utilize resources & guidance
- Innovate & have fun.





# Intentional, Appropriate and Effective Technology Use

It's not the technology,  
it's how you use it.



# Intentional, Appropriate, and Effective Uses of Technology: Tools to Transform Learning and Development

Mark Bailey

[baileym@pacificu.edu](mailto:baileym@pacificu.edu)

Pacific University College of Education





# Intentional, Appropriate, & Effective Uses of Technology:

## Educator Resources

- Tech Best Practices EGs: [fg.ed.pacificu.edu/cldc/techtools.html](http://fg.ed.pacificu.edu/cldc/techtools.html)
- Early Learning Community: <http://fg.ed.pacificu.edu/elc/>
- Erikson TEC Center: <http://teccenter.erikson.edu/>
- Tech and Young Children: [www.techandyoungchildren.org/](http://www.techandyoungchildren.org/)
- Children's Tech Review: <http://childrenstech.com/>
- Visual Manipulatives: [http://nlvm.usu.edu/en/nav/grade\\_g\\_1.html](http://nlvm.usu.edu/en/nav/grade_g_1.html)
- Learning at Home 2014: <http://www.joanganzcooneycenter.org>
- Fred Rogers Center: <http://www.fredrogerscenter.org>
- This Presentation: <http://fg.ed.pacificu.edu/cldc/tww.html>



# Intentional, Appropriate, & Effective Uses of Technology:

## Educator Resources 2

- American Academy of Pediatrics - <http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/pages/media-and-children.aspx>
- Campaign for Commercial Free Childhood - <http://www.commercialfreechildhood.org/>
- Connecticut Preschool Assessment Framework - [http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Early/Preschool\\_Assessment\\_Framework.pdf](http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/Early/Preschool_Assessment_Framework.pdf)
- Cycle of Intentional Teaching - <http://www.sde.ct.gov/sde/lib/sde/PDF/DEPS/early/TW.pdf>
- Toddlers and Technology - <http://www.asha.org/Publications/leader/2011/110920/Toddlers-and-Technology.htm>