Technology in the Classroom

Enhancing your toolkit for teaching and learning

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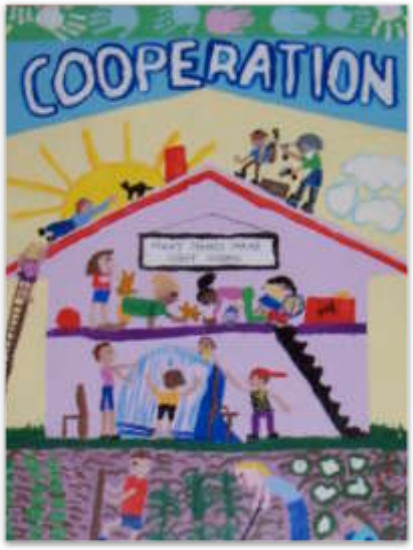
Differentiated Instruction

"Everyone does their best. Everyone gets what they need."

– Dr. Ross Greene,
Center for Collaborative Problem Solving



The key here is that both adults and students learn how to take responsibility for managing their challenges and sharing their strengths. This approach builds a strong sense of community in the classroom.

Universal Design

- Multiple means of **engagement**
  tap into learners' interests,
  offer appropriate challenges,
  and increase motivation.

"A universally designed curriculum is designed from the outset to meet the needs of the greatest number of users, making costly, time-consuming, and after-the-fact changes to curriculum unnecessary." -- CAST.org

Universal Design

- Multiple means of **representation** give learners various ways of acquiring information and knowledge

When students have access to information in flexible formats, with flexible tools, they can apply all their senses to learning - seeing words and images, listening, touching, etc. In a universally designed electronic environment, students can choose whether or not to see images, how text appears, whether or not to listen to what they read, and more.

Universal Design

- Multiple means of **expression** provide learners alternatives for demonstrating what they know

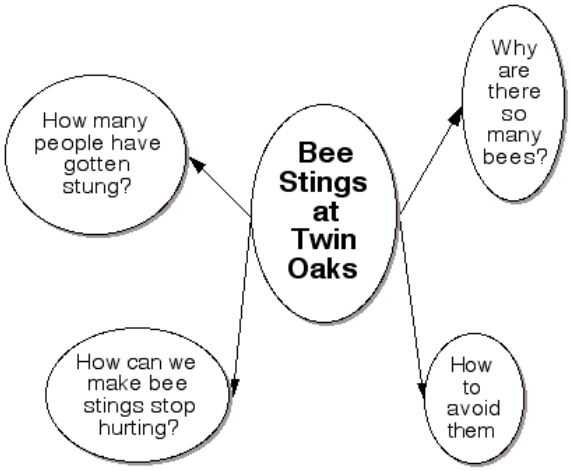
Providing more than one way for students to share their knowledge gives a more authentic assessment of student understanding.

Digital = Flexible

We need to teach in ways
that leverage this flexibility

This series shows the process we used with 2nd and 3rd graders to create an investigative report, starting with a brainstorm, and onto an expanding set of diagrams, an outline and finally an illustrated report. The same material gets modified for different purposes along the way.

Digital = Flexible



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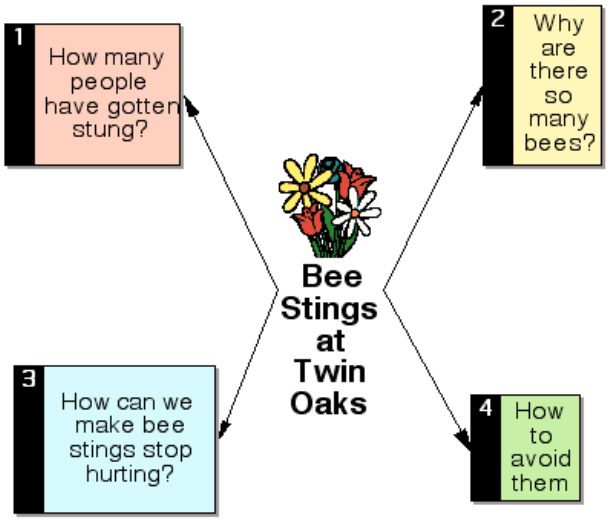

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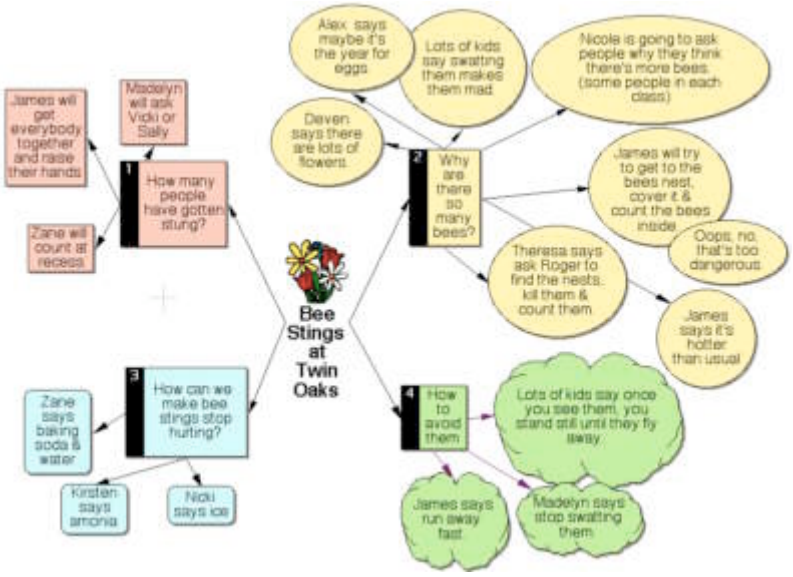

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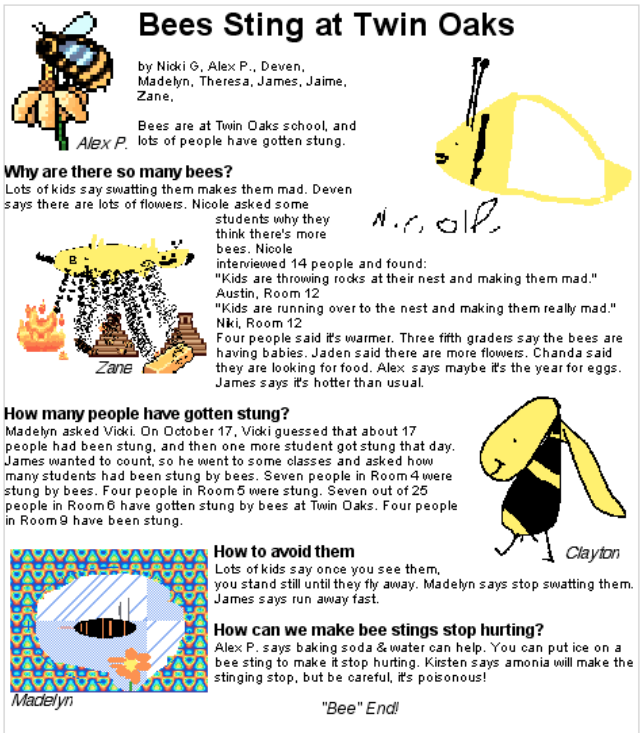

Bees Sting at Twin Oaks

Alex P.

by Nicki G, Alex P., Deven, Madelyn, Theresa, James, Jaime, Zane,

Bees are at Twin Oaks school, and lots of people have gotten stung.

Why are there so many bees?

Lots of kids say swatting them makes them mad. Deven says there are lots of flowers. Nicole asked some students why they think there's more bees. Nicole interviewed 14 people and found:
"Kids are throwing rocks at their nest and making them mad." Austin, Room 12
"Kids are running over to the nest and making them really mad." Niki, Room 12
Four people said it's warmer. Three fifth graders say the bees are having babies. Jaden said there are more flowers. Chanda said they are looking for food. Alex says maybe it's the year for eggs. James says it's hotter than usual.

Zane

How many people have gotten stung?

Madelyn asked Vicki. On October 17, Vicki guessed that about 17 people had been stung, and then one more student got stung that day. James wanted to count, so he went to some classes and asked how many students had been stung by bees. Seven people in Room 4 were stung by bees. Four people in Room 5 were stung. Seven out of 25 people in Room 6 have gotten stung by bees at Twin Oaks. Four people in Room 9 have been stung.

Clayton

Madelyn

How to avoid them

Lots of kids say once you see them, you stand still until they fly away. Madelyn says stop swatting them. James says run away fast.

How can we make bee stings stop hurting?

Alex P. says baking soda & water can help. You can put ice on a bee sting to make it stop hurting. Kirsten says amonia will make the stinging stop, but be careful, it's poisonous!

"Bee" End!

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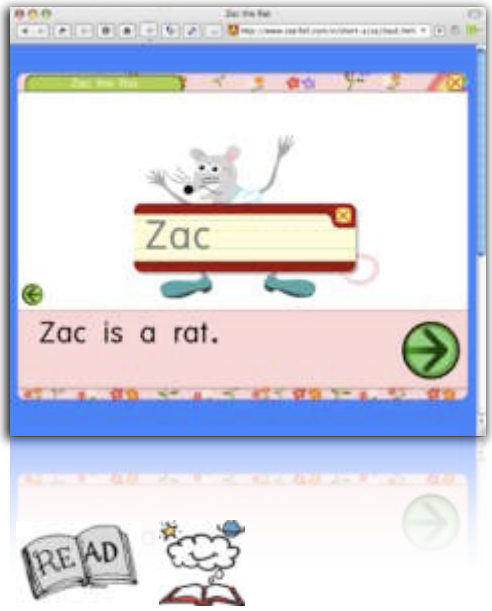
Learn to Read



What Works:

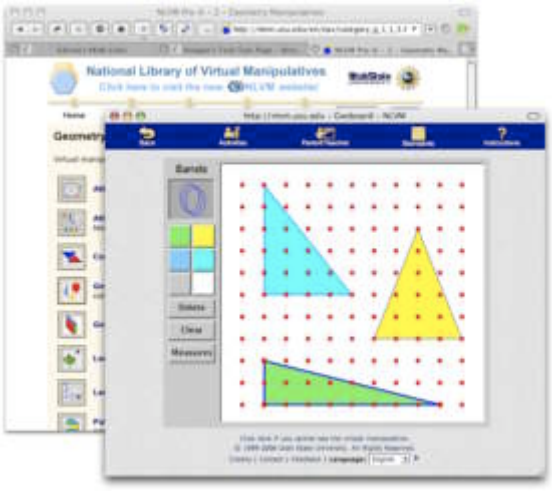
- Audio support
- Text highlighting
- Image support
- Well-crafted text
- Student control

www.starfall.com is one of the bests literacy sites on the internet, and a great example of universally designed text.

Explore Math Concepts

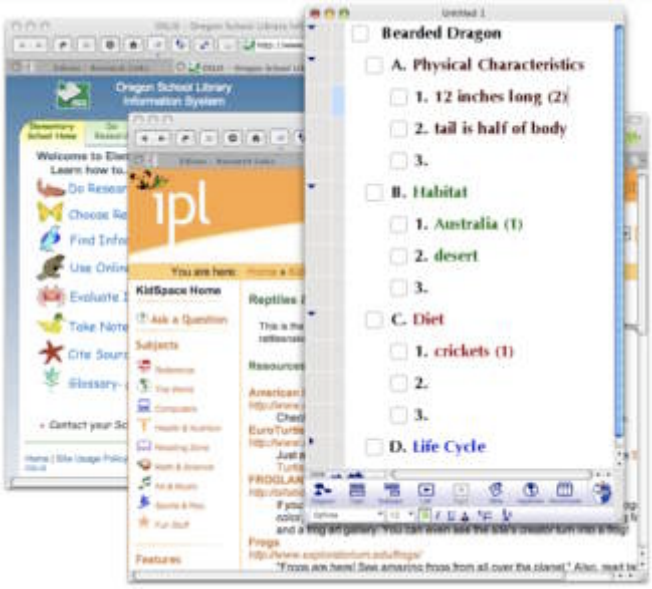
What Works:

- Interactive
- Flexibility
- Simple Interface
- Clear Objectives
- Student Control



Digital environments for math can provide high levels of structure and support, as needed. Look for a clean, simple interactive interface that gives students and teachers control over the direction and focus of the activity.

Do Research



- Outline with prompts & color
- Add 'kids,' 'learn,' etc. to Google search
- Use kid-friendly start pages
- Cite sources!

Digital environments are great for research because they allow quick access to information as well as the ability to focus and organize materials in flexible and meaningful ways.

Make a Book

- Digital Cameras
- iPhoto
- Captions

Publishing projects enhance student engagement and effort because students understand they are working for an authentic audience. Digital photos provide a quick, high quality way to add visual meaning to a text.

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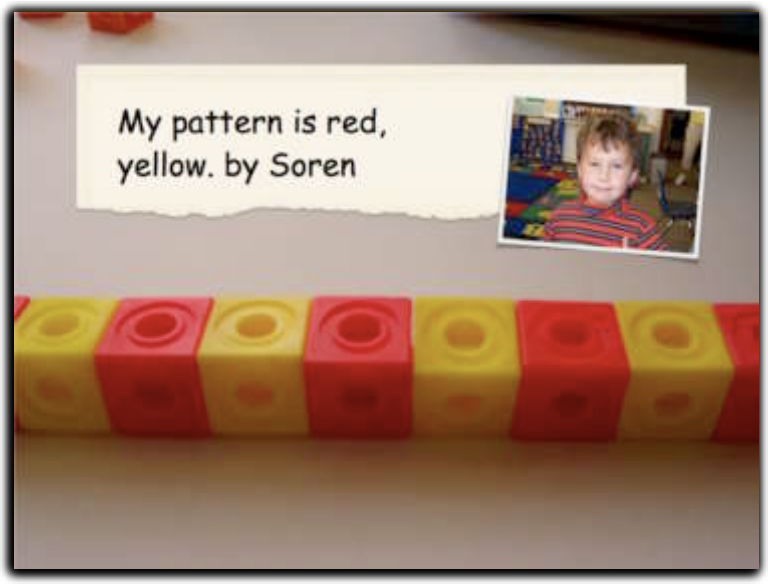

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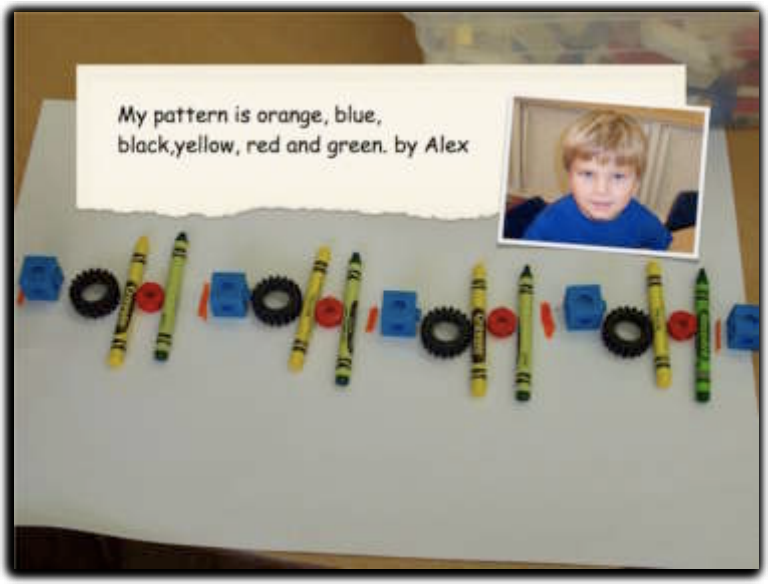

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Learn Geography

- Google Earth (free)
- Smart Board
- Google Maps
- Screen Shots
- Good Questions

The amount of information at our finger tips is beyond belief - We're able to recognize the mud-brick compounds where our friends live in a remote village in West Africa. We can find our own backyard. There's no longer an excuse for not integrating geography into every lesson we teach!

Start a Blog

- Set up a free blog
- Assign a daily writer
- Share ideas, images & more
- Document a special project
- Share info with families

Blogs are another way to publish for an authentic audience - whether it's for the class, the families, the community or our colleagues.

Audio Recordings

- Student Interviews
- Class Discussions
- Podcasting
- Music performances

Audio (and video) recordings are yet another component of universal design, giving students new ways to absorb and share information.

Create a Newspaper

Edison Times

Eugene, Oregon | April 2007 | Issue #3

Ocean Week

By: Harper J. and Delaney A.

Ocean week was created by Pat Williams who retired four years ago. Thanks Pat!!!

Edison is the only school in Oregon to have Ocean Week, which goes to show that Edison is really a special school! Each grade is studying a separate subject. Kindergarten is studying ponds; 1st grade is studying tide pools; 2nd grade is studying the sandy beach; 3rd grade is studying tide-pools; 4th\5th grade is studying the kelp forest.

Get ready to celebrate Ocean Week for the 15th time!!

COME TO OCEAN WEEK AT EDISON!

OCEAN WEEK'S SOOOO FUN!

THE Jog-a-thon

by Stella S.

Hey guess what!

The Jog-a-thon is coming up soon. If you're new at EDISON then you better read closely and carefully because it's really cool! The Jog-a-thon is where all the EDISON students go to the South Eugene High School track and run laps. So now you're probably wondering why we spend 1 hour running around when we could be in our classrooms doing school work. Because every lap we run, we earn money for EDISON! But before we run, we collect pledges from friends , family and neighbors.

So get ready to run run run!!!

- Tap into individual interests & strengths
- Work together to produce the publication
- Students become responsible contributors

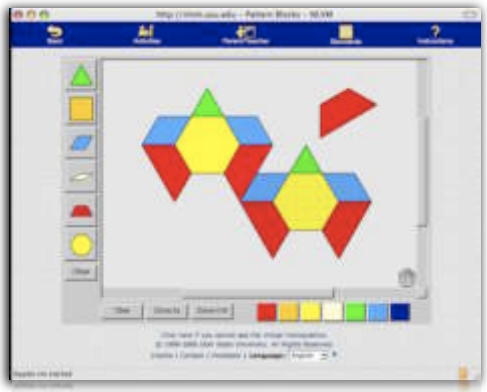
In creating newspapers, each student or small group can delve into their own interests, tap into one another's strengths (spelling, tech skills, brainstorming, social skills, planning, art, etc.). Then in order to finalize the layout, the whole team must come together to get the job done.

Digital Teaching Tools

In addition to computers with internet access, a well equipped classroom will include tools such as digital cameras, iPods or other mp3 players with recording abilities, video cameras (often the capacity built into a newer digital camera is sufficient), flat bed scanners, and interactive white boards.

Best of Both Worlds

•build up, balance

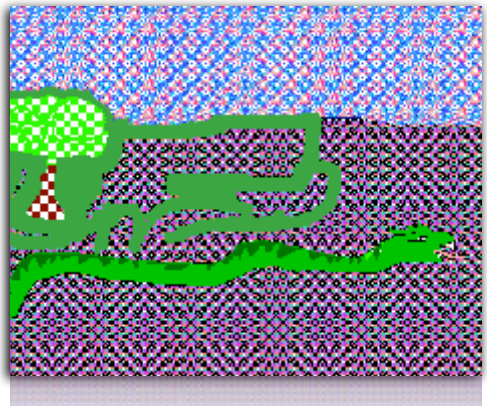


•snap, clone, zoom

But, adding digital tools does not mean abandoning our conventional tools. Rather, we need to become adept at choosing the best tool for the job. What possibilities and flexibility are built into each tool?

Best of Both Worlds

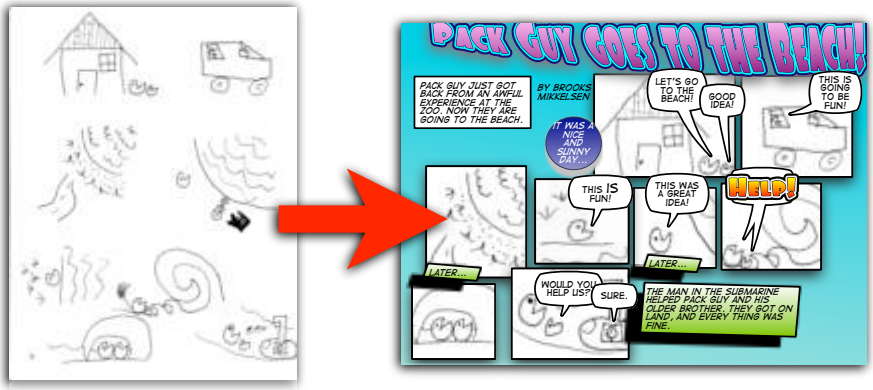
- free-form, tactile



- endless canvas & edits

In other words, ‘Don’t swim to Paris, and don’t fly a jet to the corner store.’

Best of Both Worlds



- unique style & control
- specialized tools & effects

Best of Both Worlds

- hands-on, sensory, personal

- distant worlds at your finger-tips

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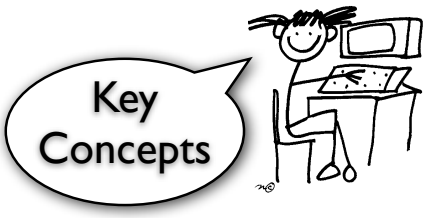

- "Everybody does their best. Everybody gets what they need."
- Universal Design - Providing multiple means of engagement, representation and expression
- Digital = Flexible *(e.g. brainstorm > diagram > outline > draft > story)*
- Possibilities - Learn to read, explore math, do research, make books & newspapers, record a podcast, write a blog
- Tools - Camera, scanner, mp3 play/record, SmartBoard, internet...
- Best of Both Worlds - add to, don't replace, what's in your toolkit

Presented by Kirsten Haugen (haugen@4j.lane.edu)

Need-to-Know Resources

- www.cast.org - universal design
- www.starfall.com - online reading, K-3
- readwritethink.org - excellent literacy resource
- nlvm.usu.edu/ - virtual math manipulatives
- www.oslis.org - search & cite tips
- www.edublogs.org - free blogs for teachers
- schools.4j.lane.edu/edison - my favorite k-5 links
- haugenka.edublogs.org & 4j.lane.edu/~haugen - my sites