



Emerging Collaborative Technologies for Math Leaders

Jon Wray, Howard County (MD) Public Schools
EMS&TL Project Manager

EMS&TL 2010 Summer Institute, McDaniel College, June 3, 2010



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Technology is an essential tool for learning mathematics in the 21st century, and all schools must ensure that all their students have access to technology. Effective teachers maximize the potential of technology to develop students' understanding, stimulate their interest, and increase their proficiency in mathematics. When technology is used strategically, it can provide access to mathematics for all students.

NCTM Position Statement - The Role of Technology in the Teaching and Learning of Mathematics, March 2008



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"While technology has transformed just about every aspect of our lives--from the way we travel, to the way we communicate, to the way we look after our health--one of the places where we've *failed to seize its full potential is in the classroom.*"

- Barack Obama (Sept. 2008)



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"With iPods and iPads and Xboxes and PlayStations -- none of which I know how to work -- information becomes a distraction, a diversion, a form of entertainment, rather than a tool of empowerment, rather than the means of emancipation,"

- Barack Obama (May 9, 2010)



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Barriers to Classroom Use

Don't have time

**Only one
computer in
my classroom**

No Internet
access

Sites need
plug-ins

I have one
cluster of 4
computers

NO COMPUTERS
AT OUR SCHOOL

**Need more
training**

Only one
copy of the
software
available

*Computers
are "locked"*

I cannot get
access to the
computer lab

Computers
are *too old*

Old
graphing
calculators

No way for
students to
save their
work

*Don't have
the software
or hardware*

Students
visiting
inappropriate
websites

How Do Students Like to Learn?

- Collaboratively
- Anytime, any place, anywhere, at any pace
- Structured activities
- Relevancy with the real world
- They want to do this ***with the technology of their generation.***



Collaborative Tools



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Collaborative Tools

- Google Docs & Forms
 - Synchroedit
 - Open Effort
 - Zoho Writer
 - Wikispaces
 - Wiki-Site
 - Xwiki
 - Wikidot
 - Blogger
 - Word Press
 - PB Works
- 



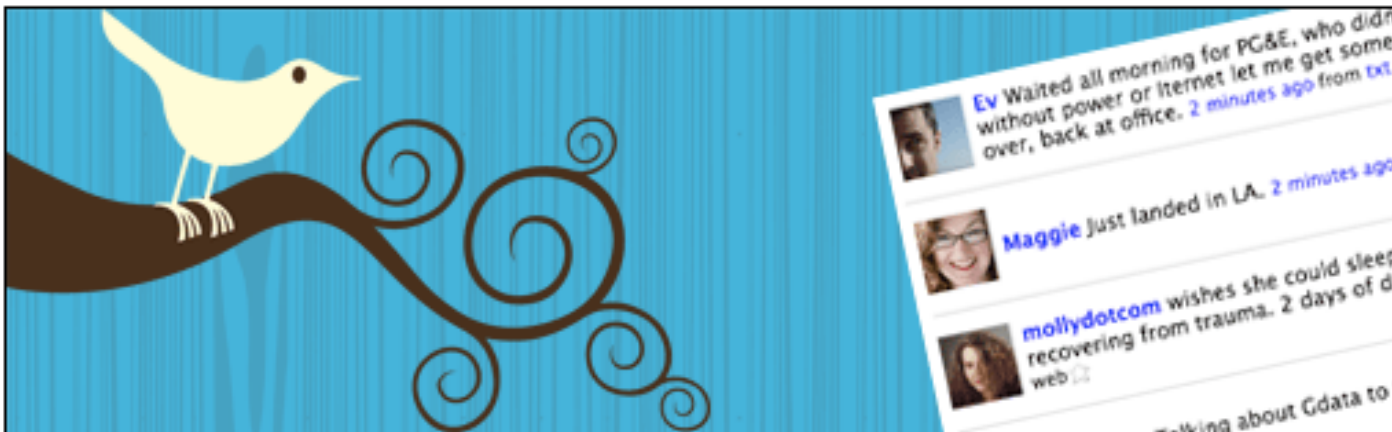
twitter

What is Twitter?

What?

Why?

How?



Twitter is a service for friends, family, and co-workers to communicate and stay connected through the exchange of quick, frequent answers to one simple question: **What are you doing?**



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NCTM – National Council of Teachers of Mathematics

Global

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Write something about Elementary Mathematics Specialists & Teacher Leaders Project.

Information**Elementary Mathematics Specialists & Teacher Leaders Project**[Wall](#)[Info](#)[Discussions](#)[Photos](#)[Video](#)[Events](#)[Edit Information](#)**Basic Info**

Name: Elementary Mathematics Specialists & Teacher Leaders Project

Category: Organizations – Academic Organizations

Description: The major goals of the McDaniel College EMS&TL Project are to fully establish the McDaniel College graduate program leading to an MS degree in elementary mathematics teacher leadership, to develop a clearinghouse relative to elementary mathematics specialists and their work and preparation, and to ensure the continuing professional development and mentoring of a cadre of mathematics teacher-leaders and elementary school mathematics specialists in Maryland. Additionally, the project seeks to... [\(read more\)](#)

Privacy Type: Open: All content is public.

Contact Info

Email: jonowray@gmail.com

Website: <http://www.mathspecialists.org>

Contact Info

Email: jonowray@gmail.com

Website: <http://marylandmath.org>



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Math Specialists

A NETWORK FOR MATHEMATICS SPECIALISTS, COACHES AND LEADERS

LATEST ACTIVITY



[Jon Wray](#) added an event
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at [McDaniel College](#)
1 minute ago



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EVENTS

[JUNE 3](#)
Thursday  [EMS&TL 2010 SUMMER INSTITUTE](#)
[June 3, 2010](#) at 6pm to [June 11, 2010](#) at 7pm -
[McDaniel College](#)

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Linkin Park, Dave
Matthews Band and
more team up with
Music for Relief to aid
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conversation about
technology,
infrastructure and the
future of Haiti.
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<http://mathspecialists.ning.com>

Research, Share, Collaborate Tools Sign In Join Diigo

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 **Jon Wray's Public Library** 0 following, 0 follower

Library Network Groups Profile

Filter: **All** | Annotated

03 Jun 10 [Choose which best describes how you feel about the use of technology in the mathematics classroom. | Poll Everywhere](#)
www.poll everywhere.com/...Nzk4OTlwMDMx - Preview

[Curricular Programs Tech PD - home](#)
ecpscp.hcpss.wikispaces.net - Preview

[Maryland Council of Teachers of Mathematics](#)
www.marylandmath.org - Preview
 maryland mctm mathematics mcsm

[NCSM - Welcome](#)
www.mathedleadership.org - Preview
 ncsm supervisors mathematics

[AMTE | Home](#)
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 amte association of mathematics teacher educators higher education

[National Council of Teachers of Mathematics](#)
www.nctm.org - Preview
 nctm math teachers

[Jonathan A. Wray](#)
jonathanwray.com/resources - Preview
 k-8 math resources online mathematics

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Public Tags (29)

Jon Wray's Public Lists (0)

No lists have been created yet.
 "List" is a great way to organize, share and display your specific collection of bookmarks.

*Diigo is about better ways to **research, share and collaborate** on information.*



Digital Curriculum - Resource Repositories



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iTunes Store

Florida Department of Education > Math - Video Lesson Profiles

Mathematics Example Lessons

TEL A FRIEND

FOR MORE INFORMATION

- Technology Lesson Plans
- Technology Integration Matrix
- Standards and Software
- Educational Technology Clearinghouse

Music
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CATEGORIES

- Business
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- Humanities
- Language
- Literature
- Mathematics
- Science
- Social Science
- Society
- Teaching & Education

DESCRIPTION

The videos below depict mathematics lessons in Florida classrooms featuring exemplary models of technology integration. These elementary, middle, and high school Florida classroom teachers use technology in many different ways, ranging from the simple and effective to the innovative and transformative.

This collection includes lessons from the school districts of Bradford, Broward, Collier, Hardee, Hernando, Hillsborough, Leon, Manatee, Pasco, Pinellas, Polk, Seminole, St. Johns and Walton counties.

Video Lesson Profiles

	Name	Time	Artist	Album	Price
1	Body Length Experiment	0:28	Florida Center for I...	Health Education	Free GET MOVIE
2	Fraction and Decimal Review Podcast	4:13	Florida Center for I...	Mathematics	Free GET MOVIE
3	Luxury Hotel	1:24	Florida Center for I...	Mathematics	Free GET MOVIE
4	Perimeter	0:47	Florida Center for I...	Mathematics	Free GET MOVIE
5	Mean, Median and Mode	1:46	Florida Center for I...	Mathematics	Free GET MOVIE
6	Pulse Rates	0:46	Florida Center for I...	Mathematics	Free GET MOVIE
7	Adding and Subtracting Integers	1:46	Florida Center for I...	Mathematics	Free GET MOVIE
8	Can Acids and Bases Remedy the Body	2:27	Florida Center for I...	Science	Free GET MOVIE

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TITLE	INSTRUCTIONAL TYPE	CONTRIBUTOR	RATING ▲
▶ "Choices" Beginning of Year Math Activity	Lesson Plan	Amy Amy_Bridges	Exemplary
4th Grade Curriculum Frameworks	Reference Collection	Christina K.	Exemplary
4th Grade Curriculum Mapping	Index/List	Mrs. Morello Parlin	Exemplary
Achievement Info - 1998 - 2002 MCAS Test Questions	Reference Collection	Christina K.	Exemplary
▶ Algebra 1A	Full Course	Zaenal Abidin	Exemplary
▶ Arithmetic quiz spreadsheet	Graphic Organizer/Worksheet	carl haeger	Exemplary

Welcome back, Jon! Sign out

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Site News

Become An Apple Distinguished Educator (ADE) - Apply Now In ALI

New Features Added - December 2008

Apple Launches ACOT2 Project - Learn More About This Challenge-Based Curriculum

Save on Mac Computers

Home > ILife in the Classroom

Symmetry in Motion

Middle School Math Teaching Practice



Duration: 0:27

Students who are actively engaged in meaningful application of new concepts and ideas internalize and understand at a much higher level. Mathematics students learning about transformational geometry will not only look at characteristics and defining features of translations, reflections, rotations and dilations of two-dimensional shapes, they will explore the world around them to find real-life examples of each type. In this lesson, students will create a desktop movie explaining each concept and provide real-world examples to clarify and develop understanding for themselves and their audience.

The Lesson

Sixth grade students engage in an authentic learning experience as they identify the meaning of translations, reflections, rotations, and dilations of two-dimensional shapes. After solidifying their understanding of each type of symmetry, students will work together to create a movie that not only explains the meaning and characteristics, but also provides an example of a natural occurrence of each type of symmetry.

Project Description

Students will work with the classroom teacher to learn, research and discover the four types of symmetry (translations, reflections, rotations, and dilations) through the use of the math text, web resources and any other mathematical resources available. Students will use a graphic organizer software such as Inspiration to map out the

Contents

1. Introduction
2. Resources

- Send media to my iTunes
- Add to my favorites
- Printable Version

Author

Gabriella Meyers
Duncan Elementary School

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Community



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<http://edcommunity.apple.com/ali>

PD 360°

The screenshot displays the PD 360° website interface. At the top left is the logo, an apple with a face, and the text "PD 360° Professional Development On Demand". The top right shows the user "Hello, Jon Wray. (Log out?)" and links for "My Account" and "Help". Below the logo is a search bar with "mathematics" entered and a "Search Content" button. A vertical sidebar on the left contains "Focus", "Search", "History", and "Courses" buttons. The main content area features a video player showing a teacher in a classroom pointing at a chalkboard. The chalkboard has handwritten notes including "COMCS MATHS", "5/13/96", "welcome", "Drill (1) SIT WITH A PARTNER FROM YOUR TEAM.", "OPEN YOUR NOTES TO...", "PAIR STUDY OUT LOUD", "ABOUT INVERSE FUN...", "CAST EACH OTHER?", and "REPEAT FACTS OUT LOUD". Below the video player is a red control bar with "Reflection", "Next Segment", "Share", and "Guidebook" buttons, and a timestamp of "5:18/17:48". To the right of the video player is a "Learning Community" sidebar with a "Enter Community" button and a "Forums" section. The forums section includes a "Win an iPod every week!!" announcement, a "Winner" notice for Renee S., and several article titles: "Mathematics: The debate continues about...", "Content Area Literacy", "Word Walls for Third Grade", "Strategies in addressing Referenc...", "K - 5 Art", and "5th Grade Lit Circle Group Suggest...". At the bottom of the sidebar is a "Files" section. A red banner at the bottom of the page says "Explore the Content" with an "expa" link. A small grey box at the bottom right of the sidebar says "See what other resources are available from School Improvement Network".



Home >> Tools For Educators >> Tools For Coaches

Tools for Coaches

Videos of Coaching Conversations By Grade

Lesson Planning

- 5th Grade
- 5th/6th Grade
- 7th Grade
- 7th/8th Grade



Faculty Debriefing

- 4th Grade
- 5th Grade
- 5th/6th Grade
- 7th Grade
- 7th/8th Grade



Student Debriefing

- 5th/6th Grade
- 7th Grade



TOOLS FOR EDUCATORS

- Problems of the Month
- Tools for Coaches
- Tools for Principals and Administrators

HELPFUL MATERIALS

- Professional Development Calendar
- Improving Our Craft as Coaches
- Supporting Teachers in their Classrooms to Increase Student Achievement
- Classroom Observation Guide
- Mathematics Teaching Rubric
- Pedagogical Content Coaching

Professional Development Calendar

This document provides a sample for how teacher learning around the MAC tasks might unfold over the academic year. [PDF >>](#)

Improving Our Craft as Coaches

Presentation given by Noyce Professional Development Faculty to participating coaches (2009). [PDF >>](#)

Supporting Teachers in their Classrooms to Increase Student Achievement



Online Gaming



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<http://labyrinth.thinkport.org>



jonowray 390 2530 Calculation Nation

CLICK THE PERIMETER OF YOUR RECTANGLE TO COMPLETE YOUR TURN

70 72 76 30

GET NEW NUMBERS

USED NUMBERS:
20

STATISTICS
WIDTH: 1 HEIGHT: 9 AREA: 9
CURRENT EFFICIENCY: 36%
OVERALL EFFICIENCY: 36%



<http://calculationnation.nctm.org>



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Points Earned
48

Click on all the factors for the flashing number 8.
Then click OK.

You will be awarded points totaling the sum of the factors found after you click OK.

Factor Dazzle

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

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Points Earned
2100

Up
Down **FIRE!**

It's your turn. Earn points by setting a course for your ball that will collect the most coins.

Digital Video Resources



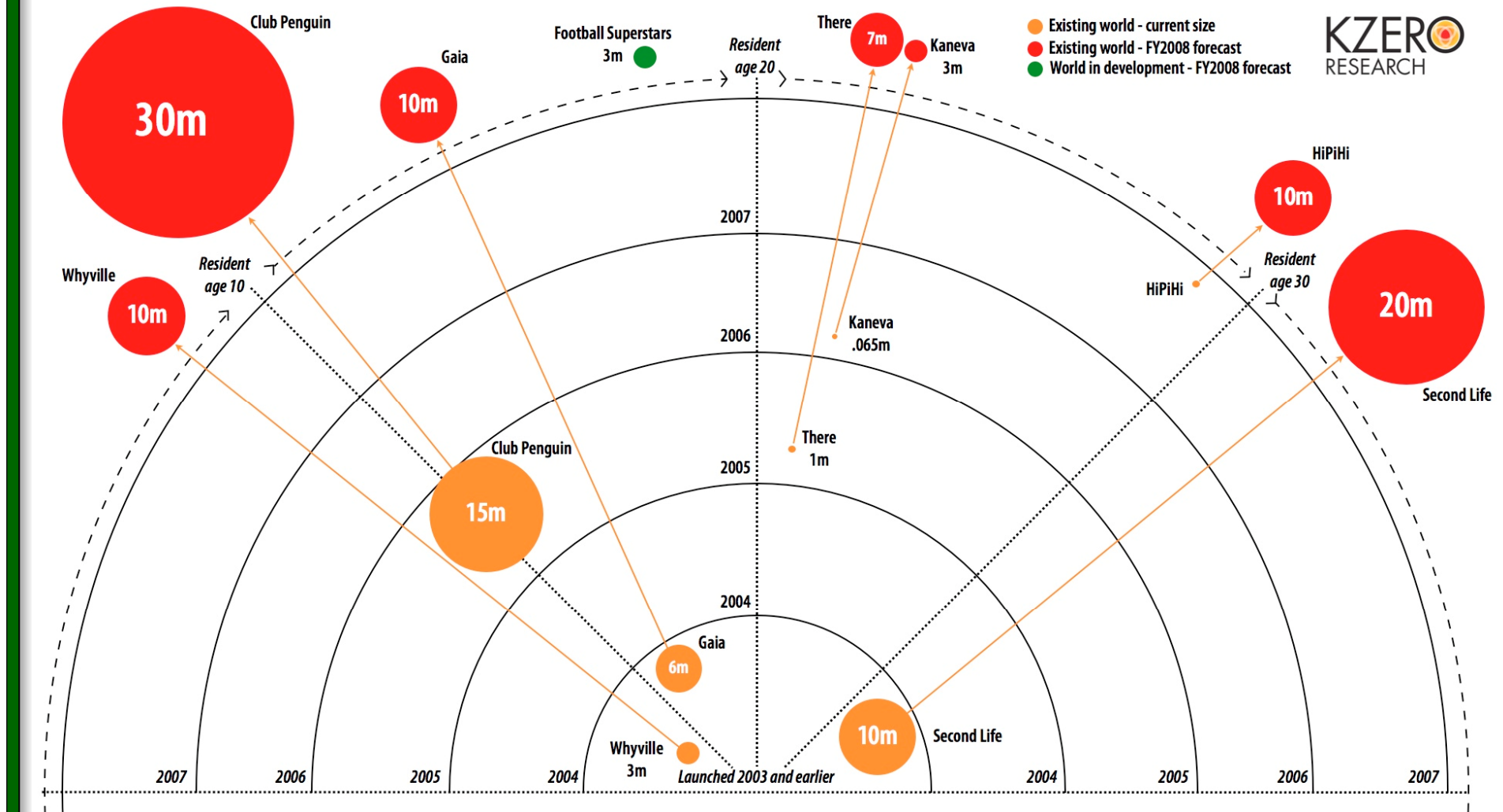
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<http://theflip.com>
Pure Digital Technologies



Virtual Meeting Spaces & Tools



Gmail Voice and Video Chat:

How does it work?

<http://gmail.com/videochat>



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<http://www.secondlife.com>