

**Title of Session:** Math and Technology

**Moderator:** David Weksler

**Title of File:** 20050621mathtech

**Date:** June 21, 2005

Room: After School Online

**DavidWe:** Welcome, Amanda

**DavidWe:** Are you here for the math and technology discussion?

**AmandaL:** Yes I am.

**AmandaL:** Have you done intros yet?

**DavidWe:** Welcome, then. We weren't sure if anyone was coming

**DavidWe:** I guess we should do intros, then. Would you like to start?

**AmandaL:** I guess I should Introduce myself. I seem to be the only newbie

**BjB:** oh, Sorry, Amanda!

**BjB .** o O ( we all should introduce ourselves )

**DavidWe:** So, I'm David Weksler. I began working with teachers around geometry/math and the Internet in 1993 when the National Science Foundation decided to give a chunk of your money to a group of us at Swarthmore College - it became [www.mathforum.org](http://www.mathforum.org) - the Math Forum

**DavidWe:** Please do, Amanda

**AmandaL:** I am the technology liaison for the Alabama A&M Writing project in Huntsville, AL

**GailH:** I am Gail Hoskins, outreach coordinator with Eisenhower National Clearinghouse (ENC) which is in Columbus but a K-12 math and science national resource at <http://www.enc.org>

**DavidWe** wonders if Amanda knows Sandra Shattuck

**AmandaL:** I sure do!

**GailH .** o O ( Ohio )

**DavidWe** thinks Gail IS a math and science national resource herself

**BjB**: I'm an art teacher in Pennsylvania

**EmilyW**: I am Emily from TX, I am a recent college grad and web designer

**GailH**: Sandra is a familiar name, somehow. I found her at <http://tappedin.org/tappedin/web/perspectives/2004/ss.jsp>

**DavidWe** wonders if Jeff is...

**JeffC**: is what?

**DavidWe**: ready to introduce himself

**DavidWe** smiles

**JeffC**: I surf the Net... therefore I am...

**DavidWe** nods

**DavidWe** can project Jeff's résumé page, but decides not to

**JeffC**: I'm on Helpdesk here, an unemployed Education Technology Specialist... but hopes to land a job with the local school district.

**BrookeM** joined the room.

**DavidWe**: So, I've got a few ideas for this evening, but I want to Amanda what brings her to a math and technology session

**DavidWe** waves to Brooke

**DavidWe**: Hi, Brooke. Welcome

**GailH**: Amanda, we really are glad to have you. We are just being goofy.

**DavidWe**: Want to give us a brief introduction, Brooke?

**AmandaL**: Then I should fit right in!

**MelanieZ** joined the room.

**DavidWe** hopes to be not too goofy

**DavidWe** waves to Melanie

**AmandaL:** I am here to experience an ASO session

**DavidWe:** Hi, Melanie. Welcome

**DavidWe** nods to Amanda

**BrookeM:** I am a third grade teacher

**MelanieZ:** Hi David

**BrookeM:** in Maryland

**DavidWe:** That's fine, Amanda. Thanks, Melanie

**AmandaL:** This one looked good to start with.

**DavidWe:** Would you care to introduce yourself, Melanie?

**DavidWe:** Thanks, Amanda. You are in with the Tapped In "A" team, that's for sure

**BrookeM** is sorry she was late and will have to leave early (class)

**DavidWe:** No problem, Brooke

**MelanieZ:** Sure...I am an educational technology researcher ...formerly of BBN and have worked on several mathematics /technology projects

**DavidWe:** Thanks for joining us

**DavidWe:** So, folks. Let me throw out a few ideas and also ask you what may interest you in this math and technology discussion area

**DavidWe:** As many of you know, the NECC conference is starting this weekend in Philadelphia

**MelanieZ:** will people be going?!!

**MelanieZ:** David?

**DavidWe:** Ihor Charischak and I are leading a Birds of a Feather discussion at NECC on Wednesday at 4:45pm, EDT

**DavidWe:** I'll be there, Melanie

**MelanieZ:** I have a birds of a feather...not sure if it is the same time

**DavidWe:** We hope to highlight a number of intersections between technology and math (we won't have enough time) but also try to promote an active and on-going discussion that will continue in several places including Tapped In

**DavidWe** nods to Melanie

**BjB** . o O ( I think all the BoF's are at the same time )

**MelanieZ:** I know Ihor from the Mathemagica project

**DavidWe:** In addition, when NECC told me I was giving this BoaF session, I was also asked to contact a very interesting group in California - the MIND Institute - who have developed a fascinating math+music curriculum being used in California at K-5 level

**DavidWe:** Here's the URL for an overview of what they do:

**DavidWe:** <http://www.mindinstitute.net/MIND3/mst/overview.php>

**DavidWe:** So, Andrew Coulson, the president of their education division will be giving a brief overview of his project and we will be talking about a range of things

**DavidWe:** For folks not able to be in Philadelphia, I'm hoping to be online in TappedIn and also be broadcasting some of our real-time interaction through a web camera so people can hear and see what's happening if they are interested

**DavidWe:** If they have questions, I will pose them to the group as time allows

**DavidWe:** It will be a little amateurish, but we'd like to make as much of an interaction possible

**DavidWe:** What Ihor, Andrew and I would most like to do is to re-invigorate the interest in the creative and compelling uses of technology in math education, especially in light of things like NCLB and the current trend for TESTING, TESTING, TESTING in many schools

**DavidWe:** It will ALL happen within our hour for the Birds of a Feather (BoaF) session

**DavidWe:** He's going to be in a booth on the exhibit floor as well, Melanie. He's never been to NECC before

**MelanieZ:** oh...The session sounds interesting and I am sorry to miss it.

**DavidWe:** He sounds like a very interesting guy who has ended up in elementary math education after some interesting other experiences in science and engineering

**MelanieZ:** I will try to catch up with you and him and Ihor

**BrookeM:** fun

**DavidWe:** So, you are all invited to attend, both in person and virtually in Tapped In. It is on the Tapped In calendar of events for next week

**DavidWe:** Email me - [wex@pobox.com](mailto:wex@pobox.com) - to let me know where you will be, Melanie. We are hoping to at least get a group to go out to dinner after the Boaf session

**DavidWe** hopes it is fun

**DavidWe:** Food will be fun for sure, but not for the virtual participants

**DavidWe** will get gift certificates

**EmilyW** hopes to be there virtually

**DavidWe:** So, for another slice of the technology pie, does anyone know about Zometool?

**DavidWe** thanks Emily in advance

**DavidWe:** [www.zometool.com](http://www.zometool.com)

**AmandaL:** nope

**DavidWe:** It's a VERY cool, building tool/toy like Lego, Konnex, etc.

**AmandaL:** Interesting

**DavidWe:** I was in New York City on Saturday afternoon with the New York rep. for the company ( a City College student and 4 8 year olds)

**MelanieZ:** useful for geometry and permutations yes?

**DavidWe:** We were building stuff. It is very geometrically accurate and allows for some pretty amazing representations.

**MelanieZ:** David you are still the road runner

**DavidWe** nods to Melanie

**DavidWe** has frequent driver miles over the George Washington Bridge

**GailH:** <http://www.enc.org/resources/records/full/0,1240,013520,00.shtm> is ENC's description of their main product (maybe not their latest).

**DavidWe:** If I would swim the Hudson, it would be cheaper!

**DavidWe:** Thanks, Gail. I knew that it would be in the ENC database

**DavidWe** thanks Gail also for the box of goodies that went over very well in Brooklyn two weeks ago

**BrookeM** thanks everyone...off to class

**DavidWe:** Anyone want an ENC pen and post-it notepad?

**DavidWe** waves bye to Brooke

**DavidWe:** Thanks for coming

**BrookeM** left the room.

**DavidWe** breathes

**DavidWe:** So, anyone have a question or suggestion or something to share?

**MelanieZ:** I do

**DavidWe** listens

**MelanieZ:** I am working on a project with the Boston Public Schools...They are implementing the ExploreLearning gizmos district wide

**MelanieZ:** Teachers go to a 15 hour training and each gets an LCD display and a subscription

**GailH** . o O ( I love them! )

**DavidWe:** gizmos?

**GailH:** Wonderful ones.

**MelanieZ:** They have the gizmo's on a district website aligned with the chapters of the text book

**MelanieZ:** the url

**DavidWe** doesn't know if he knows about the gizmos

**DavidWe** nods

**MelanieZ:** [www.explorelearning.com](http://www.explorelearning.com)

**MelanieZ:** they were originally created by Joe Garfarlo at UVM I think

**DavidWe:** I know him!

**DavidWe** smiles

**DavidWe:** They have some very cool applets and things done in Flash

**MelanieZ:** Now the gizmos ..you pay a fee for a subscription

**MelanieZ:** yeah..flash stuff.

**MelanieZ:** I used the gizmos this week with my 12 year old to study for his final and he finally got concepts that his teacher didn't teach well.

**DavidWe:** Interesting

**MelanieZ:** they are really good visualizations of math concepts

**DavidWe:** About what does it cost for a school to use, if that's a useful way to price it?

**DavidWe** agrees with Melanie about the visualizations

**DavidWe:** Justine has made (she's my niece) a very interesting math animation in Flash in about 30 minutes

**MelanieZ:** a subscription costs about \$700 a year and for that the school gets to set up 6 sets of class accounts made up of 30 students

**DavidWe:** Some math and some artistic talent go well together!

**DavidWe:** And there are some curriculum guides, teaching guides, etc?

**MelanieZ:** yes...basic how to use ...

**MelanieZ:** The trick is to get the teachers to go deeper with them

**GailH** . o O ( But anybody can try and play with them for free -- once a day (once for each one, I think) )

**MelanieZ:** yes, you can use one a day

**EmilyW** has to go

**MelanieZ:** or you can get a 30 day trial subscription

**DavidWe** waves bye to Emily

**EmilyW:** I will talk to you later

**DavidWe:** Thanks, Emily

**DavidWe:** Ciao

**GailH** has been into pricing structure for fee-based sites and has opinions from that.

**GailH** waves.

**EmilyW** left the room (signed off).

**DavidWe** hopes Melanie remembers what we tried to do with Ricky's programs in Watertown, oh those many years ago

**DavidWe** is sure Gail has opinions on that

**MelanieZ:** yes I remember Ricky's programs...bouncing ball etc.

**MelanieZ:** Mathemagica had some really nice applets

**GailH:** Is mathematica gone these days?

**DavidWe** . o O ( not matheMATICA )

**GailH:** It was with Jason, right?

**DavidWe** nods

**MelanieZ:** pretty much...the math was rolled into the Jason science and academy

**MelanieZ:** The project team are all dispersed now

**DavidWe:** Amanda, is any of this interesting to you?

**AmandaL:** I'm hanging in there!

**DavidWe** smiles



**MelanieZ:** I am sorry I missed the introductions...

**DavidWe:** No problem, Melanie. Amanda's a writing person, but...

**MelanieZ:** oh...

**AmandaL:** I'm always looking to integrate writing and math

**DavidWe:** There's a very interesting connection for a lot of folks with writing and mathematics...actually the impetus for Annie Fetter to begin the Geometry Problem of the Week: getting students to EXPLAIN their answers

**MelanieZ:** yes..writing and math are well connected..

**DavidWe:** They couldn't simply submit a numerical answer. They needed to give an explanation of how they arrived at the solution

**DavidWe** . o O ( Joan Countryman - "Writing to Learn Mathematics" )

**GailH:** She has been on ENC's math advisory board

**DavidWe:** Here's a good, quick explanation:

**DavidWe:** <http://mathforum.org/~sarah/Discussion.Sessions/Countryman.html>

**DavidWe** nods to Gail

**DavidWe:** She's a neat person

**DavidWe:** but it made the reason to use email (and the web) for writing, a COMPELLING reason to use the Internet when the Geometry Forum began

**DavidWe:** The trick is to use the technology (in my very humble opinion) for something you simply CAN'T do without it - then it seems, hopefully, less of a chore and more of a good reason to use the technology

**MelanieZ:** yes...the interesting thing is that technology allows students to explore and discover concepts in ways that sitting at a desk with paper and pencil doesn't

**DavidWe:** Melanie, how has the use of the flash visualizations gone over in Boston and how well has it integrated into their math curriculum?

**MelanieZ:** good question...one of the problems at the high school is poor tech support

**DavidWe** . o O ( How much "pressure" is their to prep kids for tests? )

**DavidWe** nods

**MelanieZ:** Tons of pressure for test prep...

**DavidWe:** Are there a number of different schools, schools in one area, etc?

**MelanieZ:** But the district has aligned the gizmos, shodor applets etc with the curriculum, e.g., preparation for the tests..

**DavidWe:** So, the technology can "fall off the wall" too easily?

**DavidWe:** That's great - that work to align them is important

**GailH** . o O ( doesn't understand the falling part. )

**MelanieZ:** to work with one of the teachers I had to go in and test, fix the laptops

**DavidWe** nods

**DavidWe:** Yes

**MelanieZ:** there is a url for the bps page with the list alignment... I can go get it if you like

**GailH** would like it.

**DavidWe:** Sure thing. I would be very interested in seeing it

**DavidWe:** Amanda, do you interact with teachers who are teaching math?

**MelanieZ:** <http://www.boston.k12.ma.us/teach/technology/select/>

**DavidWe:** Thanks, Melanie

**AmandaL:** I do. We are always trying to recruit teachers of all disciplines.

**DavidWe:** How does the writing appeal to people (math and science folks) who may feel that they don't have much time to talk about writing with all the other subjects they need to teach?

**AmandaL:** With some people there is a real phobia of connecting writing with anything besides English.

**GailH** . o O ( wonders what grade level we are thinking about )

**DavidWe:** Are you working mostly with high school teachers, Amanda?

**AmandaL:** We work with teachers preK-college level.

**DavidWe** nods

**DavidWe:** pre-service teachers or...

**DavidWe:** ?

**AmandaL:** Preschool

**DavidWe:** But they are teaching currently?

**AmandaL:** Yes.

**DavidWe:** You are doing teacher professional development

**AmandaL:** Yes.

**DavidWe** nods

**DavidWe:** Got it'

**JeffC:** Great site Melanie (playing with it now...) I've added it to the public bookmarks at <http://www.mybookmarks.com/mathscience> If you would like to add any links there: 1) Go to <http://mybookmarks.com> 2) Login: mathscience 3) Password: tappedin 4) Click the Add Bookmark link and type in the URL and description, then place it in the Math folder.

**DavidWe:** I've been impressed (distressed/depressed) that in many teacher education programs I've witnessed over the past 10 years, there isn't much of an introduction to the use of technology, especially with pre-service math teachers

**DavidWe:** Thanks, Jeff

**DavidWe:** Jude, generally we've been discussing math and technology, but Amanda does work on writing

**GailH:** Amanda, you might be interested in <http://www.enc.org/features/focus/archive/elemmathlit/> -- the navigation is on the RIGHT side. Later, be sure to check out the "talking points on teaching math using children's lit" (with your sound turned on.

**MelanieZ:** re preservice programs and technology and math...still not much

**DavidWe** agrees with Melanie

**AmandaL:** Gail, thanks for the link.

**DavidWe:** May take another part of a generation before education faculty are comfortable with the range of tech resources that are available

**MelanieZ:** Jeff for some reason the url didn't work...can you post it again?

**DavidWe:** We've got a few minutes left, does anyone have something they would like to share?

**GailH:** But it isn't just the technology that isn't getting enough time. I work with pre-service teachers who are student teachers and they aren't getting enough on things like classroom management either. I am NOT against there being tech woven into the math education prep -- but I think it is a time issue.

**DavidWe:** For those of you who won't be at NECC, I'm happy to keep track of some specific topics of interest and see if there is information/presentations/hand-outs I can get for anyone

**DavidWe:** TIME is critical...

**MelanieZ:** I think it is also faculty don't have enough time to develop new curriculum too

**JeffC:** <http://www.mybookmarks.com>

**MelanieZ:** I got in thanks..

**DavidWe** nods

**DavidWe** looks forward to seeing Melanie and Bj in Philadelphia

**MelanieZ:** yes that will be nice...

**DavidWe:** Jeff, email me if you would like me to look for anything in particular at NECC

**GailH:** David, for this event next month, will you report back -- and bring us some nifty urls please.

**DavidWe:** We can hand out your JBCoops web site for people to contact

**DavidWe** will definitely report back and give Gail ALL the important URLs, including the nifty and groovy ones

**DavidWe** thanks everyone for dropping in this evening

**GailH:** Amanda -- for high school math and literature, there is <http://www.enc.org/features/focus/archive/mathlit/> (again with the navigation on the RIGHT).

**AmandaL:** Thanks for letting me sit in. I hope to be back soon.

**DavidWe:** I appreciate you bearing with all this math stuff, Amanda. Glad that you were able to join in

**MelanieZ:** Thank you David...

**DavidWe** smiles

**GailH:** Thanks David.

**MelanieZ:** Nice to talk with everyone

**AmandaL:** Again, Gail, Thanks

**DavidWe:** Ciao, folks