

Title of Session: Math and Technology

Moderator: David Weksler

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Room: After School Online Room

DavidWe: Welcome everyone

BJB2: Please let us know where you are located and what you teach or hope to teach

StaffanyR: I am preservice teacher at the University of Houston

KimberlyMu: I am from Versailles Missouri and am currently teaching 5th grade.

StaffanyR: I hope to teach 7th grade Texas History

MichelleTJ: My name is Michelle, I am a pre-service teacher at the University of Houston and hope to teach Math in the fall

DeeDeeCl: I am currently a student at the University of Houston, hoping to start teaching middle school math in the fall

DavidWe: I'm David Weksler. I've been using Tapped In for 8 years or so, having been involved with a partnership between the Tapped In folks and the Math Forum - www.mathforum.org - a big web site for math education

PederJ: Hi, my name is Peder and I am a pre-service teacher at MSU in Bozeman, MT

DavidWe looks around for any other intros

DavidWe . o O (BJ, Emily, Jeff?)

BJB2 waves hi

DavidWe: Thanks, BJ, that helped

EmilyW: I am Emily and I am in Dallas, TX. I am a recent college graduate and web designer. Math is my favorite subject and I hope to design educational websites in the future, especially math ones.

BJB2: I'm an art teacher in Pennsylvania and am always interested in new ways to integrate math and art

DavidWe thanks Emily and BJ, in THAT order

StaffanyR: Sounds interesting Emily

DavidWe: Let me quickly say that Jeff has been leading the "regular" K-20 math resources discussions for some time now

DavidWe: I've been helping him out with some of those presentations.

JeffC: I'm Jeff Cooper and volunteer on Helpdesk here... also facilitate the Math and Science resource groups... and am happy to have David take up where I left off.

DavidWe: Jeff lives in Oregon and has done a HUGE amount of work developing ideas for ongoing and online teacher professional development

DavidWe: So, if you all are game, I would like to tell you a little bit about what I had hoped to do this evening

DavidWe: This is kinda a new session, but at the same time, one that Jeff and Bj and I have been well-acquainted with for some years

DavidWe: Using technology in math education

DavidWe: If you don't mind being participants in an on-going discussion, I wonder if I could ask you all to quickly think of something involving math and technology that you either do, or would like to do, or think might be useful in helping students learn more math

DavidWe: I'm hoping that I'll have the discipline to keep this discussion going in Tapped In

KimberlyMu: I would like to incorporate math webquests into the curriculum.

DavidWe: So, anyone want to give an example, an idea, etc?

DavidWe thanks Kimberly for kicking it off.

DavidWe: Great, Kimberly

VanL: well, I did a short clip on math and tennis...I took a clip from one of the Japanese animation called prince of tennis..then I explained how tennis involves math

EmilyW: playing educational games on the computer to learn math skills (I enjoyed doing that)

DavidWe: How does it involve math, Van?

DavidWe nods to Emily

VanL: well, the tennis court and the shapes, the measurement

DavidWe: Great, So, the geometry of the space...that's cool

VanL: then the density of the ball and the accuracy when hitting the ball

DavidWe likes to play tennis

DavidWe nods

DavidWe: Thanks, just wanted to flesh it out a bit

DavidWe: Anyone else?

DavidWe: Oh, Van, by the way, any technology involved with that?

EmilyW: searching the internet for numbers, like stats of a game and graphing them or something else

DavidWe hopes others will keep contributing ideas

VanL: it was a movie clip I did with movie maker

DavidWe: That's very cool

MichelleTJ: I hope to incorporate blogging as a journal for math processes

DavidWe hopes for more ideas...

EmilyW is still thinking

VanL: viking.coe.uh.edu/~vle/cuin3113 is the site if you want to take a look during free time

DavidWe: Want to explain that a little bit more, Michelle?

DavidWe: Thanks for the URL, Van

PederJ: I like the idea of searching the internet for numbers, has anyone been able to do anything that incorporates an entire class?

DeeDeeCI: Having students create a PP to explain a mathematical concept that is a little more difficult.

MichelleTJ: I think that writing out one's thought process as they are solving a problem helps them understand

DavidWe wants to remind everyone that a transcript with all the web site addresses will be emailed to them after they logout

DavidWe: Thanks, DeeDee

DavidWe agrees with Michelle

MichelleTJ: It requires that they really know what they are doing. They can't fake a correct answer

PederJ: I'm sorry, can someone explain PP to me?

DavidWe: Yes, I think the explaining of something - practically teaching it to someone else - can be very powerful

StaffanyR: Powerpoint

DavidWe . o O (PowerPoint == PP)

PederJ: Thank you

DavidWe smiles

BJB2: I did a Math and Art discussion in Tapped In last month that showed several ways to integrate art into math

BJB2: you can see the transcript at www.tappedin.org/transcripts

StaffanyR: can you give a few examples

VanL: that is interesting

DavidWe: So, have any of you used any math software, for example to do graphing, or any geometry program, like the Geometer's Sketchpad?

DavidWe: Staffany, not sure to whom you addressed that question

KimberlyMu: I have used Geo Logo for graphing and plotting points

DavidWe nods to Kimberly

MichelleTJ: I used Mupad in a college course, but nothing yet in the classroom

StaffanyR: BJB

DavidWe: Great. Logo is very cool

DavidWe: What is Mupad, Michelle? I don't know that

BJB2 waits for a good time to give examples

DavidWe smiles

DavidWe: Perhaps, after Michelle tells me something about Mupad

EmilyW: I used PP for a class project in college in statistics, PP could easily be used for something in math

MichelleTJ: It is a software program that does calculus for you. You can find derivatives and other calculus concepts without having to know how to do it

DavidWe: Interesting, Michelle. Thanks

DavidWe has some issues on the use of PowerPoint in general, but understands that it is good for doing presentations

PederJ: Is most of this software available for school districts or is it up to the teacher to buy it?

DavidWe: Anyone use graphing calculators (or any kind of calculators) with students?

DavidWe: Peder, I think IT DEPENDS

DavidWe: I'm working in some school districts that have bought the software for the entire district - in New Jersey

VanL: we had to watch one of the video for one of our class and a teacher use PP for other use other than the typical instructional presentation

DavidWe: But, I'm aware that sometimes teachers do things on their own if they feel motivated enough to use something

DavidWe wonders if Bj wants to give a couple of examples

BJB2: EthnoMath integrates the math of world cultures into your math curriculum

SusanR joined the room.

BJB2:

<http://www.enc.org/features/focus/archive/mathroots1/document.shtm?input=FOC-003606-index>

DavidWe waves under the table to Susan

DavidWe: Ooh, very cool, BJ

DavidWe . o O (quick intro Susan and perhaps an idea on using technology in math education - we all are sharing)

DavidWe: Another one, BJ?

EmilyW: another idea- creating graphs using the computer

BJB2: Native American Geometry : <http://www.earthmeasure.com/>

SusanR: Sorry I did not arrive early. I was called away from the computer

DavidWe: Obviously some of these suggestions and ideas may fit better for younger or older students

BJB2: Fibonacci Spirals : <http://www.moonstar.com/~nedmay/chromat/fibonaci.htm>

StaffanyR: BJB can you give use a brief description on what exactly can we find on the websites

DavidWe: We're just brainstorming some ideas about using technology in math education

DavidWe: Would you mind, Lilia, briefly introducing yourself?

DavidWe thanks Staffany for asking that question

EmilyW: drawing geometrical shapes on the computer (using word or another program)

BJB2: The Knot Plot

<http://www.cs.ubc.ca/nest/imager/contributions/scharein/KnotPlot.html>

DavidWe: Great, Emily

StaffanyR: no problem David

LiliaA: My name is Lilia Alaniz I teach 7-8 math in Benavides, Texas - I am currently working on my masters

DavidWe: Great, Lilia. Thanks for dropping in. There are a few other Texans here

BJB2: ethnomath allows you to integrate a variety of cultures and geography into your math program

BJB2: fibonnaci spirals uses patterns and can relate to the science curriculum

StaffanyR: What different resources can we find on these sites

DavidWe: I would think quite a lot, Staffany, but you clearly would need to go and explore a bit

BJB2: you'll have to take a look after you get your transcript, Staffany

PederJ: Does anybody know of any resources for fractions? I work with a student for an hour each day who is struggling with multiplying and dividing fractions. We work a lot with fraction strips and I think that the more the student can visualize fractions, the more he understands them BTW he is in 6th grade.

DavidWe: Again, a cool part of Tapped In is that you don't have to write this stuff down. You'll get all the comments and web site addresses emailed to you later, after you logout

SandyG joined the room.

DavidWe: Good question, Peder

DavidWe waves to Sandy

DavidWe: Hi, Sandy. Welcome. Math and technology - we're brainstorming some ideas

SandyG: hi everyone

DavidWe: Do you know the Math Forum - www.mathforum.org - or ENC - www.enc.org - Peder?

SandyG: I am trying to get familiar to the newer interface, I haven't been online in awhile

BJB2: you might try Math Quilts for fractions:
<http://members.aol.com/mathquilt/index.html>

EmilyW: I know there are lots of computer games with fractions (or computer software for learning)

StaffanyR: Hello Sandy

DavidWe: Want to briefly introduce yourself, Sandy?

SandyG: sure

SandyG: I am the math program coordinator for a K-8 district in nj

BJB2: Pattern Blocks: Exploring Fractions With Shapes :
<http://ejad.best.vwh.net/java/patterns/>

DavidWe: Peder, those two web sites are in effect libraries. They have search engines to help you find exactly the question you asked

DavidWe: Thanks, Sandy. I'm in New Jersey, too.

StaffanyR: Can we check out one of these sites as a group

PederJ: I haven't visited either of those sites, David, but I'll be sure to check them out. Thanks, David

SandyG: glad to see a fellow new jerseyan!

LiliaA: We have been using a website to help with math - it is called www.studyisland.com - it helps students in all the subjects that get tested in TAKS. If they are weak in an area -it breaks it down until they are at their own level & then they build back up until they learn it

DavidWe: Well, Staffany, I guess we could, but I actually have a couple of other things in mind, if you don't mind

SandyG: I am sorry that enc will cost \$\$\$ in September

DavidWe listens

DavidWe agrees with Sandy

StaffanyR: Not at all David

DavidWe hopes Lilia will explain what TAKS means

DavidWe smiles

SandyG listens

SusanR: I recommend Visual Fractions for students <http://www.visualfractions.com/>

DavidWe: Thanks, Susan, that's on point for sure

EmilyW: Susan, I just found that site

PederJ: That sounds good

DavidWe: There is some REALLY GREAT STUFF, Peder

DavidWe: Finding it is another matter, but that's one reason for these discussions

StaffanyR: It does sound good, fractions are always scary for students

DavidWe: We all know SOME things

DavidWe wonders if he can pause the conversation for a minute and relate something else that happened recently

LiliaA: It is the abbreviation for our State Assessment Preparation Programs

LiliaA: - Texas Essential Knowledge & Skills

DavidWe: Thanks, Lilia

DavidWe: I was getting close to that...

DavidWe . o O (the acronyms are deadly sometimes)

DavidWe grins

DavidWe: So, in the New York Times on Sunday, in the Week in Review section, there was a great advertisement from the Girl Scouts

DavidWe: I'll describe the picture, but here's the text underneath:

DavidWe: By 6th grade, an alarming number of GIRLS lose interest in math, science & technology.

DavidWe: Which means they won't qualify for most future jobs. That's why parents have to KEEP THEIR INTEREST ALIVE, in every way we can

DavidWe: That's the end of the quote

DavidWe: Then it says: IT'S HER FUTURE. DO THE MATH.

DavidWe: And the web site is:

DavidWe: www.girlsgotech.org

DavidWe: I've not even checked it out yet, but maybe we all could take a look at it.

StaffanyR: That's surprising David

DavidWe: The ad is great. I made some full page copies of the newspaper

DavidWe: In what way, Staffany, is it surprising?

DavidWe: Seem like there are a lot of games on the site, Emily

StaffanyR: It doesn't seem that girls at such a young age would lose interest in math, science and tech

DavidWe: I've heard this quite a lot over the 13 years or so that I've been working with teachers

StaffanyR: 6th grade

EmilyW: I think it is more at the high school level that girls (and even boys) lose interest

DavidWe: Typically girls do just as well in math/science as boys up until they are 12/13

StaffanyR: I would think much older

KimberlyMu: I have also heard this

DavidWe: That may be true, also, Emily

SusanR: How would you use this site in a lab setting with grade 7/8 students. David?

EmilyW: they don't understand why they need math

SandyG: is this site owned by the girl scouts?

DavidWe looks at Kimberly since SHE is a 5th grade teacher

EmilyW: what is the point of studying all this?

SandyG: it is an unfortunate stereotype

DavidWe: I'm not sure, Sandy. I've just opened it up for the first time tonight

DavidWe agrees with the stereotype, but if it is true...?

KimberlyMu: I definitely see the boys start to exceed the girls in math and science at this age.

SandyG: girls thinking that they are not as talented in math as boys. it is not true.

DavidWe: Any ideas why, Kimberly?

DavidWe comes from a lot of smart girl scientists, so, he knows...

SandyG: the nsf math programs many districts have adopted even the playing field

SusanR: Grade 7 /8 girls seem to exhibit the same enthusiasm for computers and lab projects..from what I see. Girls appear to be more goal oriented.

DavidWe . o O (Women scientists)

SandyG agrees with Susan

DavidWe: Those Canadian girls must be on the ball, I guess

BJB2 . o O (speaking of scientists:

<http://www.engineergirl.org/nae/cwe/egmain.nsf/?Opendatabase>)

KimberlyMu: Not sure. I think it can be a variety of reasons. I think that they don't see a need for it, more interested in boys!

MichelleTJ: I am currently observing a class of 6th grade students 26 of them are girls. I definitely can see that they are not too interested in math, but instead boys and chatting

SusanR: Ottawa is quite techie.

DavidWe: There's been a lot of concern about this - the quotation from the President of Harvard University, recently, about women in math and science

MichelleTJ: 30% failed last 6-weeks

DavidWe grins at techie Ottawans

SandyG: that was an unfortunate comment

SusanR: They seem to like to work in pairs or with a team member

DavidWe: Any idea as to why, Michelle? Other things on their minds?

PederJ: Could it be something that some teachers do, unconsciously, that discourages girls in these subjects?

DavidWe has some ideas on the influence of puberty and girls getting interested in boys, but he doesn't want to get in trouble with this largely female group

StaffanyR: Michelle is the teacher exciting and appears to be excited about what she is teaching

DavidWe: Good question, Staffany

MichelleTJ: Definitely other things on their minds. I think a lot of them are just having trouble adjusting to middle school and the different things going on. The class is out of control, which is a classroom management problem as well.

StaffanyR: Thanks David

DavidWe: Middle school is ALSO a big focus of a lot of math/science programs - what I'm working on, specifically, thought not focusing on girls exactly

MichelleTJ: The teacher has tried to introduce fun things, but there is absolutely no way to integrate technology in her class

DavidWe: Male/female teacher, Michelle?

MichelleTJ: large class 1 computer, not a lot of cooperation

DavidWe . o O (the one you are observing)

MichelleTJ: Female teacher

DavidWe nods

StaffanyR: Does she have any other resources

KimberlyMu: Could it be the issue of boys more interested in the more mature female teachers, able to focus? What is the statistic on how many time teenage boys think of sex?

DavidWe: Do the students admire the teacher, in your opinion?

DavidWe: Great question, Kimberly

DavidWe laughs

DavidWe tries to remember that he couldn't count that high

MichelleTJ: I think the teacher started out to friendly, and it now has come back to haunt her!

DavidWe smiles

KimberlyMu: Michelle, how long has the teacher taught?

MichelleTJ: This is her 5th year

DavidWe: Well, obviously someone who connects with the students is going to be able to interest them to a greater extent

VanL: the students are probably taking advantage of her

DavidWe: So, she knows what she is doing, having taught for 5 years

KimberlyMu: middle school is a rough group to teach.

DavidWe: To bring this full circle, there are ALWAYS individual differences with teachers, students, etc.

StaffanyR: true

DavidWe: But, I'm guessing the Girl Scouts have done a little research about this, thus the web site, the big advertisement in the New York Times...

DavidWe: So, it just struck me. I wanted to share this NEW web site with all of you

DavidWe: Let me introduce one more thing...the time is skipping by and I really appreciate all of your inputs and questions and comments

DavidWe: It makes the conversation more lively and hopefully the discussion more interesting as well

DavidWe: Do most of you know what the NECC conference is?

DavidWe . o O (some of you?)

StaffanyR: I don't

MichelleTJ: no

PederJ: I do not

BrendaE: I'm going for the first time this year.

DavidWe: National Education Computing Conference

KimberlyMu: I should but don't similar to NCTM?

StaffanyR: explain please

VanL: no

DavidWe: Great, Brenda, hope to see you there.

LiliaA: no

DavidWe: it's the tech folks for education, basically

DavidWe: Here's the web site for this year's conference:

DavidWe: <http://center.uoregon.edu/ISTE/NECC2005/>

BrendaE: I'm really looking forward to attending a couple of workshops.

DavidWe: But...

DavidWe: What I wanted to share with you

DavidWe: Is that I'm going to be doing a presentation there, somewhat similar to this, a less formal presentation called "Birds of a Feather"

BrendaE: Which day? Time?

DavidWe: I've been asked to partner up with an interesting group from California, the M.I.N.D. Institute

DavidWe: Wednesday/4:30pm

DavidWe nods to Brenda

DavidWe: Anyway, this group - I'll give you the URL in a minute -

BrendaE: I'll try to attend.

StaffanyR: That sounds like a great opp David

DavidWe: Has developed...thanks, Brenda, ...an elementary math and music curriculum that they've been deploying in California

KimberlyMu: any success

DavidWe: They require a music teacher be in the school and that the school has access to a musical keyboard of some kind

DavidWe: Not sure, exactly, Kimberly, but they are expanding

BrendaE: math and music integrated?

DavidWe: Some of you may have heard of a project which involved college students listening to Mozart...?

DavidWe: Yes, Brenda

DavidWe: One group listened to Mozart; one group didn't and then both groups were tested on a specific kind of reasoning

DavidWe: The Mozart group did better

DavidWe: . o O (this was in 1993, actually)

PederJ: Can you elaborate on the specific kind of reasoning?

SusanR: . o O (listening to classical music can increase math skills retention)

DavidWe: So, for the past few years (I don't know how many, actually) this group has been working with California elementary schools and putting this curriculum into place

DavidWe: Here's the web site that describes the project:

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

BrendaE: I tend to play a lot of classical music in my classroom.

DavidWe: Spatial-Temporal reasoning, is my understanding, Peder

KimberlyMu: so would you call this a research based program?

KimberlyMu: my district only implements research based programs.

DavidWe: Yes, Kimberly, I would, from my very preliminary understanding of what they are doing

DavidWe: I'm actually speaking with one of the curriculum implementers tomorrow on the phone - we're trying to coordinate how we will do this session at the NECC conference

KimberlyMu: I think I will bring it up at my grade level meeting tomorrow.

StaffanyR: Brenda do you see any improvements in your class when your students are listening to classical music and when they are not

DavidWe: Well, I can't tell you much more, Kimberly, as I've really not looked much beyond the web page that I just gave you

DavidWe checks the clock on the wall

BrendaE: It seems to help them focus on the task at hand, especially when they are working in small groups.

DavidWe: So, there are about 10 minutes left in this evening's session

SusanR: music can develop spatial reasoning

DavidWe: Let me ask you for any ideas, thoughts, wishes, on whether this type of discussion has been helpful to any or you, some of you, all of you

DavidWe listens for any and all feedback

DeeDeeCl: This has been wonderful, it has given me more ideas than I could have hoped for.

DavidWe: I hope some of the things mentioned this evening may prove useful to some of you

PederJ: This has been great for me. Sorry I haven't been able to offer many suggestions but I have gotten some ideas that I will be able to use right away.

KimberlyMu: I enjoyed listening to everyone's comments and am eager to delve into all of the sites listed.

DavidWe: Thanks, DeeDee, I appreciate that

StaffanyR: this discussion was interesting with a lot of helpful websites given

DavidWe: DeeDee -- what else would you like to get out of a session like this, in the future?

DavidWe thanks Peder and Kimberly and Staffany for those comments

MichelleTJ: I thought it was useful, especially all the websites given. I am always trying to see how I can use technology when I get in the class next year

SusanR: I now understand why our school district is bringing back formal music, physical education and art teachers.

StaffanyR: no problem thank you for your time

BJB2: I think one thing that this discussion has done is point out that math isn't an isolated discipline...it has many real life applications in culture, the arts, geography, science

DavidWe: I really would like your thoughts as teachers, student teachers, others on how to make this kind of discussion more relevant

MichelleTJ: I think that if we talked about specific tools that are being used in the classroom, it would help me see what is out there. (smartboards, and other interactive tools)

BJB2: an edited transcript will be available in about a week at www.tappedin.org/transcripts

DavidWe: I sometimes feel a little guilty, pushing all this technology for the last 10 years

DeeDeeCl: I would like to get ideas of where I could go to integrate technology into the classroom and also how to make a math classroom more interesting so that I do not lose students

DavidWe: I think good teachers can teach any subject with a blackboard and chalk, etc.

DavidWe: But I think the technology CAN be a compelling addition

StaffanyR: I agree

DavidWe: Good thought, DeeDee

DavidWe: But there are also MANY things that can go wrong with technology and if you don't have adequate support, it can be VERY frustrating

BJB2: I like the quote on the April Tapped In Newsletter

BJB2: "If you want to build a ship, don't herd people together to collect wood and don't assign them tasks and work, but rather teach them to long for the endless immensity of the sea." - Antoine de Saint-Exupery

DavidWe smiles

DavidWe wonders HOW BJ knew that he likes Saint-Exupéry very much

DavidWe: He wrote "The Little Prince" if you don't know him

BJB2: . o O (lucky guess?)

DavidWe: Any one else have a question or thought?

SusanR: More and more younger students are playing the recorder in class..so I gather the playing of the recorder would enhance mathematical skills, David?

BJB2: teaching ANYTHING is about passion..about longing for the endless immensity of the sea.

DavidWe: Thanks again to all of you for coming to this somewhat hastily scheduled discussion

DavidWe agrees with Susan

DavidWe: Yes, Susan, I think so

VanL: thank you everyone for all the wonderful ideas. I learned a lot.

DeeDeeCl: thanks for all the information provided

StaffanyR: Thanks David and everyone for your comments and suggestions

DavidWe: Learning an instrument is just often a good thing, too

BrendaE: David, thanks a lot for the discussion and NECC hints. Hope to attend your "Birds of a Feather" presentation.

DavidWe: You are welcome, Brenda