

Title of Session: Math Resources K-20+

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Title of File: 20060307mathk20

Date: March 7, 2006

Room: Math Resources Group

JeffC: let's start with introductions

JeffC: if you'd type in a few sentences about who you are, and what you'd like from this group (as well as what you offer) we'll get started.

BjB: Hi, everyone! I'm an art teacher in Pennsylvania and a math/art fan

IlyssaR: Ilyssa - HS Math teacher in Maryland - also taking a grad school class in online mentoring/coaching

JeffC: Hi Susan. I'm Jeff Cooper, in Forest Grove Oregon, I'm on Helpdesk at Tapped In, facilitate this group, and hope that more math teachers start taking an active role here!

FredK: I am retired engineer with a math degree now working in an adult literacy program

SusanSi: 4th grade math/science teacher

DavidWe: I help math teachers learn more about educational technology. I'm a HelpDesk volunteer in Tapped In. I'm in New Jersey, near New York City

JeffC: ok... good. this next note is for Fred only... at some point Fred I'd like you to "join this group" (everyone else here is already a member). in the main window (not the chat if you've detached the chat)... scroll down the window until you see a link next to a little "i" in a green circle that says "Math Resources K-20+". Click that link, then click the link to join this group.

FredK: Is that a requirement?

JeffC: neither punctuation nor joining this group is required... but encouraged.

JeffC: everyone else is already a member.

JeffC . o O (tries using peer pressure on Fred)

BjB chuckles.

IlyssaR: what benefit does joining have?

JeffC: ok... at some point, if you haven't already introduced yourself to the *group*... there are over 200 members of this group, but as you can see, only a handful login for these sessions. therefore, to have real communication with the other members, you need to join the group and *post to the Discussion board*.

JeffC: aside from being able to post to the discussion board... members get free candy.

FredK: I'm trying but not going anywhere

IlyssaR: oh I see - great benefit - thanks

JeffC: I don't want you to go anywhere Fred.

MichaelMea joined the room.

DavidWe waves to Michael

BjB welcome, Michael

JeffC: I'd like to start by sharing a few links... we'll go from there.

MichaelMea: hi....I'm just going to hide over here in the corner....

JeffC: First, I have a number of Math links at <http://www.mybookmarks.com/public/coops> (in the Mr. C's Bookmarks folder then the Math folder).

JeffC: Michael will be leading the Science Resources group meeting next hour... he works with a company that will shoot payloads into space for K-12 science experiments.

JeffC: You may click on the above link... hold down the Ctrl button if you have popups blocked.

DavidWe wonders if he can go with some of the payloads

JeffC: A specific site I'd like to recommend is <http://www.mathcats.com/necc2005/mathjewels.html> ...which comes from last year's NECC Conference.

JeffC: ok... I'll let people take a look at some sites, post any comments or questions before moving on.

DavidWe nods

JeffC: how's everybody doing? having fun at any specific site(s)?

FredK: Lots of resources to look over. I use <http://www.math.com> / for tutoring.

IlyssaR: these sites are great - but I teach state assessed curriculums - not much time to involve computer lab time to use sites like this.

JeffC: Are you a tutor for math.com Fred?

IlyssaR: any other ideas on how to get the students using them without taking the class time?

DavidWe: How much can you incorporate into what you teach, Ilyssa, beyond the state-assessed curricula?

JeffC: Let's talk about "state assessed curriculums" Ilyssa.

FredK: Literacy covers it all.

DavidWe: Do you guys know about the Math Forum?

IlyssaR: not much - I teach geometry - students have to pass a state test to graduate HS

DavidWe nods

JeffC: have you ever taken them to an interactive geometry site Ilyssa?

IlyssaR: so I have to make sure to cover the assessed indicators and make sure the students are proficient to pass the state test

JeffC: or... are you feeling constrained to teach the whole year out of the textbook?

IlyssaR: I use geometer sketchpad in the classroom

IlyssaR: but I haven't taken the classes to a computer lab

DavidWe: Geometer's Sketchpad was built at Swarthmore College, the original home of the Math Forum

IlyssaR: and yes - I am constrained to the book and topics all year

DavidWe: Sketchpad gets kids doing some interesting things very quickly

JeffC: take a look at this Ilyssa:

<http://www.studyworksonline.com/cda/explorations/main/0,,NAV2-21,00.html>

IlyssaR: wow - great site

JeffC: I feel that state standards and text based teach to the test approaches run counterintuitive to contemporary learning theory regarding constructivism and student-centered learning.

IlyssaR: I could assign something like this for HW

IlyssaR: I agree!

JeffC: you may still be able to use online sites and still meet state standards.

PaulaB joined the room.

IlyssaR: the other geometry teachers and I try to incorporate investigative activities and the like but don't have much time to go to the computer lab to have the entire class working on sites

DavidWe waves to Paula

DavidWe: Hi, Paula. Welcome

JeffC: students will become more motivated to learn, and become more actively involved with their own education... plus... you will be reaching many more students who have different learning styles (Gardner and Papert).

PaulaB: Hi

JeffC: I think that teachers need to be able to tell administrators "I have a number of sites online where the students will learn far more than through the textbook."

DavidWe agrees with Jeff but wonders if Ilyssa feels a lot of pressure to STICK to the curriculum

IlyssaR: but the culture at the school would have to be such that it is possible to tell the admin that

JeffC: This is not to replace the textbook (although frankly I think the Net *could and should* replace textbooks in the future)... but currently to supplement instructional technique, and reach a number of students who do not respond to didactic teacher-centered approaches.

IlyssaR: pressure? yes - we have been told - do not move away from the county written curriculum and sequence of topics

DavidWe: How does technology get integrated into curriculum at your school, Ilyssa?

IlyssaR: I think using the sites would be great!

JeffC: and what do they say when your students fall behind?

DavidWe appreciates the "pressure" that Ilyssa feels

IlyssaR: it isn't integrated into specific classes - although there are technology classes (programming, etc) - and we use calculators in math

IlyssaR: and when kids fall behind they have to come in to get extra help

JeffC: if they think that everything must be learned in a specific sequence (something that holds more truth for math than other subjects), then they must agree that if a student lapses in one area, then immediate remediation is required.

JeffC: if they aren't being reached through the textbook, then alternative method(s) must be used.

IlyssaR: and the other method is typically one-on-one time with the teacher after school

JeffC: using technology to facilitate extra help is what I'm talking about here Ilyssa.

JeffC: and... being online... getting them to work perhaps with other students online may be just the thing they need to "get over the hump."

IlyssaR: I think it would be great

JeffC: certainly, it may help make the subject matter become more relevant... something many students don't see when it comes to math.

JeffC: there are a number of sites that also deal with math relevancy and real world applications.

IlyssaR: I would love to see those

IlyssaR: I'm running out of applications for some of the topics - it is always nice to have new ideas

DavidWe nods

DavidWe: Where do you go for new ideas, Ilyssa?

JeffC: cool Ilyssa... now... one question for you... how much computer time can you make available for your students? can you get them into a lab once every two weeks? do you have access for them in your classroom?

JeffC: even a few computers in your class?

IlyssaR: no computers in the classroom

IlyssaR: and doubtful about the lab - it is booked solid all school year

JeffC: that's a shame

PaulaB: Are we talking about sites that demonstrate, or tutor, or getting students to work together online?

JeffC: right... my guess it's booked solid for testing.

JeffC: any and all of the above Paula... I'm going with the flow here.

IlyssaR: new ideas - I talk to other math teachers at the school

JeffC: Please feel free to chime in with any suggestions, or any needs you may have.

SusanSi: your school needs a math technology grant, Ilyssa

IlyssaR: even if we had the resources - I would face one other battle....

FredK: Our public libraries have computers for public use-free

SusanSi: I teach in rural NE TX and I have 11 computers plus some laptops available

PaulaB: I was going to suggest one classroom computer with a projector is a way to share the tech with students

IlyssaR: I teach geometry with two other teachers - we team plan and write tests/quizzes - and while I would love to use the technology I can't see either of them buying into it and wanting to use it

JeffC: Good point Paula, but the problem with that is you're still talking about teacher-centered teaching... but it is one way to go.

SusanSi: when they see students get excited, they will change

JeffC: why not Ilyssa? are they technophobic?

IlyssaR: yes

DavidWe is watching the NewsHour's report on math and science teachers and teaching in California

IlyssaR: one is close to retirement and the other is skeptical about anything new

DavidWe: Sounds like Bethesda

DavidWe smiles

JeffC: and your admin at the school Ilyssa? sounds like they're more along the lines of the other teachers... not seeing the value that tech may have (guessing here).

SusanSi: thanks, David

IlyssaR: no

IlyssaR: they'd be more on "my side"

IlyssaR: but the admin pushes the county initiatives - not really their own

JeffC: well... there's a starting point then. btw, you may feel free to pass the transcript from this session along to them if you think it would help.

IlyssaR: the superintendent says ___ and the admin does ____

DavidWe: You're welcome, Susan

JeffC: right... admin are constrained by county and state mandates; I understand how they're between a rock and a hard place as well.

IlyssaR: right

JeffC: my point is that there are many sites that will help you reach your state standards, perhaps in a way different than the current "textbook only" approach. the admin need to recognize that textbooks do not reach all students and other styles of learning and teaching need support as well.

JeffC: basically though, using tech isn't a simple approach... it requires support, and a different way of thinking about learning. It also means that not every student will be doing everything the same way at the same time.

JeffC: indeed... it is sort of a "demilitarization" of the educational playing field.

DavidWe smiles

JeffC: many educators, teachers and admins alike... are uncomfortable with this idea.

DavidWe: Administrative support is VERY IMPORTANT and sets a tone in schools

JeffC: however, by taking the "it's always been done this way it will always be done this way" we doom the students to outdated pedagogy and *students will be left behind*.

IlyssaR: also - regardless of the content - the use of technology is important for students in this ever evolving Tech World

JeffC: exactly Ilyssa

JeffC: and... if you *don't* incorporate technology... you are again leaving students behind.

JeffC: so... those are several compelling reasons (in my opinion) why admin need to seriously support tech within standards based curriculum and not avoid and ignore it.

PaulaB: <http://score.kings.k12.ca.us/standards.matrix.html>

PaulaB: This site has sites that are in a matrix with the standards

JeffC: again, Ilyssa (and any others here)... you say you have no computers in your classroom... is that true for the whole school... there isn't tech in the individual classes? because... a lot can be done with even one (although 4-5 is preferable).

JeffC: thanks Paula!

IlyssaR: there are computer labs, the library, we ever have a cyber cafe

IlyssaR: but it is tough to book the periods in the rooms - they get booked solid in September - so those of us trying to get in with new lessons are already scheduled out

DavidWe: I think computer labs had a rationale in the early days of computers in schools - increasingly, many schools are forsaking the computer lab for a smaller number of computers in every room where teaching takes place

JeffC: that's a nice matrix, it certainly gives the standards, but it also points out a basic weakness regarding technology and curriculum. here is the largest state in America... there is a site with state standards... which is fine. however, the resources linking off of those standards are not nearly complete, nor are the links really to truly interactive sites. California hasn't spent the time or money (and it wouldn't be that hard to get a few math teachers together to find the really cool sites for *each standard*) to support its educators and students.

JeffC: what I'm asking you though Ilyssa, is, do other teachers have computers in their classes, or are there just a couple labs?

PaulaB: I moderate the computer lab calendar at my school. I only post it 4 to 5 weeks in advance. The teacher walking in with an idea might get there on the right day, or not.

But if the new calendar isn't up, they can contact me. But I wouldn't post it for the whole year.

FredK: Discussions on <http://www.techsoup.org> can be helpful in the computer realm.

IlyssaR: couple labs - yes

SusanSi: make a request--sometimes if you just ask, with plans to excite them, the admin will surprise you and try to meet your classroom needs, Ilyssa

IlyssaR: good point Susan

JeffC: Right Paula, when I ran two labs, then there would only be a month in advance sign up... however, I was there all the time to support those labs. They also weren't being used (almost exclusively) for testing, something I see happen all the time now.

JeffC: And Ilyssa, if you have an ethernet connection in your class, I'd suggest writing a mini-grant or corralling a few unused computers in your school or district and get 4-5 computers in your classroom. That is the *only* way you will have a way for your students to be getting regular and sustained support and connectivity.

JeffC: thanks for the link Fred

JeffC: ok... let me cover a couple of other things in the remaining time (about 10 minutes).

JeffC: If you are a member of this group, sometime in the next ten minutes I'd like you to click the Discussion link on the left of the main Tapped In window.

JeffC: Find an appropriate folder, and post either a reply to someone else's post, or make one yourselves. You don't have to do this within the next ten minutes, but I'd like you to think about it and post something of substance within the next day or so.

FredK: I just joined

JeffC: By posting to Discussion here, your message will go out to over 200 fellow math educators.

JeffC: (via email). if you want a response, please put in your email address, since this is a "one way only" list and messages may not be replied to in email (people have to login to Tapped In to reply).

JeffC: Now... one other thing... since most of you are K-12 teachers... I'd like for you to consider using Tapped In with your students. Now, this is somewhat easier for English or Social Studies teachers to do, but if you create a virtual classroom for your students

here, you may be able to have the students collaborate on various math projects and assignments.

JeffC: Here are two sites that relate to project based learning for math:
<http://www.uoregon.edu/~moursund/Math/pbl.htm>

JeffC: <http://mathforum.org/~sarah/Discussion.Sessions/Blumenfeld.html>

JeffC: http://www.glencoe.com/sec/teachingtoday/subject/project_based.phtml

JeffC: Please note that I said two sites and posted three... I was never very good at math.

DavidWe smiles

DavidWe re-counts

PaulaB: My students have access to another program that allows each class to have a discussion space, post homework, etc. We just started using it, but thus far, the students have been off pretty trivial in their use of the chat area.

JeffC: What's the program you're using Paula? First Class?

IlyssaR: we use blackboard to facilitate discussion boards, post grades and assignments, and have students submit assignments

PaulaB: It is called comunicado, It was developed by a neighboring school district, and we are perhaps the only other district using it. Again, just starting

DavidWe: Sounds interesting, Paula

PaulaB: Maybe. On the plus side, we have access to the programmer.

JeffC: thanks for coming everyone

JeffC: Science Resources starts now.