Title of Session: K-12 Math Discussion Group Moderator: Jeff Cooper Title of File: 20031202k12math Date: December 2, 2003

Room: After School Online

JeffC: I'm taking a look at the Profiles of the people that are logged in here... to get an idea of who you are. If you at any time feel like asking a question... specific or general... feel free, and we'll work collaboratively to try and answer it.

JeffC: This is Math K-12 Resources...

JeffC: And my goal here is to facilitate discussion, provide and share resources, for educators, parents, students, etc.

JeffC: So... for starters... I'd like to share a few resources...

JeffC: <u>http://www.mybookmarks.com/public/mathscience</u>

JeffC: These are my public bookmarks for Math and Science. Anyone can access them... and more importantly... anyone here can *edit* them (add, etc.)... by logging into Mybookmarks.

ShannonMB: Are these sites mostly resources or activities for students?

JeffC: My goal here is twofold... number 1: to share Math and Science links 2: to get educators in the mode of collaborating. They are both Shannon.

JeffC: My point is this... it's not about my resources, or even yours (although I would like you to add yours)... it's about a mindset of sharing with your professional peers.

JeffC: How many of you are teachers, homeschoolers, etc... and are in a *routine* that enables you to collaborate with others, share resources, etc. If so... how are you doing it? **AmandaGC**: I am a preservice teacher and will be grateful for all new resources.

RobynC: I am a preservice teacher so I mainly looking for ideas to use in my future classroom

RoxannaA: same here

ShannonMB: I'm a third grade teacher in a small private school (about 500), but have had public school experience...I do much more collaboration now with my team **JessicaSh**: I am in the education program at NGCSU and we are constantly looking for new ideas and sources

TarahM: I am a stay at home mom, going to school, and I teach at my church. **JeffC**: Feel free to jump in with any question, comment, etc. Excellent Amanda and Robyn (and Roxanna)...

GailH: I am the Outreach Coordinator for ENC (Eisenhower National Clearinghouse) -- and happy to see ENC on your math list!

JeffC: OK... this is great... we have a varied background of individuals... all with different talents etc...

JeffC: And actually... I was going to mention ENC specifically today... to get people to join.

RobynC: What is ENC?

ShannonMB: I'm not familiar with it...what is it?

JamesDB: I am a High school teacher in North Georgia.

ChristelT: I am a 7-12 Math Director struggling with helping teachers to further integrate technology in teaching and learning

LobnaK: I am working on my teacher's certification at University of Houston (teaching math 4-8)

AshleyGst4: I'm a fourth grade teacher. I have the low level math class for fourth grade...no time for collaboration.

JeffC: What I'm thinking about is how everyone here can add to the mix... give input and resources, perhaps start collaborative projects...

JudyAS: I am a Preservice teacher in Georgia

JeffC: There are ways to collaborate Ashley,... with *all levels*.

GailH: Robyn, ENC is a K-12 math and science teacher resource (online, free, advertisement free) for teachers.

AshleyGst4: Can you give an example of collaborative projects?

JamesDB: We have a hard time integrating tech and meeting test objectives.

RobynC: thanks Gail

SusanR: I do the K to 3 GREAT resources session here. here I am pleased to see my K to 6 Math track on your list, Jeff.

AmandaGC: this is a great way to collaborate for me because I get to hear what teachers have to say

JeffC: There are ways to meet standards... without having to go straight to teaching to tests... ENC is a great resource... there are others...

RobynC: Does anyone know of any great math websites for 1st grade math?

AmandaGC: What do you do when you can't seem to find a time to collaborate with your fellow teachers?

JudyAS: I am anxious for some manipulative math ideas for early ele **JeffC**: You need to look at how you allocate time...

BJ: wow! Lots of questions and concerns, Jeff...

JudyAS: Yes Brainpop.com

JeffC: If you're spending hours lesson planning... there are ways to make that easier...

RobynC: oh ok I will look at that

JeffC: Thanks Judy

JoshO: This site is a great way to collaborate even if there is not time in the schools.

JeffC: See... here's the key... working together... you can save yourself a lot of time as well...

JessicaSh: what are some tips to making lesson plans easier?

JeffC: Rather than spinning or reinventing one's wheels... you can build upon the work of others.

JamesDB: We are up against some End of Course tests for Algebra 1 and Geometry. Don't teach to the test but addressing the objectives tested can be rough when trying to integrate technology

JeffC: And more importantly... working *with others*.

JudyAS: Can you work on lesson plans with a group of teachers?

RobynC: I have seen many teachers use each others ideas instead of trying to reinvent the wheel

TarahM: Seems to me that teachers don't have time except at workshops

JessicaSh: we are going to have to write a bunch of them next semester and they are supposed to be quite extensive

JeffC: Excellent Robyn...

AmandaGC: So do you suggest that we research for lesson plans on the internet and find ways to arrange them to accommodate our students?

JamesDB: I use excel for lesson plans. It makes it easier to cut and paste.

SusanR: Robyn, I recommend The First Grade Math Backpack for Grade One http://www.learning.caliberinc.com/math1.html

RobynC: thanks a lot

JeffC: Depending upon grade levels... there are literally hundreds of sites for lesson planning... I have quite a few in my own public bookmarks at

http://www.mybookmarks.com/public/coops ... in the "lesson plan" folder

JudyAS: Any ideas for manipulatives?

JeffC: New York Times Lesson Plans are the best for 6-12

ChristelT: We are using CMP (Connected math project) with our middle schools and are struggling mainly because they are lacking in content expertise. We have been offering numerous training session. I would like to offer some training online either synchronous or asynchronous...any suggestions

GailH: For PK-1 I like <u>http://www.bbc.co.uk/schools/numbertime/games/index.shtml</u>, like mend the number square.

AshleyGst4: Any ideas to improve basic addition/subtraction computation? **ShannonMB**: What about certain curriculums that don't leave much room for supplementation?

JessicaSh: What do you think about the Saxon method to teaching math? JeffC: I've been working on a PowerPoint for multiplication Ashley... same could be done for +-

AmandaGC: How important do you find technology in a math class?

RoxannaA: my concern is that since I'm going to teach high school math, how do you keep teenagers minds on math? That is what I am most "scared" of...my students being bored. Are the lesson plans that are available new with new ideas? **JeffC**: Good questions...

RobynC: using technology is always a good way to keep students interested **ShannonMB**: Tell us more about the power point...

JeffC: As far as the "keeping teens engaged"... I'd look to have it more along the lines of relevancy... have them do work that relates to their real world.

JoshO: Is there a good website for using different teaching methods for kids with learning disabilities?

TarahM: I believe that is so true Jeff

JamesDB: Some technology is good, but don't we need to teach processes too? **RobynC**: I always paid more attention when things were more relevant

JamesWr joined the room.

JeffC: The PowerPoint is creating a number of slides that when you click in a 10x10 grid, you get directed to a color coded slide that shows the answer... patterns, etc. **JudyAS**: Any good math websites for children with autism?

AmandaGC: Another idea is to present challenges instead of problems and then they have more drive to find the solutions.

JamesDB: Does relevance = real world application?

MarkO: The challenges sound like a good idea.

JessicaSh: Roxanna, when I was in high school, my math teacher taught us the information, and when we were tested, whatever we missed we were given the opportunity to get partial credit back if we re-worked the problems. this helped me because I learned the information and improved my grade at the same time

RoxannaA: did a project on that...PowerPoint has an excellent help topic on created nonlinear presentations. My project was a jeopardy game.

JessicaSh: be on your students side...my math teacher's main goal was to see us succeed JeffC: I also recommend Schoolkit... it integrates Math with MS Office... lots of stuff with Excel. Trouble with standards is that tech standards lag far behind... learning graphs in Excel isn't going to be on a standard chart... but you can incorporate it elsewhere.

RobynC: I have seen Jeopardy games on power point

RobynC: they work very well

JamesDB: I like using mindtrap questions

ShannonMB: Interesting...I'd be interested in seeing those PowerPoint experiments. **JudyAS**: How do you feel about students learning formulas through discovery of manipulatives, like Cuisenaire rods?

JeffC: Plus... my own opinion... we need to do what we can to work around the standards based curricula... we need to motivate and inspire... not just require and perspire. **JoshO**: Jeopardy sound like a good way to get them interested

AshleyGst4: Robyn, where did you get ideas for this power point presentation?

LindsayD: I believe it is not about the answer, but the process...having the kids reworking problems to understand their mistakes is an excellent way to relearn the process

JeffC: Those rods work well with certain ESL students (and others)... suggestopedioa (sp?)... has quite a few ideas about that.

JamesDB: I agree Lindsay, I do that when my classes do poorly on tests

RobynC: I have never heard that, that is interesting

JeffC: There was another question earlier... that I don't think I addressed...

RobynC: children with autism I think

TarahM: I have never been in anything different than a traditional math class (working 100 problems a day and no interaction)

LindsayD: I like that idea because if over half the class does poorly on an assignment then the process is obviously not understood

JudyAS: Right . My question. Thanks.

AmandaGC: How do you try to incorporate math into other content areas? This could also create more interest within our classroom.

JamesDB: But some times I think High school students need to learn that sometimes you only get one chance to do things right.

JeffC: Going back to it now Judy...

JessicaSh: but only getting one chance could keep them from learning the information too

JudyAS: Don't they get discouraged and give up trying,

RobynC: that is true James but I do think that they should get some points for reworking the problem because this will help them remember in the future

AshleyGst4: Roxanne, do you know of any resources to help with a power point presentation?

AmandaGC: It wasn't until college that I understood most of what I learned in high school

RoxannaA: let me look, I don't remember how I learned...

AmandaGC: and it really is discouraging

LindsayD: even if is extra credit for something else, free homework pass or something JeffC: As for the rods... I think if they work for your students... go for them.... how do they like them?

JamesDB: But if they always get a second chance, aren't we teaching them that the first attempt at anything is not so important?

LobnaK: there are tutorials for PowerPoint on the Microsoft website

ShannonMB: Sometimes with manipulatives I think, even when the lesson is well prepared for, they miss the point of them because their so "fun"...

JudyAS: We use them for GCF and LCF and discovering the Pythagorean theory, Jeff. AshleyGst4: I think math is an all right answer...this teaches them to check their work JamesWr: It's about learning, but that is why the second chance is a reduced grade RoxannaA: thank you Lobna, that was where I learned how to do it the game RobynC: that's right

JessicaSh: my teacher told us to keep all of our tests from the semester...she didn't tell us why until a few weeks prior to the test

TarahM: Maybe if the problems were the same but different the second time around. **LindsayD**: I believe we are discussing math, math is about processes, not answers...I

think we are teaching them a few things, if at first you do not succeed, try again, and understanding the solution is the most important part of learning, not the grade **JoshO**: Math definitely has to get away from theorems and methods and more towards discovery.

RobynC: Lindsay that is exactly the way I feel

JessicaSh: then she said if we reworked them we could get partial credit...AND it helped us study for the final

ShannonMB: but grades are good motivators for some students...

JamesDB: Why not the discovery of theorems and algorithms.

JudyAS: Josh -that's why we are moving towards hands on learning!

GailH: I agree wholeheartedly with what math "needs to do" but the reality of what mandated testing is doing makes it challenging to teach that way at times.

RobynC: grades do help but there is too much emphasis placed on them

JeffC: Now... what I'd like to backtrack to for a minute are my links for Math resources... and ask that if anyone would like to add their own links... they can do the following: 1) Go to <u>http://www.mybookmarks.com</u> 2) login: mathscience 3) password: tappedin From there, you can add your own Favorites (from your computer)... you don't need to do this now... but check it out.

JamesDB: I agree Robyn, but we are all judged on them

LindsayD: Mandated tests and worksheets can be supplemented with manipulatives RobynC: sadly we are

TarahM: I really never understood why when there are different ways to work a problem, some teachers made us work them HER WAY

ShannonMB: Thanks Jeff.

LindsayD: there are ways around the old ideas

JeffC: Exactly Lindsay...

AmandaGC: some teachers may still need a little teaching themselves

JamesDB: I like to show multiple ways to work every problem, exhausting for me but good for them.

AmandaGC: present the information politely and they may listen

RobynC: does anyone have ideas of how to grade students without actually giving number grades

JessicaSh: I totally agree Amanda

ShannonMB: I'm using the "everyday math" in third grade and they teach so many ways to solve a single problem I sometimes get flustered, but I allow the students to work however best they understand the process.

ChristelT: They made you work it their way because they were not well versed in their content area...they were scared

JudyAS: We should also consider the multiple intelligence theories Children all learn differently!

JamesWr: I taught math in a school that had probs in Texas. it got to the point to where we gave lessons on how to use calcs. not how to solve problems. this hurts "everyday math"

RobynC: Yes they do Judy

JamesDB: We are up against end of course tests. If they don't pass, they get no credit, regardless of our grades.

AshleyGst4: I use Saxon Math and it is more methodical and one way to get the answer JeffC: Math is taught sequentially quite often... so if students miss something, they miss it later and have a hard time catching up...

RobynC: Yes this is why I think they should get a chance to retake test **JoshO**: true, Jeff

JessicaSh: that's so true Judy...in my previous classroom the students learned to add doubles by using a math rap!

AmandaGC: that is so true Jeff

JeffC: Finding a way to get the "Joy of Math" is a pretty tricky proposition...

RoxannaA: what is Saxon math?

JudyAS: Jeff- Do you think having a national QCC across the Country would improve math scores?

GailH: Jeff, if we add new favorites to your site (like tomorrow), will they be around for others to see (subject to your removing them, of course?

RobynC: yes math was not my favorite subject

JeffC: That's why I like what they've done at ENC... Math Forum, Brainpop, etc.

AmandaGC: sometimes when students fall behind I think that teachers have a hard time getting back to the basic for them

AmandaGC: as a teacher I want to learn how to "tutor" my students as well as teach them

RobynC: that is a major struggle that teachers have Amanda

JeffC: Well... that's in part because the system is designed to pretty much have a teachercentered curriculum... especially when it comes to math. Can you think of any way to get more student- centered with your approach to the subject matter?

AmandaGC: I think it isn't enough to just present information to students we must be able to show them how to expand on it

RobynC: I think as a teacher you should let the students explore more to get their answers

RobynC: Don't just give them a formula

JessicaSh: students don't like to be lectured at all the time

JessicaSh: I personally do better when the activity is hands-on or working in a group to discover new theories

RobynC: me too...I remember the process better than a formula

ShannonMB: I think it is important for teachers to explain processes and then allow for a time of discovery and hands on to reinforce, but not the primary teaching method....I'm a traditionalist when it comes to Math...

TarahM: I think that students will understand more in depth if we do not first give them the formula. This will help steer away from the lecture tradition

JamesDB: No one likes a lecture, but how are most college classes taught. If that is what we are preparing them for.

JudyAS: Jessica- are you a visual learner?

AshleyGst4: Saxon Math is a scripted program that uses a lot of repetition. It ensures all teachers are teaching the same way. It builds a foundation for math that can be built upon. Great program for elementary because not every teacher is good in math.

JessicaSh: I am able to understand the information better

JessicaSh: oh yes

AmandaGC: I tend to get off the subject when I am working in groups

AmandaGC: you have to really watch out for students like me

RobynC: yes you do:)

ChristelT: math through communications is imperative...kids need to talk to one another on a consistent basis about mathematics

JoshO: very true Amanda

JudyAS: Cooperative learning is great for math!

AshleyGst4: How do you keep communication of math and not get off task?

ChristelT: group work needs to be structure...the younger the children the greater the structure

JessicaSh: I like to have students learn from other students

RobynC: I do think groups are important because children need to know how to work with others to solve problems, more than likely they will have to do this in their careers **JamesWr**: hey I found one of the best way to teach math is to get some peer that understands it to explain it.

JessicaSh: sometimes they even learn more because they are peers

RobynC: James that is an excellent way

ChristelT: Start with pairs...use a system like clock buddies or the like

TarahM: I think group work probably depends on your class (you will know) hopefully! **JessicaSh**: I bet that works really well James

JudyAS: Children understand their own language!

RoxannaA: They are willing to listen more to a peer than to a teacher

JoshO: cooperative learning is important, students sometimes are more accepting of info from their peers

MarkO: The peers have a better idea of what the problems are to understanding **JamesDB**: Group work is even better when the groups are structured with student of different levels and abilities.

ChristelT: group work does NOT depend on your class but does dictate the amount of structure needed

RobynC: James that is a great point

SusanR: I have successfully used peer instruction...great with grades 6 to 8

RobynC: how did you do this

JamesWr: It means more work for teachers (control)

JudyAS: Have you been successful Susan?

JamesDB: In my school the lower level students are mainstreamed. but not the gifted. Bad idea!

AshleyGst4: How do you motivate low level "I don't care" students in math? These kids are so immature that they would fight with each other instead of work in a group to solve problems?

JessicaSh: it is interesting to see the ideas that they are able to come up with while working in a group too

JoshO: collaboration with other teachers can lead to this

JudyAS: Ashley - Motivate them with extra privileges!

SusanR: If I can't get the concept across I often offer the stage to students...works with computer skills ie Excel

SusanR: ...great for student self esteem

RobynC: What are some good privileges to give to children

JamesWr: "I don't care seems to be about your relationship with the student.

AmandaGC: Present goals for your students because they always feel better once they have accomplished something

RobynC: I agree Amanda I think children should know why they are learning something **JamesDB**: The I don't care students are most likely going to be vocational/technical students. Why not have them research math in the field they might like to work in?

TarahM: Technology use would be a good idea for these students (they are probably more interested in the computer or video games anyway)

AmandaGC: its not always good to stereo type students like that

JudyAS: Robyn-Having no homework for the night, sitting at a special table at lunch, Free ice cream, pass to work on the computer....

AmandaGC: sometimes they don't care because they don't understand

JessicaSh: sometime students don't understand the relevance of the information they are being told to learn...some of my teachers till don't do this for me so I sometimes take on that "I don't care" attitude because of this

JamesDB: Is it better to be unrealistic?

RobynC: Thanks Judy those are good ideas

JamesWr: of course some students may never care(about math)- vocation must come back as a track as an option(Texas). Stats say not all go to college-and that's ok

AmandaGC: no it is better to find the source of the problem rather than type cast them into a spiral of failing

ShannonMB: Jeff, do any of your sites specifically target low performing students (in math)?

JessicaSh: I totally agree Amanda...that's our job!

JamesDB: I just want my students to get ready for their life. Vocation/ Technical is not failing.

RobynC: That is true Amanda children are put into a group and they then never have hope of getting out

JudyAS: Self esteem is something that is hard to build back up in a child!

JeffC: Shannon... my main recommendation for them would be to get them involved in some sort of collaborative math project.

JoshO: If teachers can provide students with the big picture of life it helps. They need keep their eyes on the horizon.

AshleyGst4: you getting personal here James...this attitude is what the students bring to the classroom... I work with them daily trying various methods and they just don't care about learning? any suggestions?

ShannonMB: What sort of collaboration projects do you suggest...I'm not up on those for math...

JeffC: I think the reason that students don't care about learning is because of the very standards based curricula that we have been forced to teach from.

ShannonMB: I agree...I think we all would

AshleyGst4: I agree!!!!

JamesDB: Voc/Tech may go to school for two years and make 40k a year starting. I agree Jeff.

JeffC: Learning has become extrinsic... in a lot of ways, we drill the will to learn out of them.

RobynC: Jeff do you think these could be changed for different students

AmandaGC: just remember students need to know that life has its successes with its failures and if they struggle through high school they still need to know that they can always succeed

JamesDB: The curriculum needs to change to suit the student

BJ. o O (there is a Global Project Based Learning discussion on Thursday)

JeffC: I think if we all started approaching teaching from a different angle... that there may be hope.

JoshO: Standards are taking away some flexibility in teaching methods JamesDB: Very much so Josh.

JamesWr: pbl is an under used concept-

JessicaSh: standards are taking away A LOT of flexibility

RobynC: There are too many things that we have to get in a day... there is no time for flexibility

JudyAS: Principals are putting more pressures on teachers daily to get their students performance up.

AshleyGst4: I agree Josh...standards are dictating our teaching methods due to time constraints

JessicaSh: and because of that there is no time for creativity

JeffC: You need to be flexible yourself in how you face those standards.

JamesDB: I would like to teach them useful mathematics without watering down the high level classes.

JeffC: Test results are arcane... there... I've said it.

AmandaGC: an educator needs to learn their own flexibility in order to present content to students

JamesWr: Robyn is right there is not enough time. just teach summer school and you see. . .

ShannonMB: Back to the point about re-taking tests for additional credit....it was often the second go around that I got the idea of the process...especially in Geometry!

ShannonMB: So I did appreciate the revisit for the process sake as well as my Precious grades...haha

JeffC: Several of you are in Texas... and I know that GW really pressed teachers to "teach to the test"... and I also know that although test scores have risen... the students don't have the creativity, or ability to write decent papers at the college level. Sorry if my politics are showing.

LobnaK: at least you were able to learn it and that is what matters the most **AmandaGC**: you could always have a pre-test so that the students are ready for the real test

JamesWr: I give many second chances but few show up to take advantage

JamesDB: I like the idea of going back over tests, and occasionally reworking them for credit. Just not regularly

LindsayD: In my school, we do Mathematics their way and the manipulatives are abundant and the kids love it

JessicaSh: giving second chances give the student another opportunity to learn the information

JoshO: Students should be accountable on the first test. in life they will always not get a second chance to do something right.

RoxannaA: Jeff...I have many friends that teach 3rd grade and all they do is teach for the "TAKS" test. It's sad.

ShannonMB: I totally disagree Josh

RobynC: I have also found that children love manipulatives

JeffC: Here's a question for you James (both of you)... and others... what do you do with students who didn't get it one week... but get it the next... or those who passed the test, but lose it the next week?

JudyAS: James How about the students that study and get it right the first time? Any rewards?

ShannonMB: In life we often have a second chance to re-learn or re-try something we didn't first succeed with ..

JamesDB: I give a practice test for every test so they know what kind of questions to expect.

AshleyGst4: It's a fine line because you don't want to teach them that there is always a second chance because then they always expect it..but yet you want them to learn????? **JoshO**: not always

LindsayD: Good point, the ones who do not get it a first versus the kids who forget it the next, which do you think is better...I would choose the first

AmandaGC: sometimes the joy comes in the learning not the actually grade **RobynC**: Practice test are a wonderful resource to use

JessicaSh: but the ones that do take advantage of it will be successful...it's still important to give them the opportunity...sometimes kids are just lazy...it's their choice

JeffC: Let me make sure that people also go to this site and register: <u>http://www.enc.org/</u> **AmandaGC**: letting students know that it is more important to obtain information is the key

LindsayD: most likely this means they eventually understood the process while the others simple memorized the answer

JeffC: I'd say that ENC is one of the top resources for all K-12 Math and Science Educators.

JeffC: It's a tough call all around. Personally, I'm in favor of students creating their own electronic portfolios.

GailH: I work at ENC and can help with that if anyone needs help. Things like <u>http://www.enc.org/features/lessonplans/math/</u> are easy to use.

ShannonMB: how do you get grade accountability from e-portfolios

RobynC: What are e-portfolios

JudyAS: I never heard of them!

AmandaGC: yeah I am not familiar with those either

JeffC: You won't see electronic portfolios on too many standards sheets... but having students build upon their past... in *all* subjects... can only lead to greater understanding for everyone.

ShannonMB: That would take hours to grade and days to develop the rubrics?yes? **ChristelT**: well planned lessons specifically geared towards meeting the objectives tested on you assessment are the best way rather than giving practice test...provide students with opportunities to practice what will be on assessments as part of lessons...backwards planning

TarahM: This is why we as teachers cannot accomplish much because everyone is against each other.

JeffC: You can get instant rubrics at Rubistar... that's not the point though... right now if you are spending hours a day grading daily work... you're also spinning your wheels and wasting time.

AmandaGC: it's really not so much about us as it is about students and what we can do for them

ShannonMB: is that a web-site?

JeffC: Here's something you can all hate me for: I'm against testing. Period.

AshleyGst4: But it takes take to build these e-porfolios too???

AmandaGC: testing is only a form of accountability for the teacher

JessicaSh: so how do you assess if you don't test?

RobynC: where do you get e-portfolios???

JudyAS: Jeff Do you do oral testing?

JeffC: It takes a little time... but kids are more and more tech savvy... you can create your own site for \$30 a year that would allow students to build within your own site.

ShannonMB: But, Jeff...will the main-stream ever agree to our "radical" idea?

LindsayD: like I already said, testing only gives you a number, not a measurement of learning

LobnaK: but isn't testing essential for them to learn the material

JamesDB: I would love to get rid of testing, but that is the nature of the beast. Unfortunately

JeffC: Well... I say "kill the beast!" (name the book!)

AmandaGC: it's only the nature if we allow it

RobynC: I wish there was another alternative to testing

JessicaSh: I don't disagree or agree with your statement about testing...I am just curious JamesDB: Those that test well are rewarded. I'll buy two!

RoxannaA: I know personally I didn't care if I learned anything...just as long as I knew how to get a good grade and what teacher to take. I'm sure things haven't changed THAT much since I was in school.

TarahM: Remember this is not a debate

JeffC: Oh... debate can take different forms... and be a good or bad thing... depending on how people react.

RobynC: Things haven't changed Roxanne

ShannonMB: not debate...just provocative discussion! haha

JamesDB: Grades are inflated here for state scholarships. they mean very little

JoshO: Students are too focused on getting a grade instead of enjoying the act of learning LindsayD: not a debate....a discussion...arguments on both sides

LindsayD: it is better to think outside of the box

ChristelT: there is plenty of research to support the idea that grading is inaccurate and not very useful

ChristelT: This is part of the reason for the push for SB report cards

RobynC: what is that

JeffC: Right... students are externally motivated in *all* subjects... for the grade... that's it...

JamesDB: I know what my students have learned. My grades are lower than many, but I feel my students have learned more

JessicaSh: so what is another alternative to testing?

JeffC: Math especially...

JudyAS: Only on state tests that grade schools on their performance!

JeffC: I think electronic (and other portfolio) assessment methods are worth exploring. ChristelT: SB=Standards-based

LindsayD: I think those of us who do not like testing need to apply for principal positions=)

ShannonMB: but we couldn't survive with state standards!

JamesDB: They can have that job

AmandaGC: I am game for that...who is hiring

LindsayD: but we can make a difference

JeffC: Well... you can come up with other ways to assess in your own classes... and if you find positive ways to enhance math... and inspire students to get more involved... I'd like to see the principal argue against you.

JoshO: yes Lindsay or run for president

ChristelT: testing is in part a necessary component of assessment....but not nearly the only one

LindsayD: yea, I like the president idea

ShannonMB: very true Jeff....

JeffC: Check out the sites I've given you... and be sure to add to the mix yourselves.

RobynC: thanks Jeff I will

LindsayD: but the types of "testing" is subjective

LindsayD: observations, anecdotal records, interviews, portfolios

LindsayD: those are all testing for assessment

AmandaGC: thank you Jeff for all the additional references you have given us tonight

ShannonMB: Yes, thanks Jeff...and all!

RoxannaA: thanks a lot Jeff!

JessicaSh: thanks for the ideas Lindsay

JoshO: This discussion has been great everyone!

ChristelT: Checking for understanding regularly and consistently using whole class techniques and "dipsticking" are the keys to getting kids to get and engaging in mathematics

JamesDB: It has, thanks Jeff

LobnaK: thanks, that was a great discussion

GailH: Thanks, Jeff. I'm going to email you in next couple of days. Because of changes in past year or so on ENC site, a couple of your bookmarks to us could be updated. **JamesWr**: it is good to see some many teachers concerned with learning. it makes me wonder why the US is ranked 8th in math. maybe the state should let us teach not test.

SusanR: Thought provoking session, Jeff. Thanks

JeffC: You're welcome

JudyAS: Appreciate all the great web sites given!