

**Title of Session:** Math and Technology

**Moderator:** David Weksler

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Room: MathEdTech Group

**DavidWe:** We'll start with introductions after BJ gives you all some basic starting instructions, but...

**DavidWe:** Consider what you might like to learn about NCTM

**DavidWe:** I'm happy to research stuff for any of you while I'm here

**DavidWe:** I'm also looking for topics for discussion this evening since I've not really prepared anything

**DavidWe:** I talked at a New Jersey math conference on Friday and then came to Atlanta on Monday

**BJB2:** Welcome to today's MathEdTech discussion, everyone!

**BJB2:** as always, let's start the discussion with brief introductions.

**BJB2:** please tell David where you are located and what you teach

**CarrieMc:** I live in Houston and I am currently student teaching in K

**JenniferR5:** Hello, I am a student teacher from Houston. I am currently teaching 1st grade.

**MaryKil:** I am in Northern Virginia and teach special education grades 3-5.

**KristinMG:** I am actually student teaching in Houston, Texas! I am in pre-K right now and was in 4th grade a few weeks ago

**FredK:** Hi everyone, I am a literacy tutor in SE Oklahoma

**MaureenB:** hi Maureen here teach 4th grade in Putnam County NY

**DavidWe** gives people two web sites..one for NCTM and one for CLIME

**DavidWe:** <http://www.nctm.org/meetings/atlanta/#highlights>

**DavidWe:** That's the conference web site - with highlights indicated

**DavidWe:** The other one is for an affiliate group of NCTM a friend of mine maintains - CLIME

**DavidWe:** [www.clime.org](http://www.clime.org)

**DavidWe:** It started out as the Council for Logo in Math Education but now includes ALL kinds of technology

**KristinMG:** I have heard of NCTM but not CLIME.

**KristinMG:** so I will be interested to learn about it.

**DavidWe:** CLIME is a small group of technical folks (interesting in using technology in math education)

**CarrieMc:** Thank you for that information. I too have never heard of them.

**DavidWe:** Ihor Charischak, who is a colleague of mine and works at Stevens Institute of Technology in Hoboken, NJ, has been very interested in pushing the math community to embrace the use of technology in math education

**DavidWe:** It's not been easy to do

**NancyKZ:** I didn't know that

**DavidWe:** For example, I'm doing a presentation tomorrow afternoon - I'll pay for my own WiFi Internet access and I've brought a projector - the conference won't supply any of that for me

**KristinMG:** that doesn't seem right.

**DavidWe:** Well, it's a bit of a sticky issue - although technology is a "principle" in NCTM's standards, they aren't always so forward thinking about embracing it

**CarrieMc:** Why I wonder

**DavidWe:** Well, the organization is sensitive to its members AND its sponsors

**MaureenB:** you would think they would have the technology at a conference like that

**DavidWe:** It moves slowly

**NoraO:** I believe that they should provide you with everything that you need

**DavidWe:** Well, Nora, I'll let you know who to contact

**NoraO:** ok

**BJB2** . o O ( should we take up a collection for David? )

**DavidWe:** What's funny is that at the NECC conference (National Education Computing Conference) which will be here in Atlanta in June

**KristinMG:** sounds good!

**BJB2** winks

**DavidWe** holds out his empty hat

**MaureenB** . o O ( thinks I have a few pennies to spare )

**NoraO:** Yes, because he is doing something that it is going benefit

**DavidWe:** At NECC there will be technology everywhere, but then again, that's the main focus of that organization

**DavidWe** accepts pennies, especially shiny ones

**DavidWe:** Some of you may know about the Math Forum - [www.mathforum.org](http://www.mathforum.org) - my beginning in this particular field of education and teacher professional development

**NoraO:** No, I did not . Thank you

**KristinMG:** I am not familiar with it...

**DavidWe:** We have been struggling with NCTM to move more deliberately towards a more technology-rich environment, but it's been a TOUGH struggle

**DavidWe:** The Math Forum began in 1992

**DavidWe:** We were putting stuff on the Internet before the Web really even was available.

**DavidWe:** We were teaching teachers how to use email and other Internet tools, creating an online community for teachers of (first) geometry, then, later, math in general

**DavidWe:** We had teachers putting good lesson ideas online, sharing ideas with each other

**DavidWe:** Tapped In became available in 1997 and the Math Forum was one of the early tenant organizations in Tapped In

**DavidWe:** It allowed us to interact with YOU online

**KristinMG:** that's interesting...especially since now you can go online and find all kinds of lessons, etc.

**NoraO:** I think that it had learned a lot as a new teacher, like me

**DavidWe:** I no longer work with the Math Forum, but I still work with teachers and help them learn how to use technology

**NancyKZ:** I know that is great

**CarrieMc:** I praise you for doing that

**DavidWe:** So, I've not checked this out myself, but the program (there are over 1000 presentations at NCTM) which begins on Thursday, may be online

**DavidWe:** Thanks, Carrie

**DavidWe:** You are more than welcome to peruse whatever parts of it you can

**KristinMG:** thanks

**CarrieMc:** Thank you

**DavidWe:** It's divided up into strands, themes, topics, Tom Friedman from the New York Times is giving the opening keynote

**DavidWe:** If something strikes you as interesting and you would like me to try and attend a session or pick up some material for you, feel free to email me

**DavidWe** . o O ( [wex@pobox.com](mailto:wex@pobox.com) )

**DavidWe:** That's my email

**JenniferR5:** Thanks

**NancyKZ:** thanks

**DavidWe:** I'm happy to try and look some stuff up for you all and get back to you after the conference

**CarrieMc:** Thank you.

**DavidWe** smiles

**DavidWe:** Least I can do, especially, since I'm here

**DavidWe:** Does anyone have a particular topic or question or interest that you would like to ask about?

**DavidWe:** As I mentioned, earlier, I've really not planned anything for this evening, since I've been talking and traveling a fair bit in the past 5 days

**DavidWe** waits for anyone to make a comment

**DavidWe:** Ah...

**DavidWe** smiles

**NoraO:** I do have a question with regards to a good website for Kindergarten teachers

**DavidWe:** What drew you to this discussion this evening?

**DavidWe:** What are you looking for, Nora? Can you be a bit more specific?

**DavidWe:** Have you seen the Dr. Math pages at the Math Forum, Nora?

**MaryKil:** How can I make double digit multiplication more interesting for my students in grade 3-5. They get confused on the process.

**KristinMG:** When I think about using technology for math, I don't have many ideas, but I would love to get some more ideas. Its a pretty broad....Are there some good websites that give great ideas?

**CarrieMc:** That a good question. I had the same problem

**NancyKZ:** a good web-site to teach fractions?

**DavidWe:** Good question, Mary

**NancyKZ:** for 4th grade

**DavidWe:** So, here's the Elementary School section of Ask Dr. Math, as a reference:

**DavidWe:** <http://www.mathforum.org/library/drmath/drmath.elem.html>

**DavidWe:** Under the topics are real questions from real students that have been collected in the past 12 years or so

**MaryKil:** Great, I will look...

**DavidWe:** Some of the responses are excellent - they have been marked with a red star

**NancyKZ:** thanks

**NoraO:** Thank you for the info

**DavidWe:** Fractions is a category; multiplication is a category

**DavidWe:** In addition, have you all seen the Library of Virtual Manipulatives?

**MaryKil:** No, where is it?

**NancyKZ:** no

**KristinMG:** no, sure haven't

**DavidWe:** These are JAVA applets - but grouped by grade levels (k-2, 3-5, etc.) and topic:

**DavidWe:** <http://nlvm.usu.edu/en/nav/vlibrary.html>

**DavidWe:** Your browser needs to be able to run JAVA but most current browsers do

**DavidWe:** There are a host of activities for each topic area in each grade level grouping

**CarrieMc:** Kristin, they're the ones we used last semester.

**KristinMG:** Yeah, I just realized that.....

**DavidWe** smiles

**KristinMG:** We actually had to do some assignments after looking through that website.

**DavidWe:** There is a cool one about naming fractions - with a big yellow octagon showing the visualization, for example

**CarrieMc:** For anyone who has never used them, I highly recommend them.

**DavidWe** smiles

**NancyKZ:** I will look at it

**NancyKZ:** I will sure like to use it

**NoraO:** I will do the same thing

**DavidWe:** There's another web site with similar (although not free, but you can get a free trial) small topic specific "gizmos"

**DavidWe:** Explore Learning - I don't really know the fee structure, but when I saw some of their people today, they were offering me a 30 (or 45 day) free trial period

**DavidWe:** Might be worth "exploring"

**DavidWe:** <http://www.explorellearning.com/>

**KristinMG:** yes, I will check it out...thanks for sharing all these websites with us

**DavidWe:** I think they are more grades 6-12 though, if I recall

**DavidWe:** But they have some cool stuff, but it is commercial

**KristinMG:** I'll still check it out

**DavidWe:** I think the challenge to all of you (especially new or soon to be new teachers) is to come up with your own "scrapbook" of math teaching ideas

**DavidWe:** You will only start to have situations where a student won't understand something the way you present it

**KristinMG:** That sounds like a great idea....for when I have some "spare time".....

**DavidWe:** Then, it is a dynamic of how to present it in a different way (visually, with manipulatives, etc.) to help the understanding

**DavidWe:** right, spare time IS valuable

**DavidWe:** but, one reason for Tapped In and the Math Forum is for teachers to exchange with each other good things they have developed

**CarrieMc:** Which I truly love.

**MaureenB:** David just went to Gizmos. Thanks it is an answer to my prayers today for the kids who just can't "see" how to compare fractions

**DavidWe:** The Math Forum has a Teacher to Teacher section where you can ask about topics and hear back from other teachers

**DavidWe:** Cool, Maureen - I'm glad that you found something

**DavidWe:** Here's the Teacher to Teacher section of the Math Forum:

**DavidWe:** <http://mathforum.org/t2t/>

**DavidWe:** You can browse through what other people have asked

**DavidWe:** You can search for a specific topic

**KristinMG:** I am so excited about finding out about all these resources to use

**NancyKZ:** me too

**DavidWe:** Here's a thread (I don't know if it is interesting or not) about memorizing number facts:

**DavidWe:** <http://mathforum.org/t2t/thread.taco?thread=12522>

**JenniferR5:** That website has a section for learning math tricks...how interesting

**DavidWe:** It's from a few years ago, but it may be interesting to read through the three messages

**NancyKZ:** it is

**DavidWe:** The responses to the initial questions usually contain a LOT of information - links to other discussions, etc.

**CarrieMc:** I am glad that you have shared this information with us. I wish I was aware of these resources when I was in 4th grade a couple weeks ago. I will mark this information down so that I can use it when I teach in my own classroom

**DavidWe:** Part of YOUR job, is to take the time to do the research - you may need to ask the same questions with different ways, in a slightly different form

**DavidWe:** Always room to learn more stuff, Carrie

**DavidWe:** Believe me. I keep learning about stuff that I should have known about years ago

**DavidWe** smiles

**KristinMG:** Yeah I agree Carrie....I am in a pre-K classroom right now, and honestly I have hardly seen math except for counting and comparing objects

**DavidWe:** A friend of mine just gave a very powerful (although somewhat discouraging) talk about the state of math education



**MaryKil:** I briefly checked out the virtual manipulatives site. It looks great for fractions! Do you know of any good websites for division?

**DavidWe:** One thing that is ABSOLUTELY critical is for SUSTAINED teacher professional development

**DavidWe:** I would be surprised, Mary, if there wasn't a virtual manipulative for division as well, but I've not memorized all of what is there

**DavidWe:** You need to keep asking questions, keep thinking about how students learn and where the learning breaks down and how to find different ways of explaining a concept

**DavidWe:** Teachers need the time with each other as colleagues, to attend conferences, to learn from other people

**DavidWe:** It's one of the main motivations for the existence of Tapped In

**DavidWe:** You guys may never meet me in real life, but in Tapped In we can get to know each other a bit and learn about new stuff that may be helpful to all of us

**DavidWe:** It's more fun to sit down over coffee or lunch with a group of people, but Tapped In tries to be a virtual teachers' lounge

**KristinMG:** It's so cool that we get the opportunity to do that...

**DavidWe** smiles

**DavidWe** agrees

**DavidWe:** So, take time to explore the NCTM web site

**DavidWe:** Do you know about Illuminations?

**MaryKil:** No

**NancyKZ:** no

**CarrieMc:** Yes

**KristinMG:** hmmm, don't think so

**JenniferR5:** I dont think so

**DavidWe:** <http://illuminations.nctm.org/>

**DavidWe:** big set of activities, aligned to standards with lessons plans and links to sites on the Web

**KristinMG:** very cool

**DavidWe:** So, if none of you mind...

**KristinMG:** I'm going to have to make a list of all these websites you have shared

**DavidWe:** You know about the transcript you will receive from Tapped In, after you logout?

**CarrieMc:** I agree..Kristin

**DavidWe:** It will have the URLs and other things we have discussed

**CarrieMc:** I have not heard of some of these sites.

**KristinMG:** yes

**DavidWe:** If nobody minds, I may call an early end to this discussion so I can get some dinner and go to bed - it's been a long day for me

**DavidWe:** Well, I'm glad that you've heard of them, now, Carrie

**JenniferR5:** Thank you for sharing the websites!

**NancyKZ:** that's fine

**FredK . o O ( most helpful )**

**KristinMG:** I understand!

**CarrieMc:** I am familiar with the transcripts being emailed

**NancyKZ:** Thanks for the info

**CarrieMc:** That's fine

**NoraO:** Thank you

**MaryKil:** Thank you for sharing!

**DavidWe:** Let me also ask you if you would like to have this discussion focus on specific topics (like math in Kindergarten) send me an email and I'm happy to do a more focused presentation

**DavidWe:** Sure thing

**CarrieMc:** Have a good night and Thank you for all the info

**NancyKZ:** thanks for all the web-sites too

**KristinMG:** ok that sounds great!

**CarrieMc:** Yes that would be helpful

**FredK:** Thanks David and have a good conference

**DavidWe:** It's not always clear who will show up on Tuesday for this discussion and sometimes it is hard to have kindergarten teachers talking about what high school teachers are doing

**KristinMG:** Thanks for everything and have fun in Atlanta (in the heat)!

**DavidWe:** So, it would be fine for me to focus a future discussion more narrowly

**DavidWe:** Just let me know and we can schedule things appropriately

**CarrieMc:** Ok

**KristinMG:** ok

**DavidWe:** You should all have my email - [wex@pobox.com](mailto:wex@pobox.com) - and please don't hesitate to contact me

**DavidWe** wonders if BJ can remember when the next discussion is

**CarrieMc:** Thank you for all your help and time

**DavidWe** looks at his calendar

**DavidWe:** 17 April

**DavidWe** . o O ( at 7:30pm EDT )

**DavidWe:** Again, take the time to poke around the web sites. My guess is that you will come across some unexpected and hopefully useful things

**KristinMG:** I would be interested in a chat for the elementary grades....

**DavidWe:** yes

**DavidWe:** I think I could pull together some more resources for you all

**KristinMG:** sounds great!

**CarrieMc:** That would be great!!

**MaryKil:** Me too

**MaureenB:** thank you

**DavidWe:** Actually, if you elementary folks think you will be here next month, we could make the decision now to focus on elementary level

**CarrieMc:** I will be

**DavidWe:** By the way, you should also consider attending Susan Roseman (SusanR)'s discussion K-3+ resources

**MaureenB:** me too

**KristinMG:** that would be great

**DavidWe:** It's on Tuesdays at 8pm EDT

**CarrieMc:** Thanks

**DavidWe:** Susan discusses ALL topics, but she has great resources, too

**KristinMG:** wonderful

**DavidWe:** Susan's next discussion is 27 March (next Tuesday) at 8pm

**KristinMG:** perfect!

**DavidWe** smiles

**CarrieMc:** Great!!

**MaryKil:** I will come to the Elementary Math next month

**DavidWe:** So, I think that's all my fingers can type...

**DavidWe:** Elementary math in April it is!!

**NoraO:** Thanks

**KristinMG:** ok, well thanks again!

**DavidWe** hopes BJ makes a note of this for the calendar

**MaureenB:** thanks David always walk away with something I can use

**CarrieMc:** Thanks

**DavidWe:** Take care, folks - good luck with the teaching

**CarrieMc:** Again have a good night

**DavidWe:** Thanks for coming and I look forward to seeing you again

**BJB2:** thanks, David

**DavidWe** hugs BJ

**DavidWe:** sure, BJ

**FredK:** Good session, David

**NancyKZ:** Thanks David

**JenniferR5:** Thanks for your help!

**DavidWe:** I'm going to find some food!

**KristinMG:** bye

**NancyKZ:** bye

**DavidWe:** Take care, folks.

**BJB2** hugs David goodnight

**DavidWe** waves bye and heads to Reception