**Title of Session:** Math & Technology

**Moderator:** David Weksler

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Room: Math Ed Tech Group

BJ: we've apparently just finished intros, Melody

**BJ** . o O ( which I also missed )

**DavidWe**: Melody would you introduce yourself (what you do, where you are located)?

**DavidWe**: I'm David Weksler. I've been helping teachers (primarily math teachers) learn about educational technology over the past 14 years

**MrsTatGHS(Melody)**: My name is Melody Thomas, I teach honors pre calculus and calculus in Germantown TN

**DavidWe**: I'm in New Jersey about 15 miles from New York City

DavidWe: Thanks, Melody. BJ?

**BJ**: I'm a remedial communications teacher and on Tapped In helpdesk

**KeyanaJ**: Houston, TX . Student Teaching in First Grade

JosephWi: Should we just all redo them? Glendale, AZ - 6th grade math and reading.

DavidWe appreciates Keyana and Joseph re-introducing themselves

**DavidWe**: I wanted to also ask you for a little feedback in terms of what attracted you to this discussion and what specific (be as specific as you would like) topics you would like to hear about, get help with, etc.

**MichelleLM**: I need suggestions for software for pre-algebra and algebra support classes-lab

**JenW** joined the room.

DavidWe: Thanks, Michelle

DavidWe waves to Jen

JenW waves back

**DavidWe**: Quick intro Jen - we're starting off with what people are interested in, want to learn about, etc.

**JosephWi**: I recently (yesterday, and we're on fall break right now) got a laptop cart in my classroom. 8 laptops, and I'm looking for ideas on how to use them effectively in my math classes.

**MrsTatGHS(Melody)**: I use technology a lot - am a tech facilitator for the county and also dept chair so any insight would be great

**KeyanaJ**: I would like to information about what kinds of technology can be used for math besides software, like some helpful websites

DavidWe: Thanks Joseph, Michelle, Melody, Keyana

**MichelleVT**: I was interested in the topic, because you always hear how difficult it is to integrate technology into math lessons

DavidWe hopes Jen will plug her own web page

**JenW**: Ahhh -- Well, I am Jennifer Wagner -- I host online projects for K - 6 grade teachers. I work out of my home and am interesting in math and technology!! One of my sites is <a href="http://www.technospud.com">http://www.technospud.com</a> --

DavidWe: Thanks, Melody

**JenW**: and I live in Socal -- and sorry if I went out of order

**DavidWe**: I think almost everyone but Melody is a K-8 teacher, Jen, so they may be interested in some of your projects

MrsTatGHS(Melody): http://www.ilovemath.org/ is the site

DavidWe: Thanks, Melody

**DavidWe**: Do most of you know about that web site that Melody is sharing?

MichelleLM: yes

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JenW: the logo is nice

**DavidWe**: That's always a good start

DavidWe smiles

**DavidWe**: Do all of you know about the Math Forum - <a href="www.mathforum.org">www.mathforum.org</a> - big, website for math education - K-20?

**DavidWe**: That's how I started working with teachers and technology

**DavidWe**: I was part of the group of people who began (then) the Geometry Forum which became the Math Forum in 1992

**MrsTatGHS(Melody)**: some of the textbooks have web sites - we use Glencoe and their site is pretty cool

**JosephWi**: I have some of the links I use on a classroom blog. <a href="http://mrwilliams.edublogs.org/links/">http://mrwilliams.edublogs.org/links/</a>

**DavidWe**: Melody, can you say a bit more about what you do on <a href="www.ilovemath.org">www.ilovemath.org</a> how you use it, what level it is appropriate for?

**JosephWi**: most of them link to <a href="http://www.shodor.org/interactivate/activities/">http://www.shodor.org/interactivate/activities/</a>

DavidWe: That's great, Joseph. I appreciate you sharing that

**DavidWe**: Shodor has a TON of stuff - actually they have worked with the Math Forum in the past

**JosephWi**: Yes, there are a ton of "games" on Shodor that my students like to play.

**DavidWe**: Do you find those games "educational", Joseph? Do they, in your opinion, help the students learn concepts?

**SusanR** joined the room.

DavidWe waves to Susan

SusanR: Hi David

**JosephWi**: I wouldn't even call them games. I've used the fraction pointers quite a bit and the students like to get in front of the class to make the fractions (I have a smartboard in my classroom).

**MrsTatGHS(Melody)**: I love math has a lot of resources that are wonderful - the power points for teaching unit circle trig are wonderful

DavidWe: Just getting started, Susan

**DavidWe**: Want to add a quick intro, please?

**DavidWe**: So, Melody, you can find teacher-ready materials that can be used right away in class?

**KeyanaJ**: Wow that must be great with a smart board, more whole group interaction

**MrsTatGHS**(**Melody**): it is kind of an open forum for sharing of content resources for all levels of math teachers

**SusanR**: K to 8 Occasional Teacher from Ontario Canada and facilitator of the K to 3+ Great Resources twice monthly sessions here at TI

**JenW** waves to Susan -- see you next week

**SusanR** . o O ( Jen is our special guest this month )

SusanR: Hi Jen

SusanR: nice to see you online

JenW followed the breadcrumbs to find my way back to Tapped In -- Glad that I did

SusanR: super..glad to have you on board

SusanR: super

**JenW**: May I ask a question as a Tech Coord to a room of teachers??

SusanR: go ahead

**JenW**: Honestly -- do you wish the Technology Teacher to teach the math concept -- using a computer program -- or do you like to do that in the room and then the Tech only reinforce the learning??

MrsTatGHS(Melody): Yes David, you can find all kinds of stuff and post all kinds of stuff

**DavidWe**: That's great, Melody. I've run across the web site before, but not anyone who uses it consistently

**MichelleLM**: I like to mix it up to keep middle schooler guessing! They are pretty well interchanged in my classroom

SusanR . o O (lost all our techs)

**DavidWe**: Michelle, you asked about some pre-algebra/algebra software, resources, right?

**JosephWi**: We don't have a technology teacher. We have a lab, but just an aide in there to monitor it.

JenW: thank you

MichelleLM: yes please

**MrsTatGHS(Melody)**: one of my friends was part of the dynamic duo that created the site, it has been re-worked and is much easier to use - very organized now

**MichelleVT**: I think that as long as the concept can be understood by the students, it doesn't matter how the concept is introduced or reinforced

**DavidWe**: Well, it's definitely not sexy, but do you ever use Excel (or another spreadsheet program) for getting at some algebraic ideas?

**MichelleLM**: My lab is in my classroom with computers that my father-in-law rebuilt for me

DavidWe: Always good to know the creators, Melody

**JenW**: I use excel with students all the time -- but for simplistic math formulas

**MrsTatGHS(Melody)**: Jen - my school uses laptop carts and the cart goes to the teacher room rather than students to a lab; we do have a PC based lab that we use with students too but it is booked most of the time

**DavidWe**: That's a good deal, TOO, Michelle

**MichelleVT**: honestly, I think we as teachers need to learn from our students, and if they learn better from on introduction in their regular class or from the tech class, so be it

**DavidWe**: So, Joseph can talk to Melody a bit about using a set of 8 laptops on a cart, I guess

**JenW**: wow -- good thoughts -- thank you

**DavidWe**: Can you say a bit more about "learning from our students", Michelle. I like that idea, very much but many teachers may feel uncomfortable with that at the get-go

**MrsTatGHS**(**Melody**): we use Geometer's sketchpad; TI interactive; TI connect and the Glencoe site

**MrsTatGHS(Melody)**: we also use PLATO learning network for remediation

**DavidWe** knows the author of Geometer's Sketchpad - the software was actually built at Swarthmore College - after that the Geometry/Math Forum began

**MichelleVT**: it's only natural but the goal is to show them that teaching math through technology can work

**DavidWe**: So, you seem to be pretty technology-RICH, Melody

**MichelleLM**: I love using geometer's sketchpad as a demo tool.

MichelleVT: they're eventually going to have to put their egos in their back pockets

**JenW**: MrsT ??? where is your school???

**DavidWe**: Yes, it can be a GREAT electronic blackboard

MrsTatGHS(Melody): I am in Germantown TN

JenW: thanks

**DavidWe**: You know that you can do quite a bit of algebra with version 4 of Sketchpad, Michelle

**JosephWi**: So if you had 8 laptops in your math classroom, how would you use them?

**DavidWe**: Are you aware of some of the resources from the Key Curriculum Press web site?

**JosephWi**: I'm thinking of learning centers.

**JosephWi**: but I'm not sure yet.

**DavidWe**: What are the topics that you are getting at, Joseph?

**DavidWe** . o O (7/8th grade, right?)

MrsTatGHS(Melody): I'm back

**DavidWe**: We're glad, Melody

**JosephWi**: 6th - Algebra and Probability is what's next.

**MichelleLM**: I have a few of the extras: Algebra 1, Exploring Algebra and Pythagoras. I haven't been able to get the students to be independent with the system though...

**DavidWe** . o O ( <u>www.keypress.com/sketchpad</u> )

DavidWe: Quite a few links there that may be helpful to you, Michelle

MichelleLM: Thank you

DavidWe: Sure

**DavidWe**: Do any of you find the NCTM web site helpful?

**DavidWe**: They have done a lot of work to make things available to teachers, good methods and resources for addressing the standards, etc.

**MichelleLM**: I like browsing it. I really likes the Now and Then articles that were once published. Where have those gone?

**DavidWe**: Do folks know about Illuminations - a big chunk of the NCTM web site?

**MrsTatGHS**(**Melody**): I like the TI website too, especially the calculator activities

**MichelleLM**: Are the activities compatible with 82's?

MrsTatGHS(Melody): do any of you use the NUMBERS curriculum with your students

**DavidWe**: Here's the LESSONS page from the Illuminations web site - it breaks things down: K-2, 3-5, 6-8 and 9-12

MichelleLM: Have for all three seasons. I was doing my own before...

**DavidWe**: http://illuminations.nctm.org/Lessons.aspx

**MrsTatGHS(Melody)**: Yes, most of the calculator activities can be completed on the 82s with some modifications, really geared for the 83/84+

**KeyanaJ**: yes I visit the site often for standards

**DavidWe**: Great, Keyana

DavidWe: Do you all know, also, about the Ask Dr. Math section of the Math Forum?

**MrsTatGHS(Melody)**: Yes - my students love that site

**DavidWe**: Real world questions from K-20 students over the past 12 years (or so) with highlighted answers

**MichelleLM**: yes, I have even used Dr. Math for questions.

**DavidWe**: http://www.mathforum.org/dr.math

**DavidWe**: Some of the early elementary questions are often some of the best

**DavidWe**: Very good explanations for giving good responses to 1st graders' question:

"What's a number bigger than infinity?"

KeyanaJ: wow, that's great

**DavidWe**: Here's the Infinity page:

DavidWe: <a href="http://www.mathforum.org/library/drmath/sets/elem">http://www.mathforum.org/library/drmath/sets/elem</a> infinity.html

MichelleVT: thanks

**SusanR** . o O ( nice set of individualized lessons on fractions here http://illuminations.nctm.org/LessonDetail.aspx?id=U113 )

**SusanR**: fractions always a bit of a challenge to teach

DavidWe: Always

**IhorC** joined the room.

MrsTatGHS(Melody): I have to run ... it has been great chatting with you all - a lot of

great sites to bookmark

DavidWe waves to Ihor

**IhorC**: hi David

**MrsTatGHS(Melody)**: have a wonderful evening

DavidWe: Well, Joseph, you are in luck

DavidWe: Hi, Ihor

MrsTatGHS(Melody) waves goodbye

DavidWe: Thanks, Melody - appreciate your contributions

DavidWe waves bye

**MrsTatGHS(Melody)** left the room (signed off).

**DavidWe**: Ihor, Joseph just was given access to a cart of 8 laptops and is looking for interesting ideas for Algebra, some probability stuff....

**DavidWe** . o O ( please fill in where I'm leaving holes, Joseph )

JosephWi: That pretty much sums it up.

DavidWe smiles

DavidWe: Ihor works with the CIESE group at Steven's Institute of Technology

DavidWe: www.ciese.org

MichelleVT: if you don't mind, what does CIESE stand for

**DavidWe**: DOn't know if any of you have run across this web site?

**DavidWe**: It keeps changing, Michelle

KeyanaJ: no I haven't

**IhorC**: Center for Innovation in Science & Engineering Education

KeyanaJ: oh ok

**DavidWe**: I think...it is the Center for Innovation in Science and Engineering Education, currently

MichelleVT: I see the site, thanks

**Ihor**C: Now you know why we just call it CIESE

**DavidWe**: It used to stand for something else but the same acronym

JosephWi laughs

**DavidWe** smiles

**DavidWe**: Well, it did, right, Ihor?

**Ihor**C: Don't get me started...

**DavidWe** is just glad that it is spelled with the "i" before "e" rule

**KeyanaJ**: do you know of any other resources for primary-elementary math

**DavidWe**: Middle school algebra stuff - Joseph wants to know

DavidWe: Maybe, Susan has some other good resources, Keyana

**DavidWe**: She's my reference point for K-3 stuff

KeyanaJ: ok

**MichelleLM**: Michelle is still desperate for lab software suggestions to independently reinforce basic skills

DavidWe smiles

**DavidWe**: basic math skills, Michelle, like....?

**DavidWe** . o O ( remedial? )

**SusanR**: I do..please head up to the K to 3+ Resource room..there is a math folder full of resources there

**JosephWi**: I think what I really need to do is talk to IT about installing the smartboard software on all the laptops. I use the Hands on Equations system, and it would be nice to be able to use some templates I have for Hands On on each of the laptops.

**KeyanaJ**: ok, thank you

MichelleVT: thanks a lot Susan

**SusanR**: at the end of the session please

DavidWe: You can do that with Susan if she has time

**MichelleLM**: 2 days a week all students work independently where their needs are. Such as-whole number, decimal, integer, fraction operations

**DavidWe**: Susan's next session, by the way (K-3+ Resources) is next Tuesday at 8pm EDT

KeyanaJ: ok, good to know

DavidWe nods to Michelle

**DavidWe**: I would have to go and search for that, Michelle.

**DavidWe**: Have you ever used the internal search engine at the Math Forum?

DavidWe: That would yield you a lot of hits, I'm guessing

MichelleLM: No worry, I don't want you to go and add more work to your day.

**DavidWe**: Of the top of my head I'm not too sure what to tell you about specific materials to address those topics

DavidWe: Hey, it's my work to do

**DavidWe**: Just thinking that you can do the search (and do it better since you know what you are looking for)

**MichelleLM**: Lots of hits yes but I am having a difficult time separating the duds.

DavidWe: Yes, that's always the challenge

SusanR: Math Forum filters out the duds for you, Michelle

**DavidWe**: We HOPE it does - that's part of the purpose of the web site

**MichelleLM**: Okay, thanx. I'll work on that this evening. No pressure from the principal to get this done by Friday. Tee-hee.

**JosephWi**: I'm not sure if this link will work right. If it doesn't, click on "Asset Home" on the top left. <a href="http://asset2.asu.iassessment.org/ia/render.userLayoutRootNode.uP">http://asset2.asu.iassessment.org/ia/render.userLayoutRootNode.uP</a> broken into grade levels then su**BJ**ects.

**DavidWe**: Do all of you know about the National Library of Virtual Manipulatives?

MichelleLM: no

**MichelleVT**: never heard of it

**DavidWe**: Another great set of online resources (applets) that has been carefully constructed and organized

**IhorC**: http://nlvm.usu.edu/en/nav/vlibrary.html

**DavidWe**: It's based at Utah State

**DavidWe**: Here's the web site....thanks, Ihor

**DavidWe** hands over ANOTHER quarter

**KeyanaJ**: we used them in our math methods class last semester

**JosephWi**: the link I put up in my last post.. go to the Math Active part for your grade level. It has short flash animations that describe something, then the students manipulate things to reinforce the skill. They are in English, Spanish, and some in Navajo

**DavidWe**: Again, 4 strands of content, K-2, 3-5, 6-8, 9-12 and it is searchable

**DavidWe**: Is any of this addressing things you are thinking about, Keyana. Don't mean to ignore you

**KeyanaJ**: no you referred me to Susan, that's great, and the websites are awesome

**KeyanaJ**: thanks

**DavidWe**: Ihor and I will be at a regional NCTM meeting at the end of this week and we hope to corral the NCTM President (Skip Fennel) and talk to him about technology and math education

**DavidWe**: Ihor has been a leading figure in pushing NCTM to focus more on the continually growing array of technology/software/hardware that augments traditional math education

**DavidWe**: He has maintained an affiliate group for NCTM for the past 20 years. It is called CLIME and initially focused on using LOGO in math education

**DavidWe**: To learn more you can look at <a href="http://www.clime.org">http://www.clime.org</a>

**DavidWe**: One of my concerns is that it is easier to chat with you about web sites and software - there are many, many website and too much software

**MichelleLM**: Part of the site issue is keeping the hardware updated and usable, along with getting teachers to use it efficiently

**DavidWe**: The challenge is to find the time to explore things and to have good examples TO explore

**DavidWe**: One role for THIS discussion is to be a place where people can also ASK QUESTIONS, LOOK FOR FURTHER USE OF SPECIFIC WEB SITES/SOFTWARE

**DavidWe**: Associated with this "live" discussion is a message board which allows people to post questions when the conversation IS NOT happening

KeyanaJ: it's great

**MichelleLM**: We are also looking at all the wonderful websites now along with "discussing". Multitasking.

**DavidWe**: I'm also happy to focus on specific topics in upcoming sessions - for example it would be fine to have a conversation specifically on Algebra software - I would just let people know ahead of time that if that doesn't interest them, then they may not want to login for that specific topic

**JosephWi**: Is there a transcript of the chats or a collection of links? I've put all the ones that were in this discussion on my del.icio.us account, but I'm wondering if there are transcripts from other sessions.

DavidWe: Similarly, Keyana. a focus on early elementary stuff would be fine with me

**Ihor**C: I'm working on my activities for a session on Thursday at the NCTM meeting in Atlantic City. You can see some of them at <a href="http://www.ciese.org/nctm/oct2006">http://www.ciese.org/nctm/oct2006</a>

**DavidWe**: Yes, Joseph. As a member, you will get a transcript, automatically

**DavidWe**: It shows up about 15 minutes after you logout

KeyanaJ: Great

DavidWe: You don't need to write this stuff down. TI does the note-taking for you

**DavidWe** smiles

**KeyanaJ**: I'll get a eye on the calendar

JosephWi: Nice. Thanks. I guess I didn't need to tag them when they came up

**DavidWe**: My email is wex@pobox.com

**Ihor**C: It's mostly appropriate for middle school. But its good stuff.

DavidWe: I welcome any comments, suggestions, topics for further exploration

**DavidWe**: In the past few months we have tended to have quite a wide range of teachers (K-college) so, I've tried to keep things general

**DavidWe**: But, now that the school year is in full swing, I'm really looking for community input in shaping these discussions

**JosephWi**: I'm going to share a link to a podcast I found interesting this week. It doesn't have to do with math, but is definitely about technology.

 $\underline{http://www.speedofcreativity.org/2006/07/29/podcast73-a-web-of-connections-why-the-readwrite-web-changes-everything-by-will-richardson/}$ 

**DavidWe**: So, please don't hesitate to request topics for future meetings

**KeyanaJ**: ok, no problem

**DavidWe**: Do you know about "Edutopia" - the free publication from the George Lucas Educational Foundation?

**DavidWe**: There's an article by Will Richardson in the October issue, Joseph. It's quite good

**JosephWi**: Yes, that's how I found his blog, which linked to the Speed of Creativity Blog that the podcast is from.

DavidWe: http://www.edutopia.org/magazine/ed1article.php?id=art 1648&issue=oct 06

**DavidWe**: There's the article form Edutopia if anyone else is interested

MichelleVT: why thanks David

**JosephWi**: I did a lot of blog reading last week because we had district wide standardized testing.

MichelleLM: Thank you

**DavidWe**: <a href="http://www.edutopia.org/magazine/index.php">http://www.edutopia.org/magazine/index.php</a> - that's the web site for the magazine

**DavidWe**: It's a terrific resource and I look forward to what they highlight - very high quality, IMHO

**DavidWe**: Something to keep you busy during those high-stakes tests, huh, Joseph?

**DavidWe** smiles

**DavidWe**: We've got about 5 minutes left

**SusanR**: "These technologies are user friendly in a way that technologies have not been in the past. You can be up and blogging in minutes, editing wikis in seconds, making podcasts in, well, less time than you'd think."

**DavidWe**: Has this been helpful to folks? Are you interested in coming back to other discussions in the future?

**JosephWi**: The links have been helpful.

**DavidWe**: You should all know that we have a K-20 math discussion on the first Tuesday of the month led by Jeff Cooper

**MichelleVT**: of course! I appreciate all of the wonderful websites you guys have introduced to me

KeyanaJ: yes, very helpful, I'm really into the online project website

**MichelleLM**: Yes, I have enjoyed this session. Will see you later.

**DavidWe**: I still think that people-to-people communication (even online chat) is more powerful than searching the web

**DavidWe**: Teachers know what works and I find, most of the time, are quite happy to share resources with each other

**KeyanaJ**: yes, because info on the web is soo vast

**DavidWe** . o O ( too vast, sometimes )

**DavidWe** smiles

**SusanR**: The topic for the K to 3+ discussion next Tuesday is Online Collaborative Projects btw

**DavidWe**: So, again - feel free to use the Message Board, here in the MathEdTech Group room

**KeyanaJ**: I'm there Susan

MichelleLM: Thank you and good night all

**BJ** . o O ( you must join the group to use the discussion board )

**DavidWe**: I promise to do a slightly better job of "decorating" my virtuall meeting space - it's rather spare at the moment

SusanR: with special guest Jen Wagner

**KeyanaJ**: I'm looking at the pumpkin project now

**DavidWe** smiles

**DavidWe** waves goodnight to Michelle

MichelleLM waves goodbye

BJ: thanks, David

JosephWi: They had us join the group in the Virtual Field trip of Tapped In this

afternoon

DavidWe: You're welcome, BJ

KeyanaJ: good night

**DavidWe**: Any Tapped In questions - how to join a discussion group?

DavidWe waves to Keyana

**DavidWe**: Thanks for joining us, Keyana

**MichelleVT**: Thanks for all the resources, have a good night

**SusanR**: http://www.k12science.org/currichome.html

JosephWi: Ok. Thank you.

**DavidWe**: Email me - wex@pobox.com - if you don't find what you are looking for

**DavidWe**: If anyone wants to look at some of Susan's K-3 math resources, she can

probably lead you to them

DavidWe gives his typing fingers a rest

KeyanaJ: ok

DavidWe smiles

SusanR: I will head up .... you can join me

**JosephWi**: Thanks everyone for the links and information.

**DavidWe**: You're welcome, Joseph. Thanks for coming