

**Title of Session:** Math and Technology

**Moderator:** David Weksler

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Room: Math Ed Tech Group

**DavidWe:** So, we typically begin discussions with brief introductions

**DavidWe:** Who are you, what do you teach (would like to teach in the future) and what are you interested in

**AngelaSu:** I'm a pre-service teacher....I want to teach K-2nd grade....I'm graduating in May!! =)

**BarbaraG:** My name is Barbara and I am a teacher's assistant for kindergarten in Texas at Hancock Elementary. I will teach kindergarten somewhere next year. I Love cats and kids

**ErinEP:** Erin, 2nd grade student teacher, graduating in May too!

**FayeO:** Faye, teach sixth grade math in VA for 18 years, working on Ph. D. in Math Ed. Leadership

**ChristinCC:** My name is Christine, and I am a pre-service teacher at Mahanay, and I love kindergarten! I'm also graduating in May.

**FredK:** I am a literacy tutor in SE Oklahoma helping with some school youth

**StephaniK1:** Stephanie - HS math (mainly Alg1 and Geometry)

**DinaLe:** Hi, I previously taught HS math, but now am in the corporate world. I am in the process of renewing teaching license and have Master's in Ed Tech

**DavidWe:** I'm David Weksler. I'm in New Jersey, near New York City and I've been helping math teachers learn more about educational technology for the past 15 years

**SusanR:** Sue Roseman from Ontario, Canada and facilitator of the K to 3+  
RESOURCES SESSION HERE AT TI

**AlbertA:** I am a teacher in Adult Education at the RI Department of Corrections. I would like to learn innovative ways to teach.. My background is in Curriculum and Instruction

**LuisI:** Luis from Oceanside....Doctoral student taking a technology class as well as a district office administrator.

**MaryFrancT:** I am a third grade teacher in Virginia, 12 miles west of Washington D.C. I am a graduate student at George Mason University.

**AlbertA:** My concentration in my doctoral work was in mathematics education, and minors in technology in ed, and stats.

**DavidWe:** So, by way of a little more introduction - does everyone know about the Math Forum - [www.mathforum.org](http://www.mathforum.org)

**DavidWe:** That's great, Albert - I should learn some stuff from you, tonight

**ChristinCC:** I did not know about the Math Forum

**DavidWe:** The Math Forum was started in 1992 to be an online resource for geometry (first) and then math (last 10 years)

**DavidWe:** It's a HUGE web site that has numerous resources - some of you may know about "Ask Dr. Math"

**DavidWe:** A question and answer service that has a large database of real questions and answers from students that have accumulated over the past 12 years

**FredK:** I like the toolbox

**DavidWe:** Most of you may know that after you logout, tonight, you will also get a transcript, sent to your email address, of this conversation containing all the information (URLs, too) so you don't have to scribble them down

**DavidWe:** Tapped In takes the notes for you

**AlbertA:** NCTM. Org may also be a valuable resource. The NCTM has periodicals in teaching children math, middle school, and secondary math.

**BarbaraG:** awesome

**DavidWe:** NCTM is a great resource and is, of course, the professional organization for math teachers

**DavidWe** . o O ( [www.nctm.org](http://www.nctm.org) )

**DavidWe:** I'll be at the annual meeting in Atlanta next month (22 March, I think it begins)

**DavidWe:** I'll be giving a presentation about technology (including Tapped In)

**BarbaraG:** very cool

**DavidWe:** So, since there is a good sized group and I know several of you are elementary folks...what can I help you with?

**DavidWe:** Online resources for math stuff?

**ErinEP:** yes!

**AlbertA:** I have found the Geometry Sketchpad as an effective way to teach geometry concepts

**AngelaSu:** using more technology for math

**MaryFrancT:** y

**BarbaraG:** How to teach Math through technology to the little ones?

**DavidWe:** Again - if you don't know the Math Forum web site - that's the starting point, in my humble opinion

**DavidWe:** Okay, Barbara...I'll answer that one in just a minute

**DavidWe** actually thought about that question 20 minutes ago

**DavidWe** smiles

**DavidWe:** Albert, you may be interested in knowing that the group of people who created the Geometer's Sketchpad were also at Swarthmore College - where the Math Forum started

**AlbertA:** David what is/are some of the most effective math software packages out there??

**DavidWe:** It is a fantastic piece of software (mostly used in middle and high school) for doing geometry on a computer

**DavidWe:** Well, I think Sketchpad is one

**DavidWe:** Obviously there are high-end symbolic algebra programs (Mathematica, Maple, MatLab) - high school and college level

**DavidWe:** But, let me jump into something that may be more appropriate for you teaching younger students

**StephaniK1:** which of these programs are free?

**AlbertA:** How about programs for elementary students

**AngelaSu:** yes....please do

**DavidWe:** I think there is a variety of free ware

**ChristinCC:** free is good

**BarbaraG:** free is great

**DavidWe:** But the software I mentioned earlier is commercial - but not expensive (at least Sketchpad isn't)

**DavidWe:** Free IS great

**DavidWe:** So, let me get you to another big and growing site for online software

**DavidWe:** National Library of Virtual Manipulatives

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

**DavidWe:** Click on that

**BarbaraG:** Sounds promising

**ChristinCC:** awesome!

**ErinEP:** that's a great site

**DavidWe:** Grade-appropriate topic-based selection of online tools for math

**FayeO:** NLVM is awesome!!

**ErinEP:** I've used it before

**AngelaSu:** so have I

**FayeO:** I've used it with my kids numerous times

**DavidWe:** I know some of you have seen that - I just want to make sure everyone knows about it

**DinaLe:** Nice site

**AngelaSu:** we used to for our math methods class

**ChristinCC:** interesting

**DavidWe:** The Math Forum ALSO has a big collection of Math Tools

**DavidWe:** Let me give you the web page for that

**MaryFrancT:** That site is cool!

**AngelaSu:** I found some of the "activities" confusing...

**DavidWe:** <http://www.mathforum.org/mathtools/>

**DavidWe:** No doubt, Angela

**DavidWe:** Having the tools is one thing

**DavidWe:** Knowing what to do with them is another

**AlbertA:** There is a web site where students and teachers can get software for a fraction of their regular price as well try <https://secure.academicsuperstore.com/cart.html>

**DavidWe:** I'm not really going to spend ANY time at all on explaining how to use any of these tools....

**DavidWe:** Thanks, Albert, for that URL

**AlbertA:** You are welcome

**DavidWe:** But, in a future discussion, we could pick out a couple of tools that interest you and I would be happy to focus more on using them and making sure everyone understands how

**DavidWe:** We would need to schedule that, Angela

**BarbaraG:** Yes, Thanks Albert!!! Awesome site

**DavidWe:** But, if you are interested, Angela, do email me - [wex@pobox.com](mailto:wex@pobox.com) - I'll make a point of scheduling that for a future discussion

**AlbertA:** You're welcome Barbara

**DavidWe:** BJ has a web site that I'm not aware of that she would like to share

**MaryFrancT:** The NLVM will be wonderful for me this week because I am introducing probability to my 3rd graders, thanks

**DavidWe:** Cool

**DavidWe:** You're welcome, MaryFrances

**BJ:** Tapped In has a resource room in the student campus that you should be aware of...

**BJ:** The student campus is a safe and secure place where teachers can bring their K-12 students...

**BJ:** the group is eToys

**BJ:** you can view some of the information at <http://www.squeakland.org/>

**BarbaraG:** It is wonderful BJ shared this in last chat

**DavidWe:** Teachers can arrange to bring groups of K-12 students into Tapped In

**DavidWe:** Groups of students can work collaboratively if that is something you can see doing

**DavidWe:** Barbara, especially for young students (pre-K, K, 1,2) I still think many people would feel that hands-on activities with REAL manipulatives are still the best way to start

**BarbaraG:** I was so thinking that very thing

**DavidWe:** Cuisenaire rods, Konnex, ZomeTool - very good building tools with lots of extensions in math and science

**ChristinCC:** I agree

**BarbaraG:** But I have seen games here at my school that look like a lot of fun

**DavidWe:** But...

**DavidWe:** There are some pretty cool, relatively new online manipulatives and programs that do some pretty cool things - like integrating math with music

**DavidWe:** Let me show you a web page for a very cool non-profit group that I've been able to get to know a bit

**DavidWe:** It's called the M.I.N.D. Institute

**ChristinCC:** Has anyone heard of Larson's Math program?

**ErinEP:** no

**DavidWe:** Hang on just a sec, Christine

**BarbaraG:** HMMM, no

**DavidWe:** We'll go there, next

**ChristinCC:** Mahanay uses it~

**FredK:** no

**DavidWe:** <http://www.mindinstitute.net/cont/edu/stmath.php>

**DavidWe:** The MindInstitute is a pretty new program that tries to combine elementary math with music education

**DavidWe:** They have some very cool products

**BarbaraG:** I Love the sound of that

**DavidWe:** It does cost some money, but they have some nice demo stuff you can preview

**DavidWe:** Some of you may remember when there was a big interest in newborns being exposed to Mozart?

**DinaLe:** Is it appropriate for all levels, including 6-12?

**BarbaraG:** Yes

**AlbertA:** I know this is a math forum, but I would like to add Encarta Encyclopedia Is a great resource for all levels, get the deluxe edition. Amazon has it fairly reasonable with a rebate

**DavidWe:** I think the MindInstitute stuff is probably tailored more for K-6 or K-8

**DavidWe:** Thanks, Albert

**DavidWe:** Here is the DEMO page for the MindInstitute stuff:

**DavidWe:** <http://www.mindinstitute.net/cont/edu/demos.php>

**AlbertA:** I have done reviews for the NCTM, if you do reviews for products and software you can keep the products after the review.

**DavidWe:** Christine, please tell us about Laron's Math

**DavidWe:** That's great, Albert

**ChristinCC:** Well, for kindergarten, the students go once a week to the computer lab to do Larson's

**ChristinCC:** From what I've observed, they do math activities such as matching

**ChristinCC:** patterns

**ChristinCC:** graphing

**ChristinCC:** etc.

**BarbaraG:** That is perfect for the little ones

**ChristinCC:** I was very impressed with what the kindergarteners are capable of doing

**DavidWe:** Do they have a web site, Christine?

**ChristinCC:** The tough part is logging the children on

**ErinEP:** what ages is this appropriate for?

**EmberlyB** offers site <http://www.larsonmath.com/>

**ChristinCC:** they have different grade levels

**DavidWe:** So, it is subscription based

**DavidWe:** Any idea of the cost, Christine?

**AlbertA:** I am using the EMPower series from Key Curriculum Press, it is for students studying basic math from whole numbers to algebra. My students enjoy it, the topic are for middle to junior high mathematics, although some topics are in geometry and algebra  
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**ChristinCC:** no idea

**ChristinCC:** I can find out!

**BarbaraG:** Hey y'all I just remembered something I saw today ..Has anyone seen the website Kellyskinderaten.com?



**ChristinCC:** no

**DavidWe** hasn't seen [www.kellyskindergarten.com](http://www.kellyskindergarten.com)

**BarbaraG:** so much stuff here...math included...and free

**DavidWe:** Christine, what do you like about Larson's math - can you tell us?

**ErinEP:** looks good!

**DavidWe:** Thanks, Barbara, for sharing that

**BarbaraG:** You are welcome

**DavidWe** notes that there are at least 5 elementary teachers here

**ChristinCC:** It seems like a lot of fun because of the bright colors, fun animations, etc

**ChristinCC:** There are cute sound effects as well

**DavidWe:** Let me quickly introduce Susan Roseman (Susan R) and let her say a couple of words about her K-3 Resources discussion

**DavidWe** prompts Susan to say a few words

**EmberlyB** finds Larson's price \$29.95 for 1-24 ...\$11.95 for 500-999  
[http://www.larsonmath.com/lmc\\_prea/prealgebra.htm?changeme=tabs/subscribe/subscribe.html](http://www.larsonmath.com/lmc_prea/prealgebra.htm?changeme=tabs/subscribe/subscribe.html)

**DavidWe:** While Susan is composing her thoughts...

**FredK:** Has anyone tried <http://www.funbrain.com> ?

**DavidWe:** Her discussion is typically twice a month

**BarbaraG:** no - I will check it out..thanks

**MaryFrancT:** y

**DavidWe:** The next K-3+ Resources discussion will be next Tuesday at 8pm EST

**DavidWe:** Okay, so we've seen that there is a lot of stuff out there

**BarbaraG:** Amen

**MaryFrancT:** I have done Math baseball from this site.

**DavidWe:** How difficult is it for you to incorporate some of this into your classroom

**ErinEP:** Not difficult

**DavidWe:** Great statistics lessons from lots of sports

**DavidWe:** That's good, Erin

**DavidWe:** Angela, if you don't mind me asking, what did you find confusing - something you mentioned earlier?

**DavidWe:** Something on the Virtual Manipulatives web site?

**AngelaSu:** I don't remember specifically.....we had to pick some of those games and I didn't know how to do it...

**AngelaSu:** I just remember thinking that it wasn't all that great....

**ErinEP:** I agree, some of them are hard to figure out!

**DavidWe:** Okay...did you have any idea where you could go to help figure out your questions?

**ChristinCC:** I think because...it was TOO easy that we thought it was hard

**AngelaSu:** but then again, I didn't look at ALL of the games

**DavidWe** smiles

**DavidWe:** Okay

**DavidWe:** Let me highlight another feature of the Math Forum...

**ChristinCC:** I remember we thought something was confusing because it did not make sense

**ChristinCC:** Can't clearly remember

**BarbaraG:** Doesn't each school have a tech representative to talk to with questions?

**EmberlyB** is belly laughing on the floor after hearing Barbara

**DavidWe:** So, there is a Teacher to Teacher section of the Math Forum

**DavidWe** chuckles

**BarbaraG:** Okay - silly me - we have one and she's great

**DavidWe:** That's a great THOUGHT, Barbara, but it isn't always the reality in MANY schools

**DavidWe:** Keep her and be very nice to her

**DavidWe:** So, the Math Forum, teacher to teacher service allows teachers to ask pedagogy questions of other teachers

**BarbaraG:** Aim to please..hee hee

**AngelaSu:** cool

**StephaniK1:** is the teacher to teacher like a msg board?

**DavidWe:** Yes, Stephanie - it's a little like "Ask Dr. Math" for teachers

**DavidWe:** I'll give you the web page....

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

**DavidWe** . o O ( teacher to teacher == t2t )

**DavidWe:** You can browse past questions that people have asked (and the response)

**BarbaraG:** awesome - will do

**DavidWe:** This is a group of real teachers and experienced people responding to them

**DavidWe:** It's a searchable database, so you can target your search by topic, grade level, etc.

**DavidWe:** Susan is going to tell you a bit more about her K-3 discussion, now

**SusanR:** If I can interject or jump in for a moment...quick reminder for the K to 3+ audience here..next Tuesday's session is Writing Strategies and Technology..do check the calendar and I will be around at the end of the session if you wish to join the K to 3+ Resource Group/Room. K to 3 is my area of expertise

**SusanR:** or answer any questions or concerns

**DavidWe:** Lots of interdisciplinary stuff K-3, so Susan covers multiple topics and also integrates math into other activities for younger students

**SusanR:** Thanks you David for the plug

**DavidWe** bows humbly

**DavidWe:** So, I don't want to throw out too many web sites and just have you roam around...

**DavidWe:** Are there specific topics, concepts that any of you are having trouble getting across - would like to know other ways of teaching, etc?

**ErinEP:** measurement

**DavidWe:** I think the IMPORTANT thing for me (especially for the soon-to-be teachers...

**DavidWe** nods to Erin

**AlbertA:** David do you have a summary of recommended web sites anywhere at Tapped In??

**DavidWe:** is that you SHOULD all know that there are places online where you can find resources, but also other teachers who can help you with teaching

**SusanR:** I need inspiration for future sessions so I welcome any topics

**DavidWe:** Albert, I would defer to the Math Forum

**AlbertA:** Thanks

**DavidWe:** I don't have a SPECIFIC set of David's favorite web sites - I'm not a classroom teacher and I know people tend to have specific interests and goals

**DavidWe:** I think, like lots of resources, you need to know about it, first

**DavidWe:** Then, you'll try teaching with it

**DavidWe:** Things will break, the Internet will go down, the computers will crash, you'll get frustrated

**DavidWe** . o O ( Barbara will call her wonderful tech support person )

**ChristinCC:** The students tend to make mistakes and then you have to keep logging them back on

**BarbaraG:** very true - ha ha

**DavidWe:** But, you have to work through the disruptions, the crashes (the fire drills) and I believe, with good tools, there will be a difference

**ChristinCC:** In the computer work stations, the students have log in names and passwords

**DavidWe:** Students will understand (some students) in a better way

**DavidWe:** I was chatting with a teacher on Sunday at a coffee place (I was checking my email and logging into Tapped In when I heard him say "I'm a teacher")

**StephaniK1:** in a utopian classroom, these sites could be one of many stations around the classroom

**DavidWe:** When I asked what he taught and he said math (geometry in particular), I asked him if he used the Geometer's Sketchpad software

**StephaniK1:** I have found it helpful that as I find good sites/resources to write them down in my pacing guide.... that way I don't forget about it when I actually go to teach it.

**DavidWe:** He said that the school had the software but didn't really use it because it took too long to get the students familiar with the program itself

**DavidWe:** That's a common complaint - TIME is the 4-letter word

**StephaniK1:** I agree with coffee dude.... some kids catch on very quickly, others spend too much time getting comfortable.

**DavidWe:** You (and the school) have to make a concerted effort to use the software, to learn how to teach with it in the environment you have...

**DinaLe:** After the kids know the software it can be utilized at many levels though.

**DavidWe:** One computer classroom - 5 computer classroom - 1:1 classroom where everyone has her/his own laptop

**DavidWe:** Absolutely, Dina

**DavidWe:** The kids will learn the program faster than many adults

**DavidWe:** But, what to do with the software is still the job for the teacher

**MaryFrancT:** I agree.

**DavidWe:** How do I teach algebra with Geometer's Sketchpad - takes some thinking/planning/practicing

**DavidWe:** It won't happen by itself - it's work - like learning anything

**DavidWe:** But, some of the tools allow you to do things that you can't do with paper and pencil or even calculators

**DavidWe:** And, often teachers find that software allows some students who may not be the strongest math students to shine in different ways

**DinaLe:** Exactly, it allows you to focus on concepts, instead of paper/pencil.

**DavidWe:** Geometer's Sketchpad can allow for creative responses to geometric constructions - there are many possible answers - how can you do it quickly or differently becomes an option

**DavidWe** agrees with Dina

**DavidWe:** But, I have spent days with teachers helping them get comfortable with the Geometer's Sketchpad - it helps if they can PLAY with the program, too

**DavidWe:** They'll need that tech support person that Barbara has, too

**DavidWe** smiles

**DavidWe:** So, we have about 10 minutes left - please let me know if you have other questions, problems, things to discuss

**DavidWe** starts making a to-do list for next time

**DavidWe:** If anyone is particularly interested in something that will be at the NCTM conference in Atlanta - feel free to let me know and I'll make a point of looking for more information for you

**BarbaraG:** Just want to say - I think technology is a marvelous tool for allowing for all levels of learners to shine and I look forward to checking out all the new websites you've suggested.

**MaryFrancT:** Is this Geometer's sketchpad appropriate for younger students?

**DavidWe:** Again, you can email me afterwards to let me know - [wex@pobox.com](mailto:wex@pobox.com)

**ErinEP:** that's what I was wondering...I'd like to check it out

**DavidWe:** I've seen 3rd graders doing productive things with it, Mary Frances

**DavidWe:** Geometry is really about shapes (which I think get introduced early on)

**ErinEP:** right

**MaryFrancT:** Thanks, I will have to check it out.

**DavidWe:** You may not need all the tools that the program comes with, but I'm sure that teachers of elementary students who have access to Sketchpad can think of things to do with it

**StephaniK1:** I would like something concrete like how to go about teaching kids how to use something like sketchpad.... what strategies to use with them.... just let them play? ... guided play???

**DinaLe:** know of any uses for telecommunication tools in a math classroom?

**DavidWe:** There is a DEMO version you can download from Key Curriculum Press - it is a full working copy (you can't print nor save)

**DavidWe:** But you can play with it

**StephaniK1:** good question Dina =)

**DinaLe:** Stephanie, I can share some stuff with you about sketchpad offline. I used it when I taught.

**EmberlyB:** Great tip Thanks!~

**DavidWe:** Here's the link to download an evaluation version:

**DavidWe:**  
[http://www.dynamicgeometry.com/instructor\\_resources/evaluation\\_edition/index.php](http://www.dynamicgeometry.com/instructor_resources/evaluation_edition/index.php)

**StephaniK1:** Thanks Dina!

**ErinEP:** thanks!

**ErinEP:** I'm very curious to know what you've been talking about

**DavidWe:** There are lots of downloadable lessons and sketchpad files at the main web site:

**DavidWe:** [www.dynamicgeometry.com](http://www.dynamicgeometry.com)

**ChristinCC:** nice

**DavidWe:** If some of you would like to focus more specifically on using Sketchpad, we can set a future Tapped In discussion for that purpose

**BarbaraG:** super

**DavidWe** knows the author of the program

**DavidWe:** Just let me know

**DavidWe** looks at the clock on the wall

**AlbertA:** A program that some of you may find of value for middle to junior high school students is the Adventures of Jasper Woodbury,  
<http://peabody.vanderbilt.edu/projects/funded/jasper/Jasperhome.html>

**DavidWe:** Anything else?

**EmberlyB:** I would love a sketchpad discussion

**DavidWe** nods to Emberly

**DavidWe:** What is that about, Albert?

**BarbaraG:** Barbara is going to take her tech gal out to dinner...Bye now!!!

**DavidWe:** Take care, Barbara

**ChristinCC:** Dinner sounds good

**BarbaraG:** You too

**EmberlyB:** Bye Barbara, you know I'm just jealous : )

**StephaniK1:** sketchpad discussion would be great

**DavidWe:** Albert, can you say a bit more about Jasper Woodbury?

**BarbaraG:** yes.....smiling

**DavidWe** notes down a future Sketchpad-focused discussion

**DavidWe:** Okay, we'll put that on the calendar

**ChristinCC:** sounds interesting

**DavidWe:** Are you also familiar with the Illuminations part of the NCTM web site?



**DavidWe:** Another comprehensive set of resources

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

**ChristinCC:** looks familiar

**DavidWe:** Some well-delineated Activities, Lessons correlated with Standards - other web resources

**AlbertA:** The Adventures are on videodisc, they may also be on DVD, they are real life adventures based on fictitious stories requiring students to use math skills to solve

**ErinEP:** I'm loving the websites

**ChristinCC:** I'm loving them too

**ChristinCC:** almost overwhelming!

**StephaniK1:** I have found a lot of great stuff on Illuminations

**DavidWe:** Any of you watch the CBS program, "Numbers"?

**ChristinCC:** Don't have time for TV

**DavidWe:** You know there are math lessons associated with the plot lines of the show

**StephaniK1:** Their math connections seem pretty complicated, are they?

**BarbaraG:** heard it's great..haven't watched

**BJ:** A reminder that the next Math and Technology discussion is on March 20

**ChristinCC:** thank you

**DavidWe:** "We All Use Math Every Day":

**DavidWe:** <http://www.weallusematheveryday.com/tools/waumed/home.htm>

**DavidWe:** I've actually never watched the show, Stephanie

**DavidWe** admits

**DavidWe:** A friend of mine (a teacher) actually works on the math lessons that come out of the program

**DavidWe** hopes Chuck isn't listening

**FredK:** How much is real math?

**AlbertA:** Thanks BJ I will try to make the next meeting , I have to go now thank you for welcoming me into your community. Bye David and all members of this forum.

**DavidWe:** If you haven't joined the MathEdTEch group, you may want to - that way you can receive reminders about the upcoming discussions

**DavidWe** waves to Albert

**BarbaraG:** Thanks ya'll

**DavidWe:** Thanks for joining Tapped In and for joining the discussion, Albert

**ChristinCC:** Thank you for all the resources!

**DavidWe:** I'll hang out for a while longer if there are other questions

**DavidWe:** Thanks for coming tonight, folks

**ErinEP:** thank you

**MaryFrancT:** Thanks, goodbye

**BarbaraG:** Good Night

**DavidWe:** Good luck with your teaching and your studies

**ChristinCC:** Good bye!

**SusanR:** Great session, David

**DavidWe:** Thanks, Susan

**SusanR:** as usual

**FredK:** Thanks for an informative and good discussion tonight

**DavidWe** appreciates all the help

**EmberlyB:** Thanks David

**SusanR** makes a mental note to watch NUMBERS