

Title of Session: Targeting Librarians: Math and Technology

Moderator: Lesley Farmer

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Room: Hot Tub Conference

LesleyF: greetings! Are you here to talk about math and technology -- and how librarians can participate?

CarolAR: Hi, Carol Robinson here with a few from Hacienda La Puente District

LesleyF: Hi, Carol!

BJB2: great, Carol.

BJB2: how about if we start officially with introductions, Lesley?

LesleyF: Let's introduce ourselves as we wait for a couple of others. I coordinate the library media teacher program at California State University Long Beach

BJB2: a reminder if you are new to Tapped In to go to Actions in the top right of your chat window and click on DETACH

BJB2: I'm an art teacher in Pennsylvania

SharonML joined the room.

BJB2: welcome, Sharon. Just in time for introductions

LesleyF: hi, Sharon.

LesleyF: Keren?

SharonML: Hello. Glad to be here.

RandaK joined the room.

LesleyF: hi, Randa, we're introducing ourselves.

EmilyW joined the room.

LesleyF: Hi, Emily. want to introduce yourself?

KerenS: Hi - I'm a technology teacher on special assignment in the Los Angeles area

LesleyF: great -- what's your special assignment?

EmilyW: Hi I am Emily and I am a helpdesk volunteer

RandaK: Hi, Lesley and Emily.

KerenS: Lesley, I work with teachers as they use technology in their teachingand with the district librarians

RandaK: I am a librarian at a middle school

LesleyF: great

SharonML: I am a middle school computer teacher at a K-12 independent school in Charleston, SC.

LesleyF: So let's get started with our topic on math and technology. Have you seen some good examples of it -- or some questions about it? -- or issues thereof?

CarolAR: Can I justify buying math and science biographies for just one math teacher who is going to have his students read them and then I will grade the reports the students write?

LesleyF: This is for which age group?

CarolAR: high school, but reading level is more 5-8th grade

LesleyF: There are several history of math web sites. Let's take a quick look. Ready?

KerenS: ready

LesleyF: <http://homepages.bw.edu/~dcalvis/history.html>

RandaK: ready

LesleyF: Just click on the URL

BJB2: . o O (if you've got a pop up blocker, hold down the ctrl key on your keyboard as you click on the URL)

BJB2: a new window should open for you

BJB2: checks to make sure everyone got the url?

LesleyF: take a couple of minutes to look at the links

BJB2: would you recommend an online site over print media for Carol, Lesley?

LesleyF: well, it's certainly cheaper -- and there aren't that many math biographies. Also, the teacher may well not need a long paper, and some of those biographies are collective (with several people) but only one person can check it out at a time...

BJB2 nods

LesleyF: let me show you two others -- another benefit of online sources is that students can access the info from their home. Gee, doing homework...

LesleyF: So ready to see 2 more math biography URLs?

BJB2: yep

CarolAR: What about e-books, what do they cost?

SharonML: Yes. Hope I can see these. I couldn't get into the other site.

LesleyF: ebooks CAN be expensive -- and VERY few are on mathematicians

LesleyF: <http://www-groups.dcs.st-and.ac.uk:80/~history/>

LesleyF: <http://www.agnesscott.edu/lriddle/women/women.htm>

LesleyF: <http://scidiv.bcc.ctc.edu/Math/MathFolks.html>

SharonML: Sorry to be a problem, but I'm not seeing anything when I click on the URL's. What am I doing wrong?

LesleyF: BJ? Any tips?

BJB2: Sharon, do you have any windows minimized?

BJB2 . o O (are you on a mac or pc?)

SharonML: Yes. I'm on a PC.

BJB2: look in your task bar and see if you have a window hiding

BJB2 . o O (if you're on firefox, you might have to disable the pop up blocker)

VM: Firefox does allow you to Ok popups from certain sites

CarolAR: Did you hold down the Ctrl key?

LesleyF: If worse comes to worst, you can look at the sites later because this session will be archived.

LesleyF: Want to give the details, BJ?

SharonML: I don't see anything. I'm on Internet Explorer and have turned my popup blocker off for this site and hit the ctl key for the URL's. Let's move on, though. I'll look at the sites later.

BJB2: Sharon, the url will be in your transcript

LesleyF: OK. So in what ways do you think that technology can help teach math?

SharonML: Okay. Thanks.

BJB2 . o O (and you can access archived scripts in a couple weeks at www.tappedin.org/transcripts)

KerenS: I've seen some good sites with manipulatives -- where they can move things around while solving problems.

CarolAR: I did ok in Stats, but still have some math phobia--how can technology help the math phobics?

LesleyF: yes, that's a great way. I think the simulations/manipulatives make math less threatening, more interactive, more logical, and more concrete -- it shows how math can be applied in real life

LesleyF: BJ, want to share about Squeakland?

KerenS . o O (sounds fun!)

BJB2 nods. One of the Tapped In members shared Squeakland with me...it's an amazing resource to intuitively teach kids math

BJB2 . o O (definitely for the digital natives!)

BJB2: <http://www.squeakland.org/>

VM: One of the professors I work with in Brazil has created a software program which moves from a balancing scale toward equations to help students bridge that cognitive gap

BJB2: FYI, I'm hoping to have Squeak and some NASA for kids sites in group rooms in the Student Campus

LesleyF: yes, I've seen that kind of thing

LesleyF: Here's an interesting site, with an appropriate name:

<http://coolmath.com/home.htm>

KerenS: Squeakland is fascinating -- and I notice on the site map that it's very global as well ..

CarolAR: I wonder what happens when you click on the free phone with pink diamonds--not math related, too bad they included ads on the site

LesleyF: BJ mentioned NASA. The National Science Foundation's Eisenhower clearinghouse is also a good site for math:

LesleyF: <http://www.enc.org/>

LesleyF: The Eisenhower National Clearinghouse is well-known for its K-12 math and science resources, and annotates top-rated sites monthly. Past sites have included Evolution, Whale Safari, Math Lessons, Maya Astronomy Page, and The Wild Ones. Each site is briefly annotated and archived for six years. Its Curriculum Resources Search database contains over 7,000 K-12 curriculum resources; it is searchable by topic, type, grade level, and cost.

BJB2: ENC is now a pay site, I believe, Lesley

LesleyF: oh, no!

BJB2 nods sadly

LesleyF: well, NASA is still free and has some math applications

LesleyF: is that www.nasa.gov?

LesleyF: (it is...)

BJB2: Sharon Bowers led a discussion for the Science Resources group on the NASA sites

RandaK: Is it easier to troubleshoot problems in the Dells as opposed to the imacs

LesleyF: in general, using science sites with simulations can also transfer to math problems

LesleyF: I do have a couple of other sites, though, that focus on math manipulations. Ready?

KerenS: ready!

LesleyF: Manipula Math with Java

LesleyF: <http://www.ies.co.jp/math/java/>

LesleyF: Interactive mathematics programs designed for middle school, high school, and college students

LesleyF: did you figure out that the other writing is Japanese?

KerenS: Everything I've seen on the site gives a way for kids to experience these concepts in a way they couldn't explore with the technology.. it's very interactive!

LesleyF: yes, students like to experiment -- and feel that they are in control.

KerenS: I meant in a way they couldn't explore withOUT the technology ...

LesleyF: I guessed...

LesleyF: and it takes less time to set it up -- or clean up afterwards...

KerenS:and they can do it at their own pace

LesleyF: these are the kinds of things that kids don't mind doing on their own free time.

LesleyF: here's another...

LesleyF: Math and Science Activities from Jefferson Lab

LesleyF: <http://education.jlab.org/beamsactivity/>

LesleyF: A collection of classroom resources in the areas of science and math developed for sixth graders. There are Internet and paper-based games and puzzles, student activities including experiments, and reference resources.

CarolAR: I just play with the designs and maybe pick up something that way, but I would need to have a human explain what it really means

LesleyF: absolutely, Carol.

LesleyF: I find it best to demonstrate briefly with my own projected computer station.

LesleyF: and the younger the students, the more you need to structure their activity and access to the sites.

CarolAR: I found an element Bingo our Science teacher would like

BJB2: I have a site that relates to what Jo is doing in Brazil

LesleyF: that sounds like fun

LesleyF: Share, BJ

BJB2: . o O (the creator was a guest in Tapped In and led a discussion...should be archived)

BJB2: <http://edutech.cs.brandeis.edu/>

David2WGst3 joined the room.

LesleyF: Hi, David, we're talking about math and technology

David2WGst3: Hi, Lesley

David2WGst3 nods

LesleyF: we've been focusing on interactive websites

VM: and I was just learning to play math games at: <http://www.funbrain.com/>

David2WGst3 was part of the Math Forum - www.mathforum.org - when it started up in 1993

LesleyF: Yes, both of those are great. the Math Forum is probably the grandparent of them all and still wonderful. Do take a moment to look at both...

David2WGst3 smiles

KerenS: . o O (BJ - you mentioned Jo, in Brazil? What is she working on .. the site looks great)

LesleyF: Fractals is another math topic that is quite popular these days. Just as a review, fractals can be considered like repeated/recursive formulas/functions. Think snowflakes.

BJB2: Jo, do you want to share again what you're doing?

BJB2: . o O (with Lesley's permission...sorry to interrupt)

LesleyF: sure, go ahead. I'll save the fractal business after.

KerenS: . o O (sorry - didn't mean to get off track -- didn't see a Jo logged in))

LesleyF: Jo is cleverly disguised as VM. Obvious, no?

BJB2: . o O (she's in disguise)

KerenS: ...that was going to be my next guess?

BJB2: laughs

KerenS: laughs too

LesleyF: In the meantime, let me paste the fractal sites...

LesleyF: Fractal

LesleyF: <http://www.math.ualberta.ca/~ewoolgar/java/fractal.html>

LesleyF: Draw fractals and Mandelbrot sets with these Java tools.

LesleyF: Fractals Lesson

LesleyF: <http://math.rice.edu/~lanius/frac>

LesleyF: Features a fascinating introduction the world of fractals to elementary and middle-school children. Includes notes to teachers.

LesleyF: The Fractory: An Interactive Tool for Creating and Exploring Fractals

LesleyF: <http://tqd.advanced.org/3288/>

LesleyF: High schoolers created this ThinkQuest project to teach about fractals.

LesleyF: that ought to wake everyone up

BJB2: I get a server not found

David2WGst3: Cynthia Lanus now works with the Math Forum - she's got some great stuff

LesleyF: One of the important aspects of using online tech and math is to bookmark the sites, and test them out to see what kind of platform and plug-ins are needed for the projects to work.

VM: sorry I'm slow, my project in Brazil has to do with teacher education but my partner is in Math Ed and he has a program which uses scales to help students learn how to go

from the visual of balancing weights (virtually) to the more conceptual of balancing equations

BJB2: a tip for those having trouble opening urls, go to actions and SEND TO PASTEBOARD. Then just copy the url by highlighting, using Control C and then paste in a browser window.

JeffC: I'm lagging so bad... I'll just wait for it to come out in paperback.

BJB2 chuckles

KerenS laughs

CarolAR: to read at the beach

KerenS . o O (...fractals in the sun!)

LesleyF: Here's a site about measurement: Measure 4 Measure: Sites That Do the Work For You

LesleyF: <http://www.wolinskyweb.com/measure.htm>

LesleyF: This megasite links to online tools that calculate all kinds of things. Sections include: science/math, health, finance, and everything else.

CarolAR: See ya off to dinner, but Keren will log me off later at the end

LesleyF: before you go, folks, click on the FILES link on the left and download my webliography of math sources -- mainly MS and some HS

BJB2 . o O (you may need to ATTACH your chat window to see the web window above the chat window)

LesleyF: The site includes items for students as well as for teachers, and notes curriculum standards and links

LesleyF: document, not site...

LesleyF: We also want to announce next month's librarian session, which will be back to the regular 3rd Wed. time...

JeffC plans on plagiarizing all these sites into the Math Resources group.

BJB2: The February topic for Targeting Librarians is Problem Solving and Technology

SusanR joined the room.

LesleyF: well, you're free to cut and paste, Jeff.

SusanR pops in quietly

KerenS: What a great list of resources Lesley

BJB2: Sue, go to FILES to see the sites that Lesley shared tonight

LesleyF: The other main point that I wanted to stress is the use of rich datasets found on the Net, which students can analyze, particularly using spreadsheets.

JeffC: thanks Lesley... I will once this darned lag ends and I have the time .

KerenS: Can I share them with our math teachers?

LesleyF: Some of the obvious ones are the census and the US health datasets.

LesleyF: Of course you folks can share these resources.

KerenS: Thank youwill give you credit

SusanR: Thank you, Bj

LesleyF: we'll talk more about the use of datasets in our problem-solving session in Feb.

LesleyF: yes, credit would be nice.

LesleyF: I strongly encourage schools to have a FunMath corner on their school site portal/web page.

KerenS: ...great idea

LesleyF: I would also suggest that you have sessions with parents about using technology, including Net sources, to help their children learn and enjoy math.

LesleyF: They can also mention tutoring sources.

LesleyF: ie -- online expert help just in time.

LesleyF: any more ideas/thoughts for the group?

RandaK: enjoyed the discussion, and thank you Lesley for all these wonderful resources

LesleyF: I'm credentialed as a math teacher so I like looking at these sites

LesleyF: thanks

LesleyF: for you librarians, knowing about these sites can serve as a good opener for collaboration...

LesleyF: sometimes it's hard to do that with math teachers

LesleyF: they tend to associate math in the library with biographies, just as we witnessed with Carol at the beginning of this session

David2WGst4: Math teachers have typically been the most reluctant to use the Internet

LesleyF: interesting, no?

LesleyF: Share with them WebWorks, which is a great homework problem generator.

LesleyF: Here is one site that uses it: <http://www.math.utah.edu/~korevaar/1210spring03/>

LesleyF: it tends to be used in advanced HS and college courses (developed by university profs)

LesleyF: math olympiad info can also attract math teachers: www.moems.org

LesleyF: hopefully, this discussion has given you some point for departure?

KerenS: ... have just downloaded and been looking through your webliography What a huge wealth of resources ... and what a helpful ideas

BJB2: Thanks, Lesley.

LesleyF: glad to share

LesleyF: one nice thing about math is that most sites will clear filtering software: good clean fun usually

LesleyF: except for the sexist joke -- for every mathematician with a figure, there's a librarian with an angle...

David2WGst4: ooh, bad!

BJB2 grins

David2WGst4 makes a face

KerenS . o O (hadn't heard that one!)

SusanR groans

LesleyF: I thought it was a cute one...

LesleyF: but I can tell I'm getting off on a tangent

BJB2 . o O (now I'll groan)

KerenS . o O (Lesley's on a roll!)

LesleyF: or on all cylinders

David2WGst4 . o O (whole wheat or sourdough?)

LesleyF: time to sine off, I think

KerenS smiles again!

LesleyF: you'll have to admit kids could have fun making math puns -- and it would help reinforce their math vocabulary

SusanR agrees

KerenS . o O (trying to think of math answer to the roll thing -- can't think of a thing)

JeffC: time to sine off

LesleyF: wave?

KerenS: Thanks so much Lesley

David2WGst4 . o O (sine or cosine?)

JeffC is being obtuse as usual.

David2WGst4 smiles

VM: bye and thank you!

David2WGst4 gets Jeff's point

LesleyF: yours till infinity...

David2WGst4 . o O (lazy 8's?)

SusanR: Q: What does a mathematician present to his fiancée when he wants to propose?

A: A polynomial ring!

JeffC: well... at least there's a ray of hope.

David2WGst4: Oh, man! Susan...

KerenS . o O (you guys are amazing)

David2WGst4 . o O (we're deranged!)

David2WGst4 laughs

KerenS laughs

David2WGst4 . o O (de-RANGE-d)

LesleyF: jokes from all quarters

BJB2 . o O (with change)

LesleyF: we're just trying to be positive

JeffC: enough hyperbole

David2WGst4: Zero in on the important things

David2WGst4 laughs

KerenS . o O (afraid to leave in case you guys get on a roll again -- don't want to miss this.)

LesleyF: ciao, then