

Title of Session: Science Resources K-20+ - MadScience

Moderator: Jeff Cooper

Guest Speaker: Ricky Sethi

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JeffC: We'll give people a few minutes to get here, then we'll do introductions and I'll hand the floor over to Ricky to discuss madsci.org

JeffC: Hi everybody. I'm Jeff Cooper, on Tapped In Helpdesk and I facilitate this group. I've been an educator for almost 20 years, but my credential is in English and ESL. So what am I doing here? My focus now is on supporting all educators and students in all subjects and grade levels. I'd like everyone to type in a couple of sentences about themselves, and then I will introduce Ricky Sethi from <http://www.madsci.org> ...our guest speaker for today!

ElizabetLE: I'm Elizabeth I go to TAMUK and I'm majoring in early education

CaroleF: I'm Carole, 1st year teacher... teach 5th grade

HollyMu: I'm Holly Murray, from GA. Homeschool mom to two elementary boys, almost finished with my Master's degree through Walden University.

ChelseaLH: HI I'm Chelsea. I'm a freshman at TAMUK. I'm studying to be an education major specializing in math. Most likely 9th grade algebra.

KatyM: Hello I'm Katy and I am also a student at TAMUK majoring in early childhood education

SelmaP: I'm Selma and I am a an Early Education major from UTPA.

JeffC: ok... anyone else?

JeffC: I'd like to introduce Ricky Sethi from <http://www.madsci.org> ...when you click the link it will open in a new tab, but PLEASE HOLD THE CTRL KEY DOWN OR YOUR POPUP BLOCKER WILL LOG YOU OUT!!! You may also accept popups from Tapped In (best... there are no ads here!).

JeffC: Ricky... the floor is yours to discuss the site... point people in whatever direction you like... and take questions when you wish!

RickyGst7: Thanks, Jeff... I'd like to encourage everyone to please stop me whenever you have any questions, as I do tend to ramble on, at times... :)

RickyGst7: (That's the same spiel my students get, btw :o)

RickyGst7: But I suppose a brief introduction to our site and to myself is likely in order...

RickyGst7: We're a non-profit ask-a-scientist site with over 700 scientists distributed globally...

RickyGst7: We have been cited in academic publications (we've published papers with the Weissman Institute and the home institutions of Lynn (Harvard) and myself (UCR), web awards, sites/portals like yahoo.com, etc.

RickyGst7: (you can see some of our awards at <http://www.madsci.org/awards.html>)

RickyGst7: madsci.org was started in 1996 (I came on board in 1997) as the brain child of Jim Simpson and Lynn Bry

RickyGst7: Lynn was an MD/PHD student at WashU (and is currently teaching at Harvard) and did most of the programming...

RickyGst7: I was a Physics/Neurobio undergrad at UCB (subsequently did my masters work in Physics and PhD work in Computer Science; my current research thrusts are in Artificial Intelligence and Computer Vision at the Information Processing Lab at UCR)

BJB2: very cool, Ricky!

RickyGst7: Currently, there are three principals at Madsci: Lynn, Kieran, and myself

RickyGst7: But we also have about 30 moderators (you can see the full listing on the personnel page at <http://www.madsci.org/info/how.html> on our site)

RickyGst7: Thanks, BJB!

RickyGst7: (Btw, I do teach, as well, in addition to my primary research thrust; I adjunct at UCR and Devry University in Southern California)

RickyGst7: But as you can see on that page...

JeffC: sorry to interrupt, but since 98% of this session will be chat here, and we won't be using the top frame much, I recommend participants click the Actions menu (in the upper right of chat) and then Detach. you may also make the font larger for easier reading.

RickyGst7: Thanks for the tip, Jeff... I'm actually going to try that (and cross my fingers I don't get lost in the ether! :)

ChelseaLH: So much better thank you!

ElizabetLE: yes thank you

RickyGst7: I'll add to the kudos, Jeff... that works great!

JeffC: great! carry on please!

RickyGst7: Sounds good! As you can see on that page, we're all scientists that contribute our spare time to the site...

RickyGst7: We're organized in a hierarchy of three principals, some Madsci Admins (usually just the principals), about thirty moderators, and about 700 scientists...

RickyGst7: The principals/admins tend to take care of the organizational/back-end stuff...

RickyGst7: But the moderators and scientists do all the real work!

RickyGst7: The process works by having students (or anyone with science-related questions, actually)...

RickyGst7: come to our home page: <http://www.madsci.org>

RickyGst7: From there, we hope that most will browse the archives using our nifty circumnavigator (<http://www.madsci.org/circumnv/index.html>) via the Browse the Archives Link

ElizabetLE: is there anything for grades below 4

RickyGst7: Great question, Elizabeth... the grade level is really arbitrary and we welcome any questions from kindergartners on up (as long as they or their parents can type the question, I suppose! :)

RickyGst7: (btw, if anyone else has any question at all, please don't hesitate to stop me and ask!)

ElizabetLE: ok that is really helpful thanks

RickyGst7: So if the browse archives link doesn't yield a specific answer, people can submit their question using the Ask a Question link

SelmaP: That is actually what I was wondering about also....if there was anything below grade 4.

RickyGst7: Once a question has been accepted by the automated system, it's put into a

repository where the moderators for that particular subject can review it...

RickyGst7: Hi Selma, yup, there's no age limit, on either end! :)

SelmaP: Ok, thanks!

JeffC: I wonder how much science gets taught in grades K to 3 anymore... due to the NCLB mandates on increasing time in math and reading.

RickyGst7: The grade designations are really only there for our own use; we've analyzed that data to see what kind of distributions we get for different genders and ages and that's the basis for some of our publications with the Weizmann Institute, e.g.

RickyGst7: That's a great point, Jeff... and brings up a great point! Our site isn't necessarily designed as an adjunct to the educational curricula...

SelmaP: I have a nephew in 6th grade who loves science....I'll have to show him your website.

JeffC: of course science involves *both* math and reading... so it is silly to not integrate it and teach it MORE!

RickyGst7: I suppose we might be considered more of a supplement, in case someone's curious about a question that they can't get an answer to...

KatyM: I agree

RickyGst7: What we have had in the past is teachers using our site as a research resource...

RickyGst7: So they'll give assignments to their students to submit a question that gets through our moderators and gets answered...

ElizabetLE: that's a great idea

RickyGst7: If the question is too "homeworky", it'll usually get sent back to the questioner with a couple pointers but no real answer

ChelseaLH: Is the site supposed to target a certain age level?

RickyGst7: Not at all; most of our scientists are working in the field or academics but they're happy to answer questions from people from 3 to 103...

RickyGst7: If you've got a genuine interest, that's usually all that's required

ElizabetLE: that's smart about the homework

SusanR: ideally how would you like students and teachers using the site?

SelmaP: So for us college students we would be able to ask questions as well?

RickyGst7: That being said, our moderators tend to be very hard-working but very overworked...

ChelseaLH: That's awesome and I think the whole "homeworky" thing is smart as well

RickyGst7: Absolutely, Selma! We entertain questions all the way up to post-docs!

RickyGst7: I just got your question, Susan!

SelmaP: That's good to know seeing how I have a couple science classes left to take! :)

RickyGst7: Ideally, I'd say that students should feel free to ask any questions about subjects or material they don't understand or are having difficulty with... teachers can actually use it for the same or as a resource for their students...

RickyGst7: Their students can ask questions or look at the archives to do some research (e.g., to find answers to a question the teacher knows is in the archives) or perhaps to use our references/resources in the MAD Library or MAD Labs

SusanR: Thanks Ricky

RickyGst7: The site is scheduled for a significant overhaul (we're aiming for the end of 2009 for that) but all the resources that you see there are guaranteed to stay there down the line, as well... with just a slicker interface, hopefully

RickyGst7: But to elucidate the questions/answer process a bit more...

ElizabetLE: the labs look like they are really helpful also

RickyGst7: After the question is submitted, a few scripts check to see if an answer to a similar question is already on the site...

RickyGst7: Great point, Elizabeth! The labs can also be utilized as a resource for teachers!

ChelseaLH: I'm so glad I learned about this site. I'll be taking my science classes next semester and it will really come in handy.

ElizabetLE: yeah I was looking over them and there were some really good ideas

RickyGst7: Glad to hear it, Chelsea! And if you have any questions, you can even email

some of the scientists directly!

JeffC: how many questions do your site generate on average, daily?

RickyGst7: If the question passes the automated test, then it's forwarded to a queue where a moderator expert in that area looks it over...

RickyGst7: The number of questions generated (i.e., that pass the screening process and actually have an answer posted) varies, Jeff...

ElizabetLE: I was wondering the same

RickyGst7: We get thousands of questions which are culled to just a couple hundred passed on to scientists...

SelmaP: And you say an automated test...what is that exactly?

RickyGst7: Unfortunately, because our scientists are volunteers, some questions don't get answered and get recycled

SelmaP: Or I should ask what questions get passed

RickyGst7: (this is one of the things that we'll be fixing the overhaul next year... most of the changes will be on the back-end)

RickyGst7: Great question, Selma!

RickyGst7: The automated scripts just check to see if a question has already been answered in our archives or if it can be easily answered by a search on the web...

RickyGst7: The next level of scrutiny is by the moderators, who do a little semantic analysis to see if it's a homework question or something easily looked up in a reference...

RickyGst7: If it's neither of those, then the moderator goes through the list of scientists that are experts in that area and passes the question on to one of them...

RickyGst7: Once they answer it (this is part of the process we'll be streamlining to make more efficient), the moderator reviews it for accuracy and pertinence...

JeffC is glad that his question passed the test and got filtered onto Ricky!

RickyGst7: If it's good, it gets posted; if it's not, the moderator contacts the scientist asking for clarification...

SelmaP: Interesting....

RickyGst7: LOL, Jeff! :)

ElizabetLE: do you have scientists in all areas or which areas are they in

RickyGst7: Or, if the answer is significantly below par, it gets recycled to another scientist

RickyGst7: Great question, Elizabeth. We have a bunch of areas that we currently address...

RickyGst7: If you go to this link

RickyGst7: <http://www.madsci.org/ask.html>

ChelseaLH: Do you get questions in all subject areas or mostly science?

RickyGst7: You can see the areas we currently address, including Astronomy, Physics, Computer Science, Biochemistry, Biology, Chemistry, Anatomy, Agricultural sciences, Neurobiology, Evolution, etc.

ElizabetLE: ok and if you don't have a scientist in area that a question is asked what do you do

RickyGst7: That's a great question, Chelsea... we tend to get all sorts of questions that we don't or can't answer (e.g., medical questions) but, in general, they tend to be science questions

RickyGst7: There's a catch-all area (Other) that we send it to and if a moderator knows a particular scientist might be able to give it a go, he/she sends it to them...

RickyGst7: But if it's too esoteric (e.g., metaphysics or philosophical), then it'll likely get returned by the moderator to the questioner

RickyGst7: Often, legitimate questions might go unanswered/returned, sometimes because we don't have someone with the expertise or because the answering scientists were too busy

RickyGst7: (That's one of our biggest issues that we'd like to address in the overhaul this next year)

ElizabetLE: ok I see but it seems like y'all have most areas covered

RickyGst7: LOL! We do try to cover most of the science-y subjects. :)

ChelseaLH: Yeah y'all have a wide variety

JeffC hopes the overhaul will give madsci.org more big bang for the metaphysical buck.

RickyGst7: LOL!

RickyGst7: But I think that covers the basics of the site (and I don't want to monopolize the whole hour!)

RickyGst7: So I'll open the floor to (even more :) questions

JeffC: I mean... I'm sure you get questions like "how did the universe start?"

RickyGst7: Yup, absolutely, Jeff! And usually, we'll ask for clarification...

JeffC: like... what universe?

RickyGst7: Actually, that kind of question will likely get caught by the automatic scripts...

ChelseaLH: Haha

RickyGst7: In fact, here's a little experiment you can try right now and try submitting it via <http://www.madsci.org/ask.html>

RickyGst7: LOL!

JeffC nods... now... forgive me if you've answered this... but will an auto script email the questioner back with specific links within madsci and/or offsite?

RickyGst7: And that can actually be the basis of a legitimate questions from the Many Worlds interpretation of Quantum Mechanics, actually! :)

RickyGst7: Actually, it'll just give a response right there with links to the answers it thinks answer your question

JeffC: great

RickyGst7: We're thinking of addressing the AI in the scripts of this portion as part of the overhaul but I think we might instead divert resources to the human elements more

RickyGst7: Here's a link to how we handle the incoming questions, btw (this write-up is pretty old but still applicable for the most part!

:) <http://www.madsci.org/info/using.html#review>

ElizabethLE: do you answer questions from the site

RickyGst7: Great question, Elizabeth... I was MUCH more active as an answering

scientist before I became one of the principals...

RickyGst7: Nowadays, however, most of my time is spent on the back-end or getting questions related to our site like the one Jeff submitted for Tapped In! :)

JeffC: hehe

RickyGst7: You can see some of my answers by searching for my name in our search engine, of course

RickyGst7: (I mostly answer in neurobio, physics, or computer science)

ElizabetLE: ok that's interesting

RickyGst7: If there are any specific relations to teaching, please do feel free to ask; I don't have expertise in teaching k-12 but I'll give it my best shot. :)

ElizabetLE: do you get a lot of kids k-12 using your site

RickyGst7: Tons and tons, Elizabeth! They're, in fact, our biggest users...

RickyGst7: In our analysis of the questions, in fact, we found very interesting trends in k-12 students...

RickyGst7: It seems, that at an early age, the majority of people interested in hard sciences are actually female!

KatyM: That's interesting

RickyGst7: But, after about the 5th grade or so, boys and girls switch their interests in hard sciences...

SelmaP: That what I would of figured...because some parents get kids science homework and check websites.

RickyGst7: And, even more curiously, historically disenfranchised countries like Egypt actually generate most of the science questions from girls!

RickyGst7: You can see some of our research publications at <http://www.madsci.org/research/>

JeffC: could that be because you're their only/best recourse for resources and support?

RickyGst7: That's a very interesting point, Jeff... and we suspect the egalitarian nature and wide-spread use of the Internet might be a causal element in that...

RickyGst7: But we can't be sure, of course

ElizabetLE: wow that's really interesting

RickyGst7: (actually, we need to update our research page; sadly, we've been derelict in that because I notice a couple of recent publications not on there! :)

JeffC: it's always hard keeping resources up to date! this darned internet thing keeps generating more info all the time!

RickyGst7: LOL! This is why I like to get students from my classes to intern for me...

RickyGst7: Not only do they get paid but they usually do EXCELLENT WORK (and maybe will end up becoming contributing scientists one day! :)

JeffC: hehe... sounding like a true admin... delegating work!

RickyGst7: LOL! Absolutely the best way to get something done! :)

BJB2 checks the clock on the wall

RickyGst7: I guess we're coming to the close of our session...

JeffC: Our time is about up for today. I'd like to thank Ricky for spending time with us... and hope I can convince him and other madscis to come back. Any final questions for Ricky?

RickyGst7: In closing, I'd like to just give a usability hint: please do use the little Quick Index on the top left of the homepage for easy navigation for now.

ElizabetLE: not from me thanks a lot Ricky you've been a great help

ChelseaLH: No but your website is really helpful Ricky! Thank you so much for your information

BJB2: Ricky, it's been an honor having you as a guest. I hope you will become a member of Tapped In! Thanks, Jeff, for introducing us to Ricky.

RickyGst7: It was my pleasure, Jeff! And thank you to Tapped In for featuring us!

SusanR: Thank you for the extensive overview

SelmaP: Thanks for the info Ricky...it was very informative and helpful!

RickyGst7: Thank you so much, everyone! I think we'll definitely create a link to Tapped In on Madsci to add you as one of our valuable resources!

JeffC: The pleasure is all ours!

KatyM: yeah thank you Ricky the website looks very interesting and helpful

JeffC: Thanks to everyone for coming today.

BJB2 . o O (tapped in was originally funded with a grant from the NSF)

RickyGst7: Good to know, BJB! I think we might try to get some funding next year ourselves! :)

BJB2: good luck! Funding is always a struggle