

Teneisha Myers-Ferguson :Good day

Teneisha Myers-Ferguson :Has the meeting started? I am not hearing anything.

Kristin Keith:We will begin at 7 pm

Kristin Keith:I just moved the music over

Kristin Keith:Can you hear it now?

Leah Baker:I can hear music

Kristin Keith:great!

Teneisha Myers-Ferguson :yes thanks

Jordan Rock:I was concerned that something was wrong when I couldn't hear anything.

Jordan Rock:I can here it now though!

anfreacrawford:i am hearing music

Kristin Keith:No problem! I was still getting everything set up :)

Teneisha Myers-Ferguson :Okay great

Cassandra Parker:Do we know the length of the meeting...just trying to figure out my sons bedtime

Kristin Keith:7 - 8 pm

Teneisha Myers-Ferguson :Is this the next 20 minutes?

Kristin Keith:We will make a recording available after if you need to take care of your son

Cassandra Parker:ok thank you!!!

Kristin Keith:Teneisha, I'm not sure what you mean

Teneisha Myers-Ferguson :Im in Jamaica

Teneisha Myers-Ferguson :USA is an hour ahead

Kristin Keith:ok! Yes, we will begin in 17 min

Teneisha Myers-Ferguson :Okay thank you

Monica Ramirez:good evening everyone :)

Kristin Keith:Where's everyone from?

Morgan Hamilton:I'm using my iPad. could that be why I'm not hearing music?

Teneisha Myers-Ferguson :GOOD EVENING

Monica Ramirez:DFW Texas

Morgan Hamilton:Dallas, Texas

Kristina Hill:Northeast Tennessee

Teneisha Myers-Ferguson :Greater Portmore Jamaica

Jordan Rock:Laconia, NH

Leah Baker:Edmonton, Canada

Regina Walters:Mitchellville, MD

Ed Nolan:Parkville, MD

Kristin Keith:I wish I was in Jamaica!!!

Barb Borgwardt:Fountain City, WI

Jordan Rock:Barb, are you a Packers fan?

Teneisha Myers-Ferguson :You are welcome to visit

Troy Verey:Sydney, Australia

Sharon Zintel:Hello everyone from Ontario, Canada

Marlene Miller:Hi everyone . I am happy to be joining this session

Leah Baker:Hey Ontario from Alberta

Teneisha Myers-Ferguson :Hi Marlene

Marlene Miller:Hi Teneisha

Teneisha Myers-Ferguson :This is a blessing, I am happy to be here

Elizabeth Bean:Columbus, IN

Marlene Miller:Looking forward to the session

Morgan Hamilton:should there still be music?

Kristin Keith:yes

Beth Roberts:Henderson, KY

Kristin Keith:if not, run the audio wizard

anfrea crawford:I am happy for this session too

Lisa Delfosse:Wausaukee, WI

Maryellen McHenry:Phelan, CA

Jeffrey Glenn:hello from detroit

Morgan Hamilton:how do you do that on an iPad?

Kristin Keith:Morgan, I'm not really sure. I've never done it on an ipad before. Do you see the meeting drop down top left?

Jacqueline Pfaltz:Hello from Long Island

Charlotte Wilkinson:Charlotte Wilkinson from New Zealand listening in

Morgan Hamilton:not at the moment. I heard it a minute ago.

Kristin Keith:New Aealand?! Thats awesome!

Kristin Keith:Zealand :)

Mary Beth Rollick:Hello from Ohio

Kristin Keith:Morgan, you may want to exit out, then come back in.

Morgan Hamilton:ok

Andrea Dandola-DePaolo:Hi from New Jersey

Janet Koza:Hello from Massachusetts

Barb Borgwardt:@Jordan - Yes!

Jordan Rock:GO PACK GO!!

Barb Borgwardt:You bet!

Regina Walters:yes

Ismail Marul:yes

Fran Tishkevich:Hello from Cape Cod

Cassandra Parker:hello from virginia

Ellen Johnson:Hi from Michigan

Stacie Kyhn:Apache Junction, Arizona

Ismail Marul:Tajikistan

Renee Smith:Hello from Kansas

Carrie Kopf:Norfolk, NE

Joseph Espinosa:Hello from Los Angeles

Barb Weidus:Hello from Ohio

Laurie James:Aloha from O'ahu Hawaii

Bonnie Angel:Blue Ridge, GA

Joan Commons:Hello from San Diego

Donna Brink:Donna- NH

Athena Pappaconstantine:Hello from Maine

Michelle Bittick:Hello from Lyndon Station, WI!! Hi Barb Borgwardt!

Barb Borgwardt:Hi, Michelle! Good to "See" you!

Michelle Bittick:-)

Amparo Moreno:hi everyone!

Kristin Keith:welcome everyone, so excited to have you with us!!

Charles Brown:Hello, from Ocala, FL

Ellen Johnson:Jeffrey Glenn - where in Detroit? I teach in Dearborn

Jeffrey Glenn:I teach in Oakland township

Ellen Johnson:cool

Regina Walters:We wil continue to try the constuctivist way

Elizabeth Nelson :Hello from Cleveland, OH

Subash Bijlani:Hello from Rockville, MD

Michael Lanstrum:Cuyahoga Community College in Cleveland, O

Dianna Sopala:hi from nj

Jeffrey Glenn:memorization is the lowest level of thinking

Jeffrey Glenn:memory fades with age also

Fran Tishkevich:But math skills and understanding are intertwined. Higher order thinking cannot exist outside of content knowledge. Conceptual understanding cannot be taught without the supporting basic skills.

Michelle Bittick:Hard to convince those NOT in the know that memorization is the lowest level of thinking, even though they know Bloom's! They think it doesn't apply to math???

Teneisha Myers-Ferguson :I agree Fran

Subash Bijlani:Taxonomy of learning requires 'low level' skills and competencies. The pyramid needs a solid base.

Jen Overley:disagree about conc underst cant b taught w/out skill

Monica Ramirez:yes I agree with the solid foundation

Nicole Lineham:basic skills can and should also be taught conceptually. This is what creates a solid base.

Michelle Bittick:Not when a child has a block to memory. Math stress causes children not to remember.

Renee Smith:I agree with Jen. Conceptual understanding can be developed in very young students through application and procedural fluency can come over time.

Jeffrey Glenn:the uproar about common core is ridiculous. So many of the original governors who hate it now were tasked with creating it in the beginning.

Jeffrey Glenn:the training of comon core for teachers could have been better too

Jeffrey Glenn:if you work in retail you would do this when giving change to a customer

Jeffrey Glenn:you would count up

Ellen Johnson:yep

Stacie Kyhn:We need to teach not just the students, but their parents. If the parents get it, they won't be as fearful looking mathematicall illiterate to their children.

Marie OBrien:Hello from Tucson AZ. Sorry I am late.....I had trouble with the connection

Jeffrey Glenn:inviting parents in for a math lesson is a great idea to bring them onboard.

Nicole Lineham:I agree Stacie. I do give parent math nights and the parents love it! They finally understand WHY the math works and they are much more positive about embracing this 'new math' (it's not new but they call it this)

Athena Pappaconstantine:We have math nights in the beginning of the year now to show them the "new" ways we teach, including the models.

Michelle Bittick:I was kicked off due to storms in my area. I'm hopeful we'll get a link later to hear the parts I missed.

Monica Ramirez:how is the parent night attendance? How do you get them motivated to show up?

Renee Smith:Love that so many people are doing PR to parents with math nights.

Kristin Keith:Michelle, there will be a recording posted!

Jeffrey Glenn:if you don't know how to use a machine how will you understand the answer?

Michelle Bittick:Thank you.

Joseph Espinosa:UCLA Math Project provides support for parents with understanding math through a different lens and support their children. Focus is on math practices which students are engaged in when they solve problems amongst other high leverage instructional activities.

Fran Tishkevich:Archimedes was a creative genius. Euclid set the standard for mathematical rigor and clarity. Aristotle defined the laws of logic. All of them did arithmetic. None of them invented the addition algorithm. That was invented hundreds of years after their deaths. Once concepts and methods become automatic, they seem simple and obvious. It's easy to forget how difficult cognitive innovation is. Once a student has mastered an algorithm, he or she has access to the conceptual structure on which it is based. With these tools a student can grasp and integrate in 12 years, a body of knowledge of math that it has taken hundreds of geniuses thousands of years to devise..

Athena Pappaconstantine:Monica, We have had success by having pizza or snacks available. We have recently adopted a new curriculum. Parents were interested in knowing more about it. Also having childcare services on site has helped.

Jordan Rock:Food will always bring the people!

Monica Ramirez:ok thank you Athena

Ellen Johnson:it drives me nuts when parents complain about the "new math"

Jeffrey Glenn:Devils advocate question: should all students be required to take high levels of math when in society we have artists, musicians, poets, historians, etc..

Nicole Lineham:Monica - we also provide treats and invite parents to come to learn about how to support learning numeracy at home. We send reminder emails once a week for a month or so and usually have about 20% show up. Not enough but it helps

Teneisha Myers-Ferguson :I dont think so Jeffery..develop their talents

Joseph Espinosa:Yes all students should have access to higher level mathematics no matter their career because math is a tool for social justice.

Renee Smith:Math is in music, nature, art.....we don't all need the same math but we do all need to be able to think and problem solve.

Jeffrey Glenn:hence my question about high level of math. of course math is everywhere and in every field

Michelle Bittick:Math is everywhere! As corny as that sounds, it's true!

Kristina Hill:access to higher math or required to pass higher math?

Nicole Lineham:I think one of the big divides occurs because some teachers think math should be taught so that students can take upper level math (including post secondary) while others view it as developing numeracy so that they can be numerate in their lives.

Jordan Rock:But what does society need more? I know that Art is so important, but our civilization moves forward with scientists and engineers...Maybe I am biased, but student will have a better shot at a successful life with more math. Not to mention it is better for the rest of us as well!

Teneisha Myers-Ferguson :They need the basics but they dont need the level they wont need

Stacie Kyhn:What is your definition of high level math?

Jeffrey Glenn:after algebra I and geometry, so pre-calc, calculus, and higher

Jacqueline Pfaltz:I agree with Renee. Math is everywhere and everyone needs those basic skills.

Stacie Kyhn:Not everyone needs precalc and higher. However, I do think Quantitative Reasoning and/or Statistics would be great!

Sharon Zintel:Family Math Nights offer opportunities to build student excitement and parent engagement. Slow and steady works wonders. We need to allow students to have fun with math and change attitudes

Monica Ramirez:Stats and money seem to be two important topics that seem to not be addressed as much as they could

Jacqueline Pfaltz:The parent/family math nights would also increase the students' learning at home.

Kristin Keith:Anybody have questions for Matt?

Stacie Kyhn:2008 showed us that financial literacy would have been a good topic to explore.

Fran Tishkevich:Yes we SHOULD allow students to select and practice the method that makes sense to THEM. But too often that is not the case.

Renee Smith:When will the information about the webinar about the new resource be available?

Monica Ramirez:Yes after the methods are taught, I like when students are given a choice on what method to use

Regina Kilday:We have Parent Math Workshops that are focused on content and directly supporting student learning and then have a Family Math Night in the spring which students attend with their family and friends to celebrate what they are learning in Math. This year we had 200+ participants in Family Math Night.

Joseph Espinosa:What about the student? Where does their lives and experience come into the equation of balance? What about mathematical identity and agency?

Kristin Keith:Renee, registration for that webinar is full BUT there will be a recording available

Jeffrey Glenn:I have a question for Matt: everything he said most teachers know or are learning. When are teachers going to speak up for their profession and inform parents and politicians this information?

CHONDA LONG:The recording will be available a day or two after the live webinar

Renee Smith:Chonda when will that be?

anfreacrawford:I will love to learn more about Maath night

Lisa Delfosse: Any advice on directing teachers to research-informed instructional practices rather than finding lessons on TPT or Pinterest?

CHONDA LONG: The live webinar is next Wednesday

Barb Borgwardt: Will the power point slides be available?

Regina Kilday: Jeffrey Glenn - I think that it is our professional responsibility to inform parents and advocate for high quality math instruction all the time.

CHONDA LONG: So next Thursday or Friday

Renee Smith: Oops sorry, I am registered!

CHONDA LONG: Barb - A recording of the webinar and a copy of the chat will be available

Barb Borgwardt: Thank

Barb Borgwardt: Thank you, Chonda!

Becky Hanselman: I have the chance to talk to parents for about 10 minutes. What would be the best message to share?

Charlotte Wilkinson: Do ALL teachers have the conceptual understanding of the number system to fully understand the reason behind multiple methods and are able to assist students to make connections or are the students ending up trying to memorize multiple procedures. Teacher and student belief plays a part here.

Renee Smith: Thanks Matt for all you do for us through NCTM.

Joseph Espinosa: @ Becky to engage their children with the math practices and problems solving. Bed Time Math is a great free app.

Fran Tishkevich: Good points Charlotte.

Kristin Keith: Jeffrey Glenn: I have a question for Matt: everything he said most teachers know or are learning. When are teachers going to speak up for their profession and inform parents and politicians this information?

Jordan Rock: I only get to send home a news letter, what would you suggest I could add? Many of my parents are trying to push students to private schools but I also have many students that are struggling to stay in school. How do I appeal to both?

Regina Kilday: Jeffrey Glenn: The NCTM advocacy toolkit is a resource for individuals to advocate for mathematics education and to make a difference in the public policy process. It is available on the NCTM website.

Delaores Llewellyn: How can I get a copy of the presentation?

Nicole Lineham: I think many teachers (as many adults) do not have conceptual understanding of math and so that is step 1!

Kristin Keith: Any other questions for Matt?

Jeffrey Glenn: Thanks Matt and Regina for the responses

Sharon Zintel: For the past 11 years, I have been setting up Family Math Nights in multiple boards with average attendance of 200 to 800 parents and students. Have some fun and they will come!

CHONDA LONG:Delaores - you will be sent a link to the site where you can access the recording and a copy of the chat

Catherine DeMers:glad to hear about the toolkit

Regina Kilday:anfrea crawford - I am happy to share what I have for our Family Math Night and Math Workshops - [gkilday@gmail.com](mailto:rkilday@gmail.com)

Charlotte Wilkinson:Question for matt How does teacher training ensure teachers have a conceptual understanding of the number system in order to make the connections between multiple strategies.? Certainly an issue in NZ.

Fran Tishkevich:Nicole. I agree. So are we swapping a tried and true algorithm for several different methods that neither students nor teacher really understand and only confuse far too many?

Joseph Espinosa:Matt: Thank you for answering my question. I'm encouraged by the changes NCTM is making with respect to expanding equity and access.

anfrea crawford:thank you Regina

Kristin Keith:Charlotte Wilkinson: Question for matt How does teacher training ensure teachers have a conceptual understanding of the number system in order to make the connections between multiple strategies.? Certainly an issue in NZ.

Renee Smith:Nicole, I agree teacher content knowledge has to come first. Many teachers are a product of our old system and they didn't have the opportunity to develop conceptual understanding as kids but it is never too late.

Teneisha Myers-Ferguson :Regina may I email You

Regina Kilday:Teneisha I put my email out there for anyone interested in the info I have on Family Math Nights and Math Workshops. I'm happy to share

Nicole Lineham:Agreed Renee - I find them very willing to learn - they just need proper training. I think that's what is missing (here in Canada anyways). It takes a lot of time to learn it conceptually

Jeffrey Glenn:I like Singapore math texts which develop alternative methods of learning

Nicole Lineham:Once we have the teachers fully understanding the math, the strategies and how to assess well we will be well on our way:)

Jeffrey Glenn:for concepts.

Joseph Espinosa:I'm wondering if the requirement for elementary pre-service teachers for math methods should be longer than just one course or two courses. TEDD.org has some great resources for in-service teachers.

Kristin Keith:Jordan Rock: I only get to send home a news letter, what would you suggest I could add? Many of my parents are trying to push students to private schools but I also have many students that are struggling to stay in school. How do I appeal to both?

Monica Ramirez:Jeffrey, what Singapore math texts do you recommend?

Renee Smith:Same is true here in Kansas too, Nicole. That is what I do, train teachers. Love it but we need so many more to come on board.

Kristin Keith:Any other questions??



Michelle Bittick:I've been watching webinars and using resources from mathematicallyminded.org for early number sense. It's been a great PD journey for me this year.

Nicole Lineham:Yes Renee - I've created a site [www.educatingnow.com](http://www.educatingnow.com) to help with this- it's online so teachers can use it when they need it. No need to always go to a workshop

Camille Nemanic:I appreciate your advice about what to communicate to parents.

Charlotte Wilkinson:Thanks Matt: same issues We encourage but not ensure. THose teachers interest do improve those who are not interested or maths anxious don't. Student learning experiences of mathematics continues to be a lottery and totally dependent on their teachers.

Jordan Rock:Thank you Matt!!!

Joseph Espinosa:I prefer CGI as a framework for incorporating both effective and equitable based math teaching practices mentioned by Matt.

Ellen Johnson:Thank you Matt

Nicole Lineham:Thanks Matt!

Michelle Bittick:CGI is exceptional

Athena Pappaconstantine:Thanks :)

Renee Smith:I love CGI and so do my teachers.

Lisa Delfosse:Thank you!

Jim Matthews:Thank you.

Michelle Bittick:Thank you, Matt!! We need to clone you!!

Morgan Hamilton:thanks, Matt, Kristen and Chanda!

Jeffrey Glenn:Thank you Matt

Delaores Llewellyn:Thanks a million

Camille Nemanic:Thank you, Matt!

Teneisha Myers-Ferguson :Thank you Matt

Barb Borgwardt:Thanks, Matt!

Catherine DeMers:thank you!!

Regina Kilday:Thanks for all of the participation!! You are what makes NCTM strong!

Cassandra Parker:thanks

Ismail Marul:Thank you Matt

Monica Ramirez:thanks Matt

Renee Smith:Thanks, Matt!

Ellen Johnson:We use Math in Focus curriculum

Mary Beth Rollick:Thanks Matt. Your discussion encourages me to continue to work with pre-service teacher on both conceptual understanding and procedural know-how.

Jacqueline Pfaltz:Thank you Matt and Kristen

Michelle Sullivan:thank you! arrived late but will read the transcript for what I missed

anfreacrawford:how do i access recording of webinar

Jeffrey Glenn:@Monica: look up math in focus HMH

Kristina Hill:Thank you, Matt!

CHONDA LONG:you will receive a link to the page where you can access the recording

CHONDA LONG:and the chat

Monica Ramirez:thanks Jeffrey

Jeffrey Glenn:do we need an invite for the recording of next weeks webinar

Teneisha Myers-Ferguson :by

Jeffrey Glenn:?

Teneisha Myers-Ferguson :bye

Monica Ramirez:bye