

00:26:21 Emily Kavanagh: Hello from stormy Columbia, Maryland  
00:26:42 Carol Matsumoto: Hi from Winnipeg  
00:26:43 Michael Lanstrum: Hello from Cleveland, Ohio  
00:26:50 Trena Wilkerson: Hello from Waco, Tx!  
00:27:06 Tami Broomall: Hello from South Carolina!  
00:27:24 Barbara Dougherty: Aloha, from Honolulu, HI  
00:27:34 Flávia Sueli Marcatto: Hello from Brazil!  
00:27:35 Sarah Bush: Welcome everyone!! From Orlando, FL  
00:27:36 Dawn Lopez: Hello from Long Island, NY  
00:27:40 Kendra Edwards: Hi from Brooklyn, NY  
00:27:42 Karen Karp: Hi from Louisville kentucky  
00:27:43 Jennifer Robitaille: Hello from Maine.  
00:27:45 Ken Krehbiel: Hello everyone from Washington, D.C.  
00:27:53 Michelle Kornitz: Hello from Milwaukee :)  
00:27:58 Felicia Alexander: Hello, St. Thomas, US Virgin Islands  
00:28:00 Daniel Irving: Hello everyone from North Providence, RI!  
00:28:12 Trena Wilkerson: Excited about this session!  
00:28:15 Michele Mailhot: Hello from Oakland, Maine!  
00:28:26 Carol Matsumoto: Hi Daniel  
00:28:37 Roni Gold: Hi! Roni from Springfield Massachusetts  
00:28:40 Trena Wilkerson: Hi Daniel!  
00:28:51 Carol Matsumoto: Hi Trena  
00:28:56 Barbara Dougherty: Thank you all for joining us today!  
00:28:57 Karen Karp: Hi Michele  
00:28:59 Trena Wilkerson: Hi Carol!  
00:29:12 Daniel Irving: Hello Carol and Trena!!!  
00:29:17 Cicely Washington: Hello from Virginia  
00:29:34 Michele Mailhot: Hi Karen! Excited to learn more tonight and  
how I can better use your resources!  
00:29:37 Marshalyn Baker: Hello, glad to be able to participate in  
this webinar.  
00:29:48 Karen Karp: whooo hooo sweetie  
00:29:59 Emily Kavanagh: Excited to learn something new  
00:30:04 Barbara Dougherty: Hi, Marshalynn!!!  
00:30:08 Roni Gold: hi, just confirming participants video and audio are  
off  
00:30:30 Sarah Bush: We are so glad to be here tonight! Welcome everyone!  
00:30:52 Marshalyn Baker: Glad to see two of my fellow board members  
presenting this!!!!  
00:32:33 Dawn Lopez: Congratulations Sarah!1  
00:33:47 Sarah Bush: Thanks!  
00:35:20 Roni Gold: hi, just confirming participants video and audio are  
automatically off  
00:36:08 Chonda Long: @Roni - yes, that is correct  
00:46:15 Karen Karp: Any words you think should be eliminated besides  
borrowing and carrying? NAME THEM  
00:46:40 Dawn Lopez: rename  
00:46:45 Michele Mailhot: reducing fractions! UGH!!!  
00:46:48 Michelle Kornitz: improper fractions  
00:47:01 Karen Karp: keep them coming!

00:47:35 Carolina Napp-Avelli: Moving the decimal point  
00:47:49 Katie Billings: Add a zero  
00:47:49 Monica Tienda: PEDMAS  
00:47:54 Karen Karp: or getting rid of the decimal point!!! YIKES  
00:48:04 Carolina Napp-Avelli: FOIL  
00:48:36 Daniel Irving: Keep Change Flip.  
00:48:43 Dawn Lopez: moving the decimal point drives me bananas!! so many  
book use it and I stress the digits shift not the decimal  
00:48:59 Monica Tienda: Butterfly method  
00:49:08 Karen Karp: or bow tie method!!  
00:49:12 Cathy Campbell: Yes, the butterfly!!!  
00:50:56 Cathy Campbell: Yes, proportional materials before the  
non-proportional materials  
00:51:13 Monica Tienda: Dad-Mom-Sister-Brother  
00:51:20 Karen Karp: if they can do non-proportional they don't need the  
materials anymore!  
00:51:40 Cathy Campbell: Touch math keeps kids in counting :-(  
00:52:11 Monica Tienda: Adding a zero  
00:52:39 Karen Karp: It was not developed for learners who were doing on  
to learn higher math - and yes - everyone is now moving forward to higher level  
math.  
00:52:49 Karen Karp: NO TOUCH MATE  
00:52:55 Karen Karp: TOUCH MATH  
00:54:01 Barbara Dougherty: What are some physical materials that you  
find effective in your mathematics teaching and learning?  
00:54:32 Carolina Napp-Avelli: Unifix cubes  
00:54:44 Cathy Campbell: What happens when a school staff doesn't have the  
experience to make decisions on the understand the 'hard core' components?  
00:55:06 Barbara Dougherty: Cathy, can you say a little more?  
00:55:11 Monica Tienda: Adding negatives; multiplying fractions  
00:55:26 Carolina Napp-Avelli: Cuisenaire rods  
00:55:32 Tami Broomall: Rekenreks  
00:55:41 Barbara Dougherty: Yay! Cuisenaire rods!  
00:55:51 Barbara Dougherty: Good one, Tami!  
00:55:54 Karen Karp: When they don't have the experience to make  
decisions they may want to rely on more knowledgeable others!  
00:56:58 Cathy Campbell: @Barbara, when teachers disagree on what is  
mathematically foundationally important, how do they come to agreement? What if they  
choose something that doesn't have longevity? Is there somewhere where they could  
look for guidance?  
00:58:28 Cathy Campbell: Often elementary teachers, who teach all the  
subjects, don't have this math background  
00:58:50 Michele Mailhot: We were taught them when we were in school!  
We teach what we know and what/how we were taught....  
00:58:55 Barbara Dougherty: That is a great question! That's a time when  
it may be helpful to have an external facilitator to support the work and bring an  
objectivity into the discussion. It is very likely that this will happen! One thing  
that teachers in one of the school I'm working with has said is that they have  
learned a LOT of math in creating their MWSA.  
00:59:43 Karen Karp: Other rules that expire? please share.....

00:59:49 Barbara Dougherty: If you also have the book, you'll see that there are suggestions about ways to handle disagreements and lots of examples that can spark the conversation.

01:01:01 Gloria Amado: Student choose A

01:01:04 Ticharo Rolle: A

01:01:10 Kendra Edwards: A

01:01:15 Sheilah Jefferson-Isaac: A

01:01:18 Marshalyn Baker: A

01:01:28 Cathy Campbell: I believe that ALL teachers do their best but they may not have had the experiences to learn about the math rules that expire, math vocabulary that should be used, etc.

01:01:32 Dawn Lopez: A

01:01:35 Tami Broomall: a

01:01:41 Daniel Irving: Likely A.

01:01:42 Barbara Dougherty: I totally agree with you, Cathy!

01:01:45 Roni Gold: a

01:02:00 Monica Tienda:  $2 \times 1 > 1 + 2$  NO

01:02:25 Karen Karp: nice examples Monica!

01:03:11 Tami Broomall: When subtracting and regrouping is needed, such as 3-8 students AND teachers say "You can't do that."

01:03:31 Karen Karp: truth Tami - that's short lived.

01:05:00 Cathy Campbell: I think the emotions students experience when they learn something that goes against what a former teacher taught them really hinders future learning.

01:05:23 Barbara Dougherty: That's absolutely true!

01:05:32 Karen Karp: so true Cathy

01:05:44 Barbara Dougherty: It's very difficult to unteach --and to regain the trust of the students.

01:05:52 Monica Tienda: Elementary kids living in winter regions with subzero temperatures and wind chills realize negative numbers are a thing, but not necessarily a math thing

01:06:08 Michele Mailhot: I would like to eliminate the term "cover"!

01:06:33 Karen Karp: only use cover when you are talking about measuring area!!

01:06:55 Michele Mailhot: @Karen, agreed!

01:07:35 Cathy Campbell: Math learning is a long-term commitment! It isn't something that is quick, easy and only focussed on answers. This has a huge cost when students don't have the mathematical reasoning needed for future learning.

01:07:51 Karen Karp: spot on Cathy

01:08:32 Monica Tienda: PS: Cuisenaire rods can be used to study combinatorics #HandsOn #BeyondElementary

01:09:09 Karen Karp: Cuisenaire rods don't expire as a thinking tool

01:09:40 Monica Tienda: @Karen: Tell Secondary!!

01:10:13 Karen Karp: trying, trying

01:10:17 Cathy Campbell: Oh, that last one is BIG! Sometimes using improper fractions are better, depending on the context

01:11:01 Cathy Campbell: I think kids think that the mixed number is the best form because they spend so much time converting back and forth between mixed numbers and improper fractions.

01:12:49 Dawn Lopez: Love this!!

01:13:17 Ticharo Rolle: Yes, love this approach  
01:13:32 Karen Karp: We love it too.  
01:14:29 Ticharo Rolle: Will definitely be using this!  
01:15:05 Cathy Campbell: I like this chart and the three categories. Is there a way to decide when to use one of each of these? Or will experience help us?  
01:16:27 Gloria Amado: MWSA stands for ?  
01:16:55 Karen Karp: Mathematics Whole School Agreement (MWSA)  
01:16:57 Cathy Campbell: To change your practice you have to practice change - BRILLIANT. Will use this for sure  
01:17:04 Gloria Amado: Thank you  
01:17:15 Karen Karp: anytime  
01:17:21 Barbara Dougherty: Yes, Cathy—there is! Generalization questions should come later in the instructional sequence. The flexibility and reversibility questions can actually occur at any time. R questions are helpful even in reviewing previous topics.  
01:17:56 Cathy Campbell: @barbara, thanks for that answer about the 3 types of questions  
01:18:29 Dawn Lopez: This is why I loop- my student get consistency for at least 2 years- sometimes 3.  
01:19:05 Sheilah Jefferson-Isaac: I agree Dawn!  
01:19:07 Chonda Long:  
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01:19:49 Karen Barbieri: @Dawn - I love looping - so many benefits to instruction!  
01:20:09 Roni Gold: Karen Karp & everyone, we are launching Cuisenaire Rods k-5 this year, would love to touch base and learn from your experience with them!  
01:20:44 Cathy Campbell: Hosts, have you had success coming to agreement across a whole school division?  
01:20:48 Dawn Lopez: Especially during the pandemic- the SEL was golden!  
01:21:03 Barbara Dougherty: That is awesome, Roni! They have some interesting properties that support some significant understandings.  
01:21:43 Barbara Dougherty: @Cathy—do you mean a K-5 school or are you asking about a school where teachers are not on the same page?  
01:22:06 Barbara Dougherty: @Cathy—do you mean a K-5 school or are you asking about a school where teachers are not on the same page?  
01:22:51 Cathy Campbell: I'm thinking about coming to agreement for ALL elementary schools in a school division. Have you tried that or does the work need to begin one school at a time?  
01:23:55 Barbara Dougherty: I'm currently working with a school that has had a 60% turnover in teachers—it is part of a larger district. This particular school started the movement and invited coaches and admin to attend the beginning sessions to prompt more interest. So far, 3 more elementary schools have joined in. 3 more to go.  
01:24:22 Barbara Dougherty: The coaches and admin were from the other schools  
01:24:33 Roni Gold: thanks Barbara, we've had sporadic use at various grade levels and are trying to anchor our instruction for k-5 in one manipulative, seems like Cuisenaire Rods were the best fit :-)

01:24:46 Barbara Dougherty: If you have the Math Pact book—there are scenarios in the last chapter.

01:24:52 Cathy Campbell: Wow, there is a lot here that here that I think would challenge a lot of teaches and their philosophies! For example, the behaviourist approach of I do, we do and you do

01:25:27 Cathy Campbell: I don't have this book but I can see that I MUST buy it now!

01:25:28 Karen Barbieri: @Cathy - admin too who "look for" these stages

01:25:29 Barbara Dougherty: That is a huge one!!! BUT—if you look at the new IES practice on assisting students struggling math, you'll see a stepping away from that.

01:25:31 Trena Wilkerson: Thank you for including PK! That is wonderful! As well as post-secondary—

01:26:12 Michele Mailhot: I did this with middle school parents! it was great!

01:26:33 Emily Kavanagh: Love this chart

01:26:46 Cathy Campbell: "Things to stir up", great way to begin

01:26:49 Barbara Dougherty: @Roni—Cuisenaire rods are really interesting to work with—especially with rational numbers. They don't work as well with base 10 or integer development—in my experience. If you address those, I would love to see how that works!!

01:27:34 Marshalyn Baker: Marvelous webinar. Kudos to the presenters!

01:27:36 Trena Wilkerson: Thank you all so much! Powerful thinking and reflection throughout the session!

01:27:36 Cathy Campbell: Can you highlight what is the same/different between the 3 versions of your books? Thank you

01:27:38 Sheilah Jefferson-Isaac: Thank you!

01:27:42 Roni Gold: @barbara, great pt, thanks

01:27:47 Gloria Amado: Wow !

01:27:51 Felicia Alexander: great session!!

01:27:54 Carolina Napp-Avelli: Thanks!!

01:27:56 Dawn Lopez: Thank you so much- excellent as always!!

01:27:56 Carol Matsumoto: Thank you everyone!

01:27:57 Ticharo Rolle: Thank you again. this was great!

01:28:00 Felicia Alexander: Thank you

01:28:02 Emily Kavanagh: Excellent session

01:28:07 Daniel Irving: Thank you for this incredible session and for your powerful and impactful work!

01:28:15 Roni Gold: thanks everyone this was an amazingly inspiring session to kick off the year!

01:28:23 Karen Barbieri: Thank you!

01:28:36 Karen Barbieri: Can't wait for the middle school session!

01:28:45 Gloria Amado: Today was elementary day !

01:29:11 Gloria Amado: Can we join the middle school webinar next week , if we are elementary educators ?

01:29:16 Elizabeth Irwin: Thanks everyone- your influence is felt "down under"

01:29:33 Sarah Bush: All sessions are open to all NCTM members.

01:29:49 Roni Gold: is this book primarily for coaches or teacher to read?

01:29:52 Roni Gold: or both?  
01:29:54 V Kelly: Thank you! Very informative for elementary  
01:29:55 Kendra Edwards: Thank you. Great session!  
01:30:04 Cathy Campbell: Thank you, that helps me decide which books to buy.  
I will buy ALL of them :- ) I support teachers K-9 so the examples will be helpful to  
connect with teachers across the grades  
01:30:12 Tami Broomall: This was great - thank you so much!  
01:30:24 Sarah Bush: The book is targeted to district leaders, coaches,  
and classroom teachers - also administrators  
01:30:33 Michele Mailhot: I've read 2 of the 3 and am halfway through  
the third book. I love how they are similar so you can use it for a district  
approach!  
01:30:36 Roni Gold: thanks Sarah  
01:30:39 Emily Kavanagh: Thanks so much  
01:30:53 Sarah Bush: Thank you all so much for attending!  
01:31:02 Gloria Amado: Annual meeting is 100 percent in person ?  
01:31:05 Cathy Campbell: Great session today. Thanks everyone!  
01:31:07 Barbara Dougherty: Have a wonderful week—thank you for sharing  
your time with us!  
01:31:28 Monica Tienda: Thank you! Gracias!  
01:31:35 Michele Mailhot: Thank you!  
01:31:42 Jennifer Robitaille: Thank you!  
01:31:43 Gloria Amado: Thank you so very much fir your insights today !