

Lauren Carr (00:00):

There's an idea of what fluency looks like. There's these little tests. You gotta sit there, quiet. Write all your answers as quickly as you can. And I'm like, not all students learn that way.

Bethany Lockhart Johnson (00:13):

Hi! And welcome to another episode of Math Teacher Lounge. I'm Bethany Lockhart Johnson.

Dan Meyer (00:19):

And I'm Dan Meyer.

Bethany Lockhart Johnson (00:20):

You know, Dan, we're in the thick of our season about fluency. And I have to do our episodic check-in —

Dan Meyer (00:28):

Yes!

Bethany Lockhart Johnson (00:30):

— about how you're feeling about things. You have two young sons. I wanna know, how is it impacting the way that you think about fluency with your kiddos?

Dan Meyer (00:43):

Yeah! Thank you for asking by the way. I hope you are well, also, Bethany. So, to orient the listener, if you have not been tuning into previous episodes, I, Dan Meyer, former high school math teacher, have had a little bit of an uneasy relationship with ideas of fluency. Which, for me, are kind of associated with a lot of negative experiences that students I taught had had throughout K–8. So I'm here, in this journey, trying to find my love and excitement for fluency. I feel excited about introducing new math concepts with students. About assessing math knowledge. And Bethany has been super-helpful, as have our guests. All of whom have had tons of enthusiasm. I've got kids who are in kindergarten and first grade. I'm watching them learn math right now, and it's been pretty exciting to think about through the lens of what we've been chatting about. For instance, I watched my first grader zip on through some fluency exercises, not realizing that addition problems changed to subtraction problems. So the kid was doing like six plus four and making tens real nicely, but then six plus four becomes six minus four. And, all of a sudden, there's 10 again, which to me said like, "OK, this is one of the tricky parts about fluency — not getting just so anchored in the operations that we're not paying attention to what we're doing." There was that. And then, like, I had a moment that I just felt like, Bethany, if you had seen it, you would've just fallen on the sidewalk and been sobbing at how beautiful it was. Sort of thing you've told me to do. Which is walking to school, we just start making fives, you know. Making fives as a math nerd dad is "want to do"!

Bethany Lockhart Johnson (02:20):

Making fives out in the wild.

Dan Meyer (02:22):

In the wild! Yeah! And so, we're doing, like, four plus one, three plus two. Someone has the bright idea to go from three plus two to two plus three, and they think they're pulling off a bank robbery by flipping

'em around like that. That was cool. And then I had a moment where I brought fire to the cave people when I was like, "Check this out! You ready for this? Five plus zero." And everyone's like, "Oh dad, you're the best!" So anyway, that's some of my experiences, to see that my first grade kid then flip around and say, "You know what else makes five? 15 minus 10." And I was like, "Oh, shoot. OK. Kid's got game."

Bethany Lockhart Johnson (03:01):

Nuh-uh!

Dan Meyer (03:01):

I'm serious! I would not lie on the pod. I would lie off the pod, maybe, but I would not lie on the pod. So I'm just, like, feeling how the procedural fluency ties into a conceptual understanding. How that robustness of understanding then leads into better fluency. It is a cyclical thing going on. So thanks for letting me riff off that for a hot second here.

Bethany Lockhart Johnson (03:22):

Yeah, I wanna hear it all, because I think the part that I'm hearing is that it's becoming this, like, everyday thing. We just talk about numbers. And we decompose numbers. And we look for numbers around us. We look for different ways to make numbers. And we celebrate numbers. It's just part of our day. And that is what I'm hoping that when we think about fluency, I'm hoping that we use that lens. We've been talking about the ways that fluency has not been done in a productive, joyful way. And we don't want that for your kids or any kids.

Dan Meyer (03:58):

Any kid. Which is why I'm really excited about our guest today. We've had a lot of people who have been speaking from a perspective of academic literature, theoretically, "what are we talking about when we define or assess or foster fluency?" And I found it super helpful. I also have the need, right now, to feel grounded in classroom practice, and people who are doing the work, and seeing its effect on classes full of kids. I'm super-excited that we have on Ms. Lauren Carr, who's a teacher out of Southern California, who happens to teach kindergartners and first graders, who are kids that I have a love-hate, but mostly love, relationship with right now. Lauren, in 2016 received the LA Unified School District's Rookie Teacher of the Year award, has been in the game for nine years, is a UCLA Math Project coach is doing it all. And here, at the end of the week, has been kind enough to sit down with us and chat about fluency and how it works in your classes. So, thanks for being with us. Lauren Carr, appreciate you.

Lauren Carr (05:03):

You're welcome. I'm happy to be here.

Bethany Lockhart Johnson (05:05):

Thank you for being here.

Lauren Carr (05:07):

Happy to be here.

Dan Meyer (05:09):

Lauren Carr, we have a question we love to get to know our guests by asking. And the question is this: In what ways have you been developing fluency in your personal life? Is there an area where you're like, "Oh, I'm doing the thing that I ask kids to do in the math classroom every day, most days"? What would that be for you?

Lauren Carr (05:27):

Over the summer I started learning how to sew. And, I don't think I realized how much math goes into sewing <laugh>. The amount of times I've had to measure things. And then, I don't know, all the numbers, and keeping track of everything. And, if you're one inch off, that throws off your whole outfit. And so I've been trying to —

Bethany Lockhart Johnson (05:54):

Wait. You started with clothing?

Lauren Carr (05:57):

<laugh> Yes, yes.

Bethany Lockhart Johnson (05:59):

That's impressive!

Dan Meyer (06:01):

Straight for the final, boss.

Lauren Carr (06:02):

Yes, yes <laugh>. When I do things, I commit. I go over the top. I can't just start something small. I'm like, if I'm gonna jump in, I'm gonna jump in. So, I've made my sister a matching set. I made myself dresses. I made my sister's dog a little bandana <laugh>. So I've been trying—

Bethany Lockhart Johnson (06:24):

No pot holders for you, <laugh>, let me tell you. That's awesome! So, as you've been learning these new skills, and building your fluency with the machine, with all the language of the discipline of sewing, you said about the measurement, but has it been frustrating? Have there been moments when you're getting to the flow of it?

Lauren Carr (06:53):

Yes. A lot of frustrating moments. Like I said, I'm always I wanna just get it done. And so, sometimes I'll sit with a pattern and I'm like, "I'm gonna finish this right now." And then I keep making mistake after mistake after mistake. And then I'm like, "You know what? I need to take a break." And so, I've been OK with taking breaks. And then there's some times, I've just let it kind of happen, when I haven't used a pattern, I've found that sometimes I'm doing a little bit better <laugh> when I just kind of look at how it fits on my body. Trying to not be so stuck at, "Oh, this is the pattern I have to follow this." Kind of like, what fits on my body? What headspace am I in right now? Do I need to take a break? Can I keep going? So it, I've learned a lot about myself as just learning something new. So it's also a good stress reliever after a long day of teaching. And I always bring it back to my kids too. So I'll wear something and I'll—

Bethany Lockhart Johnson (07:50):

You said, "I made this."

Lauren Carr (07:52):

Uh-huh. And I think they're just shocked now. And I'm like, "Yes, I made this."

Dan Meyer (07:57):

Where'd your clothes come from? And I was like, "What?!"

Lauren Carr (07:59):

<laugh>. It's a whole lesson.

Bethany Lockhart Johnson (08:01):

I love it!

Lauren Carr (08:01):

It's like, I would love to teach my kindergartners and my first graders how to sew. 'Cause there's so much math in it.

Bethany Lockhart Johnson (08:07):

I love that that brings you calm <laugh>. I love that that brings you calm. It does not sound calming to me. But here's the beautiful thing: You're seeing what happens when you work through, when you persevere. So, thank you for sharing that with us! Now, you mentioned your kinders, your first graders, which I could have a whole conversation with you about combo classes, but we'll save that for another time. <laugh>.

Lauren Carr (08:31):

Yes.

Bethany Lockhart Johnson (08:32):

I love seeing people teach. I love teaching, but I love there's such a joy in being in someone's teaching space, right? So if I had the chance to visit your classroom, if we — OK, Dan, you can come too. If Dan and I had the chance to visit your classroom, I'm so curious, what would you hope I would see? Or what would you hope I would experience about your teaching philosophy? Or the kind of space that you're trying to create for yourself but also for your students?

Lauren Carr (09:07):

Yes. So, I hope when you step into my classroom, you feel a lot of love. I think that's one thing that I really want. I want my kids to feel safe and loved in the classroom. Specifically in math. Honestly, my class is never quiet <laugh>. So you'll never step into my classroom when it's quiet. They're always having conversations. You're always hearing them asking questions, moving around, wiggling. Doing all the fun stuff. But, my teaching philosophy is very student-centered. It's a lot of student choice, student voice. And so, I hope when you maybe, possibly, come to my classroom, you would hear a lot of student students talking and not as much me up there just talking. The students bring so much knowledge and

experiences to the classroom. And I really enjoy just listening to them, and then giving them questions and things to nudge them forward. And so, that's the space that I hope everyone feels. 'Cause usually when I step in there, I feel that <laugh>. So I'm hoping everybody else feels that when they step into my classroom.

Dan Meyer (10:19):

That's great to hear! And I hope that one day we're all in the same room enjoying your teaching <laugh>. For some people, some forms of fluency feel like the opposite of what you're describing. Sometimes, the way that fluency has been tried, teachers, pure of heart, have tried to develop fluency, result in kids not feeling they can be themselves or contribute actively. That they have to be kind of programmed. And so I would love to know like, how do you make this fluency? How do you weave fluency into this space that you've created, that feels so full of life and love?

Lauren Carr (10:53):

Sometimes, when you hear fluency, you just think of those timed tests. And when I was younger, thinking about those timed tests and just the stress that came with it. We won't see those little timed tests in my class. It's a lot of counting collections and a lot of counting, a lot of word problems, number talk images, different hands-on experiences where students are having fun with numbers and also real-world experiences. Today, a parent brought in some donuts, and so we ended up just having a conversation about, "There's 20 of us, and there's only 10 donuts. What are we gonna have to do?" And so just that real-world experience, and that's fluency. They were able to say, "OK, I think we gotta cut it in half." And that's first graders! They were like, "Yeah! Cut it in half so that everybody can have a little piece." And so, those little experiences, a lot of those types of experiences, I feel like build fluency. And knowing that it's going to be OK to kind of make mistakes. And having conversations and asking questions. And I think that really helps with fluency.

Dan Meyer (12:04):

Was that a gift to you? Were you happy that a parent brought donuts in? Or was that like, "Oh great, you brought donuts in. Wonderful, thank you." Is that a good thing to bring to K-1 combo teacher?

Lauren Carr (12:14):

They were given at the end of the day. So, it was the last—

Dan Meyer (12:17):

OK, nice! Perfect!

Lauren Carr (12:18):

She came in the morning, but I said, "OK, end of the day." Once we go home, there we go.

Dan Meyer (12:22):

That's a nine-year veteran teacher right there!

Bethany Lockhart Johnson (12:25):

Yeah, this is no rookie of the year here. This is no rookie <laugh>.

Dan Meyer (12:29):

So I'd love to dig in a little bit more here on fluency. You've described a bunch of different kinds of curricula, or activities, that I think are, like for a secondary teacher like me, aren't, I'm not super familiar with counting collections, for instance. And the others you mentioned. So I'd love a little more elaboration here perhaps on what those are. And I'm also curious about when the donuts came in, and you had this moment of numeracy with the students around the donuts, like, my idea about fluency has not included the kind of one-off, interesting, real-world application experience. Help me out here. That moment is what the fluency has meant to support. Like, using fluency, that development, and developing your kid's sense of being math doers, and having an identity as a mathematician, is the thing that enables them to be mathematical in that moment. The donuts. But, the donuts themselves, in my understanding, are not a fluency-developing activity themselves. So, there's two questions there. One about how much did the kind of real-world, one-off activities develop fluency? And I'd just love to know more specifics about the activities you mentioned that have developed fluency for your students.

Lauren Carr (13:47):

I'll start with the counting collections. So counting collections, they're an activity where students are given an amount of objects and they're asked to count them in a way that makes sense to them. And so, in kinder and first, they're working on cardinality. Extending the counting sequence. One-to-one correspondence. Actually first grade. That's what we're working on with counting collections.

Dan Meyer (14:14):

I'm still working on that. So, no disrespect.

Lauren Carr (14:16):

<laugh>. Yeah, so that's a great activity to work on those things. Then they're just counting. And then I come and ask questions. How did they count it? Why did they count it that way? And then they might start counting by ones. And then they might start counting by fives. The collections might start getting bigger. And then they're like, "I've got a thousand little rocks. Am I gonna count those little rocks by ones?" And so they start making sense of does this make sense? Does this not make sense? And then the fluency comes with counting, like skip-counting those collections in different ways. And so, sometimes they're counting the same collection over an extended period of time, a lot of different ways. That's building their fluency. And it's fun! Counting collections are, like, my favorite activity.

Dan Meyer (15:03):

It sounds like it'll take you a long distance. What I'm hearing now is that students will reveal to you that they are fluent when they start adopting new strategies for counting. I'm not hearing you formally assess their understanding of cardinality or skip-counting. It's like all of a sudden, I don't need to direct-count like, six of these. I see a five and then one more. Is that an indicator to you that, "Oh, OK, we are developing fluency here." It has been developed in some way.

Lauren Carr (15:36):

Yes, it is! They'll start, like I said, by ones. And then when they start making connections from the counting collections to maybe the choral-counts, where we're counting altogether. And they're able to decompose the numbers or the counting collection to the word problem. They're making those connections. And so, yes, that starts to tell me like, "Oh, they're starting to recognize the patterns."

They're starting to see patterns. And start to see the patterns everywhere else. And then, yes, that's where I'm able to say, "OK, we're building our fluency."

Dan Meyer (16:09):

I think K–5 folks will know what choral-counting is and counting collections and all these things. But, it was really helpful to hear you spell out those different kinds of fluency building activities, which we haven't heard so far, I don't think from many of our guests. Which is why we've got you on.

Lauren Carr (16:27):

Yay!

Bethany Lockhart Johnson (16:27):

So, for me, definitely, counting collections brings me a level of joy. Not just collect — my husband's like, "Why are you saving these bag ties? Why?!" It allows me to have my little collections, and it's for my classroom. But no, really, there's so much richness that we see coming out of these opportunities for students to count. And to make sense of word problems and problem-solving. But, I also want to address, what about the teacher who says, "Yeah, we've been doing counting collections, but my students still can't add, or can't subtract, you know, five minus four or two plus three, or whatever." When I ask them, or when I give them an opportunity and assess them, they're still not understanding or fluent according to the standards. And I ask that because I think we understand that there's fluency in the bigger sense of fluency, with numbers and composition and decomposition, but then there's also the standards, right? So, I'm just curious, how does that fit in with the kind of folks who push back and ask you more specifics about addition and subtraction, the way they might picture it initially?

Lauren Carr (17:49):

I hear that. And I hear the fluency. They have to be able to add quickly to be able to add on to other activities. It's the foundation for, like, multiplication, division. But I think that they are mastering the standards through fluency with like counting collections and things. I think it just looks different. And I think there's ways to assess fluency with addition and subtraction that's not punitive, where it's something that's gonna stress students out. And so when it comes to the standards, yes, like in first grade, the standards is to be able to add and subtract fluently within 20. So yes, we are playing math games where we're adding and subtracting fluently within 20. We might have a little sheet with different number-sentences, but they're asked to solve the ones that are less than five or more than five. That's still building fluency. Yes, you wanna be able to go quickly, but sometimes we don't. Like, honestly, I'm just thinking about me sometimes when it comes to percentages when I'm shopping and trying to know the percentage of a sale. Of course I wanna be able to know it fast but, in that moment, I don't really need to know it that fast. I think it's like, "Why are we trying to go so fast?" On one end, I'm like, yes. Like I said, yes, we wanna be able to add and subtract quickly. And then some of us, we are working on our own at our own speed.

Bethany Lockhart Johnson (19:35):

I've been in schools where the school was very gung-ho and was very focused on some fluency goals, and kind of telling the story of fluency K–5, right? And that was a really rare experience. And then I've had other situations where it wasn't talked about at all, right? And, and it was more put off like, "Oh, well the parents will practice those things at home." Right? So I bring it up because I think it's so fascinating to hear. There's so many times we hear about fluency and it's very antithetical. Like, the way

fluency is taught antithetical to how you're talking about your classroom culture, right? So if your students are experiencing joy, if your classroom is not quiet, 'cause they're engaged, they're in it, they're present. I think I am hearing you say that, simultaneously, they are becoming flexible thinkers with numbers and with problem-solving. Is that what I'm hearing? I wanna make sure I'm understanding.

Lauren Carr (20:39):

Yes, for sure. I hope all of those experiences make space for them to be fluent with numbers, and have fun with numbers, and see numbers everywhere. See numbers in the real world. Yeah! That's what I want! And I don't want them to see numbers and think, "Oh, I don't know how to do this quickly, so I can't do it." Or, "This doesn't make sense to me. And so it's not relevant to me, so I'm not gonna do it." Or, "I have to sit here and be quiet during math time. That's the opposite of what I want." And so I think by making space for the joy, and having fun, and having a positive math identity, I think students will build fluency.

Dan Meyer (21:23):

You've described yourself as someone who is interested in students learning about justice in the world through math class, not in other classes, but in this class, through these activities. And I just wonder if you could speak to how the different approaches to fluency, we've talked about the ones that you've been pursuing with your kids and other ones that are out there that other kids have experienced, how those contribute to a student's sense of who I am in the world. Can they do that? Is that too lofty? You have a goal for fluency? Or have you seen that contribute to a student's sense of what justice looks like in the world?

Lauren Carr (21:55):

So we start with math as, like, patterns. Math is all about seeing patterns with numbers. And you can use math to see patterns in the world. We start small with the numbers, and then we start to see patterns in all types of different subjects. So it's like seeing patterns in and issues of injustice in the world. Patterns of nature. We're seeing patterns everywhere. I think that's one way that in those real-world experiences they're able to see patterns and make those connections.

Dan Meyer (22:34):

Yeah, that's helpful. There could be activities or experiences students have in math class where they're noticing where patterns are maintained and when patterns break. I feel like kids of this age have a sensory experience of fairness or unfairness. Like, we should all get half of a donut. And then, if that pattern gets disrupted, it's perhaps a kid who has some fluency with numbers can notice that more easily than kids who don't. Does that sound accurate to how kids develop these ideas?

Lauren Carr (23:09):

Yeah, I think so. Coming back to the donuts: The students that have had a lot of experience, hands-on experiences, with little parties and having donuts, and being able to count the donuts — how many donuts there are. How do we share donuts? — those students can bring that to the problem. And then be able to fluently say like, "Oh, I know that we're gonna split these up quickly. This makes sense to me, because I've had a lot of experiences talking about these things and seeing these patterns."

Bethany Lockhart Johnson (23:41):



So, last season was about math anxiety. And something that came up again and again when we were talking is the anxiety folks had around assessment, and around perceived judgment of their math competency. And so, thinking about how we look at patterns and justice, I feel like with fluency instruction, if done poorly, it can really exacerbate inequalities, right? And I'm wondering how you think about that in terms of when you're in that kind of situation, wanting to celebrate students who are bringing this knowledge about their experience. I've had lots of opportunities to count and to experience these parties. And then I also have students who this is all new for them, right? Or they bring a different fund of knowledge to the conversation.

Lauren Carr (24:36):

My teaching philosophy in general is social justice-centered and anti-racist. It centers students' thinking and students' voices. I always say "empowering students," but they have the power. But giving space for students to recognize their own power. With fluency, I used to think that if students are sitting there kind of quiet, listening to what I'm saying, being able to tell me exactly what I just said, I was like, "OK, this is going well." And I think it's also because I used to be like that. I was that math kid that was like, "Just tell me what I need to do, and I'm going to do it." And so when I started getting older, and the math started getting harder, and I started to think a little bit <laugh>, I was like, "Oh, wait a minute, I don't know, because I've been told how to do this math my whole life." And I didn't want that for my students. I want them to be able to be loud, have fun, ask questions. I'm not going to tell them the answer. And I think one thing I always tell my students is it's not about the answer. It's about how you get to the answer. Those little conversations going into word problems and counting collections. All those things I feel are also part of fluency. I'm always talking about math. I feel like I'm the person at the school that's always talking about math. And people are always just like, "Oh, there she goes again." Then, whenever fluency comes up in spaces, there's an idea of what fluency looks like. The idea that there's these little tests. You gotta sit there quiet. Write all your answers as quickly as you can. And I'm like, not all students learn that way. Not all students are going to get it that way. And, it's not equitable. I believe it's not equitable. And so, I want teachers to see, like, my classroom where we're doing counting collections. We're having fun. We're having these conversations about math. Seeing math everywhere we go. Recognizing patterns everywhere we go. And that's building fluency. Those experiences are building fluency. That's what fluency looks like to me. And even just thinking about today, we have these beautiful murals at our school, and my students just look was just looking around. He's like, "Hey, I noticed a pattern!" And I thought it was the colors that he was going to notice. But, it ended up being the arrows. One arrow was going up, one arrow was going down, one arrow was going up. And I was like, "Wow!" So that to me, those experiences where he's looking at something in the space and recognizing a pattern and sharing it, those experiences are going to help him be fluent. And how excited he was to just share with me that he saw a pattern at our school.

Dan Meyer (27:38):

Yeah, I'm trying to get a sense of you around fluency versus the conception of how a lot of people experienced it. And one thing I feel like I'm hearing, right or wrong, I don't know, is that whereas a lot of teachers might see their job as to give out the paper that has the problems on them, and that is the thing that develops fluency. What I feel like I've heard you talk about is doing so much work to help students realize you have good ideas, but you're also kind of a provider of experiences, like a box of new stuff to count up. And then, the cool thing you do, like lots of folks could do that, but what you do feels like naming a kid's strategy as a thing of value. A thing you did. And knowing what to offer them next in response to keep helping them develop that. And that feels like a very different approach to fluency

than what a lot of people are used to. Different kinds of skills to develop. It's very fun to hear. Thank you so much! It's been a real pleasure to have you on. Learn more about you and your work.

Lauren Carr (28:46):

You're welcome. It was a pleasure. I love talking about math. I can talk about math all the time, every day, all day.

Bethany Lockhart Johnson (28:53):

You're welcome in the Lounge anytime.

Dan Meyer (28:56):

We're here 'til 1:00 AM some nights just talking about math. It gets a little bit nuts. Wow, Bethany, what a ride! So fun to hear from someone doing the work in the classroom day in, day out. What'd you take away there?

Bethany Lockhart Johnson (29:10):

These conversations we're having, it's definitely expanding my notion of the idea of fluency, right? Because I think when I envisioned the season, I came in with a much narrower definition. Really thinking about the California state standards, and really thinking about like computational fluency in terms of how that can be a barrier or a real foundation for students. Thinking about ways to see fluency happening, in a broader sense, is I think really helpful. And it's a good reminder when we're thinking about cultivating classroom community. What about you, Dan Meyer?

Dan Meyer (29:51):

Yeah, all of that! And I loved Lauren's description of attending to student identities, even while we're asking them to do stuff that's difficult, and even sometimes repetitive. What stuck out to me was the moment when Lauren was talking about how you're not gonna count to a thousand by ones, so what can we do here? And like, just how necessity is the mother of invention of fluency, of the need for fluency. I thought that was pretty special. It takes a certain kind of teacher to say, "OK, I'm not just gonna have you develop fluency for its own sake, but develop fluency in order to become proficient at a particular task that you understand. And that is interesting to you." That felt, like, next-level. That felt like rookie of the year, like nine-year veteran type teaching moves to me. So, that was really exciting.

Bethany Lockhart Johnson (30:41):

Well, and also, for folks listening, we see each other virtually as we're recording. And I hope, and I think it will come across, when you hear the way Lauren talks about her students and her classroom, but to see the joy emanating <laugh> from Lauren as she's talking about her students, as she's talking about mathematics, as she's talking about creating a classroom culture like that. We want to share that. We want our students to experience that joy and that, I don't know, freedom around talking about math. And seeing math, and exploring math and problem-solving, even when it's not coming easily, so to speak. So yeah, that was a pleasure. And I thank you all for listening with us. And hopefully you're enjoying this season. We'd love to know what you think about Ms. Lauren Carr's strategy for developing fluency. Or maybe you have other ideas of your own that you'd like to share about this season, or about what you do in your classroom. Please join the conversation in our Facebook discussion group, Math Teacher Lounge: The Community. And you can also reach us at X, formerly known as Twitter, at MTL Show. We have plenty more to come on this season of Math Teacher Lounge.

Dan Meyer (32:00):

And you folks can keep up with all of it by subscribing to our podcast on all the platforms. And we would love for you to support our work here. Get the word out by rating and leaving a review wherever you get your fine podcast products. Bethany and I, we read all of them. And I do mean we read ALL of them. And we read them to our loved ones, and parents, and friends. So just keep that in mind as you fill out that review. Just think about what you're saying, and would you like this to be read to Dan's mom? You know, <laugh>? So we'll be back in just a couple weeks. In the meantime, here's a quick tease of what's to come.

Speaker (32:38):

We have to look at mathematics as a story that we tell students across the grades, K to 12. And what we are is the conveyors of a chapter in this progression of the story. If we look at it as an isolated chapter, then the question really becomes, what am I doing to my students and for my students?

Dan Meyer (33:00):

Thanks for listening folks.

Bethany Lockhart Johnson (33:02):

Bye!