

Kristen Moore (00:00):

If you're a skeptic, you wanna start by testing ChatGPT for what it knows and understands.

Dan Meyer (00:05):

Hey folks. Welcome back to Math Teacher Lounge. It's the summer jam summer session. I'm your host, Dan Meyer, and I am without my esteemed co-host, Bethany Lockhart Johnson. She'll be back in the fall, bringing you all of her insight and comments and commentary. I've been really excited this summer to chat a bit with guests who know a lot more than me about artificial intelligence, about these large language models. ChatGPT Khanmigo. Do any of these keywords resonate for you folks? I'm hearing lots about them in my world, in education technology. Lots of huge claims about them. I've been in rooms with people who have made some claims about how we might not have teachers in 10 years, might not need 'em, or claims about how every kid with their computer could have a free, world-class tutor — some claims that I have found a bit outlandish. And, in my last episode, I chatted with Jennifer Carolan, a partner at Reach Capital, one of the folks who invest money in companies working in this space. And she offers one kind of perspective on AI and education, and I'm enormously thrilled to have on the podcast today, Kristen Moore, to chat about, at the ground level, at the place where this technology actually meets teachers and students, what it can do. Kristen Moore is a high school math teacher. Let's welcome her to the show. Hey, Kristen, thanks for being here.

Kristen Moore (01:21):

Hey, Dan, thanks so much for having me. And I am a big fan of AI. I don't think it's going to replace us, but I think it's going to be an amazing tool to support us. So I'm excited to have this conversation with you.

Dan Meyer (01:32):

Likewise. I've chatted with you for like five minutes and can already tell that AI could not do what you do. So I'm excited to dig in more to that. Can you give us a little bit of your backstory, you know, kinda a brief tour through your, your spin through education, teaching? Like, how did you get into looking — I mean, this technology's been around for like, I don't know, six months or something. It's not been a ... but what first got you into the tech, and thinking about how could this be useful for me as a high school math teacher?

Kristen Moore (01:59):

Yeah, absolutely. So I've always kind of been into more innovative teaching models and teaching practices, but when I first heard about ChatGPT, I really kind of thought of it as the Photomath equivalent for English teachers. Like, it was going to write everybody's English essay and they were going to be grumpy about it. So I completely wrote it off to begin with. But then my colleague kept talking about it at lunch and the interesting things he was doing with it as a teacher for English. And I was like, all right, well, let's see what we can do to bring math teachers into that fold. And really, I just started with like, how can mathematics be used to model polynomials in real life? And trying to figure out how I could make that connection for my students. And that just led me down the rabbit hole. And I have been using AI to co-plan lessons with me and create tasks with me pretty much ever since.

Dan Meyer (02:42):

Awesome. So, feeding that back to you a little bit: Photomath is the tool that uses AI. It's been around for a while to help students ... let's just charitably say, learn all the steps and the answer to a lot of different math problems.

Kristen Moore (02:55):

Yeah.

Dan Meyer (02:55):

And so now finally, you know, English Language Arts has their own Photomath to deal with: Type in any essay prompt and say, "Gimme five paragraphs. No. Make it sound like an eighth grader. No, a seventh grader." And, then they're done.

Kristen Moore (03:09):

Yeah.

Dan Meyer (03:09):

So now, we're all even. And so you're in this and you type in a math topic that high school math teachers often struggle to make relevant and concrete to students: Polynomials. You know, I'm thinking the common applications I see at the start of the chapter are like, "a roller coaster," which, yes, it can be modeled by a polynomial, and no, the students don't then care about polynomials more after than before.

Kristen Moore (03:35):

No.

Dan Meyer (03:35):

First, can you just tell me, when you type in to ChatGPT, that prompt, let's talk the tech a little bit. I'm curious. I wanna understand a little bit better and what you know about it. When you type in, "Tell me an application for polynomials in the real world," what do you know about what's happening behind the scenes in ChatGPT that's different from, say, if you type that into Google? What's your take on the tech?

Kristen Moore (03:57):

So what I like about ChatGPT is that I can really filter the answer. So when it first comes up, it'll come up with, you know, five or six answers for me that really probably don't relate a lot to my students. I saw some things in there on, like, Bézier curves, and I was like, my students don't know what that is. But what I like is that the more you talk with ChatGPT — and I definitely think of it as having a conversation with ChatGPT — the more you're able to get it to narrow down into the things that you want to see. So, it'll give you a bunch of prompts and you say, "OK, I'm working with high schoolers in, you know, I'm in suburban Michigan. And these are things that are interesting to them. Can we find real applications that are more relevant to that?" And the more you have that conversation, the better responses you're going to get from ChatGPT.

Dan Meyer (04:42):

That's super-interesting. And that does seem like a key distinction between Google and ChatGPT. Google will — I guess it'll give the most clicked-on links across the entire space of whatever. Which could reflect,

you know, perspectives, or have an idea about, you know, contextual relevance, that doesn't work for students in suburban Michigan.

Kristen Moore (05:02):

Right. Yeah. Google is much more SEO-driven, and ChatGPT, you have the ability to filter it down to make it more YOU-driven. Your-students-driven. And not driven by who can write the best long-tail keywords.

Dan Meyer (05:14):

Right, right. Long-tail keywords, wow. So the conversational element feels like it's a big difference. Can you let us know, what were some of the winners, after you helped tune up the responses? Do you recall what ChatGPT told you about polynomials? Math teachers all over the listening audience are dying to know here.

Kristen Moore (05:31):

We are dying to know! You know, one that always comes up is cryptography. And I think that that's really cool, especially now that we're talking all about cryptocurrency. So that's something that I can get my students to buy in on. We can go a little bit into the history of it and how it, you know, started in mathematics. And then my students are more bought in, because they wanna make the next billion dollars on some sort of investment. And so that connection with them gets us down that rabbit hole a little bit further. Same thing with something similar, like rational functions. Boiling points are really good to model rational functions. And so if you can get your students figuring out a recipe to make mac and cheese or how to make the optimal fondue, they're like all of a sudden super-bought-in. And they're like, "OK, Ms. Moore, I'll do this math problem for you because you're right: I actually want to know how and why I'm going to do this."

Dan Meyer (06:20):

I pride myself on making a pretty mean box of mac and cheese, and I've always suspected is because of my mathematical background.

Kristen Moore (06:26):

Absolutely.

Dan Meyer (06:27):

Great. So I'm curious: If there are listeners who need a little more persuading here to hop into the process you're describing, this conversation with an AI agent, talking to a robot ... what kind of encouragement can you offer here? What's their first step? The next step?

Kristen Moore (06:42):

Yeah. So I think if you're interested in using ChatGPT or any form of AI like this to help you with writing lessons or creating different projects and products for your classroom, I think if you're a skeptic, you wanna start by testing ChatGPT for what it knows and understands. So, I like to go in there with a specific standard in mind and ask ChatGPT what it thinks would be a good learning target or what it thinks the right success criteria are. And as I go through and I have that conversation with it, I now know that it's filtered to the exact same lens that I wanna look at it through. So if I want a procedural lesson

on, you know, GSTR-8, we're working with similar right triangles here, I can ask it that. And if it's giving me the right kind of learning targets, I know that it's going to give the right kind of results that I want. And it's not just going to give me something off the cuff or that I could have randomly found in a Google search on TPT, or, you know, Google.

Dan Meyer (07:38):

Yeah. Great. OK. That makes sense. So again, the conversation is so interesting to me. Like, I resist the idea that every student will have a more capable teacher through ChatGPT, because I just think the difference between what you do, what you can do with a look and a raised eyebrow, vastly exceeds what ChatGPT can do. And you're there in the room. But I do love this idea that teachers ... many teachers don't have a teacher assistant. Like, my first assistant, I got 'cause I had taught this kid for a while and she came in and stapled tests for me or whatever. But what you're describing feels like someone who's not just a student who has graduated out of your class, but rather someone who's a fairly capable adult. Who has read the entire internet, basically. And can be reasoned with.

Kristen Moore (08:24):

Yeah.

Dan Meyer (08:25):

Which to me feels pretty exciting. I'm getting excited thinking about it right now. Is that a useful way to think about this? Or are there other ways to think about this for you?

Kristen Moore (08:33):

Yeah, I think so. I think it's like having a thought partner. Which is weird, because it's not having its own actual thoughts. But it's bouncing ideas off of you, or you're bouncing ideas off of it. And between the two of you, it sparks a lot of really interesting ideas that you may not have had, but you're still the teacher, you're still the expert of your content and of your classroom. So you're going to be able to say, "OK, I like this idea, but let's tweak it this way," so that it's better going to meet the needs of the students in your classroom. So while AI is an amazing tool, you've really gotta make sure that you're focusing in on your expertise as well, and saying, "How can I use this to make something better?" And not, "How can I just use this to make something."

Dan Meyer (09:16):

Right. This "human in the loop" idea is one that I see tossed around a lot, by people who are thoughtful about AI and education and elsewhere. "Keep yourself in the loop," they say. Let me ask you: You've mentioned, like at the standard level, like "What's the standard about?" or at the context level, like, "What's an application for this context?" You've also, it sounds like, done some work with ChatGPT at the project level, at much larger levels. Multi-day experiences for students. Can you tell us how in this dialogue with ChatGPT you were able to pull out of that a multi-day project for students?

Kristen Moore (09:56):

Yeah, absolutely. So, project-based learning is a practice that is near and dear to my heart. It's something I've been doing for over a decade now in my math teaching. And so my ability to create better projects and more current projects and projects a little bit quicker using this AI was really important to me. So when you go ahead and you find some of those real-world applications and you're able to connect them to your students, or you're able to say, "I know that my students would be

interested in that," then you can go down and have it go through like the entire PBL process, or if you don't wanna go full-on PBL, you can help it construct a project with you. So, for example, I've done a project in the past all about how art and math unite us across cultures. And I've always found that fascinating. And I've done this project off and on for the last 10 years. And so I've got a pretty good basis for it. But I wanted to see what ChatGPT could do to help me take that to the next level. And what I loved about that connection was that ChatGPT was able to not only identify cultures that I've never heard of before, get really specific with that, but it was able to tell me where I could go and find these pieces of art — whether it was local to me and my students at a university or at an art museum, or if I could do a virtual field trip, or where I could find it online. So ChatGPT was able to make that experience for me even more present and authentic to the situation that we're in now. And that's where I think it can be really powerful — in that kind of search engine/co-creator role.

Dan Meyer (11:32):

That's really interesting. Yeah. So, you have your own cultural lens background, your own knowledge and competencies, and if you were to create the art project on your own, it might reflect that. I understand there are a lot of concerns about like, "Who is ChatGPT listening to and reading, and does that reflect a diverse group of people and cultures?" But it does sound like you were able to tell this teaching assistant, "OK, here's our premise, go to the library, whatever library you have inside your brain, and go look up other cultures for me." That sounds pretty exciting.

Kristen Moore (12:03):

Yeah, it is really exciting that you can use it, like you said, as that teacher assistant, and it does some of the heavy lifting for you. We know that teachers already have so much on their plate, right? So if you can do a little bit of that heavy lifting, and sort through that Google search faster than I can, I'm all about that life.

Dan Meyer (12:20):

Definitely. Can you back up just a little bit? And so the first prompt is ... you came to it with art in math. Walk us a bit through the conversation you had with ChatGPT. Roughly speaking, where did that go next? You have a rubric on that lesson plan; is that something you came up with from PBL frameworks or that did ChatGPT offer you a rubric?

Kristen Moore (12:42):

So you can ask ChatGPT to just design a generic rubric for you. You can tell it the number of points that you want it to assign. You can tell it what kind of categories you want. So it really depends on how well-versed you already are in creating your own rubrics, or if you have a set standard that you have to use with your school or your classroom. If you're doing a mastery-based approach, really you can have ChatGPT customize it however you want. You just have to be really good at inputting the information that you're looking at it to give back to you. The better input you give, the better output you're going to get back. And then you can take it and you tweak it and you know, you make it in the right format for you, because it might come up with a little table or it might come up with a bunch of bullet points, but it's not going to be the same format that you have to have. But, like you said, when I started the project, I went in and I asked about geometry and art and where they saw it across cultures. And then I asked, "OK, what kind of transformations are most visible in those types of art?" And as it gave me some more background information, then I could ask it to help me form an essential question that's going to drive the learning for that whole project. And from there, I can chunk it down personally into what I know the

best milestones are going to be. My students are going to need to know what transformations are, first. What a translation is is easier than what a reflection is. Or what a rotation is. And I can build on that. And as I identify those learning goals and targets that I want my students to hit, I can ask ChatGPT to help me with a number of things, whether it's generating extra ideas on a hands-on activity that I could include in that piece, or if it's asking it to help me create a performance task or a mini-rubric for that understanding that builds us towards that final product.

Dan Meyer (14:18):

You mentioned a couple parts that are really exciting to me, especially extension problems. And making context more accessible. Like, I think that I've seen, "Take this article and rewrite it in language that a sixth grader, a fifth grader, a fourth grader could understand," to me is where I got those, those goosebumps, of like, "Wow, this does feel like a kind of sorcery." And the same for, a student finishes my project early or needs more challenge; what are some ways I could challenge that student? Just as a first draft, obviously. You're bringing your expertise to it, to whatever ChatGPT throws at you. But as a first draft, that sounds really exciting. I would love to ... so just declaring my biases here, I taught for six years, and I left teaching in part — I haven't left education, but I left teaching — in part because creating curriculum was a huge part of what I was doing every year. And that became extremely exhausting for me. And what you're describing sounds like a way to make this less exhausting. But I did go into curriculum development because my belief is that every teacher should not be reinventing a curriculum, or every district should not be creating their own core curriculum. There's advantages to the coherence to having people who are like, "We have 20, 30 people working on every lesson in our curriculum."

Kristen Moore (15:31):

Oh my gosh.

Dan Meyer (15:32):

Teachers don't have the time. They're working for multiple days, an army of people, on these lessons. And there's no way one teacher, even with ChatGPT, could create that kind of thing. So what I'd love to do is venture outside of what we've talked about so far, curriculum development. And there are lots of people who need this, because they don't have a core curriculum that works for them, right? But I found myself wondering, where else could Kristen and I start to brainstorm, just whiteboard-sketch ideas, for where we could put ChatGPT to work for us? And I went to Deborah Loewenberg Ball, a professor in Michigan, U Michigan, University of Michigan, who has researched teacher practice for greater amount of time and at more depth than really just anybody else. And she has a list of 20 or so high-leverage practices for teachers. She describes them — her group, TeachingWorks, describes them — as used constantly and critical to helping students learn important content. That makes them a high-leverage practice. I'm looking through them; I'm looking through them; and I'm like, "Oh! There's Kristen! Right there! In the one that is listed as "designing single lessons and sequences of lessons." One of the high-leverage practices. That's what you've been talking about. So there's that.

Kristen Moore (16:49):

Absolutely.

Dan Meyer (16:50):

And there's others where I feel like we would probably, definitely not ask ChatGPT to get involved. I'm gonna read a couple of them. I encourage you to check me to check me if you think like, "Well, hold on now."

Kristen Moore (16:59):

Oh, I will.

Dan Meyer (17:00):

Because you've used this. You've used this tech in ways that I definitely have not. So, a couple of them ... there's five where I was like, "Nah." So one was leading a discussion. Building respectful relationship. Communicating with families. Learning about students. Checking, student understanding.

Kristen Moore (17:20):

I'm gonna say we can use ChatGPT for all of those.

Dan Meyer (17:25):

Whoa! No! OK, awesome. I'm gonna learn something here. Gimme an example. What do you think?

Kristen Moore (17:29):

OK. So what was that first one? Leading a discussion?

Dan Meyer (17:32):

Yeah, yeah, yeah.

Kristen Moore (17:33):

Right. So that's actually one of my favorite things to do with ChatGPT, is to ask it to help me scaffold and understand what students are going to think. And you can ask ChatGPT to act as a ninth grade student. What are questions you would have about this? And so it kind of gives you an insight into what the students are thinking. And then you can use it to help you create questions to guide that dialogue. I will frequently go in and say, like, "Give me 20 questions about this topic," and then I can select and sequence those to kind of plug into my classroom and lead that conversation. Or get my students to raise those questions by themselves.

Dan Meyer (18:11):

OK, hey, I love this. I'm learning a ton here. So you're asking the chat interface to play the role of someone opposite you — a student, in a discussion — and getting questions that might keep that discussion moving.

Kristen Moore (18:27):

Exactly. And then you've got that as your backup script so that when you know you're in the heat of the lesson, and you see the ideas that are coming out from your students and you know what order you wanna sequence them in, you can feed in those extra questions to keep that dialogue going with your students and make sure that you're reaching your mathematical goals.

Dan Meyer (18:44):

This opens up a whole new category for me, of teacher development. I don't think that while you're in the discussion itself — and again, correct me — I'm not gonna pause a discussion, where students are in their seats and we're talking together. I don't know if I'm gonna pause that and go consult ChatGPT.

Kristen Moore (19:01):

Yeah.

Dan Meyer (19:01):

But what you're describing feels like the preparation for the lesson. The rehearsal.

Kristen Moore (19:04):

Yeah.

Dan Meyer (19:05):

And maybe even there's an angle here for teacher education and staff development. Is that a category that we should think about here? Teacher development?

Kristen Moore (19:15):

Yeah. So you know, the five practices for orchestrating productive math discussions has that whole set, where you're thinking about the anticipation of what your students are going to be thinking. And that's where I think you can start going to ChatGPT and figuring out, what are some common misconceptions students might have? What are some questions students might raise in this? And how can I lead a discussion to connect them from this to that or to clear up a misconception? So in that process of preparing for the lesson, that's when I would go ahead and figure out how to use those questions to guide the conversation. Definitely not in the middle of the lesson.

Dan Meyer (19:51):

I love that so much. Actually, before this episode, I went to ChatGPT and I asked it, "What are some common ways that students would get the question wrong?" Graph the inequality, why, less than, whatever? Yeah. Like a linear inequality, where you create a line and you shade on one side of it, make it dotted or solid. Anyway. It was really interesting. It was like, students might shade above the line instead of below the line. They might make the line dotted instead of solid. They might shade the wrong side of the line. So ChatGPT gave me the same one twice, but whatever. It was cool, you know? It's all good between friends, and you're free, you know. So I'm not gonna knock it too much. As a new teacher, you know?

Kristen Moore (20:26):

Oh, absolutely. And those are things you know as a teacher. But when you have to plan for two, three, four preps, or you're teaching 150 kids, it's helpful to have ChatGPT there to feed you those ideas and go, "Oh yeah, that's right. They might do it this way. Absolutely. How can I pre-plan for that?" So it takes some of that cognitive load off of you, and then you're going to go work your magic in your classroom. Because it gave you that idea and you're like, "You're right. Let's do that. That's how I'm gonna handle this."

Dan Meyer (20:54):

There's a lot of curricula that that will not let you know the common wrong answers. Like, they tell you the right answer, for sure. In the answer key. But that question with the common wrong answer, it feels like it's like folk knowledge, that you almost have to develop, you know, like through having taught it once or twice. And being surprised that students do what they do, that they have these ways of applying old knowledge to new scenarios that don't quite generalize. And so for teachers that are teaching a course for the first year or a new grade, and you know, how intimidating and terrifying that can be, it does seem like this might offer practice, a practice round, for instance, of a new lesson.

Kristen Moore (21:32):

Absolutely.

Dan Meyer (21:33):

You really rocked my world with leading a discussion, which I had just written off as, you know, "ChatGPT can't, you know, mop my floors. It can't do everything for me. It's fine. I'm not expecting it to." But I'm convinced that it has more applicability there than I originally did. The other four, just in case you wanna knock one more off? Building respectful relationships, communicating with families, learning about students, checking student understanding. I'd be curious if you see anything in there that's worth talking about, from your perspective.

Kristen Moore (22:02):

You know, I think that in general, communication is something that we've seen a lot of. People are using ChatGPT to help them craft newsletters, and weekly emails home, and how to write a letter of recommendation. I know as a high school teacher, I get inundated with letters of rec. And using ChatGPT for something like that is really helpful. I like that you can do it, with ChatGPT for communicating home with families, because you don't always know the reading level of everyone that you're talking to. And so you can ask it to make it in really friendly terms. You can ask it to change the tone so that when you read it, it's coming off and presenting the same way that you are intending it to. You know, it can be really difficult to have a conversation through text or to communicate effectively through text. So being able to run it through ChatGPT a couple of times and really wordsmith it out can be helpful.

Dan Meyer (22:54):

There we go. OK. Let me offer ... there's a few areas where I thought, maybe there's something here. And so, I imagine given what you did with the areas I thought that there was nothing there, you'll see one of these four I imagine will catch your eye in a big way. And I'd love to just tackle that one and see what you do with it. These, again, are the high-leverage practices as defined by Deborah Loewenberg Ball's group TeachingWorks, out of University of Michigan. So these four include setting up and managing small group work, attending to patterns of student thinking — which, you know what, I think we just, we just tackled that one, in terms of like, "how do students come to understand these different ideas?" So we got that one, I think. So I'm gonna check that one off my list as nailed by Kristen Moore. And then the other two are implementing norms and routines for discourse, selecting and designing assessments. Assuming you don't have a resource that offers you assessments aligned to your curriculum. Like, I kinda wondered if you had any experience — you've talked about problems, standards, projects, assessments, another huge area. What you got on any of those?

Kristen Moore (24:01):

Oh my gosh. Well, I think it can definitely be really helpful in designing those assessments, right? If we're already sure that we can use ChatGPT to give us a good quality learning target and success criteria, we know that it's giving us what we want and we can use it to identify student misconceptions. We can also use it to help us kind of scaffold what the problem process is going to look like. And, you know, people do assessments in all different ways. If you're doing, for example, mastery-based grading and you want them to be, you know, at the Level Three, that's your target level, you can use ChatGPT there to input what your problem is and what your context is and say, "How could we make this more of. ..." and then fill in what your Level Two criteria is. Can you give me five different examples for this? And it can come up with all these different ways that you can then take and tweak and suddenly you can make yourself two, three, four different versions of an assessment in about the same amount of time that it would've taken you to craft just one.

Dan Meyer (24:58):

Yeah. That's really inspiring. I gotta ask: You know, as well as anybody, the state of teacher morale coming out of the pandemic, and virtual teaching.

Kristen Moore (25:08):

Oh yeah.

Dan Meyer (25:08):

You know, there's endless surveys just demonstrating that teacher morale is not in a great spot right now. If teachers got involved with this, it's obviously helpful. Is it helpful, do you think, in a way that could improve teacher morale to a point where some teachers might decide to stick around longer than they would otherwise? Like how, how effective do you think this might be? I'm just curious if you have any kind of sense of ... how excited are you when you do this kind of work? Is this something that teachers should get into, so as to improve morale?

Kristen Moore (25:40):

So I think that ChatGPT has really helped me to streamline a lot of the processes that I already use. It helps me to get things done a lot quicker and more efficiently. And I think the more that you can get done in a quality manner, in an effective amount of time, the happier you're going to be with your work life. You're able to have more of that work-life balance. So I don't know. I don't know.

Dan Meyer (26:09):

It's hard to quantify, but it's good to hear your sense of what it does, not just for ... there are teachers who will hear this and say, "Yes, I can spend more time than I already do now using ChatGPT to make even better lessons for students," and that kind of teacher is one of my favorite kinds of teachers and not one that I'm super-worried about, as far as sticking around. I'm really worried about the ones who are on the edge of burnout, and who need to gain back time, for instance. And I guess I just want to name my own hope that this could give some hours back, like you're describing. Help teachers recover some time for binge-watching and whatnot. And keep them around. Doing the stuff that they can uniquely do, the things that ChatGPT cannot and maybe will not ever touch. So thank you so much, Kristen Moore, for hanging with us and really altering my perspective on this tool, broadening my horizons, and I hope that of our listeners as well. Me, personally, I would love to keep tuned into your learning journey with these technologies and understand what you're learning, in real time, if possible. Do you have any kind of media you can share, or can keep track of your learning?

Kristen Moore (27:14):

Yeah, absolutely. Everyone can connect with me on all the socials. I'm at MooreThanJustX Z — "Moore" with two Os — because I believe that math is about so much more than just solving for X. And you can also catch me on my own podcast that just launched this last month, The Modern Math Teacher podcast. So I'll be sharing all the things that are happening in my classroom, and how AI is transforming it in real time.

Dan Meyer (27:38):

Awesome. As the year kicks off. Thank you so much. And we'll put all of that in the show notes for folks to tune into. Thank you again.

Kristen Moore (27:45):

Awesome. Thank you so much, Dan. This has been great.

Dan Meyer (27:49):

Thank you so much folks for listening to my conversation with Kristen Moore, high school math teacher and STEM instructional coach in Michigan. Check out the show notes for a link to her recent piece in Edutopia, titled "Using ChatGPT in Math Lesson Planning." If you're looking for more of what you heard here in this show, we'd love to hear from you with your thoughts on this episode, this series on AI and ChatGPT more broadly. Maybe you also have some tips of your own to share. So hit us up. Let us know in our Facebook discussion group, Math Teacher Lounge Community, or on Twitter, at MTLShow. You can find more info on all of Amplify's shows at our podcast hub. You can go to amplify.com/hub. And next time on Math Teacher Lounge, get this, we are launching Season 6. That's right. We're gonna be focusing on the topic of fluency. We've had some past episodes on fluency that really packed it out, resonated with listeners, and now we're going to do a full season-long deep dive. I am so excited to learn. My co-host, Bethany Lockhart Johnson, she has actually changed my own work with, the kids who live in my house with me on fluency. She has excellent perspectives, especially at K–5. I'll be thinking about the secondary level. We're gonna talk to leading researchers on what fluency is, why it matters, how it can help students and also hurt students sometimes, and how we go about it. And then we're also gonna delve more into best practices for developing fluency. It's going to be a hoot. The best way to ensure you don't miss out on any of that is to subscribe to Math Teacher Lounge, wherever you get fine podcast products. Also, please do us a favor and rate and review us. We love to read your reviews. That's what's ahead on Season 6 of Math Teacher Lounge. Can't wait to see there in the Lounge. Thanks so much for listening.