

Eric Cross (00:02):

Welcome to Science Connection, Season Two. As we begin the next season, I thought it would be a good time to share my story. As the host, I get to ask people questions about their journey, but I've actually never shared much about my own. So I've taken some of my most frequently asked questions to guests and asked them to myself. I hope you enjoy.

Eric Cross (00:23):

So the origin story question, I think really gets to the heart of why a person does what they do, because so much of who we are, especially as adults and teachers, is a result of experiences that we had in our lives when we were kids or in school with other teachers. And my life's no different. I was born to a 19-year-old single mom. And when you're a young boy growing up, especially with a young single mom, you often look to older men in different positions as kinda like a surrogate or like a mentor. And you may not even tell them that they are that to you. You kind of keep it close to the chest. And that's what I did growing up. One of the ones that really stood out to me is, in seventh grade, I went to a middle school here in San Diego that was called Keiller Middle School. And we were a magnet program that specialized in science. And they had this program that brought professors from the local universities and they did this high-level enrichment. They would even take us to the college campus and we would work in these labs as seventh graders. It was amazing. And one of the people there, his name was Dr. Tress, and he was a professor. And Dr. Tress took a liking to me. I reminded him of his son. We were doing this great embryology experiment. We would take purple sea urchins. And we would inject them with potassium chloride, which would cause them to spawn. And we would fertilize these eggs, and then we would run different experiments using them. And these were things that I had never done before. I had always loved science. I'd always loved tinkering and building things. But this was my introduction, really, to high-level biology and to higher levels of education. I didn't—I didn't have many figures like that in my life growing up. I mean, I'm a first-generation, you know, high school, college graduate. Many of these are first generations for me. So, this was a new experience. And so Dr. Tress really unlocked a core memory and was one of my first mentors, as far as academics are concerned. And during my seventh-grade year, I entered the science fair and won first place, which was a huge deal. They took us out to Balboa Park. We got to miss school for a week. We got to go to all the museums for free. It was the best. And I think at that point in time, it really solidified something in me that would lay dormant until later on in my adult life. High school, I was really fortunate: the high school I went to was Morse High School, not too far from Keiller, and they had an aeronautics program. So I was able to enroll in that aeronautics program. And I learned how to fly before I learned how to drive. And I had this great instructor named Mr. Klou, who was this like 6' 4", 250-pound hippie guy. And he—we would get in the plane and we would have these like philosophical conversations. And through that, especially looking back now as a teacher, I realized that he was making connections with me and investing into who I was as a person. And it was something that I so needed at the time. Because at home I didn't have that. You know, my safe place, a lot of time, was school. It was my only structure. It was where I knew I would get

encouragement. It was where I knew things were reliable and consistent. For a lot of people, and a lot of kids, their home life isn't like that. School was that for me. So Mr. Klon, I mean, he was this authentic, you know, consistent person in my life and made a huge difference at this time.

Eric Cross (03:23):

After I graduated high school, I left home just to get away from a difficult environment. And I was homeless for a little while and that was a huge moment in my life. And around that time, an aunt found out and she said, "You're gonna come stay with us." And this was like this three-year process of me living with them in this, like, functional family that ate dinner together. And they went to the zoo. They had family passes. And they took family photos at Christmastime. This was all weird stuff. Like, I didn't know—I didn't know who did these things. It was—I felt like a puppy that like lived in a home that was like...it was a home that was just always kind of like violent or like just really toxic. And then it gets put into a healthy home and doesn't know how to act. That's how it felt. And this was around like 19, 20 years old. During that time I started putting myself through school. So I went to community college and I was broke as a joke. And so I couldn't afford the textbooks while I was going. So I would just go to the bookstore, the Barnes and Noble bookstore in Mira Mesa here in San Diego. And I would stay there all night using the textbooks or using the books there for doing my work. And then I would just put the books back on the shelves. Because let's just face it. Textbooks are expensive, brother wasn't trying to pay for all that. So I really had to earn that time. So I was working full-time. I was going to school. And, eventually I got a job in working in finance with a really great friend who mentored me during my younger twenties. And I didn't wanna be broke and finance made sense.

Eric Cross (04:44):

And so I did that for a little while, until I got to a point in my career where I was watching an episode of The Office, the UK version, the Ricky Gervais version, and a character said, "I'd rather be at the bottom of a ladder I want to climb than halfway up one I don't." And I realized, working in finance, that I was halfway up a ladder I never wanted to climb. So I wanted to move into something that, if I was gonna spend eight hours a day or 10 hours a day doing something, I wanted it to be something that actually filled me up inside. And this is how I got into teaching. So I had always been working with young people, specifically 12- to 18-year-olds, like a non-profit or volunteering, mentoring, after-school programs. And I've always managed to rationalize my job in the finance world as meaningful because it let me do the real work that fulfilled me. So the real work was working with the kids. But my day job, my, like, Clark Kent-type job, was just, you know, doing the finance thing of like helping people that have a lot of money make more money. Which at the end of my life, I look back and I said, "That's not what I want my legacy to be."

Eric Cross (05:43):

And when the finance crash happened in 2008, that's when I think I started looking back on it and said, "If I'm gonna spend all my time doing something and spending 40 or 60 or 80 hours of my day of my week doing things, I want it to matter. And that's when I decided to pivot and leave that field and go and

get my master's in education and get my teaching credential, teaching science specifically. Now, one of the questions we get asked a lot and I've been asked is, is "How has teaching changed as a result of the pandemic?" And I feel like this could be several podcasts in and of itself, and it's also regional, because everybody's experienced it differently, And we're still experiencing it! That's the crazy thing! It's like, it's not over, we're still in it. And some places have innovated and pivoted and some places just did what they needed to and they are trying to go back to business as usual. But if anything has happened, the pandemic revealed how much more, how much schools are more than places of just content learning. For many students it's where they have their only community, their structure, their emotional wellness. They get regular meals, access to tech, and adults that care about them that are outside of their family. The schools are so much more than that. I mean, my school, they were a place, like a hub, that was giving out food every single day during the pandemic to families that would kind of drive by. So for a lot of schools, they became places like that. It also...the pandemic revealed the intensity of the educator workload. I mean, being able to manage your family, having the capacity, to be a content expert, you need to be a counselor, a trauma-care specialist, a coach, an encourager, a tech expert.

Eric Cross (07:23):

I mean, the term mental health is now more common and starting to become prioritized. Now we're focusing so much more on the whole child. And we know from research that how a child feels about themselves and their safety and their security impacts their ability to learn. So the more comfortable and safe a student feels in the classroom with teachers and with friends, the better they're gonna be able to learn. And ultimately the higher they're gonna be able to achieve. You can't, you can't have one without the other. In addition, I think less teachers, see themselves teaching into retirement. I think that's a big thing. I read these articles about teacher shortages and I think the reality is it's actually teacher exodus. It's teachers leaving. And that's been really difficult. I've had many friends who've left for the private sector. And I get it, especially if you're one that has—if you're the first in your family to graduate from college, with a STEM degree, to them taking a teaching position can mean walking away from a salary in the private sector that pays two or three times more.

Eric Cross (08:23):

And in many places around the country, in order to be a teacher and maintain a median standard of living, you need either dual income, multiple jobs, or a multi-generational household. For a lot of people it just doesn't make sense. And even right now, today, as I'm recording this, I'm reading articles and getting text messages...and I received a text message three days ago from a teacher that said, "My goal this year is to just not resign." And that's where a lot of teachers are feeling right now: isolated, challenged, and under-appreciated. And Plato said, "What's honored in a country is cultivated there." And I've been looking at how teachers are honored and one of the ways is just, like, practical. Like, look, I gotta pay my bills. You know, love the Starbucks gift card. Love the CPK, the gift card. The cards, all those other things...but brother got a car payment. And at the end of the day, if we care about our kids, we need to take care of the people that take care of them. And there's very practical ways for that to happen. And everybody in different sectors around the country is dealing with that in different ways. I

think the pandemic also revealed, now the public can see how our kids don't receive the same quality of education. And once you're aware of that, you can't put the genie back in the bottle. So once you see on Zoom or once you see in a meeting, or once you see on the news, that students in different areas, whether it's the rural South or a suburb in Seattle, are not getting equitable educations, well, ultimately that impacts all of us. Now. It's not all doom and gloom. Good things have come from, as a result of, the pandemic. Many schools have made progress towards narrowing the technology gap, 'cause they had to! 'Cause you can't do Zoom and you can't do Google Meet and all that stuff with a packet! You gotta get those Chromebooks. And Chromebooks and the internet and access to tech is not a new thing. It's been out for a long time. The technology gap is not a new thing. It's been written about extensively, but all of a sudden districts and schools started figuring out how to close that gap. And that's awesome. We didn't want a pandemic to be the catalyst for that to happen. But at the end of the day, we started closing it. A lot of schools did an amazing job and districts did an amazing job with deploying the hardware, sending out buses with wifi, putting lessons and videos on USB sticks and dropping them off to parents who live in sparsely populated areas. I mean, there were so many stories that I've heard about schools and teachers just doing amazing things, going above and beyond what they needed to on behalf of kids.

Eric Cross (10:51):

I think in addition to that, there's also been students and families are now having more options to personalize their learning. So we have this in-person model, we have this Zoom or kind of online model, and this hybrid model, and it hasn't all been perfect, you know, at all. But some families have come out and said, you know what actually doing this hybrid model is better for my son or better for my daughter or better for my student, because they're able to get the socialization, but also able to focus better at home than they are in a classroom of 36. And that's legitimate. You know, we talk about personalized learning, but it's not exactly personalized when everybody has to wake up at the same time, same schedule, go to the same, the same classroom of, you know, up to 40 kids, and do the same lesson. I mean, we have to be honest about our limitations with personalizing learning for students. And when we can provide more options and we give teachers the infrastructure to be able to use different platforms, then we're able to personalize learning a lot more.

Eric Cross (11:51):

There's also been an emphasis on the whole-child wellness. I think the spotlight on mental well-being heavily impacts their academic success, but counseling teams, social workers, school psychologists—I think more than ever we've realized the value that they bring to the schools. And unfortunately many of them have caseloads of 200 students or more. And they're seeing students most often that are in crisis. And especially after the pandemic, we're realizing how valuable they are and how much we need to, one, honor them and give them the support that they need, and also recruit more. Because as we start recognizing how our brains are impacted by the things that we're dealing with, we're also gonna see how that's gonna impact our students' performance. And we need the specialists in those positions to be able to support our kids. I think, last, I think more innovation and lesson design and how we assess students. And so we've been talking about in education just kind of critiquing: how do we assess what a student

knows? How do we make what a student actually does at school relevant to real life? I mean, so many times I have students who've graduated that are like, "I feel like the things I learned in school, like, they're not always transferable to real life. It helped me on a test, but like, I don't know how to do my taxes." Or "I memorized these facts, but I don't really apply it in my job." Or "The facts that I learned I could have actually learned on the fly in my job. I wish I would've actually focused on the skills or had an earlier opportunity to get some experience because when I'm trying to apply for a job, <laugh> they ask for experience and I'm 22 years old."

Eric Cross (13:28):

And so all these things kind of come up. And so I think there's been some great conversations around "how do we rethink what education looks like?" And there's different pockets around the country that have been doing that, I think, really well. And I think it's important for us as teachers to stay connected to those people who are kind of pushing the boundaries and thinking outside the box, because when we get siloed, it's really easy to get calcified and cynical. I get it. And it impacts me too. But when we're around those people who have those fresh ideas, who are really pushing the limits, it inspires us. And that's something I think during the pandemic that I'm grateful that I was intentional about, is staying connected with other teachers. There's a big question; Why do you continue your work in the classroom and what keeps you motivated? And I was thinking really hard about this question, because depending on <laugh>, depending on my day, I feel like my answer's gonna be a little bit different. So I've had to step back from this 30-foot, thousand-foot perspective and answer the question. And my answer is this: I think because I still feel like I can be effective to influence positive change in my classroom with my students and within the larger education system as a whole. I think if I lost either of those two, then I'd rethink my profession. Look, I'm an innovator. I like asking "why" questions and things like that. And I'm not always the most popular person when you do that. But education is like just a huge ship. It doesn't pivot on a dime. And asking why questions and pushing for change on behalf of kids isn't easy, fun, or glamorous, but it's necessary. And I feel like over the last few years, I've been able to see these kind of glimmers of a trajectory change, at least where I am locally. And that's something that has given me a lot of hope. I'm very fortunate to be connected to educators and people in leadership that are really about making a difference beyond just kind of the cliched platitudes. They actually wanna make systemic change, in a way that's positive. And that's been really helpful for me. So as long as I feel like I'm useful in the classroom for students, and as long as I feel like I'm bringing, I think change, on behalf of teachers and students and administrators and our community in a way that moves the ball down the field, that's what keeps me motivated. And what I like to ask teachers when I close in the podcast is. "What teacher or teachers have inspired you?"

Eric Cross (15:54):

And for me, I think it would start off with the teachers who cared about me when they didn't have to, in elementary school all the way through college. And there are numerous teachers. My science-teacher community of practice. For the last two years, I've been fortunate to spend every month, once a month, meeting with just a core group of science teachers that really care about some of the things that we are

impacted by in the classroom. And when the pandemic was going on, we still met regularly. And because we're not all teaching in the same place, we kind of were able to bring different perspectives to the table. I think the current classroom teachers and former classroom teachers that I have in my community really inspire me. The ones who are dedicated to opening doors for students. The graduate students that I teach at the University of San Diego, they keep me fresh. I love leaving teaching my 12- and 13-year-olds, and then driving down the street to the university and teaching 20somethings who are all about to be in the classroom. They come with new ideas, they're asking questions, and I get to actually share things that I just did three hours ago. I think that's one thing that continues to inspire me. And it's one of the reasons why I love teaching at the University of San Diego. Their energy and enthusiasm is super-refreshing. And then all the teachers that are willing to take risks and fail forward, to try things different, to ask hard questions, to push the envelope. Teaching's hard. It's easy to point out the problems in education as a whole. But after we do that, it's important to figure out the practical ways we can make the changes that we wanna see.

Eric Cross (17:23):

Now, that's to say that if you have the capacity for it and the resources and the support. Some of us, we don't. Some of us, we are on an island, and that's a really, really difficult place to be, especially when you have family and kids to take care of. And you have to make decisions on what's best for you and for your own students. We do this work on behalf of kids. And it's one of the most honorable services a person can provide to our community. But one area for growth that I think we have kind of as a society, is teachers spend their lives, daily, on behalf of the future of our country. For other people's children. They fall asleep at night worrying about other people's kids. They spend their own money to create opportunities and experiences that students might not otherwise have. And it's important that we collectively, and I know I'm preaching the choir when I say this, but this is one of my messages, is that we honor them in turn. We create programs that allow them to be able to afford housing. We create opportunities for them to be able to generate wealth. We create ways for them to be able to find rest, to get connection. And then internally we create systems where they can just work on themselves, fill themselves, get trained, and be whole, so they can bring their best self to the kids in front of them. That's one of my personal platforms. It's something that I think is vital. We gotta take care of the people that take care of our kids. So there's a saying that says, "It's better to light a candle than to curse the darkness." And it takes one person to blow out a candle, but one candle can light thousands of other candles, without diminishing its own light. And that's what we have to be. So my encouragement, teachers, as you're going into this new school year, and you're thinking about what's going on, you're thinking about all the challenges—and they're there, and they're real, and trust me, it's not like some Pollyanna, like, "Hey, just be positive!" mindset and everything's gonna be great—no, no, no, no, no. It's not that. But my encouragement...if I can tell you one thing that's helped me more than anything else, it's being connected to other people who are candle-lighters. Because there are a lot of places that are gonna blow out the candle. It could be the staff lounge. It could be Twitter, it could be Reddit. It could be Instagram. It could be TikTok. It could be, you know, anybody. Someone next door to you. There's a lot of folks that are gonna be willing to point out and say, "Look, this is what's wrong." But find the helpers. Find the people that are candle-lighters. And stay connected with them. Find that community. I can tell

you for me, that's been the thing that's been able to help me sojourn through all of this—I couldn't do this by myself—is being able to share my story with other teachers and knowing that I'm doing this work alongside of other folks who are doing this work, and I can share my story with them and listen to their stories, is something that's been able to fill my cup. And so I hope I can do the same for you and for other people listening to other people I come in contact with.

Eric Cross (20:08):

Teachers, I wish you a great school year. Hang in there. Be those candle-lighters and bring your best self on behalf of the students. Thanks so much for listening. Now, we wanna hear more about you. If you have any stories you wanna share about the classroom, please email [stem@amplify.com](mailto:stem@amplify.com). That's STEM at [amplify.com](http://amplify.com). And make sure to click subscribe wherever you listen to podcasts. And join our Facebook group, Science Connections: The Community. Until next time.