

Women in Math: The Limit Does Not Exist
Episode 35 - A Conversation Between Triplets - Abigail, Lydia,
and Rachel Pung

Note: The speakers are triplets and all three sound identical to each other. It is very difficult to distinguish who is speaking.

Speaker: Hi

Speaker: We

Speaker: Are

Speaker: The

Speaker: Triplets

[Laughing]

Speaker: Yes

Speaker: Yep, that's us.

Speaker: That was perfectly choreographed.

Speaker: If you couldn't tell, we all said different words.

Speaker: I don't know Lydia and I have pretty similar voices.

Speaker: We'll have to go back and see if it worked.

Speaker: We'll never know if it worked until the end.

Rachel: My name's Rachel.

Abigail: Oh yes, my name's Abby.

Lydia: I'm Lydia. And we're all members of--

Abigail: Exclusive members of Damien's fan club.

Speaker: Yeah, his calc class slash fan club.

[Laughing.]

Speaker: We definitely recommend --

Speaker: Taking the class.

Speaker: Oh wow! We're finishing each other's . . .

Speaker: Sandwiches.

Speaker: Sentences.

[Laughing.]

Speaker: So what are you guys interested in pursuing or doing in college? What's your goals?

Speaker: Well right now all of us have the same degree. It's-- I'll spoil it. It's biochemistry. I almost said molecular biology!

[Laughing.] It was coming out of my mouth but that was wrong
[laughing.]

So we're all doing different things with it. I'm interested in medicine and I think I have been since watching Grey's Anatomy which was an extremely influential show in my little mind. I think the idea of having an experience with McDreamy--

Speaker: Eww! OK! [Laughing.] OK!

Speaker: No! Not like that! Ahh! [Laughing.] Oh my god! No let me finish! I'm going to finish here! I'm going to pick it back up! I'm going to salvage this! An experience like I'd be able to work with him on a body! [Laughing.] No! OK you need to stop! It's over! Not like that!

Rachel: You wouldn't want to experience that with anyone else?

Rachel! You didn't watch Grey's Anatomy, did you?

Rachel: Yes.

Speaker: Well then what? Why are you shaming me?

[Laughing.]

Rachel: Nobody is shaming you, I thought it was funny.

Speaker: Yeah, that was funny. That was good, thank you for sharing.

Speaker: Anyways, I don't know what I want to do with my degree. Hopefully I figure it out soon, it kind of feels like the final countdown right now or it feels like it. So this could be . . .

Speaker: We could be homeless. Which is not a bad thing.

[Laughing.]

Speaker: I just end up on the streets of Portland because I could never figure it out.

Speaker: Or I could just live at home forever.

Speaker: Oh true, my home is pretty lit.

Speaker: It has goats.

Speaker: Yeah, I am definitely not sure also what I want to do. Right now I feel like crying most of the time.

Speaker: Oh no!

[Laughing.]

Speaker: No, I'm kidding, I love school! I just feel like there are too many options. Like somebody needs to--Lydia and I were talking and she said, "wouldn't it be cool to go back in time? But it would be hard to not have a toilet."

Lydia: That's the only reason! I would love to go back in time, but if there was no public, or Western, modern bathroom, I think I would cry.

Speaker: And I was like yes! That way I wouldn't have to choose what I wanted to be. There would be one option for me.

Lydia: My only option is housewife. Yeah.

Speaker: Maybe far enough in the future-- teacher. But dang, then I wouldn't have this overbearing weight of having to choose a career! Yeah. Labor and delivery is where I think I want to go, or NICU, that would be fun, but they get sued a lot so I don't know. Rachel, what do you feel in your heart?

Rachel: Right now I'm kind of . . .

[Laughing.]

Speaker: Doctor of osteopathy?

Rachel: Yes! Yes, I forgot for a second. Yes, I'm kind of thinking about going towards being a doctor of osteopathy. I'm not sure if that's set in stone or anything, but that's kind of where my interest is heading towards.

Speaker: Rachel is definitely our . . . what's that girl's name? Elsie?

Speaker: Oh Elsie Dinsmore! I read that book!

Speaker: She's our Elsie Dinsmore!

Rachel: I don't know if I want to be Elsie Dinsmore!

Speaker: But you are! It's just who you are!

Speaker: Yes, since the time she was little, I remember when we first read that book, we all thought she was Elsie. Spoiler alert, Elsie marries a 30 year old man!

Rachel: No, he was like 50!

Speaker: And she was like 13?

Rachel: I don't know. I didn't associate with her. But it's fine because Lydia is that little drummer kid from the Partridge Family.

Lydia: I feel like that drummer boy is better than Elsie Dinsmore, right?

Speaker: I don't know!

Speaker: Anyways so Lydia, what are your hobbies?

Lydia: Just to make a statement before I start, we all do the same thing. So whatever I say, you can apply it to Abigail and Rachel as well.

From the time we were little, since the age of 6, we were playing the violin. We taught violin as well. This past spring break, we were supposed to go to India to teach the violin, but there was a pandemic. Unfortunately that didn't happen. I'm happy I didn't go because I didn't want to spread anything there so it's a good thing but also pretty heartbreaking.

Speaker: Cooties.

Lydia: Yeah. [Laughing.] Then we did 4H growing up as well.

Speaker: Yeah, it's a weird thing to do, 4H, I'll admit. It's an interesting crowd tied to 4H. If anyone is questioning, there are a lot of options in 4H. It's a youth development program so you can do leadership and public speaking.

This isn't a commercial for them, but I'm trying to make it seem like we weren't weird. We did a lot of leadership and we were ambassadors. We could travel for free.

Speaker: You don't need to own a goat to be in 4H.

Speaker: But it's definitely better.

Speaker: That should be the tagline. "You don't need to own a goat to be a part of . . ."

Speaker: Anyway, we do have goats. We have 10 goats, I think.

Speaker: 10 goats, 3 big honker goats. Massive!

Speaker: When we went to India and saw their little goats I was like, "dang, my goats could bop yours all over."

Speaker: We went to India a year ago.

Speaker: Yes, we didn't go against pandemic rules.

Speaker: Our goats are like 150 pounds. They're big girls.

Speaker: They're frickin' huge.

Speaker: So we got a buck this past year to breed them and he's a little guy. The owner said if he has trouble, [laughing] you can dig a hole to put the goats --[Laughing.] Sorry, Rachel is telling me to stop.

Rachel: I feel like this isn't a good story to put . . . Regardless of how it happened, they all had baby goats.

Speaker: We were not involved whatsoever.

Speaker: We just let them do their . . . if it happened, it happened.

Speaker: So our goats had goats, long story short, it happened at the beginning of the state shut down. It kept us really busy. That's a lot of work.

Speaker: I think people know.

Speaker: That's right, we're really cool. We made cheese, soap, and if anyone is interested, let us know.

Speaker: It's clean and we have beautiful women goats.

Wonderful ladies, gorgeous, stunning! That was a long introduction.

Lydia: When Damien first emailed us about this opportunity to be on this podcast, Women in Math: The Limit Does Not Exist.

Speaker: It's such a good name.

Speaker: I love the name! It's so Mean Girls. Loved it.

Speaker: Laughed a lot.

Lydia: We talked about how our experience might be a little different from other peoples moving through school because we are triplets and so we did everything together including school. With that, comes a little bit of a different perspective on things. Do you guys want to start talking about it?

Speaker: So when we started highschool, we went from online 8th grade to public highschool. My mom was a little worried about us. I guess she thought we were weird.

[Laughing.]

I was kind of weird. My hair was horrible my first day of school outfit was not--

Speaker: Oh!

Speaker: OK! I want to talk about my first day of school!

Speaker: No, you didn't go to the first day of school!

Speaker: Oh yeah! I sometimes get really anxious. I actually, genuinely did.

Speaker: The first day of school, I tripped over a bench and that was the most embarrassing moment of my life.

Speaker: Of your life? Girl, I got you beat.

Speaker: Oh yeah you do.

Speaker: So yeah, we taught violin at that time and going from teaching online where we had all the time in the world, elementary school obviously has different schedules. We had to do a class online in highschool in order to accommodate us leaving to teach violin. Our mom called the principal and requested to put us in every class together freshman year so we would keep each other in check so we could leave at the right time because she had zero faith in us to be --

Speaker: Oh yeah, even now.

Speaker: It was so weird! Except for Rachel.

Rachel: Oh thanks!

Speaker: Yeah, we had every class together so that came with us. That's where we got most compared to each other.

Speaker: Yeah. Rachel, chime in to say something about this, but when you're in a new environment and people find out that you're triplets, people ask who's the smartest or who's best at math. Especially if you're in a math class. "Oh who's the best at math?"

Rachel: I literally got asked who is the best at math last term. [laughing.] It happens all the time!

Speaker: I would probably ask it too. The question isn't negative, I don't think anyone means it in a negative way. I do think it's interesting because I do get it so often. I don't really know how to answer that question, even though I get it frequently. There isn't an answer to that.

Speaker: I know, I'm just like "uh, uh, I don't know."

Speaker: If I say who's the smartest, I'm biased to myself.

[Laughing.]

Speaker: Good to know how you feel!

Speaker: I think math is such a complicated subject, it's hard to say who's the best. There's so many different--

Speaker: Yeah, Rachel's better at limits, I'm better at derivatives . . .

Speaker: I might be better at all of them. [Laughing.]

Speaker: Yeah, true! Of course! [Laughing.]

Speaker: Yeah. So I forgot what I was going to say . . . oh yeah, sometimes people just do it for us. They say "oh Lydia is definitely the best in math." Or "Abby's the loudest." "Rachel's the quietest or most responsible." They'll just tell us who's what. Am I supposed to do that to you now? Am I supposed to analyze your siblings and compare them to you and see where you fit in your family dynamic? It's just interesting.

Speaker: Yeah and student teacher relationships are different when you have somebody who is identical to you. It's more difficult to learn somebody's name when you have to associate

them with their personality rather than their face. Like Abigail and I look the same so you have to know more about us to know the difference. Growing up in highschool, teachers didn't know my name. They would just call us "Triplet 1, 2, 3"

Speaker: Or just "Pung."

Speaker: Yeah. So I was always a part of this unit of people and was never really an individual.

Speaker: In the eyes of teachers for the most part.

Speaker: Yeah and you're closer to students than teachers most of the time so that was a different relationship. With teachers, I think they have such a large quantity of students that they can't take the time to learn these identical peoples' names and focus on it. It's just not realistic. I think it's a significant thing that's different: You don't really have an identity to these people.

Speaker: And there's one class I took by myself. Well, you were in it, but then you got in a car accident and had to leave. The teacher actually did know me.

Speaker: And she still knows the difference between us which is kind of funny. I only knew her for a couple weeks and she still knew the difference between us.

Speaker: She was an incredible lady. She should be the standard for identical --

Speaker: I love her. I'm definitely thinking there were some positive experiences with teachers.

Speaker: There was a lot of fun. In our sophomore year, we took AP European History. The teacher who taught that class, one of

our other teachers told us about this so it's a confirmed resource, but she would go to where the teachers ate lunch and would compare our test scores, see who's the smartest and who the best was. She was comparing us like a case study! I don't know what she was planning on doing with that. It was so interesting because I wonder if she did that with any other students or just us because we were so closely related. I felt it was sort of invasive.

Speaker: It almost felt like a competition between us when it shouldn't be. School, education, learning isn't a competition.

Speaker: With anybody but yourself.

Speaker: But somehow it always is between us.

Speaker: Like we always have to fight. I don't feel that personally, but other people might put that on you. Another example was we worked at a preschool at our high school. You could sign up to take a class to work in that preschool so we all did that.

Speaker: So fun!

Speaker: Yeah, one of the best experiences of my life. Each one of us spent a lot of time in there because it was so much fun, why not? Play with preschoolers all day?

Speaker: So we did closing which was an extra 40 minutes.

Speaker: We always stayed after school at preschool. We did lesson plans and stuff like that. At the end of your senior year, they choose two people to get a scholarship opportunity based on how much work you put into the preschool. Our teacher told us that we were going to get it because we did the most in the

preschool.

Lydia: Yeah, so I think this is one of the more significant things about being a triplet because people don't just want to give two people something. They think that I'll be offended if Rachel and Abby got that scholarship over me. And I won't be because I know how hard they worked. I saw it, too. So if they get the opportunity over me, it's not a sting on me, it's "good job!" to them.

So it was just interesting that when the time came to give out that scholarship, it didn't go to us and the reason was that there are three people and only two scholarships. So you miss out on a lot of opportunities because if there's a limited amount of spots, they don't want to give that to just one or two people.

I don't know, it's always interesting because I've never made that known. I've never said that I don't want them to get this over me. I think people just assume it.

Speaker: Yeah, people definitely put those on you.

Lydia: And it's not that isolated experience, it's happened multiple times.

Speaker: Quite a few times over our lives.

Lydia: It's disheartening, but it's not the end of the world, it's just interesting to think about.

Speaker: So how do you guys think that has influenced your experience in college or going into college?

Speaker: I was really excited to go to college because you get to move away from those experiences and you get to be your own person for the first time. Nobody knew who I was going into

PCC. I was like an individual person. It's not that I don't like being associated with these two people, but [laughing.] It was kind of nice to get away from that for a little bit.

I think in highschool there's more of a social aspect to your classroom. In college, you're more academically focused. So it doesn't really matter if you're a triplet or not. I still have classes with you and Rachel because we're going into the same degree, but even in those classes, nobody asks those questions that much. It was a lot of different experiences because you're there to learn. You sit down in class and take notes. There's not this period of time for social . . .

Speaker: College has been good, long story short.

Speaker: Definitely, I would agree with that.

Lydia: Yeah. It's been fun. I think Abigail wanted to talk about her experience. We are women in STEM. We wanted to talk a little about her experience in that. She has some specific things.

[Laughing.]

Abigail: So when we were asked to do this podcast, I was thinking, "what has my experience been?" So I'm a girl and this is the first thing that came to my mind.

As a student I loved chemistry, I still love it and am still in it. I find it interesting but sometimes it's frustrating. I decided to take AP chem because I thought it would be a nice, fun experience and it was. For most people who know me, I got voted most dramatic in highschool. I'm a pretty loud person, I guess. I make a lot of noise. I don't know. Anyways. [Laughing.]

I had a loud group and it was really fun. There was this girl that I sat next to and we were really close. Sometimes she wouldn't

show up. The first time, I thought I would have to find a new lab group. I sat next to this person who I kind of knew and I knew he was pretty nice. I thought we could do the lab together. The first thing that he said to me was "OK, now go get the materials because that's all you're good for." Like as a woman, it was like a "go make me a sandwich" statement.

I was pretty shocked in that moment, very shocked. I was like, "this is a nice person, right?" It was a joke, but it was a little shocking. We didn't know each other well enough to be making those jokes. It didn't stop there. It was the whole class. Joke after joke. It was pretty clear that he was just trying to be funny, but it was definitely a little jarring.

I came home and told my sisters and I said I think this person genuinely hates me. I thought this for a long time because of those comments and that experience. It made me a little more cautious in labs after that. I wanted to prove myself as a woman, as somebody who is good at more than just getting the materials.

I say this as the dramatic part because maybe he was just annoyed at how crazy I am, but it was definitely a weird experience to go through. That was my story.

[Laughing.]

Speaker: Yeah. In no way is this something to characterize all men or all men in math and science class.

Abigail: Oh no it is! It is a way to characterize them! [laughing] Isn't that what we're doing? Generalizing?

Speaker: Yeah, so we're just going to generalize. So these incidents don't account for the whole and that's really important to know and sharing when we've sat down to talk about what we

were going to talk about, these were what came to mind because you don't expect something like that to happen. You want to be treated with respect when you go into a classroom when you're there to learn.

Abigail: It was just out of the blue. But I've definitely experienced amazing teachers and men in the classroom.

Speaker: It's not to say that there aren't men who aren't totally supportive, totally there, on your team and ready to be collaborative. Sometimes these are just the most memorable because you don't expect them to happen.

Speaker: Yeah and I think it's a benefit to talk about it in a space like this because people can share their stories and experiences and people can relate to it maybe.

Speaker: On that note, one of our chemistry teachers, not the AP chem one, but the gen. chem teacher wouldn't give any of the girls the cool labs, the special labs. There would be the regular labs and then there would be a cool, XXL, super epic labs.

Speaker: So we were mixing chemicals and they were like blowing stuff up.

Speaker: And he would only give it to them. That one table group.

Speaker: It was disappointing because it was something I would have been interested in.

Speaker: And you just feel like you're not good enough to get it.

Speaker: Unrespected in the classroom. So Lydia, did you have anything to share and talk about?

Lydia: Yeah. I want to go off of what we said before. Don't generalize, we don't want to generalize, but one of the more significant things I've noticed is that in a math class, especially an upper division math class is that I think sometimes . . . and I'm not sure if it's just because I have a resting sad face.

Speaker: Very true!

Lydia: I look very sad, very depressed, very emo. I'm not!

Speaker: But you are!

[Laughing.]

Lydia: Closetly, yes, I do have eyeliner on right now but I don't . . . Why did I say that? I don't!

[Laughing.]

Lydia: So I noticed that if a teacher or professor would explain a subject then immediately the guy next to me would turn to me and explain it to me. Obviously that's a learning style: teaching other people around you. But it happened so often that it felt a little weird. Does he not think I'm listening to the same thing? Does he think I can't learn this by myself? I think he was trying to be very helpful and he did it in a very sweet and gentle way, he wasn't being mean or angry. I think that's important to note, he was a very kind person.

In one class I was working with a group of men and we came to a problem that we all disagreed on and it was me against them. They didn't believe me and didn't believe what I was trying to say. They didn't look at my work. I was talking to them, trying to explain it, and they'd just say "no, that's not right." It felt a little

discrediting about what I knew. Even if I wasn't right, which I was [laughing.] I did end up being right! I think things like that can get to you a little bit. You feel like you have to prove yourself a little bit more because you're a woman and it's a male dominated classroom.

Speaker: So I just realized that as you were saying that. I had an epiphany, I was like "dang, when I give an answer to something, I always feel like I have to do it in a non-confident way." I always have to say "I don't know." "But you could be right, I don't know, I'm not sure." I just don't feel like I could ever say an answer confidently. Maybe that's who I am, but I don't know.

Speaker: I feel like there's a little more authority going the other way. People feel the authority to tell me I'm wrong but I don't necessarily feel the same way about them. I don't think it has anything to do with them, but I'm the only woman there and it's a little intimidating and I don't want to step on anybody else's toes. But you do feel that kind of bashfulness I guess?

Speaker: Ew! I don't like that word!

[Laughing.]

Speaker: You're just a little more submissive in that kind of class and not as willing to share.

Speaker: Yeah. So we made a quick survey just to gauge about how other people felt about women in STEM and their experiences. We asked what their experiences were and someone shared something kind of similar to what we're talking about. I'll just read it. "I feel that many underestimate me because I'm a woman and always have. Teachers always usually focus on the success of men in class and expect more of them." More from me, sorry.

Speaker: More of them. That's right.

Speaker: Yeah, like they don't expect much from the girl.

Speaker: Yeah, that rings true for me, too. Sometimes the professors expect more from the men in the classroom than necessarily me. Or even with the science opportunity, the chemistry labs that were more difficult and they expect better from them.

Speaker: I'm going on with a bigger university. Our friend is going into engineering and he was talking about how they were entering the engineering program and they were in orientation. This is crazy! So wild! I guess him and his friends all did a different orientation and texted each other about the attractiveness of the girls in the program and whether or not some of them were girls. It's engineering, it's not a very female dense career.

One guy, who is my friend, said "this girl is a solid 3 out of 10." I was so shocked when I heard that! I was thrown back! I didn't even consider that this is something people thought about at orientation. Rating girls in your potential class? I don't know, it's just crazy.

It's not true for everyone who goes into engineering, but if you are not a traditionally beautiful woman, people look down on you because you're just smart, that's all. You don't care about the way you look. But if you are, they'll think the only way you got there is because of your looks. So you really can't win as a woman in these fields. That's pretty generalized, but yeah, that was shocking.

Speaker: I think especially for me, I've never given a number to

somebody. That's just not . . .

Speaker: Except for myself.

Speakers: 10 out of 10!

[Laughing.]

Speaker: Honestly, it was a little bit violating. You're placing that on me?

Speaker: "3 out of 10??" are you kidding me?

Speaker: 3 out of 3, girl!

Speaker: Yeah, and that's the fear. As somebody who is in the minority of that group, when there's more of another gender than you, you're more focused on it I think because there's less. Right? It's always that way with anything.

Speaker: I think if there were more women, there wouldn't be that. It would be more normalized.

Speaker: It's like a magnifying glass.

Speaker: Yeah.

Speaker: And we talked about how they get more women into STEM in our survey, or Rachel's survey.

Rachel: Yeah so we asked, "what can be done to promote women in STEM?" Someone mentioned expanding K-12 programs and encourage women in STEM and gives them opportunities to be successful. I thought it was important to mention because, going through my academic career, I noticed

that the lack of people entering these programs in college that encouraging that when people are younger, making curriculum, even when they're in the early stages of learning, is super important. It erases those biases that we have from a young age.

Speaker: We were also going to talk about how there are female dominated careers. We were in child development in our focus program in highschool, as preschool teachers, there were no female preschool teachers.

Speaker: There were no male teachers.

[Laughing.]

Speaker: Yeah, there were no male teachers in our program. We had 12 kids, 12 teachers and all of them were girls. The next class there were only two guys in the class. It's because there's this stigma against being a preschool teacher and it being a womanly career and a nurturing, caring career. It's not something people would prescribe to men as their natural instincts. Which is wrong, obviously.

Speaker: I know, but I think this all boils down to the fact that we gender careers as a society.

Speaker: Yeah.

Speaker: And they feel like they aren't -- I've talked to them when they were in highschool as they were in this, in highschool, in this career pathway. They said they feel uncomfortable going into this because other people, other men will look down on me, maybe women will look down on me. I'm supposed to be this traditional guy and in this career I'm not seen as that. Disheartening!

Speaker: And to go off of that, I think that those biases and that starts in early childhood education. Even working with preschool students, you get to really see how children perceive the world because they're so honest. They're learning alongside you. Specifically, I remember this boy who was really emotional.

Speaker: He was amazing! [Laughing.]

Speaker: He was a sweet kid, and he experienced emotion very deeply. As a result, he cried a lot. I remember one time he was having a really rough day. One of the girls came up to me, one of the preschool girls, she said, "why is that boy crying? That's something girls do. Is that boy a girl?" And you realize that people learn these differences between gender and how one is supposed to act versus another.

Speaker: She was four and she was saying this! It's because-- my teacher talked about this a lot when we learned about development. When you're in preschool stage, 3 and 4, that's your selfish stage. A philosopher decided this, the different stages of development. He said that your selfish stage, you really only care about yourself, obviously, and you're seeing the world as how it relates to you instead of how you relate to it. Basically, if you see a student with a different skin color, background, or gender, you would think less of them.

Speaker: Or maybe you would say oh that person is lighter than me, or darker than me. You think about yourself first.

Speaker: I think that it's important to notice those differences, but when you're that young, you should teach them ways --

Speaker: How to celebrate those differences. Our preschool, which I so advocate for, it's Rachel Amelia Preschool. Children

learn through a hundred languages, it's art and music and block area. We create our curriculum around students. It's new every year because we created it. We document the students learning and we try to give them the tools in the classroom so that they can develop the best for themselves.

One of the lesson plans that we did every single year was called The Color of Me. It's anti-bias about curriculum. So we specifically had to put books in our classroom that represented every background in our classroom. We had to put things on the walls that represented every background. We gave every child of a different ethnic background the space for their parents to come in and share about their background and their culture and their language. We tried to make this space where we would see the differences and celebrate it.

Speaker: It was us who were just doing this.

Speaker: Oh no! We had a really great preschool teacher who was pretty much doing this.

Speaker: She was incredible, she was the one who spearheaded it all, she knew what she was doing. We were just following along, like "this is so great!" We even experienced kids being racist towards other kids in preschool. It's not like they knew what they were doing, but they were noticing the differences and they were being mean about it.

Speaker: So there was a new student who came in, she was a black girl. Before that student came in and they hadn't even talked to her yet, but they said she was mean. I think they were associating her with characteristics that the skin color has. That's a bias. That's a stereotype.

Speaker: It's not that one-- sorry to cut you off. It's like that one

test, that one survey where the girls had the dolls. One was a white doll and the other was a black doll. They were asked “Which one do you think is the bad doll?” and the girls would point to the little black doll, instead of the white one.

Because that’s what they were taught when they were younger. Immediately when she entered the classroom the other kids were mean to her. They had already decided who she was by her appearance.

When I say, she was the most giggly person, she was so happy and joyful. She would break down laughing at whatever I said, it was so funny! Towards the middle of the year, because of this, she just became so distant from everyone. She only wanted to take naps, she didn’t want to talk to anyone. She became a poorly behaved kid, but it was only because of the environment.

We had to spend a whole year with our students to try and break down this barrier, the biases they put up against her. If kids aren’t learning how to correct it at this age, they will carry bias with them, it will only get worse, it’s only going to grow.

Speaker: I think it’s important to have environments like that, where you can talk about it and have open-ended questions and get to the root cause of the problem. And to encourage each other, and like you said, celebrate each other. I think that’s really important.

Speaker: At the early ages of life. And another thing, this doesn’t have anything to do with what we’re talking about now, but about women in STEM classes, there’s a statistic about this I was supposed to look up, but forgot.

But women as children, girls, are less likely to be exposed to toys that have to do with science and math, versus boys. I think that

has a lot to do with it, what you play with as a child, your experiences shape who you are as an adult.

Speaker: Even when you look at commercials, like a Nerf gun, if it's not pink then you only see little boys playing with it.

Speaker: That's right, toys are specifically gendered, and they're marketed towards a specific group of people. That's a capitalist tactic, a money-making tactic. At some point they decided math and science toys are gendered male.

Speaker: And artistic toys and healing toys are gendered more female, for the most part.

Speaker: Which makes you think you're supposed to go towards that, to pursue that, or not pursue that, which is disheartening.

Speaker: That was so evident in our classroom, when Lydia said that one little boy wanted to be the mother in our dramatic play area, and the girls said, "You can't be the mom. You're not allowed to be the mom." Why can't he?

Speaker: He had a great relationship with his mom, so he associated that with his mom!

In our society, a mom is traditionally a person who identifies as female, a caretaker, so they would ask him, "Why are you acting like a girl today?"

Speaker: Something else I forgot, some of the boys in our class had some behavioral issues and acted out a little bit. It wasn't them, it was their behavior.

None of the female teachers could handle it.

Speaker: They wouldn't listen to us.

Speaker: They would be throwing things and hitting. As soon as we got male teachers, the entire environment changed. These little boys were so in awe of these male teachers, they wanted to be just like them. Suddenly they were excited to do these activities that I couldn't get them to do.

It's because they had a positive male role model in that classroom, they could finally express themselves and show some emotion instead of just anger.

Speaker: To go off what you're saying, I think it's important that we have diversity in gender and background in any field. You need to have those role models growing up, you need to see that people like you are doing this.

Speaker: Especially in media representation of people, that it's not just one type of person.

Speaker: It's discouraging when you don't look like the people you see in what you want to do. If you see a group of engineers and you don't see any person who looks like you it feels less attainable.

It's important that we build children up to think that they can be whatever they want.

Speaker: That's the goal, right? But then, in education, elementary schools are so understaffed, not enough supplies, there's no individuality in elementary school.

I was doing a presentation and this statistic in Tennessee said if kids don't get the right support by third grade they're 50% less likely to enter high school. And some more percentage are not

likely to pursue secondary education.

If we don't buckle down, until third grade, that's all we need to do. Focus our time and money and energy on these kids. You'd think this education doesn't matter, but it's fostering growth not only in science and math, but in emotional connections and showing kids how to deal with emotions.

Teaching a child how to deal with their emotions is one of the most powerful things you can do, because as they get into high school and start to feel stressed out and overwhelmed because of their friends and their life changing. If they were taught when they were younger how to deal with big changes it's not going to feel as intense and scary. I feel sad about education.

Speaker: Going off on that, I think having platforms like this podcast and being in a positive class, like the calculus class [laughing] has been really impactful for us and just shows that you can have positive experiences in STEM. It's encouraging to be a part of.

Speaker: The important thing to know, my experience in calculus and math STEM has been positive for the majority.

Speaker: Except for the tests. I'm just kidding. [laughing]

Speaker: Make it optional. [laughing]

Speaker: To close it, it's been really positive and there have been some really greater people we've met along the way. We're not saying it's all bad, it's mostly good, but there are some things we can have conversations about.

Speaker: It's good to have conversations about these things, and it's not to overshadow all the good that has happened.

Speaker: I think that's all, unless you want to spend another 40 minutes talking? [laughing]

Speaker: We probably could.

Speaker: Thank you for listening, if you made it this far. Hi mom! How are you? [Laughing]

Bye, I guess!