

Annalies Corbin: [00:00:00] Welcome to Learning Unboxed. I'm very excited today to have with us our guest, Dr. Kimberlee Kiehl, who currently serves as Senior Vice President of Operations and Experience at COSI in Columbus, Ohio. So, we're really excited to have you here with us today.

Dr. Kimberlee Kiehl: [00:00:16] Thanks. It's great to be here. Thanks for inviting me.

Annalies Corbin: [00:00:18] Absolutely. And so, for some context for our listeners, so I have known Kim now for, at least, a decade.

Dr. Kimberlee Kiehl: [00:00:26] At least.

Annalies Corbin: [00:00:28] At least. And I-

Dr. Kimberlee Kiehl: [00:00:29] Maybe two.

Annalies Corbin: [00:00:30] Maybe two, Maybe two at this point. And over that time, I've known Kim in a number of roles. And those roles that she has played in the world of informal education museums and education makes her the perfect person to talk with us today about the power of informal ed, and its meaning in communities.

Annalies Corbin: [00:00:52] And over the years, she's also been Director of Museum Ohio Project at the Ohio History Connection. She has served as Executive Director of Smithsonian Early Enrichment Center. I met her; she was actually at COSI doing a lot of work with the Ohio STEM Learning Network in Battelle. For our listeners, go back and listen to some of the episodes where we talked about the formation of the Metro Schools, Design Challenges, the OSLN and Battelle's role in some of those early pieces. And so, it's been a fun journey over the years, Kim.

Dr. Kimberlee Kiehl: [00:01:26] It has been a fun journey, yeah. And it's been an interesting one moving -- I started actually in formal education and left formal education-

Annalies Corbin: [00:01:33] Exactly.

Dr. Kimberlee Kiehl: [00:01:33] ... to go into informal. So, yeah, it's been interesting.

Annalies Corbin: [00:01:36] So, that makes you the perfect person to have this conversation with us as we think about positive disruptions and how folks around the world can really think about utilizing and leveraging local resources, local entities, organizations, museums, opportunities, and really try to sort of transition the value and power of those experiences into the everyday in the classroom. And so, that's what I'm really excited to talk with you about. So, let's start with your current role at COSI.

Dr. Kimberlee Kiehl: [00:02:06] Yeah,

Annalies Corbin: [00:02:07] So, for folks who are not from Central Ohio, the Midwest, sort of explain to us what COSI is because this is one of those great gems that we have in the US.

Dr. Kimberlee Kiehl: [00:02:18] Yeah. So, I'm going to be bias probably, but I'm going to say that COSI is probably the best science museum in the world. So, we've been around a long time. COSI has a long history, Center of Science and Industry, where everyone calls us COSI. We have been open in our new location, which everyone still calls our new location, but for 20 years now.

Annalies Corbin: [00:02:39] Yeah. But it's just the old location, Kim.

Dr. Kimberlee Kiehl: [00:02:41] It's not the old one, but we're for 40. And, now, we're here. So, I think -- so, we're a place that both invites people in to experience STEM, and STEAM even with some of the things that we have there. And then, we're also a place that takes things out. We were the founder of programs like Camp-In, where you come and sleep overnight. We did the first traveling shows, our COSI in Wheel Shows, which we affectionately call COW Shows. So, we have a lot of things that we've innovated, and we're continuing to do that as we go forward.

Annalies Corbin: [00:03:15] Right. And so, let's talk about how a community that has such resources, and Columbus truly does. We are, I think, a rare community that we have a symphony, we have an opera, we have rock theater, we have amazing arts programs, we have science center that's COSI is just off the charts, we have an amazing zoo and aquarium, and the list goes on and on in terms of those types of resources.

Annalies Corbin: [00:03:43] So, I want to make sure that when we have this conversation that folks recognize that it doesn't always have to be that big, giant, flashy place. The reality is those places are successful because they fundamentally understand the value of the applied, hands-on, immersive experience. So, let's talk about that a little bit. So, I'm just a community out there, and I have some limited local resources, but I really want to understand how is it that the informal education world - museums and science centers, in particular - are able to capitalize on those local resources and turn them into something tangible for students.

Dr. Kimberlee Kiehl: [00:04:20] Yeah. So, I'm going to actually use an example of something that COSI is about to do this year, which is the big science festival. So, for four days, we are organizing, really helping to organize, not necessarily run all of it, a science festival that will cover, really, the whole community outside Columbus. And it's a great example of how we're helping a community to activate the STEM that's already in their community, and make it visible to people, and invite people to see it.

Dr. Kimberlee Kiehl: [00:04:56] So, there'll be events that will take place across three days in the communities all around the city. And then, that'll be capped by all of those places coming together outside COSI for a huge one-day science festival outside the building. So, it's really saying we don't have everything. We're going to help you see what you have, and we're going to help you make it visible, which I think is an important role for a museum to play. It's not always about come see us, come see us, come see us; although, we love when you come see us, but it's also about what do you have here, and how do we help you find what you have here, and how do we help you bring that to the forefront? And that's one of the things that we're really excited about, and one of the

ways I think museums are changing. They're going out into communities in different ways and engaging students and families in different ways.

Annalies Corbin: [00:05:47] And I think the other piece that it's joyful to see and to get to experience -- and PAST is participating in the COSI Science Day.

Dr. Kimberlee Kiehl: [00:05:56] You are.

Annalies Corbin: [00:05:56] I mean, everybody who has a hand, quite frankly, in playing out in the world and our community is and should be engaged in that activity because, to your point, it's really about the eclectic set of resources that we have that we can think about very differently, and we can put them in play in an educational space.

Dr. Kimberlee Kiehl: [00:06:16] Right, exactly, yeah. And one of the pieces that we're doing leading up to this the Science Festival is where naming these STEM stars. And so, there's this whole variety of people that are just in your neighborhoods that range from Dom Tiberi and the programs he's been doing about preventing texting while driving, to an Eagle Scout who did a project with a creek that. That was his Eagle Scout Project. So, there's a whole range of people that were starting to say, "But look, that person is a scientist. They're doing science." And we're starting to recognize that in different ways. And I think that's a really fun piece that we can do.

Annalies Corbin: [00:06:57] Yeah. And I think that the other thing that it does for any community, large or small, is it helps folks recognize that the reality is science, just like language and so many other things, is interwoven in every aspect of every single thing that we do. You can't really separate it out. That's one of the big pushbacks, for example, that we collectively see with the acronym, whether it's STEAM, or STEM, or anything else. And you've seen so many acronyms. Some, I can probably recall. I collect them, and I've seen a million of them over the years.

Dr. Kimberlee Kiehl: [00:07:29] I know, right

Annalies Corbin: [00:07:30] Right?

Dr. Kimberlee Kiehl: [00:07:30] Yeah.

Annalies Corbin: [00:07:30] And every time I see a new one, I'm like, "Hi." It's a reflection of not understanding the basis by which the world we live in operates and function that is fully, fully intertwined. And so, I do love this approach because it reminds us frequently that the graphic artist is as much as a scientist, as the person working in the lab, and so on.

Dr. Kimberlee Kiehl: [00:07:54] Yeah. It's interesting to me, one of the things you hear people talking about all the time is they say, "Well, you do STEM all the time. When you cook dinner, you do science." And when I think about that, when I'm cooking dinner, I'm not thinking, "Oh, I'm doing science."

Annalies Corbin: [00:08:07] Of course not.

Dr. Kimberlee Kiehl: [00:08:09] So, to me, I try to say science is all around you all the time. It's always happening. It's not that you're cooking dinner and saying, "Oh, I'm doing science now," but science is happening while you're doing it, right?

Annalies Corbin: [00:08:22] Yeah, absolutely.

Dr. Kimberlee Kiehl: [00:08:22] And so, how do we make that visible for you in a way that you're like, "Oh, that's pretty cool. I didn't know that," so.

Annalies Corbin: [00:08:28] And I think, how do we make the connections? That's the other piece, right?

Dr. Kimberlee Kiehl: [00:08:32] Yeah.

Annalies Corbin: [00:08:33] To ensure that we are taking the amazing content that's out in our communities and in our environment, and we're showing the way it all connects. That it is, in fact, this collective set of stuff that is our community.

Dr. Kimberlee Kiehl: [00:08:46] Yeah. I think the other thing that informals do - so, museums, science museums, in particular, we're talking about, but others as well - you'll hear people talk about informal learning, but, sometimes, they'll also talk about free choice learning, which is the phrase I really like because, I think, one of the advantages that we have, that informals have, is that people are choosing it. They're making the choice to come and learn. And if you think about things that you've learned, and the things you know really, really well, I'd be willing to bet, you didn't get that in school. Some things you did, but a lot of those things, you got outside. So, there's a great piece by John Falk and Lynn Dierking called the 95% Solution that says, people will tell you, 95% of what they know about science, they didn't learn at school. They learned it through something else. And so, when you're making the choice to learn something, you learn it differently than if you're being forced to learn it, right?

Annalies Corbin: [00:09:46] Absolutely, absolutely.

Dr. Kimberlee Kiehl: [00:09:46] So, that, we have this opportunity to hook people, and get them interested, and then let them make the choice, and then help them to go deeper-

Annalies Corbin: [00:09:56] Absolutely.

Dr. Kimberlee Kiehl: [00:09:57] ... which I think is a great piece.

Annalies Corbin: [00:09:59] And I think you're 100% correct. When I think about my own personal journey, it has been so many places and in such a variety that the reality of it is, absolutely, I learned a lot in school, I learned so much more out in the world, right?

Dr. Kimberlee Kiehl: [00:10:12] Yeah, absolutely.

Annalies Corbin: [00:10:14] But part of that was because along the way, I found myself in environments where the learning to learn, and the understanding, and the value, and the power of learning, and that it's a lifelong experience was fully ingrained. And I think part of that comes from the, sort of, wrap-around opportunity, if you will, of taking formal, and informal, and the world of experience, and curiosity that I had and rolling altogether. So, talk to me a little bit because I do want to talk about the work that you were doing at the Smithsonian because it's an intriguing intersection in these ideas that I suspect actually lends itself to a lot of the way that you think and you approach the work that you're doing today. So, give our listeners just a little overview about what the program was and where the value in it was for you.

Dr. Kimberlee Kiehl: [00:11:06] Oh gosh. That's a big question. So, Smithsonian Early Enrichment Center is a school that lives inside the Smithsonian Museum, serves infants through a licensed kindergarten. So, some people, I think, would look at and say, "Well, that's child care." It's not child care. It's education. The really interesting thing about SEEC was that the classrooms were just sort of a landing place. The learning took place out in the museum.

Annalies Corbin: [00:11:35] Exactly.

Dr. Kimberlee Kiehl: [00:11:37] So, we would take the kids, even the babies, out into the museums to see pieces, to discuss things, to connect them back to things that were happening in the classrooms. So, the toddler classroom, for example, might be talking about animals. And in their classroom, they might have some activities that involved plastic animals, and rubber animals, and photos. But then, they would go into the American History or the Natural History Gallery and look at the beautiful photographs and have a discussion about those. And so, really, we were teaching using these great treasures, but, more importantly, we were teaching using questions. So, we would encourage them to ask their questions. And as they ask their questions, we would help them find those answers, and then find the next question. So, not just find the answer and move on, but what's the next question you have.

Annalies Corbin: [00:12:31] And that's the learning to learn piece, right?

Dr. Kimberlee Kiehl: [00:12:33] Absolutely.

Annalies Corbin: [00:12:33] Which is absolutely foundational.

Dr. Kimberlee Kiehl: [00:12:35] Yeah. And I think you said a word that's so important, which is curiosity. I think that in these free-choice settings or in settings like SEEC, what we're really building on is your curiosity. And we really try to draw your curiosity out and encourage that. And once you're curious, then you'll learn, and you'll learn differently than if you're just like, "I have to learn this for a test. I have to learn this because I have to get a grade on a test."

Dr. Kimberlee Kiehl: [00:13:02] So, I tell people all the time, I have a PhD, but almost everything I know about science, I learned at COSI, almost every single thing because I had an experience, and then I got curious, and I wanted to know more about it. And then, I looked some more. And then, I'd go downstairs and say something to somebody. So, almost everything I "know" about science, that's how I learned it. So, that's what SEEC does, but it starts from the time they're babies. And then, hopefully, they continue that through life.

Annalies Corbin: [00:13:32] Right. And that's one of those things, I think, that is very foundational. And I think that's one of the other places where, certainly, for me, in my own journey, and the work that we do at PAST and the Innovation Lab, has really been through that space of I want to provide an opportunity to learn as much as I can through my innate curiosity, and the opportunity to take whatever the concept is. Maybe it's drones, maybe it's biology, maybe it's how better to filter sunlight in a variety of environments. It doesn't make any difference what we're looking at, what we're exploring, but I have to be able to ground that in something that's tangible and meaningful to me.

Annalies Corbin: [00:14:10] I also have to have a personal connection. That's the other piece in this equation that is one of the cornerstones of making that sort of foundational

learning how to learn and being a lifelong learner has to come in. I have to be able, as a human, to find the connections. The connection piece, how then -- for example, part of your tenure has also been through the Ohio History Project, and that's all about taking something and finding a way to make it relevant right now in this moment. How do you do that? Because teachers struggle with this all the time.

Dr. Kimberlee Kiehl: [00:14:47] Teachers do struggle with it. I mean, people struggle.

Annalies Corbin: [00:14:49] Exactly, exactly.

Dr. Kimberlee Kiehl: [00:14:49] I mean, museums struggle with it. Everybody struggles with it. I think there's a couple ways. I think one is through questions. So, if you ask the right question, you can find out what somebody is interested in. And then, you can take them to that next place. But I think story is really powerful too. And I think that we haven't used story enough. History museums tend to be pretty good about using story, but even there, those stories, sometimes, are abbreviated stories, or they're the story that the curator wanted to tell as opposed to this more broad story. So, one of the things that that I've been thinking about, I was lucky enough to see Hamilton on Friday night.

Annalies Corbin: [00:15:30] Oh, you are lucky.

Dr. Kimberlee Kiehl: [00:15:31] And as I'm watching it and afterwards, I'm thinking, That's a great use of story to to draw you in. And all this stuff that I learned about Hamilton that I never learned in school, I just learned in two hours sitting in this musical because this story pulled me in.

Annalies Corbin: [00:15:53] Exactly.

Dr. Kimberlee Kiehl: [00:15:53] So, how do we use those things in different ways? And I think museums have this really unique opportunity to do that - science museums, history museums, art museums, all of them.

Annalies Corbin: [00:16:03] Yeah, they really do a beautiful job with that. And so, I want to spend a little bit of time talking about how we take that experience, that knowledge base, and we help communities think about incorporating that into the everyday in a traditional setting. So, back into the classrooms. And COSI does a lot of work in the space with a lot of others in and around the world that are really thinking about how we make tangible transitions into an applied, hands-on environment. So, as we really embrace 21st Century and the opportunities that are coming in rapidly crazy, and technology, and all the influences coming in, how do we keep what's happening in that particular moment still relevant? And I think that applied is one of the ways that we can do that. So, what's COSI's, sort of, approach with us?

Dr. Kimberlee Kiehl: [00:16:53] So, you know what, I think that's a good question. I think, museums, in general, are sort of struggling with that interface between school and informal. And do we try to fit into school? So, you'll see. And we do this. We design our programs based on standards and all of the things because that's what a teacher needs to justify. I think, we need to think a little more about how we complement the formal as opposed to how we fit in to the formal, and how do we provide this, sort of, other thing that says, "Okay, here's what they're learning in school. Here's another way to look at it, and here's another way to think about it." I think museums are really struggling with that right now. Schools are struggling with it.

Dr. Kimberlee Kiehl: [00:17:47] So, we still go into a ton of schools. We bring programs in, we bring workshops in, we do all of those things. But I worry a little that those are one-shot things. And are they really changing what's happening? We've done some programs, and a lot of museums are doing programs where they're really working to help teachers think differently about their work. So, to use inquiry in a different way. And that's great if they go back to a system where that's supported.

Annalies Corbin: [00:18:19] Correct, correct.

Dr. Kimberlee Kiehl: [00:18:20] But if they go back to a system where it's not supported, then you know. So, I think, it's an interesting dilemma is, how do we fit in to

this ecosystem rather than be so focused on how to change a school system that I'm not sure we can change really.

Annalies Corbin: [00:18:39] Yeah. I mean, we certainly have that particular conversation a lot with Learning Unboxed about whether or not we should spend time, to your point, trying to change the system, or reimagine the system, reinvent the system, take your pick. But I think that maybe there's a soft spot in between those scenarios. And I guess that's what I am hopeful for. I don't know that I necessarily say "Yes, there is in fact," but I think that there is an opportunity for formal to adopt more of the informal ethos.

Dr. Kimberlee Kiehl: [00:19:16] Absolutely.

Annalies Corbin: [00:19:18] And I think that that's the, sort of, spot in between because you're right, you can't go in, especially in a system that may or may not be supportive of that more inquiry or applied-based approach and move that needle very far. It becomes a great workshop for somebody who wanted to give that a try, but it has no long-term impact on practice. However, somewhere along the way, there has to be that moment where the influence or the way that the individual thinks about or approaches what the teaching and learning in their classroom is, that can have more of those opportunities. And I do think that organizations like COSI have a meaningful role to play in that space.

Dr. Kimberlee Kiehl: [00:19:56] Yeah, absolutely. I think that's absolutely true. And we've actually seen that. So, we have, for example, some teachers, some schools that come back year after year, after year, after year because they had an experience and went, "Oh my gosh. I could think differently about what I do," or "I could think differently about how do I engage kids. So, how do I find out what they're interested in, and then link my curriculum to that?" So, we see that soft spot in that place in the middle. We see that happen. And that's always really encouraging when you see that happen. I do think you're right, there's more room for that to happen. And I think we could play a pretty significant role in that. I think things like the programs that we do help with that, but I think it's also, how do we get out into the community in a different way, like a science

festival or like some of the other work that we're going to do, that, really, it changes a larger community, so the conversation around the school is different too, right?

Annalies Corbin: [00:21:01] Exactly, exactly.

Dr. Kimberlee Kiehl: [00:21:02] And that's a key thing, right? If we can't change the course of the conversation, we can't ask a different set of questions.

Dr. Kimberlee Kiehl: [00:21:06] Right, right.

Annalies Corbin: [00:21:07] And I often have this conversation out and about. I'll be brought into a community to talk about a variety of different ways that they could think about teaching and learning, formal or informal very differently. And one of the places I almost always find myself in that giant thought bubble and those conversations, usually, sooner rather than later in a conversation is, "I'm really concerned that we're not even asking the right questions here." And I think that there's something to be said for that.

Annalies Corbin: [00:21:32] So, with that in mind, one of the other things that I think that COSI does really well, and I think that many communities would benefit from somebody in the community really taking that role, is that intersection between economic and workforce development from the business and industry side of what's happening in our community, and how that tangibly applies to the learning in the spheres of sciences, in particular, right, because I do think lots of business and industries who are doing amazing, crazy, awesome work, and are clamoring for people ready and qualified to move into their industry, have no idea how to tell the story of who they are and what they do in such a way that students will imagine that as a possibility. And COSI is a really great linkage there. So, talk a little bit about that role.

Dr. Kimberlee Kiehl: [00:22:21] Yeah, I do think we're a really great linkage there. And I think that, we have current programs where that happens. We have some new programs that will be coming up that you'll hear about soon where that's going to happen even more strongly. But I think one of the things that we do in a really

interesting way is help people, help children, students to see careers that they didn't even know existed-

Annalies Corbin: [00:22:45] Exactly.

Dr. Kimberlee Kiehl: [00:22:45] ... let alone think that they could do. So, for example, one of the programs we do is we broadcast live knee replacement surgery. Dr. Politi, he's got a head cam on, and he's talking, and you're watching this knee surgery, and he's-

Annalies Corbin: [00:23:01] I've seen it. And it's awesome. The kids love it.

Dr. Kimberlee Kiehl: [00:23:02] It's amazing, right.

Annalies Corbin: [00:23:04] Yeah.

Dr. Kimberlee Kiehl: [00:23:04] The kids love it.

Annalies Corbin: [00:23:05] They do love it.

Dr. Kimberlee Kiehl: [00:23:06] But when we broadcast it into places that he's also going around and saying, "This is the anesthesiologist." This is..." So, you don't have to be a doctor to be in the medical. You can do this, and you can do this, and you can do this. And we hear back from students all the time, "I don't even know that job existed." So, I think part of what we can do through our outreach programs, to things that happen in the building, through our website, through digital pieces, to all sorts of things is help students to see the possibilities that are out there. And even more than that, the possibilities we don't even know are going to happen yet.

Dr. Kimberlee Kiehl: [00:23:42] So, there's a lot of data about the fact that in 20 years, the jobs that will exist don't even exist now. So, it's about this way of thinking and way of being, so that you can fall into those careers when they come along. But it's also about there's this whole world out there that you didn't know existed. And I think that's

particularly true in the STEM field because I think those jobs tend to get very stereotyped. And so, the ability to let them see this whole wide range of things is a really interesting thing.

Dr. Kimberlee Kiehl: [00:24:21] I remember, I just recently was talking to a group of kids, and I said to them, "Well, I'm a scientist." And they said, "You're not a scientist." "Yeah. I did research, and I was tenured at a university, I'm a scientist." "Oh my gosh. So. wait, you can do science on people too? You can study people?" "Yeah, you can." And so, letting them see that, I think, is really interesting.

Dr. Kimberlee Kiehl: [00:24:45] I think the other thing that we do that's been really interesting is we have Labs in Life at COSI, right? So, OSU researchers doing their real work are doing their work in the building, so the public, now, can understand what is research, and why do we do it. And, "Oh wait. I can be part of it too? That's really cool." So, breaking down those barriers, I think, is something that science museums can do really well.

Annalies Corbin: [00:25:12] Yeah. And that's definitely one of the things that we see on an ongoing and regular basis and fully supportive. We bring a variety of different researchers or programs in house with us at the Innovation Lab for the very reasons you stated. It's not even just that I can't be what I can't see, I can't do what I don't know. We talk about that a lot at PAST. To your point, it's both exposure to things, but it's also experiencing them as well, right?

Dr. Kimberlee Kiehl: [00:25:38] Right, right.

Annalies Corbin: [00:25:39] And to be able to go from, "I didn't even know that job existed," to "Could I have a taste of what that might be?" And the hope along the way is that you figure it out. "I really don't want to do this thing. I thought I wanted to do that because I saw it in popular media, or I know somebody that did that. But then, I tried it, and I really want to try this thing over here." And the value of that cannot be understated.

Dr. Kimberlee Kiehl: [00:26:04] Yeah, absolutely. My son has just, actually, yesterday, sent me a picture of my granddaughter, who's six. COSI in Wheels was at her school. And there's this great photograph of her with her lab coat on, and her safety glasses holding a test tube up, and looking at this test tube. And I looked at this picture, and I thought, "What if that's the moment..."

Annalies Corbin: [00:26:23] Exactly.

Dr. Kimberlee Kiehl: [00:26:23] "... where she was like, 'Oh, this is so cool. I love this stuff. I want to do this forever.'" We don't know if that could have been her moment. And I think that's what we can do. We are a place where you can discover your moments and say, "Oh wait. That's really interesting. I want to know more."

Annalies Corbin: [00:26:39] Right. And the power of that moment cannot be understated.

Dr. Kimberlee Kiehl: [00:26:42] No, absolutely.

Annalies Corbin: [00:26:43] And I think that as we think about moving forward and what does, or should, or could education in our country and around the world look like one day, I'm horrifically bias, right?

Dr. Kimberlee Kiehl: [00:26:57] Yeah, me too.

Annalies Corbin: [00:26:57] I want to drive -- I've said this many times, but my idea of the perfect high school of the future is I drive into a community, and I stop at the first business on the edge of town and say, "I want directions to a local high school," and the response from the person standing behind the counter or speaking to me is, "Well, what part of high school you interested in because the kids who are interested in healthcare, they're all at the hospital. And the kids that are interested in science, they're over at that research center. And the kids that are interested in social justice, they're all down at the city center," and just on and on. And the reality is it's not a single place. It's a collective set of experiences.

Dr. Kimberlee Kiehl: [00:27:35] Yes, exactly. Exactly.

Annalies Corbin: [00:27:37] To me, that's the moment.

Dr. Kimberlee Kiehl: [00:27:37] That's the perfect, right?

Annalies Corbin: [00:27:40] Right. But we can't embrace that moment and truly not miss the opportunity to catalyze your granddaughter's movement if we also don't show children and our communities a way to embrace our passions, that thing that inspires us the most, as an actual career opportunity.

Dr. Kimberlee Kiehl: [00:28:02] Right, right.

Annalies Corbin: [00:28:03] And that's a real different sort of way, not just to think about it or approach it, but to try to work to ensure that folks can go, and live, and work their passions.

Dr. Kimberlee Kiehl: [00:28:13] Yeah. And I think we have to do that. And I think we also have the, "How do we catalyze and keep that sense that she has as she's looking at that?" Like I look at that picture, and I'm so afraid that three years from now, she's going to be like, "I have to go to school," or "I don't want to do this." We suck it out of them.

Annalies Corbin: [00:28:35] We do.

Dr. Kimberlee Kiehl: [00:28:35] And how do we capture that and keep it going-

Annalies Corbin: [00:28:39] Keep it, yeah.

Dr. Kimberlee Kiehl: [00:28:40] ... and say, "Okay, what's next for you now? What could we offer you next? Look, how excited you were. What's the next thing for you?"

And so, my dream would be that that's not just high school. That's how elementary schools are, right?

Annalies Corbin: [00:28:52] Yeah, exactly, exactly.

Dr. Kimberlee Kiehl: [00:28:52] That you start out early, you find these things you love, and you have these experiences that happen all over the place, and you get to develop that passion, and what you leave school with is a love for learning as opposed to a degree that says, "You passed six exams," or whatever it is.

Annalies Corbin: [00:29:11] Right, right, yeah, because who cares. Because, back to your point, that's not going to be tangible down the road.

Dr. Kimberlee Kiehl: [00:29:19] No. And you're going to forget most of it anyway.

Annalies Corbin: [00:29:21] And you do, you do. I mean, how many times have you asked a young person in their 20s, "Tell me about some of your most wonderful memories," they're rarely about sitting in a classroom.

Dr. Kimberlee Kiehl: [00:29:33] Right, right.

Annalies Corbin: [00:29:34] That is a rare child. They will tell you about some grand adventure they had their families in a national park. They will tell you about this great thing that they they did one weekend out in the snow. It's a long list. Quite frankly, it's the experiences that stick with us.

Dr. Kimberlee Kiehl: [00:29:49] Yes, because that's how things go into memory, right?

Annalies Corbin: [00:29:51] It is, exactly. And so, once again, that lets us come full circle to the power of that applied experience, that real hands-on, fully enriched, the ethos that is, in fact, informal learning and how to bring that back in. So, for our folks that are out in the world that don't have a COSI, and the closest COSI is 150 miles away. So, I'm a teacher, and I want to do everything that I just heard Kim Kiehl tell me

were so wonderful about the opportunities to help folks learn. How do I do that? What are your, sort of, parting shots to folks who say, "I'm ready to run down this road, and I am in a system that's going to fully support me. So, how do I start to bring more of this into my every day?"

Dr. Kimberlee Kiehl: [00:30:33] So, I think, the first thing that I say to them is ask more questions, right. So, instead of looking at your kids as a group, look at your kids as a group of individuals, and ask more questions, find out what this child's interested in, what is this child like, what is this child interested in. It takes a little more time, absolutely, but it's so much more enriching, even for the teachers. So, again, at SEEC, that was one of the things that our teachers knew everything every child was interested in, and they knew how to then take it to the next place for them.

Dr. Kimberlee Kiehl: [00:31:06] And what they found and what I think most teachers find is that there's some things in common. So, it's not like you have to individually plan for 30 children. You're individually planning for groups of five, whatever it is. So, ask more questions. And then, think outside of the classroom. What are the things that you can bring in that are maybe from the park down the street or that are maybe from the building across the street. Maybe it's the architecture? Who knows what it is? And then, also, think about how do you turn that interest, how do you nurture that curiosity, so that you can weave things in, right?

Annalies Corbin: [00:31:48] Right.

Dr. Kimberlee Kiehl: [00:31:49] So, you can weave in writing if they're curious about it. You can weave in all those other things, but you have to know who they are first. So, that's that's always the starting place that I'll tell people. And I think that's one of the things that we try to capture with some of the things that we do as well. I think, it's interesting, museums are going to have to reinvent who they are. So, science museums, in general, attendance is on the decline across science museums across the country but across the world. And I think that's in part because you can get it on your phone. So, you can have a 3D experience on your phone now with a 25 cent Google Glass. So, I think, we have to think about how do we become this place that's not seen

as a museum, that's seen as a place where you come and have a set of experiences that nurture your curiosity and that really help you satisfy that curiosity. We're not a museum in, sort of, that traditional sense.

Annalies Corbin: [00:32:56] Right, right. And I think that's an interesting quandary because on the one hand, it's rare to meet somebody who once you get them going down the road who've experienced a museum will tell you what they love about a museum because it is a wonderfully immersive experience. The flip side of that is it's terribly old school in some respects, back to your point. So, how do you, not just as an institution, reinvent yourself, but, culturally, how do we embrace it as something different, as part of our evolution? So, I think it's really key thing not to lose sight of.

Dr. Kimberlee Kiehl: [00:33:31] It is a key thing. And I think it's also important because there's a percentage of the population who sees museums as not for them.

Annalies Corbin: [00:33:38] Correct.

Dr. Kimberlee Kiehl: [00:33:39] So, if we really want to be a place that's for everybody, which is absolutely what COSI wants to be, then we have to think about how do we change that conversation and how do we help people see us in a different way. And I think things like the Science Festival are a first step for that, but I think there's a lot of other things that we all need to think about to change that conversation about who we are and what we do.

Annalies Corbin: [00:34:07] Right, right. We talk a lot of times with folks when they're really contemplating, "What might it look like if we're going to embrace something or utilize resources differently in my town?" And one of the first places I often see folks go that, I think, this conversation sort of lends itself around that caution is that there is truly no one-size-fits-all. And let that go, to your point.

Dr. Kimberlee Kiehl: [00:34:33] Right, exactly.

Annalies Corbin: [00:34:33] We are a collective group of individuals as it relates to the way that we think about scaffolding the opportunity to learn for our students. But it's also not that it's just that there's not one-size-fits all, there's not truly an off-the-shelf, out-of-the-box approach that it's going to be the answer.

Dr. Kimberlee Kiehl: [00:34:52] Right, absolutely.

Annalies Corbin: [00:34:53] And so, you have to be willing to recognize what you have, what you need, and to grab resources - and I use the term resources very generally and broad in this case -- in any community to tailor, so that what is happening is reflective of the community itself because if we can't get at that most granular level, you will never capture folks long enough to engage in the experience with you, because they will get bored, they will get turned off, they will walk away-

Dr. Kimberlee Kiehl: [00:35:21] Right, and they'll leave.

Annalies Corbin: [00:35:23] They will believe, "The museum is not for me." And that's on us in many ways.

Dr. Kimberlee Kiehl: [00:35:26] Yeah, absolutely. It's absolutely on us. And it's something I think that we're all really grappling with right now, and it's become, sort of, top of mind for a lot of places these days. Yeah.

Annalies Corbin: [00:35:36] Yeah, as it should be. But, also, I want to make sure that we end on a high note that is, there are so many opportunities and options out there stretched around the world that reconfigured, rethought, regrouped, can suddenly be amazing experience.

Dr. Kimberlee Kiehl: [00:35:54] Yeah, absolutely. And that's partly why I like that phrase "free-choice learning." So, again, if you go back to SEEC, we didn't just use the museums. We went to the bakery up the street, and we went to the post office, and we went to the Metro stop and rode the Metro, we went to the airport. So, all of those places are places for free-choice learning.

Annalies Corbin: [00:36:19] Exactly.

Dr. Kimberlee Kiehl: [00:36:19] Right?

Annalies Corbin: [00:36:19] Yeah.

Dr. Kimberlee Kiehl: [00:36:19] You just have to know where you can go to keep that curiosity going. What's the next thing? And it doesn't have to be a museum. It's great if you have a museum, but if you don't have a museum, there's a hundred places in your community where you can learn.

Annalies Corbin: [00:36:34] Oh, yeah. Oh, yeah.

Dr. Kimberlee Kiehl: [00:36:34] A hundred places.

Annalies Corbin: [00:36:36] Absolutely. One of my all-time favorite PAST stories, which I know that you'll be able to relate to, is we were working in a community in rural South Dakota. In this case, Armour, South Dakota. Tiny, tiny, little place. And I'm trying to do something really fun and new, thinking about chemistry, in particular. And so, we took the kids, and we spent the day with the local taxidermist.

Dr. Kimberlee Kiehl: [00:36:57] Yeah.

Annalies Corbin: [00:36:57] Right?

Dr. Kimberlee Kiehl: [00:36:58] That's awesome.

Annalies Corbin: [00:36:59] Exactly, because it was so incredibly tangible in that community, which is a big hunting and fishing priority. And quite frankly, the taxidermist there, as it turns out, has projects come in from around the world because he's so good at what he does. And the entire shop, and everything that he did, and all the process we

took the kids through was about the everyday stuff that he does, which completely related to the stuff that they had to learn.

Dr. Kimberlee Kiehl: [00:37:23] Absolutely.

Annalies Corbin: [00:37:24] And suddenly, it went from, "I don't want to learn about that chemical process," to "Oh my god. I understand this. And what would happen next if we do this?"

Dr. Kimberlee Kiehl: [00:37:31] Exactly. That's exactly what the power of it right there.

Annalies Corbin: [00:37:34] It was.

Dr. Kimberlee Kiehl: [00:37:34] It's amazing, yeah.

Annalies Corbin: [00:37:36] And that is quite frankly available in every single community.

Dr. Kimberlee Kiehl: [00:37:40] Yeah. You just have to think about it a minute.

Annalies Corbin: [00:37:42] Yeah. You just have to find the thing that you have that resource, and you've got to go there, and make it part of your every day.

Dr. Kimberlee Kiehl: [00:37:48] Yeah. And I think that's the thing that I really like about the Science Festival is it's those kinds of places-

Annalies Corbin: [00:37:53] Exactly, yeah.

Dr. Kimberlee Kiehl: [00:37:53] ... that are being featured in each of these communities, right? So, it's not the science centers. It's the local taxidermist or the local guy who builds prosthetic legs.

Annalies Corbin: [00:38:04] Yeah, exactly.

Dr. Kimberlee Kiehl: [00:38:04] Or the guy who builds rockets on the side or whatever it is. And that's how you garner that excitement and that personal connection. This is my community, this is my guy.

Annalies Corbin: [00:38:15] Exactly, yeah.

Dr. Kimberlee Kiehl: [00:38:16] So, yeah.

Annalies Corbin: [00:38:16] That's the beauty of it.

Dr. Kimberlee Kiehl: [00:38:18] Yeah, absolutely.

Annalies Corbin: [00:38:20] Well, it has been a true pleasure, Kim.

Dr. Kimberlee Kiehl: [00:38:21] Well, thanks. It's a great-

Annalies Corbin: [00:38:22] Thank you so very much for sharing your story and the way that you're thinking about how communities can embrace and think about informal education as the next rule of the roads. So, thank you.

Dr. Kimberlee Kiehl: [00:38:33] Well, thanks for having me. I really appreciate it. It was fun. It was really fun.

Annalies Corbin: [00:38:36] Good, excellent. Thank you. Thanks.