When Children Ask "Why?": STEAM Sharpens Their Inquiry Skills
Teacher Time

[music plays]

Dawn Williams: Welcome to Teacher Time. I'm Dawn Williams.

Kristin Ainslie: I'm Kristin Ainslie.

Dawn: And we are your hosts for the show. We both work here as curriculum specialists at the National Center for Quality Teaching and Learning and we've both been classroom teachers. All right, so today we are going to be sharing some information with you about what we mean when we're talking about inquiry skills and how to foster children's thinking. It's this instructional interaction, these instructional moves that you're doing in the classroom, and they are really pertinent to STEAM. So that's why we're talking about that today. Then we will also have a short clip of one of our experts, Dr. Ximena Dominguez. She will talk to us about how to use scientific method to foster children's thinking skills, as well as an interview with a local Head Start teacher, Daren Chamberlin, about how he does that in his classroom.

Kristin: So then we're going to do *Try it Out!*, our *Try it Out!* section. And here we're going to show you two examples from teaching from classrooms that show you teaching practices that you can try in your classroom immediately after watching.

Dawn: That's right, and then we will have some resources to share with you, Dr. Gail Joseph will be here with us for Resiliency and Wellness, and then we will close.

Kristin: All right.

Dawn: All right. So, today we know that children are naturally curious, and they are very good about asking why. I hear a lot of why questions on a daily basis. I'm sure you do as well. And all that natural curiosity is a good thing. It gives us an opportunity to capitalize on those questions to foster children's thinking skills.

Kristin: Right, inquiring minds want to know.

Dawn: They do.

Kristin: Children want to know about things. And we want them to want to know about things. So inquiry is an approach to learning, and it fosters children's thinking skills. So we want children to become involved and engaged in activities that spark their curiosity and lead them to ask questions to further their own understanding.

Dawn: Yeah, and this is important for a number of reasons, but one of them, as we're talking about STEAM this year, in order to develop those type of skills that you'll need to do STEAM activities, children will need to develop their thinking skills. This is a skill that's pertinent to the age we live in. It's not the Industrial Revolution anymore, it's not like one piece of machinery goes into another piece. It's the technology age. There's a lot more thinking you need to do.

Kristin: That's right, the age of technology. So we want our children to be able to ask questions, think critically about things. And then in order to do that, we want to give children opportunities to practice approaching problems with initiative and curiosity and persistence.

Dawn: Absolutely, it's all that approaches to learning out of the Head Start Child Development Early Learning Framework. Everything that's in there, they're going to have to even know what a problem is and identify it and stick with it in order to do some of those things. All right, and another thing is children will need to know how to learn to think creatively and find new ways and solutions to solve problems. So I think about every time there's a new iPhone, those updates happen pretty quickly. There must have been something that wasn't quite working or needed to be improved upon, so someone had to think creatively about that in order to make those improvements. So, and that's not just for technology jobs. I think about how teachers are always the ultimate problem solvers --

Kristin: Ultimate problem solvers.

Dawn: And there's lots of different children in your classroom with lots of different skills, and you can't always do the same thing with one child that you do with another child or the same thing that you did last year, for that matter. So it's just that creativity that's in people and the initiative to identify some of that and also the persistence to try something new or different to solve all that. So it's those kind of skills that we're talking about today. And as you mentioned before, having the opportunities to practice those things, but also to set up your environment so that it just fosters -- so your environment's set up to foster some of that inquiry.

Kristin: That's right, the materials are there, the materials are new. Maybe there's not a structured way, but just seeing what children will do with the materials. We're going to hear a little bit from Daren as we go on today. So there's a lot of ways to foster children's thinking skills and some strategies that we want to leave you with today. One is creating opportunities for children to solve problems. So kind of Daren will talk about the world "problematize." So creating small problems in the classroom for children to work out on their own. Making learning meaningful and connecting the learning to children's lives. So really making it authentic to what the children in your own classroom are living, are going through, see every day on a daily basis. So asking how and why questions that help children think about ideas. So maybe thinking about asking those questions and then following up your questions by expanding on children's answers. So it's not necessarily just why do you think that happened, how did that happen, which are great questions to ask, but it's really the follow-up from your question and expanding on the children's answers that takes us to another level for children.

Dawn: Yeah, absolutely. Some other strategies are to link new concepts with previous learning and also to help children predict what they think is about to happen next. I was volunteering in my daughter's classroom, and they were working with coffee filters, so you know the art activity where you draw with markers on the coffee filters and you spray it with water? And so I kept asking, so what do you think would happen when the water hits the square or the rectangle you just drew? And that question was a little bit hard, because asking "would" was kind of implying for them like they would know what was going to happen. So in retrospect when I was reflecting on it, and the next time I'm in there I can follow up and ask, what could happen, like what are the possibilities, which really gets into thinking about teaching children how to brainstorm new ideas or to think of something in a new

way. It's possibilities and just the opportunities to brainstorm and giving children things to do and ways to do that.

Kristin: That's right, so any idea that they would have come up with would be a great idea to try, right? Instead of sort of a test, it's more of let's think of the possibilities, right? That's great.

Dawn: Yes, let's think of the possibilities and form a hypothesis and make a guess about what's going to happen. And then teachers can also model for children how to compare and contrast similarities and differences as you're getting into an experiment, which is going to be really great when we see Ximena's video, because she's going to talk a little bit about that.

Kristin: Good. Okay. So fostering children's thinking skills. So we gave you a little bit -- a few strategies there, but what does it look like and what does it not look like? And this is where it gets kind of -- we want to distinguish a little bit for you. So thinking about classroom interactions that focus on the big ideas and deepen children's knowledge of the world around them. So what it's not, it's not drilling children on facts, it's not sort of that concrete, rote knowledge. And so we want to know what children know, so we want to ask them questions, but it's more of allowing them to show us what they know in terms of how they answer questions.

Dawn: That's right. So, for example, if you were using how and why questions that help children think about ideas, what that might look like is if you were reading a story about your emotions, you might ask, "How do you think that made her feel?" or "Why do you think that?" But it's not, if you were reading a book that had a number of different animals in it, like, oh, *Good Night Zoo*. Like, what is the name of this animal, or what color is this house? It's not necessarily about going after one correct answer. You do want children to identify those things, but it's more about thinking about what's happening as you're doing that.

Kristin: I love that. That's great. So another example that we can give you, creating opportunities for children to solve problems, experiment, figure out how things work. So think about if you were in the block area, right? It's an activity we all do a lot with children. Asking questions that are more... what do you think will happen if we add more blocks? There could be lots of different answers to what you think will happen. And then why do you think that will happen? And then continue the play and find out. So instead of -- what it's not is -- instead of asking a question that has just one answer, such as how many blocks does this tower have, we want children to count, we want them to be able to count their block tower, but in terms of giving them opportunities to experiment and figure out how things work, that's not the way that we would want to do that, is how many blocks does this tower have? Thinking about more open-ended.

Dawn: Right, and you'd want to make sure that you do both, right?

Kristin: Yes. Absolutely.

Dawn: So there's lots of ways that you're mathematizing the classroom, but just don't stop right there. What we see often is that people stop at how many blocks are in this tower instead of going to the more open-ended question where you're expanding and you get to think a little bit more.

Kristin: Right. Why do you think that there's five blocks? What makes you think that this has six?

Dawn: Right. How do you know what you know?

Kristin: Yeah. Exactly.

Dawn: Okay. So now we want to show you the clip of Dr. Ximena Dominguez. As we mentioned before, she is our expert for today. She does some research on science and technology in early childhood education. And we're showing you this clip because she talks a little bit about what we know about children's thinking but also explains how the scientific method, which is a method that we are using quite a bit in early childhood classrooms, is a way to foster children's thinking skills. So please go ahead and watch this clip.

Dr. Ximena Dominguez: Learning science is learning about the world around us. It's really giving children the opportunity to learn about the things they see around them and things that they see at home. And learning science is really exciting for young children. It capitalizes on their natural curiosity, it is engaging, it's hands-on. And for a long time, the research community and also practitioners used to believe that young children couldn't learn science, that it was too hard for them. And what we know now is that children early on can become good scientific thinkers, you know, and they actually want to learn and experience the world around them. And children learn science by learning about big ideas, by learning about related concepts, you know, how things move, how things change. What happens when you leave fruits outside? And they do so by engaging in practices. They learn about skills. They learn to observe, they learn to compare and contrast things. They learn to make predictions and then go ahead and carry out investigations. So they will test what happens when they roll things down different ramps. They record their findings, and that gives them an opportunity to talk about them with their peers and to really refine their ideas and their thinking.

Dawn: All right, welcome back. So there are a number of things that Ximena said in that video that we want to point out. And she mentioned that there's research now that tells us that children are able to do -- really be much more scientific thinkers than we thought previously, which I think is important for us to realize. We're talking about all these kind of more difficult things maybe than you're usually doing in the classroom, like we're talking about engineering and doing tasks that may be different from what you were doing before. And it's important to know that children are actually capable of these things.

Kristin: Absolutely. Children 3, 4, 5 are really wanting, right, this kind of learning and really benefit from it, and that they can do it, they can really think scientifically about a problem. I like how she said that.

Dawn: Yeah, absolutely. And speaking with the scientific method, there's different steps to that, as some of the clips showed you. But children are observing what's around them all the time. Just asking them about that and asking them to explain what they're seeing, asking them questions about that. What are you observing? What might be some predictions that might solve some of these things that you're seeing in the world around you? And they really are able to, I think, conceptualize some of those big ideas more than we thought before.

Kristin: That's right, and we're going to show you a little bit in our resources section how you can find out more about the scientific method suites that we have. But we have another clip for you, which is very exciting. Recently we were able to sit down with one of our favorite Head Start teachers here in the Seattle area -- we have many. And we asked him about how he fosters children's thinking skills and

inquiry in his classroom. So, but before we do that, we have a chat question for you that we want you to begin thinking about your own classroom, and how do you introduce science, technology, engineering, art, and math activities into your classroom? So we're going to give you just a moment for you to answer that chat question, and then you'll see the interview with Daren, just move right into it. And we'll see you after that.

[music plays]

Kristin: This season on Teacher Time, we're talking about science and technology, engineering, art, and math, which, you know, how do you sort of introduce new materials in terms of science or engineering or building?

Daren Chamberlin: Well, on the math component, I just -- I want to just for a second talk about getting the table together. The teachers will be very familiar with this process. But early on, we have lots of parents that are nervously watching their kid as we're giving them a stack of cups or whatever. And we're always waving them off when they want to order the chaos that becomes that time. So I think that we end up, just even this afternoon for snack, we had like the majority of the cups on one table, and there was no water on one table, but then just relaxing into that time of them figuring it all out, and well, you don't have a cup. But they've all seen where everything's coming from, and so it kind of demystifies any of those kinds of processes. Like when we're going to move things around in the class, we like to have them be as much a part of that, or at least bear witness to it. Like, "Oh, we're going to move the home center today." So that they can kind of see us deconstruct the environment and that they can participate in things like constructing meal time, and then we do have like a routine of acknowledging the work that they've done. But it also, as far as like this time of year where we have data that we have to enter early on, it sure helps you see kids recognizing patterns, because they're putting cups with plates and then some that are -- you can see where they're -- you know, it just allows you to kind of bear witness to their thinking when, you know, allowing that kind of chaos to happen.

Kristin: Well, I'm glad you said -- that's exactly what we're talking about this whole season on Teacher Time, is sort of the thought process, and you're sort of the... almost the proof that children, these children in your classroom, are truly thinking. Like you just talked about the table, right, one has all the plates and cups, one has no water. You're not sitting there going, "Uh-oh, this is a problem." It sounds like you're just sitting back and allowing them to think about -- you're watching them come to the realization that "Oh, there's more cups over here. I need to go over here and get one." You're not just sort of directing that, it sounds like. Is that conscious for you?

Daren: Yeah, and I think that it's one of -- it's part of our classroom culture. You know, I have on the door when you walk in, there's a picture of Paulo Freire above the door, you know, the Brazilian educator. And he -- working with adults on issues of literacy, he has the idea of looking at the lives of the adults that he was working with and having them bring real-life issues and problems, and that would create the curriculum and create the context and the material, and that would be the writing and the literacy work that they'd be doing was around real-life problems. And that -- and trying to figure out what that might look like with 3-, 4-, and 5-year-olds, you know, it's sometimes getting all the cups on one table and then seeing who's figuring it out and, you know, seeing them work on it together. And when you brought up materials, you know, just bringing things in with -- you know, I'm always curious to see -- I'm more curious to see what the kids will do with things than really feeling like

imposing my idea of what -- you know? It's our responsibility to have ideas and create opportunities, but on a selfish level, I'm always more curious to see --

Kristin: What they're going to do with them.

Daren: What they'll do, yeah.

Kristin: Yeah, so this whole kind of notion of inquiry and really...what you just said is figuring out what the children are going to do with the materials. Or you bring something in from outside. And it seems like you are immersing yourself in their learning as much as -- you know, you're not just telling them, "This is a leaf," or, "This is an acorn," or wherever it may come from, but sort of posing questions so that they can then really figure it out. Or maybe you don't know what it is, and you're immersing yourself in that. But the whole richness of their process, right? I mean, is that what you're kind of wanting to see?

Daren: Yeah, absolutely. We want them to experience things and then find ways that we can talk about those experiences. And especially with the language diversity that we have. You know, if I'm just naming things and I'm really -- you know, it's a different kind of activity. There's clearly room for that, and we do want to build shared vocabulary. Both in our class right now, we're able to teach both Spanish language and English, and then we try to bring in other teachers that can support the learning of some of our other kids and family members that are willing to participate. So we -- it's important that we can start creating shared vocabulary around this kind of problem solving. But mostly we don't need a lot of vocabulary to experience things together. And kids are so good at leaving those kind of communication obstacles at the side because they are really involved in what they're doing, and they find ways to communicate.

Kristin: So, Daren, from what I'm hearing from you, your approach to teaching and letting the children take ownership of different parts of the classroom and take ownership of materials, is that part of your teaching philosophy?

Daren: A lot of the things that we do as adults, kids are used to kind of -- you know, we drive cars, we do things on the computer, they're not quite sure what we're doing. We have conversations, they don't know exactly what we're talking about. So they're used to seeing us do things that might be outside of what they feel capable of. And so when we can get kids early on, and there's always -- often, not always, but often kids that are chomping at the bit for their opportunity to show how capable they are. And so just in thinking about ways that we can do that so that they're seeing another kid do it, then they can start -- it kind of goes on their radar of, you know, "I could do that." If I do it, I'm the teacher, and I'm already kind of an anomaly, but if another kid's doing it.

Kristin: How does it feel to you as a teacher when you see a child really working on something, experimenting with something, and then they get it, they figure it out? I mean, I'm sure that happens all the time. And do you consciously take moments to really observe that, a child really working on something and getting it? How does that feel to you?

Daren: It's, you know, I mean, it's a great feeling. It's great to get to be a part of that. And it's just, you know, those are -- every time you see that, it's just an affirmation of how capable 3-, 4-, and 5-year-olds are and how, you know, when given the opportunity to explore and create and co-create, that just they can often come up with amazing, you know -- There are so many stories that I'll tell

colleagues about "This happened today, and I wish I was smart enough to have planned that," you know? Like they came up with some amazing idea, and I had just put a few things out on the table, but they ended up spending more time than I thought or coming up with something I would have never imagined. And it just, you know -- giving them the reins as often as possible and having that be part of the classroom culture definitely has those types of rewards as a teacher.

Kristin: Well, and that's intentional for you. You're intentionally doing that. I mean, you just said, had you planned that, it probably wouldn't have happened that way, right? But intentionally you're planning activities that are interesting and engaging for kids. And you might not yourself know what they're going to do with these, you know, whatever the materials are.

Daren: Yeah, we want to kind of pose those questions and create, you know, those problems to be solved and then see, you know, what they come up with. And sometimes it just sits there and I look longingly at the table that I thought somebody was going to be like, oh, I know this kid and this kid are going to really gravitate towards that, and they've really been about magnets, so I'm going to add these other pieces of metal over here, and then it's just like birds -- crickets are chirping and there's a little subtext, you know, "20 minutes later..." and the table's still there.

Kristin: Oh, still untouched.

Daren: I haven't given up hope. But it's, you know, and that's fine too.

Kristin: Right. Yeah, exactly. But then something you might not expect happens, right, with another. Well, that's fantastic. I'm so glad that you allowed us to come into your classroom today, Daren, and talk to you about inquiry and curiosity. And I just know the Teacher Time audience is going to be really interested in what you all have to say. So thank you so much.

Daren: Thank you.

Dawn: All right, welcome back. So Daren said a number of things that really speak to what we're talking about here today. When he was talking about his environment, it sounds like he does a whole lot in his environment just to set it up to promote inquiry.

Kristin: He does, yes.

Dawn: That example he gave about being at the snack table and they put not enough cups on one table and not enough snacks on another table, snack is something that happens all the time.

Kristin: I love that, yes.

Dawn: That's something that anybody could try out. It's creating -- it's an environment that they're used to. They could -- that they know the routines so well. So if there's just a little imbalance of a problem about how are we going to get more cups to everybody else's table, that's probably something that they can be successful at and solve.

Kristin: And thinking about you want snack to start at a certain time, right, and you want the tables to be -- each child to have enough of what they need on a table, but why not sit back and see if they can then figure that out? We don't have water on this table. What should we do about that? Not everyone

has a cup. What should we do about that? And I think that comes with experience as a teacher. And I think that if I was a brand new teacher I may not feel comfortable just sitting back and watching, but we challenge you to try it and think about those times of the day where do I really have to order this chaos, in Daren's words, is what he says. Do I really have to plan this out for them or can I allow them to work through this problem?

Dawn: Yeah, and it's like another level of this instructional move where he's talking about being a part of their process. So he creates this environment where there's opportunities for children to explore fully as they want to, as they're leading it. But it takes the teacher to just step back. And you may not know where they're going. That's a little bit of a loss of control. But you can become part of their process, and you're also doing an instructional move as you do that as well. And that allows children to show that they can be leaders and take a lead, and then it makes other kids feel like they're more capable to do that. I loved when he said that.

Kristin: That's right. I mean just being flexible enough to let children explore what they want to do with the materials. And just being a part of that process as a teacher and engaged in that process with them is what really, truly makes the approach to learning in terms of inquiry, teaching inquiry skills, that's what makes this an actual, you know, important teaching move.

Dawn: It is, it is. We can talk about problem solving and critical thinking skills and creativity, and, yes, you may know what some of those things are as conceptionally -- conceptually, but how you do that in a preschool classroom with 3-, 4-, and 5-year-olds is thinking about how you work on your own practice.

Kristin: That's right.

Dawn: And so hopefully there were some things that you learned today that you can try out to work on some of that.

Kristin: That's right. So let's chat about it. What are you going to try in your classroom? So go ahead and put that in chat, and we'll be back in just a moment with Try it Out! [music plays]

Dawn: All right, welcome back. We were looking at chat while you guys were doing that, and that pumpkin volcano sounds awesome.

Kristin: It does! I really hope that whoever has done that in their classroom who brought that up, please email us and send us a picture if you have it or tell us the materials that you used. That sounds fantastic. We've done volcanoes in the classroom, but a pumpkin volcano, that sounds great. ncqtl@uw.edu. Please, please give us that information. We'd love that.

Dawn: All right, so now here in *Try it Out!* we are going to watch a couple of videos. One of them is from Daren's classroom, and the other one is from another teacher here in the Seattle area, Teacher Gabe. And then hopefully through that, you'll see some different examples or ways that we were talking about fostering children's thinking skills.

Kristin: That's right. So the video with Daren is interesting because he is not actually in the video, which we love because the children in this video are completely self-directed with trying to solve a problem. And I want you as you watch this clip to think about all of the skills that Teacher Daren has

fostered, has taught them, in order for them to persist with this problem that they have. And it's -- yeah, let's watch it, it's great.

Boy: Hold it with Olivia so I can do this. [grunts] Yeah! Now we can do it. Ai. Ai! Help us!

Olivia: Ow! Ow! Daniel, you hurt! You hurt my hand.

[Olivia grunts]

Boy: Because sand is over here.

Daniel: Now we try to pick it up. Ai! Pick...it...up. Anthony, be in the middle. Ai! Ai! Ai! Somebody help us! (grunting) It's too heavy.

[Anthony grunts]

Olivia: What we're going to do...

[Anthony whines]

Olivia: Anthony, help me.

Dawn: All right, welcome back. And that video just puts a smile on my face.

Kristin: Oh, My Gosh!

Dawn: They are trying so hard to solve this problem. They really want to move the tire. And the sad part is that we think that tire is bolted down. So it is not going anywhere. But talk about how in Daren's classroom this is kind of a result of the things that we feel like he was talking about and does in his classroom. They were trying to figure out different ways to solve this problem. They were working together.

Kristin: Yes.

Dawn: They were collaborating.

Kristin: Yes.

Dawn: They were persistent.

Kristin: They had new ideas to try. Let's try digging it out. "Ouch, you're on my hand." "Let's move over this way." "Oh, I'm going to drop my shovel and try it again." It's just -- we wish they got that tire moved, but it's the point that they persisted and that they tried. And think about the next time they're going to do that again and something's going to work out for them.

Dawn: And there's things that they learned in the process. They learned what didn't work and maybe some other thing that might work. So, and all of it is a good learning experience for them as they're going through it. And maybe with something else they might try to lift up that isn't bolted down, they

might have some more success. But just the fact that they were persistent and tried that hard I think is a good example.

Kristin: Yeah, and thinking about all those skills that he taught them in order for them to do that. That's great. So we have another video, and it just makes me think -- we're really reading the chat that's coming in today. We love it that you're involved in this webinar with us in this Teacher Time show. And one of the things that has been talked about in chat today was sort of the idea of letting go of control as a teacher in terms of -- teachers are in charge, absolutely in charge of the classroom. Teachers are intentional about everything that they do. But thinking about those little times of the day where you may have an idea, but could it be that the children are going to figure something out instead of a teacher directing their play.

And so this makes me think of this next clip that we're going to show, which is another Head Start teacher. And this is Teacher Gabe, and he is at an art activity with children, and he's allowing the children to discover all on their own the mixing of colors. And he does not direct their discovery, but he engages in the learning with them and he asks them questions that further their understanding about what they're doing with the colors. So let's go ahead and watch this.

Boy: Hey, what is this?

Boy: Hey, Teacher Gabe, why that green? Why this green?

Gabe: That's a wonderful question.

Boy: Hey, look it. No green in here.

Gabe: I know, no color in here. And Devin had a question. How did he make green?

Boy: Your stick's on this one and this one.

Devin: Yeah. This make green!

Gabe: Oh. How did you make it?

Devin: This and that and...with that.

Gabe: Mm, different colors? You put some different colors in it? Okay, let's see. So I'll try...

Boy: Can we have yellow?

Gabe: I'm going to put some yellow on this page. Did you use yellow, Devin?

Devin: No, just the blue and red.

Gabe: Oh, blue and red. Okay. So let's see.

Devin: I make that.

Gabe: Here's blue.

Devin: I mixed this. I mixed this.

Gabe: Okay, check it out.

Devin: I mixed this!

Gabe: You did it too, huh?

Devin: I mixed this.

Gabe: I'm going to do it right here. Here's red. Okay? And here is some blue.

Devin: Yeah.

Gabe: And let's see what happens in the middle.

Devin: In the middle. Teacher Gabe?

Gabe: Yeah, what happened?

Boy: Purple!

Gabe: Purple? That's just like Devin made.

Devin: Yeah!

Boy: How about yellow? Try yellow. Try yellow with...with...with green. Try with green.

Gabe: Okay, so here's yellow.

Boy: And the...and red.

Gabe: Which one's green?

Boy: No, red.

Gabe: Oh, so yellow and red?

Boy: Mm-hmm.

Devin: Yeah. Try that.

Boy: And then you see what happens.

Gabe: See what happens.

Boy: Orange!

Gabe: Orange.

Dawn: All right, welcome back from that video. So, I mean, the color mixing is something I think happens pretty much in every preschool classroom. Clearly Gabe knows how to mix his colors.

Kristin: That's right.

Dawn: He's the one guy who knows how to do that. But you don't see him just going in and giving them the answers of how to do that. This is what we mean as part of -- being part of their process and taking a step back and engaging with where the children are learning to allow them -- to let them figure it out.

Kristin: That's right. If he had just maybe answered their question, and, "Oh, yes, that's right, these colors do make this color," it could have ended right there. The activity could have ended, the children would have been looking to him for answers. And instead, he is sort of... doing the activity that they've presented, and he's following their lead in that. And I think it's just a really nice clip that they are directing the activity, and he's just facilitating it. He's scaffolding their learning with the questions that he continues to ask.

Dawn: Yeah, he's engaged in their play at their level. And to discover that on your own is a much more powerful learning experience than someone just telling them that. And you saw that. He got it.

Kristin: He got so excited.

Dawn: It was great, and so satisfying for everybody.

Kristin: Yeah, it was really wonderful.

Dawn: Okay, so now we have some resources to share with you. There are several of them. We're going to talk about *Fostering Children's Thinking Skills* suite, the scientific method, and some of our other conversation suites. So, *Fostering Children's Thinking Skills*. That is a suite that's on the *ECLKC*. It's one of our 15-minute in-service suites. And one of the things we wanted to highlight there is the tips for teachers. So you'll notice that some of the things we talked about today are pulled from that. But there are some great examples of what fostering thinking children's skills is and what it's not on this tips for teachers. So you can get yourself a little 15-minute in-service if you watch that overview video and look at those tips for teachers. And it'll give you something that you could try right away.

And some of these things that we're working on are things that take practice on the teacher's part as well. So it's -- you know, pick one of these things so you're working on that mantra. I know when I was teaching, there was something -- I always needed to give children more time to respond. So I was always saying, "Give them time. Count to 10. Relax." And I think that's one of the ways that you start doing some of the things we're talking about today. You pick one of these things, you focus on that, and you work on that.

Kristin: That's right, that's right. And maybe you think about something in your head, what it is and what it's not, in terms of I'm going to follow up children's questions today with another question, very open-ended question. Or I'm going to ask a question that doesn't have a yes/no answer or a right or wrong answer. So even just focusing on those when you're beginning this I think is a wonderful place to start. So another -- yeah, another resource that we have is a suite that's called *Using the Scientific Method*. And this is a fantastic suite that we do have up on the *ECLKC*. It goes through the scientific method in terms of experimenting, asking questions. We showed a little poster of it last time, and we're going to be referring to it quite a bit in this whole season. And it's just in terms of using this method in the moment with children and in all activities you could use it. Not necessarily with just a science activity, right, but you could use it in the block area, you could use it in the art area, integrating those domains together.

Dawn: Absolutely. And there also is a series of language modeling and conversation suites. So those are five suites that give different strategies to improve your conversations with children and to practice language modeling. So the first one is an overview. It's about having conversations with children. Then the next one gives some strategies for taking your thin conversations you're having with them and extending them into thick conversations. Then there's one on listening and asking questions, and then another on expansions. And then there's another one called Novel Words where you're highlighting ways to offer new words and vocabulary that you want children to work on.

Kristin: And think of how important -- I'm thinking about these language modeling and conversations and how important these concepts are to learning about science and learning about technology. And so the language and conversations really go hand in hand with these topics.

Dawn: Yeah, which is one of the reasons why we wanted to focus -- or we introduced STEAM last time, but this time we're focusing on the teaching strategies you're going to need to do some of those activities here. And so in future shows we're going to be getting into much deeper about activities that you can do specifically around math and science and technology and engineering. But first we wanted to really think about those effective teaching practices that you can use to do some of that stuff.

Kristin: That's right, building children's curiosity and inquiry and how to get them to think about things before we move into -- yeah, that's great. Okay, so we are going to take a short break, a short poll. We always want to know how many of you are watching, and how many of you are watching by yourself, how many of you are in groups of people, Teacher Time watch parties. And so after we take a short poll, we will be back with our Resiliency and Wellness section. So answer that poll, and we will be back with you in just a moment.

[music plays]

Kristin: All right, welcome back, teachers. We are now ready to begin our Resiliency and Wellness section with Gail Joseph. Hi, Gail.

Gail Joseph: Hi.

Kristin: Thank you for coming today. What do you have to talk about? This is always our favorite time of the day when you come in.

Dawn: It really is.

Gail: A little break in our moment. Well, so first let me just say I've been sitting on the side and watching the show today. Amazing. Just such a great job that you've done with this, you know, kind of a complicated topic, I think. And then I've also loved watching these teachers, who, both of them, Gabe and Daren, both just seem so relaxed and calm kind of about what they're doing. And I think the way that they're thinking and talking about their interactions with kids takes somebody that's feeling well, feeling rested, feeling kind of resilient. And so that's one of the reasons we bring this topic in at the end of each session is because we do our best teaching when we feel well, when we feel resilient, when we have those strategies that can help us not only survive through this hard work but also thrive. And so they've done a great job, and you're doing a great job. So today I have some things for you. I know last time I brought thought challengers. And so here. I just feel like I have to bring something every time.

Kristin: I love it!

Gail: So here you go.

Dawn: We have insoles.

Gail: Yes, insoles.

Kristin: Insoles!

Gail: And so you might be wondering why I'm bringing insoles.

Kristin: I see the word "comfort."

Gail: That is it, that is it. Today I just want to say a little bit about the importance of a support network. And one of the things I noticed when I was picking out these gifts for you, these insoles, is that they provide support and comfort. That's what they say anyways. And so that's exactly what we want to look for in a support network. So a support network are those people who really care about us and offer unconditional support. And a couple things. So these are people in our lives who can share the tough times with us, who we can talk to about our tough times. And one of the things I also notice that these do is it says they absorb shock. So I think that's part of what our support network does is that when we're feeling pressured, when we're feeling stressed, which we will feel, this is somebody that kind of absorbs some of that for us and help us through those moments. And then they're also people that share happy moments. So it's important to have people that can mirror back and reflect back to you when you're really excited and happy, right? So maybe you've accomplished a goal, maybe you had a great day at work, and you finished a project that you're really excited about and you need somebody that can mirror back that happiness to you. And what we find is that when that happens, we feel even happier in that moment, right? So it's important to have those that can provide that support and comfort, those that can share those happy moments, can be happy with us and for us, right?

Kristin: Yeah, absolutely.

Gail: So this is just a little activity to just kind of go through in your mind, is I've just put up some maybe different experiences that people have had or are going to have, things like you got positive

feedback from your coach in your classroom, so they told you that you were doing something really well, that you'd seen some really good growth from you. And just think of like, are there two or three people that you could share that with and that they would be happy for you and mirror that back to you. But what if you were experiencing a major health problem? Who's your support network for that? Who's going to help absorb some of that stress for you? Maybe you're ending a relationship. There's a new baby in the family. Maybe someone's having a baby, there's a foster child, somebody new is coming into the family. And so who's your support network in that situation? Maybe you received some negative feedback. So who's going to kind of help you through that --

Kristin: Absorb the shock.

Gail: Exactly, absorb that with you, provide comfort and support and encourage you to keep going and try something different then at work. So all kinds of things, all kinds of great events that happen, some happy, some sad. But just think for a moment, do you have a support network for those types of situations listed here? And it's never too late, right? It's never too late to find a support network and to nourish that support network. And also to just think about, gosh, this one person, I tell them happy things and I never -- it doesn't seem like they're reflecting that back to me. Maybe that's not something that's in that support network necessarily, right? So it's okay to think about like who's working for you in this situation. And for those that are your support network, providing comfort and support, you want to spend more of your free time with them, right, because you need to give back and nourish that relationship as well. So it's just thinking about that, thinking ahead, thinking about maybe you want to start a new goal, maybe you have a new health and wellness goal that you want to go for. Who's going to be that support network for you, right? So think about that and future things too.

Kristin: Thank you for this. I love this little visual reminder of providing this comfort, support. We're going to put it up on our desks.

Dawn: Right, right next to our thought challengers.

Kristin: Yeah, that's right. Absolutely. Well, thank you so much, Gail.

Gail: Thanks for having me.

Kristin: We will see you next month.

Gail: Of course.

Kristin: So before we go, we will be right back with some closing announcements, a couple housekeeping things. And please don't leave until the end, because we have a moment of aww which we show every time, some adorable footage of the classrooms that we've been able to be in, and our video our videographers are taking all across the country. So please stay tuned for that. And we're just going to take a short break and be back with some closing announcements.

Dawn: All right, welcome back. We're here with our closing announcements. We really hope that there are some things that you got today that you can use right away in your classrooms. And we love to stay in touch with you. We want to hear from you. So you can continue to chat with us, and then also, when you -- you can communicate with us through ncqtl@uw.edu and send us any ideas or photos. I really

want a photo of that pumpkin volcano. That would be great to show. Because this is a great opportunity in the chat. You can offer new ideas for other teachers to learn from you right now too. So there's just a lot of different ways that some ideas are coming at you.

Kristin: We love -- because we can't see you, we love how interactive our chat feature can be, and we want to grow that. And so emailing us is even a way to do that so that we can connect with you and feel as though we're providing information that you want, and that you are also showing us all of the amazing things that you do in your classroom. You can follow us on Twitter, #NCQTL. And you can -- yes, sign in, absolutely.

Dawn: Yeah. So if you haven't had a chance to sign in yet, please go ahead and do that so we know you were here. We'll also send you follow-up announcements -- follow-up documents and announcements and be in communication with you. The evaluation is open. This is a great professional development opportunity for you, so you can receive a certificate for this. So go ahead and complete the evaluation. At the end, just make sure you put in your name and email address as you want it to appear on your certificate, and we will get that to you probably later next week.

Kristin: That's right, and there's lots and lots of archived shows to look at. And so I think it's fun to go back and see what we talked about. Maybe you've missed a show. Maybe you're a supervisor watching even and you want to maybe show at a staff meeting or something like that. They're useful training tools, and I hope that you all get to see them and get the content that we've created for you.

Dawn: All right. So thank you all for joining us today. And as promised, here's your moment of aww.

Kristin: Bye-bye, everyone.

[indistinct conversations]

[music plays]