

84 - Tinkering & Exploring Preschool STEAM Lab

Original Air Date: 10/4/23

Purpose: The purpose of the transcripts is to provide readers and listeners with a written version of each episode of the UAGC Center for Early Childhood Education's Early Childhood Chatter Podcast so they can follow along with the audio content. www.uagc.edu/ece-center/chatter-podcast

Audience: Current Active & Enrolled Students

Episode Transcript

Host Dr. Shipley: Hello, everyone, and welcome to Early Childhood Chatter with Dr. Shipley and Dr. Heald. And as always, we will be uploading a new episode every other week on Wednesdays.

Host Dr. Heald: Twice a month, we'll come to you with a 10-minute professional development with new ideas for you to try. Don't forget to subscribe to the podcast for notifications about future episodes.

We are so thrilled to have Cynthia Hill with us here today to share some great knowledge. Cynthia Hill is a lifelong early childhood educator with a master's degree in education.

She has been in the field for over 30 years and has worked on every level within the field, from teacher to department chair, to curriculum specialist to currently the head of an early childhood division at Grace St. Luke's Episcopal School and PK, pre-K to eight independent school. Over the past few years, she's looked at ways to address the issue of science in early childhood. And what a better place to start than with a space dedicated to tinkering, exploring and discovering.

Sounds amazing. Giving children the opportunity to explore, inquire, predict and ask questions all in an effort to spark curiosity and creativity. She created and teaches in her school's Tinker Lab, and she's going to talk a little bit about that today.

And as an administrator, she discovered that this was an absolute wonderful way to get to know students in her division. Cynthia, we are so thankful that you are here with us today. Welcome.

Cynthia Hill: Thank you. Thank you. I'm so glad to be here.

So excited.

Dr. Tisha Shipley: Yes, Cynthia. So, the title of your session today is Tinkering and Exploring Preschool STEAM Labs.

So, I love this title because like Dr. Heald just said, it sounds amazing and so engaging and just fun.

So why is this session important to you? And why is it important to our listeners?

Cynthia Hill: Well, I think one of the things we tend to forget sometimes with our little ones, is that they need to be able to expand their minds, to be creative, to think things through. And we get into the habit a lot of just giving them all the answers.

And I think having them be able to explore, and do all of this on their own and coming up with their own answers, really expands them and gets them ready for the next level in education. They're going to have a lot of time where everybody's going to be, you know, feeding them that knowledge and, you know, they're spitting it back out to them. But this gives them an opportunity to expand their minds.

Dr. Stephanie Heald: Yeah. So, you mentioned Tinker School, your bio mentioned Tinker Lab, and I'm closing my eyes. Walk me through what I see, what I hear, what's going on.

Tell me about this Tinker Lab.

Cynthia Hill: So, when you walk in, it's just it was just a dead space room that we had. And so, I added a few little tables.

I added a little hatch table, which is sort of a what do you call that? Smart board, but on the level of a kid and they can stand around it. So, you'll see that when the kids come in, they literally come in. They have a seat on the carpet, and we talk about whatever it is we're going to do that day.

For instance, we talked about robots. And what do we know about robots? And we find out what they know. And then I might put out tons of gears, and nuts and bolts and things and talk about the inside of a robot.

And kids are playing with and tinkering and putting together and trying to figure it all out. And then we might see something on the smart board, that might deal with robots. I might pull up a little clip on how robots are made and different things like that.

So that gives them some more insight into that particular topic. So, it's an active environment. Kids are doing things, building things.

You know, there's lots of recyclables and and just using their own creativity. I'm not giving them any directions or giving them the answer to anything. They have to figure it out on their own.

And they might ask, but I'm like, oh, well, see what you can figure out. And so, it's a fun place. And the kids absolutely love it.

Dr. Tisha Shipley: OK, so I love this because when I taught, everything was very hands on. I probably had 20 centers in my classroom because so it kind of sounds like this. So, when it comes to STEM and STEAM, though, sometimes teachers are a little hesitant, scared.

There's lots of reasons, lots of just that's an extra thing that they have to put into their room. So, tell me how teachers can add more STEAM into their classrooms and how do you fund that? Where does the money come from?

Cynthia Hill: So, and this is one of the reasons why because the teachers were having such a hard time kind of incorporating some of that science and technology and engineering. So, giving them the ideas, we created a lot of resources for them to pull from.

For instance, they're already doing a lot of stuff, but not really realizing what they're doing. So, for instance, in the block area, kids are always building and doing. This is engineering.

How can you expand on that? What does that look like if you expand that play in the block area? So just letting them think about what they already have, what they already do and expanding on that. Resource wise, at the beginning of every school year, I put out a letter to parents and saying, you know, here's our tinker lab. This is what we do.

We're trying to build our STEM program. And so, these are the things we need. And we send out an exhausted list of just all kinds of things from golf tees to foam pieces to cardboard, whatever it is.

And you think about loose parts, and you think about all the stuff you can collect with that. And so, we send that out to a parent, to the parents. We have a huge box up front and they just bring all the stuff in.

And it really helps get us started. I set aside a little funds out of my budget to kind of build on that, you know, get things that will add to it. So, it's a joint effort with the parents and the teachers.

The teachers have a small classroom budget, and they'll put some money into it as well.

Dr. Stephanie Heald: It's so great that I really kind of hear that you're collaborating on so many ends. I think that, you know, we've heard families, we've heard parents, we've heard, you know, teachers.

What would be advice that you have for our listeners to kind of start this exact thing, start the Tinker Labs in their own centers? What would be like a checklist of things to go through that they need to attend to?

Cynthia Hill: So, I think the first thing is to really get your teachers to buy into it and get them on board. And once they're on board, then everybody can start thinking and collaborating about it. Really, initially, all we did was put out that letter to parents.

I didn't even put money into it initially. So, we sent that letter out and said, here are things we need. And so looking at all those things and then getting with like our librarian and saying, hey, we need some books, you know, like Ada Twist Scientist and all these different books that relate to science and technology, and that sort of thing to just kind of pull all that together and, you know, just work as a team to kind of get it started.

We really did not put any money into it to start. We just saw it. We saw a space and developed the space and it's just kind of grown from there.

And initially at the beginning, I set it up to do it myself. And of course, my time was pulled in all different directions, and I kept missing the classes and missing the classes. And then a couple of years ago, I said, you know what, I am literally going to put me in the schedule like I do the music teacher and everybody else.

And so, I made a schedule, and I do it twice a month with all the classes and they come to the Tinker Lab, and I'm the teacher and I might give the teachers something to send back. So, it's kind of like a big challenge for administrators. You want to get to know those kids, find something that you love, and get in there and do it with them.

And boy, you know, the kids love it. Am I going to Tinker Lab today? They see you in the hallway. Is it Tinker Lab day? It's just it's just a fun, enjoyable thing to do.

And again, you get to really know the children in your school.

Dr. Tisha Shipley: So, I think this is all amazing. I would love for our our listeners to just start small, like you said, send a note.

I did that with parents too. See what you can collect, see how you can make it grow. It might not all come together within six months or a year, but the bigger and better it gets, the longer it might take. So, I want you to give me the biggest challenge before we wrap up, because we all know these things come with challenges, right?

Cynthia Hill: Yeah, exactly.

For me, because I was the one deciding to do it, the biggest challenge was sticking to it, and getting it done. As I said, my time would always get interrupted and I would go, oh, I can't do it today. Oh, sorry.

So, for me, that was one of the biggest challenges. The next biggest challenge was to, just get the things that we needed in there. So, I had to look at my budget and say, OK, I'm going to set aside a few hundred dollars.

And really, it doesn't take a lot because you're looking at how can you use recyclables and different things like that? So, I would set aside a little money and buy the bigger things that might be needed. Then we have our parent association that gives as well. And so, this year they're giving me this this light table.

And so, I'm going to have like two of these wonderful light sources that it's called a light lab. And we'll have fun with that. I'm so excited about it.

So, it's a combination of giving a little bit from the budget, getting some from the parents, and that sort of thing.

Dr. Stephanie Heald: You know, and I think you bring up a good point. You know, obviously a large bank of our listeners are educators, and we all know in education very often we do have limited resources.

So, we do have to be creative. And I like the fact that you've brought up a few times. It is something we can use materials that might not be specific science materials, out of a catalog, but we can really diversify our thinking to see, oh, gosh, what can we do with toilet paper rolls, or what can we do with resources that we might have at our disposal? And of course, we get excited for light tables, right? But it's not necessarily something we'll have.

Cynthia Hill: What's so cool is that what you think might be, you know, just a toilet paper roll or, you know, some old ribbon or whatever, kids put it together and they are so fascinated with what they build on their own. And look what I have. And they carry it out.

You know, they're walking to the car with this piece of cardboard, all this stuff on it. And it's like, wow, look what I did. And of course, mom's like, what is that? So, on their own.

Dr. Stephanie Heald: And you're right. They have these creative minds that just like you said, your initial purpose was to spark creativity and, you know, exploration. And you're doing that.

I had our old house was set up, had a buffet, like a little breakfast area, and it had the couch. And I went away for one day and I left my two boys in charge, who were probably about eight and ten at the time. And they built a ramp from the buffet to the couch that had a straw on it.

And it was just simply old straws put together so they could get drinks, put their drink cups on that buffet and sit on the couch and have the straws directly. So, yeah. And they learned that was, you know, their creativity and a little ingenuity.

And mom wasn't there to bring drinks. And that happened. So, I love the fact that you really are making something really out of nothing to start.

But I just think that's great for our listeners. So, can you leave us with three takeaways?

Cynthia Hill: Yeah, I mean, I really want people to really focus on, you know, the part of the goals of really being creative, having the kids think for themselves. What I'm going to say, just to be more mindful that it's not all about memorization and that sort of thing.

So just have that in mind. And also, to know that it doesn't take a lot to get it done. You know, just start where you are.

Look what you have in your classroom. How can you take it to the next level with some exploration or discovery? I think that will make a huge difference. You might even do some little tinker boxes that you can build in your classrooms, that you can pull out and say, OK, we're going to pull out the tinker box.

And it has a myriad of things, in it that kids can just kind of manipulate and play with, that are different from their everyday things. And I think that would be good as well. I also like to challenge administrators to just kind of think about how you can get in there and help make that happen in your school.

It can be a challenge sometimes, but I think it's worth the challenge. I think it's worth the challenge.

Dr. Tisha Shipley: Well, that's great.

And that leads me to a challenge. You just gave our administrators one. But what's a challenge that you want for our listeners, today as they leave this session?

Cynthia Hill: Well, I think looking going back to your classroom and just take a look at your classroom, what are the things that you can do that you're already doing, that you can pull and expand on? You know, I mentioned the block area.

How can you expand on that to make it more of maybe you go into architecture, and looking at pictures, and bringing in things to kind of expand on that? And so, looking at how can you expand on science, bringing the indoors out, bringing the outdoors in to do more sort of nature-based things within your classroom. So, it's just kind of don't overthink it or

just try to go big and go out and buy this great stuff. Just start really small and look at what you have and build on it and expand on it.

And you'll be surprised where you go with it.

Dr. Tisha Shipley: I love that. Well, Cynthia, thank you so much for being with us today.

These are great ideas. I hope everyone will just start something small for the beginning of the year, or wherever they what every time they're listening to this throughout the year. You can start this anytime.

So, thank you so much for being here.

Cynthia Hill: Thank you so much.