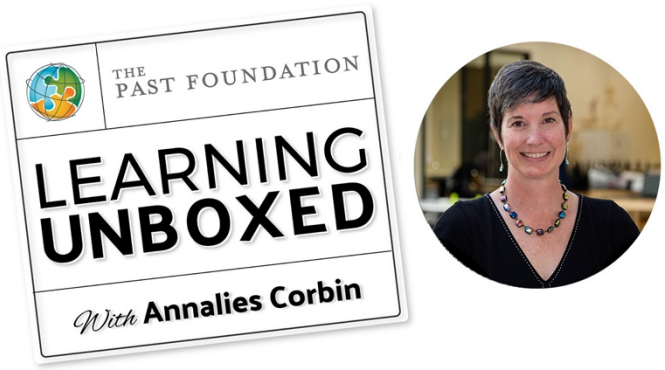

132. Take It Outside: Getting Students Invested In & Inspired By Nature with Pete Barnes

Annalies Corbin: [00:00:02] Welcome to Learning Unboxed, a conversation about teaching, learning, and the future of work. This is Annalies Corbin, Chief Goddess of the PAST Foundation and your host. We hear frequently that the global education system is broken. In fact, we spend billions of dollars trying to fix something that's actually not broken at all, but rather irrelevant. It's obsolete. A hundred years ago, it functioned fine. So, let's talk about how we reimagine, rethink, and redesign our educational system.

So, on today's episode of Learning Unboxed, we are super excited because we have the opportunity to go on site at a school, one of the first times we've been on site in many, many months because of everything that's been happening in the world. And so, I'm thrilled to be here with educator, Pete Barnes, from New Albany Intermediate School, middle school for those of you that are confused by some of that language. So, Pete, welcome to the program.

Pete Barnes: [00:00:59] Thanks for having me. Thanks for coming out to New Albany.

Annalies Corbin: [00:01:00] Absolutely. And so, for some context for our listeners, so some of the backstory of Pete here is a 25-year veteran teacher.

Pete Barnes: [00:01:00] Believe it or not.

Annalies Corbin: [00:01:12] Congratulations.

Pete Barnes: [00:01:12] Thanks.

Annalies Corbin: [00:01:13] That's quite the milestone. And 18 of those have been here in New Albany Schools. And New Albany schools are a community within Central Ohio. And for our listeners, we come back to the State of Ohio over and over again as we journey around the world telling stories of amazing teachers doing incredible things. And it's always a privilege to be able to talk about those amazing educators just in our own backyard. And I thought absolutely appropriate, because we're going to talk today about your work around pollinator gardens, and outdoor education, and environmental science, and why that makes such a difference for kids.

Pete Barnes: [00:01:51] Great. Yeah.

Annalies Corbin: [00:01:52] So, give us sort of the 50,000-foot view about the community in New Albany School just to sort of set the stage for folks. And then, we're going to get into the weeds quite literally with you about what's going on with your work in your classroom.

Pete Barnes: [00:02:06] Great. Okay. Well, New Albany is a suburban community, like you said, in northeast of Columbus. It's about 10,000 people. One interesting thing about New Albany is we have one learning campus. So, we have just one building for all four through six, it's the building on the end, one building for middle school, one for high school, and an early learning center. So, the nice thing about that is we can share resources. We actually have an 85-acre campus with woods and wetlands just adjacent to our school, so it's convenient for us to get kids outside. I think we have about 5,000 students.

And so, students from grades K through 12 can go on the same pathways and get a lot more opportunities for collaborating between teachers, between schools. And we also have the McCoy Center for the Arts, so we can do programming over there. Most of our theater programs and those sorts of things are there. So, the planning of the community was really, a lot of it was kind of grounded around education, and making sure that the community and schools were integrated, and could share resources and all those things. So, we have a lot of advantages just starting out that I feel as a teacher, I'm trying to just use as much as I can. So, it's a great place to teach.

Annalies Corbin: [00:03:18] But one of the things that I've always really loved actually about the New Albany campus, and I appreciate the way you sort of couched that for folks, because this truly is a campus, and it feels very reminiscent, a small collegiate or small, informal college setting. And I think that there's tremendous value in that. We don't see these types of campuses all over the place because of existing land and structure, and inside of urban centers, and all these sorts of things.

So, the location just provides some unique opportunities from a learning standpoint, including, because you're not deep in the middle of an urban setting, you're not completely surrounded, there's a lot of land here. And as a science teacher and somebody passionate about environmental sciences in particular, I would assume that that's pretty much laid the joy that you have this, quite literally right outside of Pete's door are woods, and opportunity, and gardens. And so, talk to us a little bit about sort of the outdoor education projects, the pollinator garden in particular, I'm absolutely intrigued by that, and sort of the experience that you have with students as a result of that.

Pete Barnes: [00:04:31] Okay. Well, I do have to make a shout out to Bill Resch, who's a former science teacher, and he's really the guy who made this whole school campus possible as far as the big grant years ago to get all these woods preserved. He originally planned to be making into housing development. So, to have that associated with the schools, it really is a great advantage and it really is exciting to see how many classes, it's wonderful because I can see right out my window the kindergartners walking over there, and the high schoolers, and everybody.

So, it really is a K-12 focus for environmental education, I would say, in our schools. So, I've just been trying to tap into that. We have what we call the E3 Learning Lab, which is a new outdoor education building just across the parking lot from us. And we have a director, Sandy Reed, who is in charge of that building, so she can do programming for kids at K-12 again. And so, all kinds of things going on related to the woods, related to the gardens, related to all sorts of projects for the kids. They're actually growing things and doing that kind of thing. We have a greenhouse here in our school, which we also do some things.

So, I guess three years ago, Sandy and I came up with the idea of creating a native garden to go around the E3 building. It's just adjacent to our practice fields for our baseball and football. And so, we got a great deal of help on that, but still kind of an ongoing project. But the idea was to take just a grassy area and turn it into about 8,000 square feet of native plants, attracting pollinators, and having all kinds of opportunities for students to be monitoring what species are out there, and doing different tasks like weeding, and planting, of course,

and watering, and all those things.

So, it's really been a great opportunity to get the kids outside and get them excited. And I didn't really planted originally as like a multi-year project, mostly because of pandemic delays, it's kind of been ongoing, but it's been fun to see the oncoming groups of fifth graders get to learn from the previous group. And so, of course, we have video, and pictures, and things from the last year, a lot of them have siblings or kids they know that were already involved. So, yeah, it's really a great project for us.

Annalies Corbin: [00:06:39] I love the fact that you and your colleagues worked so diligently to find connections between the different assets and resources that were here and to build programming that connects. So, you talked about the E3 building, and that's one of the ways that PAST had the opportunity to really sort of get involved with New Albany as part of the E3 building coming here and starting out a whole host of different TGPEs and opportunity for teachers to really sort of dig in.

And that particular project is all around energy and energy education. But I love the fact that you took this building that's all about energy, and understanding energy usage, and opportunities for students, and then tie it back in with the natural environment and to make it possible for it to be part of a bigger, broader ecosystem. So, I'm really curious, as a fifth grade teacher, how do you take the asset of the pollinator garden on E3 or either the pieces that you've sort of built out with your colleagues out there and make it part of your day-to-day teaching experience?

Because one of the things lots of teachers struggle with is the fact that we're going to do this project, but this project is not connected to anything else. It sits in isolation. So, I want to talk a little bit about sort of your journey around thinking about problem and project-based sort of opportunities, and using that as a lens in sort of the everyday way you think about the work with your kiddos. I mean, just looking, it's fun to be here in your classroom, because when you look around your classroom, you can see how you're connecting everything all the time.

Pete Barnes: [00:08:08] Mm-hmm. Yeah, that's a great question. It's never easy to do that. I think that is kind of overwhelming for teachers. We all have lots of content we're trying to cover. We're taking Ohio State tests and we're preparing for those. So, I don't want people to think that we are out in the garden every single day. I mean, it would be fantastic if we were, if we could tie it to everything, but I think it really is about looking for connections between subjects, between units like you're sort of implying.

So, when we were first preparing, of course, we got a lot of math involved in the preparation of the site. We had the students measuring the site, thinking about, how much soil do we have? How many plants are we going to need? We made a budget to work through. We actually got a Facebook community action grant this past year. And so, we were able to get money to build onto the garden and add some signage to add bird feeders and other things.

So, the students were putting out budgets, and looking over items, and deciding how much they want to spend on the side for that item and make proposals. So, all of those are tying into content areas. The E3, engineering, energy, and environment are the three Es, so we're always trying to fit those things in. But it's always a matter of, like for instance, we studied outer space, and Earth, and motion with Sun through the seasons.

So, that's a fun way to get out and just be thinking about, okay, well, how is the Sun different at this time of the year versus in winter? How is that affecting our plant growth? And we're even looking at shadows, and where is the Sun in the sky at particular times of the day? So, even though ecosystems and all the things that are

really obvious connections to the garden is only one part of our fifth grade science curriculum, we do find connections. Throughout the year, I think that we try to make fit into that bigger project.

Annalies Corbin: [00:09:56] And that, I think, is the core of being a great, engaged teacher. When I have these conversations all over the country and around the world, those are some of the common things that you see, you get the opportunity to have those conversations with these teachers that are passionate about these great things that they did, right? It's because you'll find some of those common threads, are that they're constantly able to bring their students back to that, even if they've moved on to other units or other activities, or remember when we X, Y, and Z, and that's really powerful for students to build that context.

Now, for our listeners, I also wanted to share the fact that this work in the pollinator garden and sort of the crafting of this, this was part of another effort for you personally, as that working on becoming a National Geographic-certified teacher. So, we've actually talked to a couple of teachers over the years that are also certified. We've never talked about that process, because their project never really came up, and I love the fact that pollinator garden was part of that piece of work for you. So, share with our listeners a little bit about that experience in terms of, A, why did you want to run down that road? And then, B, once you decided to run down that road, talk to us a little bit about the process to sort of get you there.

Pete Barnes: [00:11:09] Okay. Yeah. The National Geographic Education Program, the teacher certification in particular, I think it's a really well-designed program. I first heard of it from Sandy Reed, same person who's directing our E3 building, and she's been really instrumental in getting other teachers just as she was with the PAST Foundation. She worked closely when you got something like that, little project, but getting people involved and getting them the resources they need to get started with the process.

The National Geographic and teacher certification took me about six months, I guess, to complete, and a great deal of it is done online. They have some really nicely designed online courses that you work through modules that include videos, and reflections, and ways to get you thinking. They have a whole, it's called inquiry process and it's trying to connect not just your particular project, and how does that fit your standards?

That's one piece of it. But also, how does the geography of your area affect your project? How does the economics affect your project? There's a number of these different parameters that you're trying to fit in. And for me, I guess I never really had thought of a project in those terms before, so it really helped me even kind of think bigger and to kind of think about, what are all the pieces that I want to fit into this? And then, of course, as part of the process, you do get quite a bit of mentorship support.

They have people who've already gone through the process who serve as mentors and getting feedback. And you have a group of cohort members who are doing projects along with you, so you're sharing videos and ideas all the time. I think for teachers who feel like it just feels overwhelming to take on a project or do something like that, to have a support system like that really does make a difference. So, I would really recommend it. It's time-consuming, but at the same time, I felt like I was enjoying it and learning from it the whole time that I was doing it.

Annalies Corbin: [00:13:01] Yeah. Every teacher that I've talked to that has made the effort, invested the time and energy, because it's an investment to be able to do, has found it to be a very rewarding experience. Yeah, that's absolutely fabulous. So, how do you then take that experience of setting up a project for that purpose, and then translating it into an everyday or a standard, I guess, if you will, here at the school? How do you translate from an individual piece of teacher effort and professional development into, we're going to use and utilize this resource on an ongoing, although involving, I suspect, basis? But what does that look like? Because that's not always the culture of traditional school.

Pete Barnes: [00:13:48] Yeah, that's a great question. I mean, it really does have to start with supportive administration, and we're really fortunate that we do have administrators. Like all schools, they are concerned about test scores and making sure that parents are feeling like kids are at grade level and getting what they need. But inside those parameters, they are really supportive of teachers trying new things, and innovating, and collaborating, working together.

So, that goes a great deal into it. I think to have someone like Sandy who is really kind of coordinating all the efforts, I mean, she's just sort of a person that you can bounce ideas off of and can work with you. She's not assigned to a classroom, so she is able to move between buildings and really build up that support. And the other thing I think is, at our school, a lot of us have been here for a while, and we taught each other's kids, and it's a fairly small community.

I live here in New Albany, and that just makes it easier, because you know who you can go talk to you down the hall and get support from. And you're never going to have every single teacher who is gung ho about trying project-based learning or any type of really elaborate project, but I think as long as you're out there, you're sharing ideas and you're showing people, here's what I did. I thought this is really engaging.

Sometimes, for instance, with this planting project. We had 1,200 plants and I knew there's no way my fifth graders are going to get all those in the ground, we only had a few days to do it. So, I reached out to the second grade teacher I knew, was really all about that stuff, and some sixth grade teachers. And so, we had three or four different grade levels out there, all working on it together. And to me, it's just fun to have something like that where you feel like you can involve as many different kids and different teachers to dance in.

Annalies Corbin: [00:15:29] And that's always the beauty of that type of work. It's fully immersive if done well. So, there's application to everybody who comes to participate.

Pete Barnes: [00:15:41] Sure. Yeah.

Annalies Corbin: [00:15:41] So, as you think about then sort of scale, not so much of the garden itself, but the learning that happens with your kids out there, and you bring them back into your classroom, and you start the next sets of units. I know you're doing a project that's tied to sort of the mission to Mars sort of thing. You've got a project that's involving some drones that you're getting excited about, utilizing your screen. How do you connect things that's, at first blush, seem like they might not necessarily be connected? What does that look like? What's that conversation with your kids?

Pete Barnes: [00:16:13] Yeah, that's a great one. I mean, I think the key is I try to get kids really thinking about—I mean, I teach science, but obviously, we collaborate a lot between teachers. But just what is going on in their own neighborhoods and their homes related to science. And I was always surprised how many things they're bringing to me that they're thinking about that connect different things we're doing here in school.

So, for instance, when we're talking about Mars, obviously, a lot of that is related to food growth and to—I listened to your podcast about the Mars project thing, gardening on Mars. And so, there are a lot of connections actually between our garden and the experiences we've had or working in the greenhouse in this building, and what would that really look like? I mean, imagine taking that on a spaceship, and then setting it up on another planet.

And, so, that's one just connection that came to mind immediately. But I think you just have to be kind of open

to always looking for what we did before, what are we doing now, and just trying to revisit and rethink. The nice thing about the garden is we do a lot in the fall, preparation, looking in species, identifying species. We do more in the greenhouse probably in the wintertime, probably do a little bit of monitoring. In the spring, it's kind of like a whole new set of tasks and things.

And so, when we're studying for some motion as a spring unit, and we're out there doing our mousetrap cars, and that kind of thing, sometimes, we'll go check on the garden and see how things are going, or somebody will say, we haven't been out to see plants and all bit, so we'll just kind of check on it. It just takes a few minutes out of your class or out of your unit, even if it doesn't directly connect. I think it really is important to kind of keep those, just the connections and those ideas going. Otherwise, you're right, it's easy to just move on, and just forget about it, and not really have those connections throughout the school year.

Annalies Corbin: [00:18:05] And the reality is it very easily connects all the time, and most great teachers are really good at the natural sort of thing that you do, or remember when, or when we talked about, we discovered, and so what do you think about, what you learned there, how does that translate to this? And that's what you just sort of see, is the natural sort of iteration of great teachers. You don't even think about it, you just watch them doing that.

The sense the joy, quite frankly, to see. So, I am curious. I want to circle back around about your project that's going to happen in the spring with drums, because I gather that you get a grant to get these drones, just like you had a grant to get the birdhouses and all that other sort of stuff. So, now, you have this new piece of technology, and lots of folks jazzed and excited about the new tools, the new toys they get to bring in to their sort of teaching experience.

But equally, there are an awful lot of folks that find technology daunting, especially, obviously, in the wake of everything that's going on globally through the pandemic, and so much suddenly had to be transitioned in lots of places to online learning, lots of teachers are really, really adamant to grab and learn more new things. How do you think about that in getting ready to deploy drones and do some of our new programs in the spring? I'm just curious.

Pete Barnes: [00:19:31] Yeah, that's a good question.

Annalies Corbin: [00:19:31] I had so many conversations with teachers, oh, no, I don't want to learn another tool.

Pete Barnes: [00:19:36] We'll try a new thing, and yeah.

Annalies Corbin: [00:19:38] Right. But that's not the case for you.

Pete Barnes: [00:19:38] I mean, it gives me a little pit in my stomach when I start thinking about doing something new like that, because I know it's going to have all kinds of flags and there's going to be openings, of course, things go wrong, but I also think that what I can picture in my head, what the kids are going to be doing with it, and how excited they're going to be about it, and how engaged, I think to me, it's always been worth it to try something new like that, even if you don't quite know how it's going to end up.

We have no idea how this garden project was going to turn out or what we were really doing when we—and with the drones, actually, Sandy Reed and I, we went to the Teacher Air Camp, which is in Dayton this past summer, and they had a whole session on drones. And that kind of gave me the idea to write this grant. But they had us programming the drones to fly through these obstacle courses made out of loops.

And as soon as we noticed, we got to do this with the students, because we study force and motion, of course, the forces applied, and how it is affecting a moving object, putting a force on one side of it, how does that affect its motion in the other direction? All of those things that just fit so nicely. The other piece of it that really sold me on, we had a couple of sessions with people who are flying drones professionally for all sorts of things that I never even considered, all these applications, and just all the job opportunities and things that kids can be doing with them.

And for me, even fifth graders, you would be surprised how many times I will find a student who can help everybody, including me, so I know that somebody either will already have the knowledge or will go home, and look up whatever we're doing wrong or figure it out, and help the other kids. So, I don't feel like I ever need to have all of the knowledge or that everything is going to go perfectly. I know that I can rely on students to help each other and the excitement levels hopefully get us through whenever the battery runs dry, or whatever, we do crash into the wall, or I can imagine a number of things.

Annalies Corbin: [00:21:42] I would imagine you're going to see all of those. There's nothing better than teachers learning alongside students. Kids get that. They understand that when you make a decision not to be the end all, be all, the knowledge, that's a powerful thing to them, that faith and opportunity in their hands. And so, that's spectacular. So, PAST launched this fall a drone certification program.

Pete Barnes: [00:22:10] Same thing. That's great.

Annalies Corbin: [00:22:11] So, maybe we'll convince you to get the-

Pete Barnes: [00:22:13] She's trying to get me on board, yeah, maybe next year.

Annalies Corbin: [00:22:15] The next cohort, yeah, absolutely. You'll be a pro by that time.

Pete Barnes: [00:22:18] Yeah, I hope.

Annalies Corbin: [00:22:19] So, I always like to sort of wrap the conversation with a couple of different sort of recognition. So, the first one is that great teachers are constantly thinking about new things to do. So, always curious, sort of what do you have on your horizon or what are you thinking about, even if it hasn't been codified, or solidified, or even the blessing of the administration? But what a great teacher is thinking about? At the end of the day, what's happening inside that brain of yours as it relates to thinking about next things that I would really love to be able to try to bring kiddos?

Pete Barnes: [00:22:56] Yeah, that's a great question. It's something that I am always thinking about. With fifth graders, if I'm honest myself, I think I'm still driving a lot of the ideas about, where are we going and what are we going to do? I'm trying to leave things open ended, so there are a lot of different solutions and there are a lot of different tasks that kids can be doing. But I do think that my long-term goal is to have kids driving more of the early actual project creation, and the actual idea making, and that kind of thing.

So, I feel like I've made progress in that area, but I think that it's something I would really like to do more with. We do a science fair and kids come up with their own projects for that. And kids get really engaged by that. They really do come a long way as far as really creating from the beginning to the end the whole final product. I guess the other thing is just things that kids feel like they're actually making, not just like they're learning about what we need to do to help the Earth, because fifth graders, a lot of kids are just so interested in climate change, and sustainability, and all of those issues, and one of the things that we can do that when kids feel

like, yeah, this really is is making a difference.

I mean, a pollinator garden is not going to stop the climate change, but if we have pollinator gardens on school campuses across Ohio, I mean, that makes a big difference. I would love to have a school composting program. And so, that's something I've been working on where kids would actually be monitoring, in the cafeteria, for instance, what is compostable or what is not, maybe have a team that would be monitoring as they're cleaning up at the end of lunch each day. There's a lot of applications there where you can be calculating how many pounds of food waste to be saved out of that calculated to emissions savings and all those sorts of things. So, that, to me, is a project where I know kids would be excited about it, and I feel like they would feel like they were really doing something versus just documenting something

Annalies Corbin: [00:24:51] Absolutely. So, my last question, and I always close with this one, is recognition that there are teachers who listen to this program and come from all over the world, sitting in New Albany, this amazing campus and all of the grounds, if you will, that you have for these different outdoor opportunities that want to get more engaged and do some more meaningful environmental science pieces that are not just in the lab, but also bring them outdoors, go back in with them, or they go out and do this consistently, but it's just not been the way that they've been teaching for a whole host of reasons, but they want to get started doing that, what advice would you have for that teacher that says, I just listened to Pete, and he was awesome, and I want to be Pete, I want to do what Pete does. How do you get started?

Pete Barnes: [00:25:40] Okay. Well, I do think—I mean, you're exactly right. Not every school, you can just walk out and walk in the woods. And as we know, taking field trips, and getting kids on overnights, and all that, it's just not as easy, and nothing was ever easy, and that schools don't have all the budgeting. I do think that gardening is a really accessible project and it can be really small scale. It can be really big.

And most school campuses have somewhere where you can start with some sort of a garden, whether it's outdoors or tower gardens where you can go inside. I think the key there is you really have to find some good help to get you started. We were really lucky we had a person from US Fish and Wildlife Service, Brent Sodergren his name is. He's helped the school projects all over Ohio. And he provided expert advice. He helped us with the preparation of our spot, and all along, just kind holding our hands through it.

So, if you can find someone who's done a project before, or someone in your community who has gardening experience, or a local garden center, who maybe could send someone over, because it's getting kids outside, if you're doing an outdoor garden, it's kind of an ongoing thing, where they're really seeing through the seasons what's happening, and whether you're growing things like for your local food pantry or something like that, or whether you're trying to do things that are going to attract pollinators. I think there's just a lot of really cool possibilities. So, to me, that's an easy one to start with besides trying to plan like a weeklong camping trip or something that just seems so overwhelming to people. I think it is something that's attainable.

Annalies Corbin: [00:27:16] It's doable.

Pete Barnes: [00:27:17] It's doable, yeah.

Annalies Corbin: [00:27:17] Yeah, absolutely doable. Pete, I want to thank you so much for letting us come to visit you in your classroom. We're absolutely grateful for the chance to take a field trip of our own. So, thank you for that and thank you for the work that you do. And we look forward to having a chance to catch up with you again and find out what's happened.

Pete Barnes: [00:27:34] That'd be great. Yeah, thanks so much. We appreciate it.

Annalies Corbin: [00:27:36] Thanks so much.

Thank you for joining us for Learning Unboxed, a conversation about teaching, learning, and the future of work. I want to thank my guests and encourage you all to be part of the conversation. Meet me on social media @AnnaliesCorbin, and join me next time as we stand up, step back, and lean in to reimagine education.