



147. Giving Kids an Urban Farming Education with Jim Bruner

Jim Bruner: [00:00:00] Stop thinking about it as something that you have to do and start thinking about it as something you could become. You cannot do this overnight. I did not do this overnight. This started by interviewing people, Amish people, farmers, bioscientists, chemists, engineers, biologists, and asking questions and realizing, "Oh, this relates to that." Stop believing that you have to know everything. Failure is hypercritical in farming. We don't want to do that again. But you need to know.

Annalies Corbin: [00:00:32] 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, welcome to today's episode of Learning Unboxed. We have a special treat today because we are actually going to be talking with a guest that we've spoken to before. Joining us today is Jim Bruner, who is the farmer extraordinaire of one of Columbus' gyms in the city. We have a certified urban farm right in the middle of downtown called Mezzacello. And this is the oasis that was created by Jim and his stealthy and innovative crew who are all around him making it possible.

And we asked Jim to join us today to talk about a program that he did at Mezzacello last summer. And as he's gearing up for this summer's activities with urban kids around farming, we wanted to hear about last summer what he learned in those lessons and how they're going to be applied to the way he's thinking about innovative programming for students for this summer.

Because we know summer camps are gearing up all over the country and around the world for places that school are on the sort of the northern hemisphere sort of timeframe. And so, what that means is we're trying to figure it all out to do the most amazing programming experiences that we can for kids. And so, we want to take those lessons learned from Jim. So, the rest of the world, we can all apply them, not make the same mistakes that he has made, and celebrate the joys that he's had along the way.

So, Jim, thank you for joining us.

Jim Bruner: [00:02:29] My pleasure. Thanks people.

Annalies Corbin: [00:02:32] Absolutely. So, Jim, for our listeners who come to us from all over the world, let's set the stage. Tell us what the heck is this thing called Mezzacello? And why on earth would it be in the middle of an urban environment like Columbus, Ohio?

Jim Bruner: [00:02:44] So, Mezzacello is, as Annalies said, a certified 501(c)(3) urban farm that I created from three lots in, literally, downtown Columbus. There were two vacant lots that had houses on them. And one of the houses burned down. The other house had termites, so they tore it down. And so, we bought the land. Nobody wanted the land because, frankly, nobody wanted to remove the stone rubble foundations. And when Rick and I bought the land, we knew then we wanted both a garden and a farm.

And I knew that I wanted to really explore where we could go with urban ag. Because of medical conditions that affect me, I knew that food was going to be an issue. And so, I'm curious and passionate about growing food.

And one of the side effects of living in downtown Columbus - Pro: It's easy to get around. You can walk to the symphony, every theatre, the opera, the ballet, everything is right there. Con: There are no grocery stores. So, I knew I needed to grow food. So, Rick and I decided from day one we were going to focus on beauty and sustenance.

Rick does the beauty in front. And behind me is what Rick refers to as North Korea, which everyday becomes more and more advanced. And it's where I grow all my food. It's where I keep my animals. And it's where I really focus my efforts on training young people in an urban environment - suburban, rural, and urban - how to understand and work with food. And that's what I did last summer, because of PAST and the Ohio Farm Bureau Foundation.

Annalies Corbin: [00:04:32] So, before we get into the actual programming, just to sort of set a little bit additional context, are we talking about a spread the size of Texas or a postage stamp? Because what does three lots really mean to the rest of the world? So, I mean, what are we talking about in terms of acreage here, just so everybody understands what we're talking about.

Jim Bruner: [00:04:53] Certainly. Thirty meters on the front, 48 meters on the side, so 75 feet on the front, 150 feet on the side, is the land that I'm dealing with. It's less than a third of an acre.

Annalies Corbin: [00:05:06] Less than a third of an acre, and you've turned it into an actual producing farm.

Jim Bruner: [00:05:10] A self-enclosed, sustainable ecosystem with seven components to it that all feed into each other and do more than one thing. If you don't do more than one thing here at Mezzacello, you don't belong.

Annalies Corbin: [00:05:23] Wow. That's pretty impressive just alone. So, with that in mind, let's talk a little bit about the programming. So, you know, you ran a very successful program last summer with kiddos. So, share with us a little bit about what that was. And, more importantly, what did you learn from that experience that's informing what you're going to do this year? And we'll close out with what the plans for this year look like. So, give us a sense of what was it that you were doing and how or why did you think about it in terms of the way you did the implementation?

Jim Bruner: [00:05:58] Yeah. So, one thing that happened that was marvelous is the PAST Foundation, because working with the PAST Foundation, I learned a problem is not an end. It's actually the beginning of a journey. And so, I wanted to solve a problem. And I thought the summer camps that I was applying for a grant

with the Ohio Farm Bureau Foundation, Youth Pathways and Agriculture Grant, I thought it was going to be about teaching kids how to farm. And it's easy, super easy, show them, and then they walk away and you hope they implement it.

What actually happened was the Farm Bureau Foundation wanted me to create camps around getting kids really thinking about what careers would come from agriculture. And that was a reframing of the problem for me. And it was an interesting opportunity because I created what I thought were the 12 perfect careers - perfect, no problem. Perfect careers for young kids to be interested in if they wanted to be in agriculture in a city. They created 35 others. And so, that was quite a surprise. The teachers that I was working with who were helping me implement these programs were frantically writing up new career pathways that, frankly, I had never thought about.

One of my favorites is a young kid, a young man who came and knew nothing about ag. Nothing. He was terrified of chickens.

Annalies Corbin: [00:07:28] Aren't we all?

Jim Bruner: [00:07:31] Especially. But he wanted to be a tattoo artist and a rapper. So, language was important to him and so were tattoos. But when we talked about and we looked at the Arduino circuit sets and the Raspberry Pi's and all the technology, he realized that all circuit boards are tattoos. And so, now, he wants to be a nanolithographer, who will print circuits at such high resolution that the frequency of light is the problem. And he knows that. And I exposed them to that. And that's one of many.

But nanolithographer was something I would never in a million years had dreamed would be a career associated with urban ag. And that was the power of the programming from last summer. I thought it was going to go this way. And as most parents and people and teachers can attest, it's going to go 90 degrees. And it did. It did.

I had a mortician, her father is a mortician, her family are a family morticians, who realize you're not going to need morticians on Mars, you're going to need carbon. So, they pivoted to pathologists and microbiologists because that carbon needs to be reused.

That was amazing to me. Just allow children to dream and give them the data and see what they say. Listen to them. Listen to them. Don't tell them what you think it's going to be. Listen to them. And then, give them duties and tasks and make them work together and see what happens.

Annalies Corbin: [00:09:05] Yeah. And it is a lot of what I loved, you know, getting the chance to visit and sort of see it in action. And I also want to share with our listeners a couple of the sort of foundational ways that we worked together on the program. And I do want to just really sort of stress.

So, oftentimes, nonprofits or schools or communities will join up with community endeavors. So, in this case, Mezzacello, a certified urban farm, which also happens to be a nonprofit, but an organization that doesn't specialize in education per se. And, also, recognizing that when you form these kinds of partnerships for the purposes of an amazing opportunity in the community with kids, for kids, around kids, but for adults as well, there's a certain amount of sort of training and support that has to go, and it has to go multiple directions at the same time.

So, for example, Jim is not himself a schoolteacher. He's a passionate guy who loves working with kids. He's super, super innovative. He's also involved directly in the PAST Foundation day to day. He's been involved

with invention convention. There's just a whole host of things that Jim has gotten involved with over the years that involve innovation and students exploring the world.

So, he had a natural propensity for this type of programming. And yet, it would almost be criminal to have just let him loose and say, "Hey, teach a program and we're just going to hope it all works out." It was the infrastructure and the support structure that we were able to put around it, both PAST as an organization, the Farm Bureau for their funding, that made a big sort of chunk of what Jim was just talking about possible. Including the inclusion of two amazing young ag teachers who came to participate and partner with Jim.

And, quite frankly, I mean, I would argue, Jim, in many ways without these two teachers standing side by side with you and influencing the way that you were thinking and modifying the program and, as you said, running out and designing new modules because a new career had just been developed because of a kids interest, it would have been a much, much different lift. So, share with us a little about the integration or the experience of these teachers coming on board to be your right hands in this endeavor.

Jim Bruner: [00:11:32] No doubt. No lies detected here. Paige and Sam were absolutely crucial. Because I don't know anything about pedagogy. You're right, I'm an informal educator and I run on instinct. Paige and Sam worked with the program with me and said, "Okay. You can run these kids for seven hours a day, but you have to give them periods to play."

And it was in the play where the most interesting learning happened, because that's the moment when the kids let their guard down and they're dependent with each other. And Paige was a master at creating games tied to what we had just done. And Sam lives on a sheep farm, so she had a lot of insight for those programs.

And I will do that again for sure. I will never work without a certified teacher again because, you know, they get a lot of slack and they get a lot of flack. But teachers really do understand the way kids work, and I do not. I understand how to motivate kids and I know what inspiration and artistry look like. But I really do credit PAST Foundation and the Farm Bureau Foundation for teaching me, "Listen. Listen to the kids. Listen to the teachers. Find a way to match that both." And if I had to do that again, I would pick those teachers again.

But I would also choose a physical education major or a physical training major, because I know about energy. I know how much energy it takes to run a farm. Children are nothing but curiosity and energy. And I underestimated that to my peril. Luckily, I had Paige and Sam there to help me gauge, "We need a 50 minute break here. These kids may need to blow off heat." So, it was a wonderful learning opportunity.

And it was also a great opportunity for me because I developed all these systems that were easy for me to use. I didn't know how to integrate them into other systems. And, frankly, it works for me. And what do I need to do to make it work for others?

The Ohio Farm Bureau Foundation Grant also gave me the opportunity to do tours and presentations. And I had kids from other communities who hadn't experienced my camps asking questions that I hadn't considered. So, I have a whole pedagogy and vocabulary now where I think about the things that I'm doing and how to talk about them to those communities that aren't ready for the transformational opportunity I had last summer.

Annalies Corbin: [00:14:12] And so, one of the other things that you mentioned that I just want to set some context for because it will be confusing, so share with us sort of the theme or the topic of last summer's camps. Because you mentioned this whole thing about Mars and they're going to be, "What are you talking about? What does that have to do with urban agriculture?" So, you know, give the listeners just a little bit of context. What was the premise of last summer's camps?

Jim Bruner: [00:14:34] Yeah. So, last summer's camp had two titles. The first one was Bio-Lego, because I wanted each module to, like, tie into each other. The second one was Urban Agtech, because I really wanted kids to see the relationship between farming and what's coming next for them, not necessarily be living on Earth. Some of them may be working in low-Earth orbit. Some of them may be part of Project Artemis on the moon. Some of them may be the people working or the parents of children who are going to be going to Mars.

Nature needs fundamental things. Bio-Legos, right? And she needs these things for life to function. I wanted to teach that. But through the lens that you won't always be in - what the kids call - auto-magic earth, where things grow. You have to make environments that will work.

The environment that I live in is not hospitable to life. It's clay. It's been compacted over 200 years of constant occupation. I had to revitalize every square meter of this space, especially where I grow food. And that seemed perfect to me as an analogy for what it would be like to grow food on Mars.

And in fact, one of the components that I used in the Urban Agtech was diatomaceous earth, which if you know anything about farming, it's plankton shells, really, really sharp. And farmers use it to destroy parasites and bacteria. But you also need it in your gut because it cuts away things. It's very sharp. And it's dried and it hasn't been eroded by water.

However, when you mix it with water and dirt, it becomes really rich soil. And I wanted kids to see the relationship between if you don't have earth, if you don't have dirt, you can make soil. Compost, diatomaceous earth, and manure with water will make the perfect soil matrix for you. And so, that was the lens I was working in. And the kids got it.

The Farm Bureau Foundation was a little bit like, "What?" The robot, which is behind me, with two windmills that actually produces compost for me, magically, automatically using engineered robotics and solar and wind power, and green and brown materials, and diatomaceous earth. And after 35 days, it's compost. And after ten more days with rain and more dirt, it becomes the perfect growing medium. The kids saw that relationship and they're like, "Oh, I see. You can create healthy environment. And food actually needs certain things."

And I think, Annalies, the most profound experience I had both times I ran the camp last summer was what kids were bringing to eat at the beginning of the camp, Hostess, Twinkies, baloney; and what they were bringing at the end, quinoa, fresh vegetables, nothing in plastic wrappers, because they knew.

Annalies Corbin: [00:17:40] Of their own choosing, right? You never said a thing. They just suddenly started shifting the way that they were bringing in their snacks and their lunches.

Jim Bruner: [00:17:51] There were no more Kroger bags. No more plastic bags. They were reusable bags or paper bags that they knew they could put into compost and could feed the animals and cause them no harm. They got it.

Annalies Corbin: [00:18:02] That's a huge win, right? And that's one of those passive wins in many ways. Probably a win that's going to be more sustaining for those individual students.

So, that's a great, great segue because my next question for you is really around the surprises that you had. I know for a fact there were some ahas. You know, this really gets to those lessons that you learned. So, Jim, what did you learn from the kids that you were not expecting? Things that ultimately change the way you think about doing programming in the future?

Jim Bruner: [00:18:37] Yeah. Well, I mentioned one of them is understanding that kids need time to be kids. They need time to play. They need time to reason through what they've felt and what they're experiencing. And talk to each other.

Annalies Corbin: [00:18:51] And these are middle school kids, right?

Jim Bruner: [00:18:53] Middle school. Nine was my youngest and my oldest was 13. And a vast gulf of experience. But the one thing they share is they have no agency in their world.

Annalies Corbin: [00:19:06] What does that mean, Jim? What do you mean by that?

Jim Bruner: [00:19:08] They're told what to do. They're not asked, "What should we do? Let's solve this problem together." And I knew this from my work with inventors in Invention Convention, but I hadn't experienced it so intimately in an ecosystem, literally. The kids, they want to be the answer. They want to. But they need to know, one, that they can, and, two, that when they are, they'll be listened to. And so, for me, it was removing myself from the equation.

When they come up with a solution, don't tell them why it's not going to work. Tell them, make it work. And then, have them work together and have them tell you why it didn't work. That's a profound shift in education, in my opinion. I don't need to be the expert. I did not need to be the expert. I did not. I was not the expert. Those kids were actually better at seeing what they were doing and how it was going to impact their future than I was.

Because, like I said, I picked ten careers, they picked 35 others, and they're all valid. And, also, working with community gardens out in the community, the questions I got from the kids were surprising because, again, I hadn't thought about it from their perspective.

Annalies Corbin: [00:20:22] So, give us an example.

Jim Bruner: [00:20:24] So, one example was, "Well, okay. So, if we have a raised bed and we put dirt in it, why do we need to water it? Because the forest doesn't water itself." Yeah, that's a great point. They don't. And when you reach your hand down in there, it does feel wet.

However, if it doesn't rain, you do need to provide some source of moisture for that. "Well, yeah. So, the plant will grow." No. It's not about the plants at all. It's really about the worms and the microorganisms in the soil. And they had not made that connection. It is above so it is below. It's really about the health of the soil. And they're like, "Oh, so the fertilizer is actually doing something other than making plants grow?" "Yeah. It's drawing life to the roots. And the plants grow as a side effect of that."

That is something in their world they had never experienced. Everything happened to them. It didn't happen as a result of them. And that was a profound shift for me, understanding that kids, that agency, which is such an important concept to me now, is really important to identify for them.

Annalies Corbin: [00:21:37] Yeah. So, let's talk about that shift a little bit, because not only was it profound for you, the urban farmer. Obviously, it's going to be profound for the kids who are participating in the programs or the visitors that are coming to the farm. But, ultimately, this experience was transformative for the teachers who participated. So, you mentioned the two teachers, the ag teachers that were working closely with you. But they walked away from this experience and often to their own classrooms with some profound opportunities as

well.

So, what have you heard from them? And then, we're going to shift and talk about this coming summer. But what do you hear from them in terms of long term impacts to the program that they were able to do with you, to share with you, to be part of with you?

Jim Bruner: [00:22:27] Absolutely. They have become friends, by the way. We're on Insta and Snap and we talk. Paige was really profoundly impacted by the idea of children as leaders, children choosing leaders, and that leadership requires followers that will support the passion of a leader. But a leader has to be a good leader to begin with, what it takes to make leadership. So, she was part of a fellowship in Israel last year about leadership and youth across conflict zones. So, she took what we learned here to Israel, and now she's teaching that in Cincinnati public schools.

Annalies Corbin: [00:23:07] That's awesome.

Jim Bruner: [00:23:08] And Sam started an entire STEM program outside of Cincinnati and Hamilton County, basically, teaching young people how to transform their school ground into enclosed ecosystems. And she finished out that year, and now she's in Utah building a new school around that entire concept.

Annalies Corbin: [00:23:30] That is amazing.

Jim Bruner: [00:23:31] So, direct output of what we did over the summer.

Annalies Corbin: [00:23:34] That is amazing. Okay. So, now let's shift gears. Let's talk about this summer. So, you learned an awful lot. So, share with us a little bit about what this summer is going to look like and why you made some of the choices you've made.

Jim Bruner: [00:23:49] Absolutely. So, one of the big changes this summer is a shortening of the frequency of the camps. Because two weeks is a long time for middle school kids to focus on one thing. And in my training at PAST, two weeks, ten days, is the perfect amount of time for a project.

But summer camp is different because they also want to have fun, right? So, we've shortened it to one week. We took three design challenges and built them around four core concepts. The first one is veterinary technology, keeping animals healthy and integrating them into an ecosystem. The second one is bioengineering, how much bioengineering is in nature, and how does that spill into life in the modern world.

The third one is renewable energy, you can see all the renewable energy around me right now. My entire farm at this point is off grid, not my house, but my farm. And the fourth one is biochemistry, and how does our immune system interact with the ecosystem, and the food, and the chemicals, and all the molecular interplay between life and our health, how does that interact. So, really big design challenges around that.

The second one is that because we're doing a shorter period of time and the design challenges are tighter, I realized I probably want more hands. So, I have two teachers and I have four interns from last year, who are coming back this year and volunteering, and they're attending camps for free, and their entire job is to serve as near-peer and peer-to-peer mentors.

Annalies Corbin: [00:25:27] These are kids that are coming back. These are kids from last year's camp who are coming back as your interns for this year's camp.

Jim Bruner: [00:25:35] Yes.

Annalies Corbin: [00:25:35] That's awesome.

Jim Bruner: [00:25:36] Yeah. I mean, mentorship is critical. Because if you're going to change the world, you got to change the world or teach the world what change looks like.

Annalies Corbin: [00:25:45] A hundred percent.

Jim Bruner: [00:25:47] This is a safe way to do that. [Inaudible] what you can't see. And these kids are going to come and they're just going to say, "It's okay. This seems like it can't be done, watch this, boom, boom, boom." And then, the teachers are there to support.

And second, it's built-in leadership. These kids already know how to lead. And they know how to lead without being mean about it. They understand that leadership is marshalling fear and putting it to use for the betterment of everybody there. It's not about power. It's about guidance. [Inaudible] the world a better place.

Annalies Corbin: [00:26:21] It is. And so, an amazing opportunity. So, if you had to step back from last summer and sort of what you're anticipating, you know, coming for this summer, if you step back from it sort of the 100,000 foot view, and you think about the long term potential or impact to the community for having participated in, orchestrated, and completed these types of programs, where do you think the value add is back to your community?

Jim Bruner: [00:26:50] It's in three places. The first is data. I taught all the kids here record everything. A good colleague of mine, Dr. B, if you didn't document it, it didn't happen. So, every experiment they did was documented and recorded. The second piece is that all of this can be done anywhere. It's modular.

And my vision for Mezzacello is to be the first of many - sorry, I'm still open from an interview earlier today - to be the first of many learning labs across the city that are sharing resources, and data, and technology, and opportunities with others. Nothing happens in a vacuum. Matter of fact, nature abhors a vacuum.

The third is, I really want other communities, other neighborhoods, to start thinking of themselves as part of a larger whole. I can provide you this if you can provide me that. And I can give you this grace, if you give me that grace. And the applied STEM opportunities for kids that have never experienced this and it popping up in an entirely new place.

So, I really want to work with the Columbus Land Bank and find these areas that if we popped a bioreactor, and we popped a rain barrel system, and we put compost there, what would happen? How can we train those community gardens to stop thinking about auto-magic food? We'll grow it over the summer and we're done. That's really not the way it works. That's not the way anything works.

Annalies Corbin: [00:28:15] Right. Right.

Jim Bruner: [00:28:16] Summer romance, that's not real either. So, I want to teach kids to be realists, and have fun, and make good food, and become leaders for the future that we need for tomorrow.

Annalies Corbin: [00:28:30] And advocates for their community. Because the reality is there are lots of places in the world, urban and otherwise, that are, in fact, food deserts. And we know that high quality food is a problem. It's an access issue. It's an equity and a social justice issue in many, many parts of the world. So, I

would argue that one of the things you're providing to the community is lens into the fact that that problem can be locally solved. But we have to roll up our sleeves, quite literally and figuratively, and we have to teach the community how to solve this problem for themselves.

Jim Bruner: [00:29:04] I really do passionately believe we need to make space for kids to teach the parents.

Annalies Corbin: [00:29:11] Oh, yeah.

Jim Bruner: [00:29:12] This is what we, children, this is what we need to survive in the future that's coming. And not that it's bad. It's just that we've taken food for granted for too long. And it's time for people to start thinking about food as valuable a resource as money and gas and power.

Annalies Corbin: [00:29:31] Yeah. Absolutely. Okay. So, last question. I always like to close the program recognizing that the majority of our listeners are teachers, and there are teachers who are digging in and thinking about amazing things that they can do with their kids. They're passionate about doing innovative things, but they don't always have the resources or the local partner.

They can hear about this great thing that we're talking about in Learning Unboxed and go, "That's really awesome. But I don't have an urban farm. I don't have a PAST Foundation. I don't have one of these other things that are in the community, but I'm willing to get started anyway." And so, how do I translate my first two or three steps as a teacher in a place that doesn't have these resources in my own school to take what is happening with the amazing Jim Bruner and Mezzacello and make it my own. What's your advice to that teacher who says, "I want to do it, but I don't know how to start"?

Jim Bruner: [00:30:24] Stop thinking about it as something that you have to do and start thinking about it as something you could become. You cannot do this overnight. I did not do this overnight. This started by interviewing people, Amish people, farmers, bioscientists, chemists, engineers, biologists, and asking questions and realizing, "Oh, this relates to that." Stop believing that you have to know everything. Failure is hypercritical in farming. You don't want to do that again. But you need to know.

And third, you do not need to be the answer. Nature will answer if you ask the right questions. Just reframe what the challenge is. It's not about creating a farm. It's not about recreating Mezzacello. It's about understanding what life fundamentally needs. And then, how do you ask children to learn that? How do you learn it and rethink that? And it will be much, much easier. But no plant grows overnight. No seed gives a tree tomorrow.

Annalies Corbin: [00:31:28] And it's also a lot of fun, right? You know, learning alongside your children is one of the most powerful things. And we've heard this from teachers over and over again. You know, when I let go of the need to have to be the sage on the stage, the all knowing, and instead I roll up my sleeves and say, "I don't know, but let's learn together." It is a magical, magical journey. And that magic happens every day on Mezzacello.

So, Jim, thank you so much for taking time out of your day to share your story. And to join us in the conversation about what makes amazing teaching and learning and really innovative in not so familiar places.

Jim Bruner: [00:32:07] I love it. You know that I love this. This is my passion. So, thank you for the opportunity. And to all those teachers out there, one day at a time. Start one day at a time.

Annalies Corbin: [00:32:17] Absolutely. Thank you, Jim.

Jim Bruner: [00:32:19] All right.

Annalies Corbin: [00:32:22] 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.