TRANSCRIPT

Learning Unboxed

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Episode #313
ANTONIO GUSTIN:

Antonio Gustin:
The worst thing I've ever found that an educator can be is boring because people associate the feeling you give them with the subject you're trying to bring to life

Annalies Corbin:
Welcome to Learning Unboxed, a conversation about teaching, learning, and the future of work. I'm your host and chief goddess of the PAST Foundation, Annalies Corbin. We know the current model for education is obsolete. It was designed to create fleets of assembly line workers, not the thinkers and problem solvers needed today. We've seen the innovations that are possible within education, and it's our goal to leave the box behind and reimagine what education can look like in your own backyard.

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Annalies Corbin:
Welcome to today's episode of Learning Unboxed. As always, I'm excited to talk with another great innovator in the transformative education space. And joining us today is Antonio Gustin, founder of Tony's Creepy Crawly Zoo. And I cannot tell you how happy I am, Antonio, that you are here, so welcome to Learning Unboxed.

Antonio Gustin:
Thank you very much for having me. I appreciate it.

Annalies Corbin:
Super excited. Kids love bugs. So, let's set some context for our listeners as we get started. Tony's Creepy Crawly Zoo 2.0 is an immersive virtual reality science experience developed through the Gateway Science Project Incorporated, designed to let students and families explore insects, reptiles, and their habitats from a radically new perspective. Using custom macro 360-degree camera technology, the project creates the feeling of being shrunk down into the world of small creatures, turning curiosity into scientific literacy through close-up, unforgettable encounters.

And I don't know about anybody else, but that sounds so awesome to me. Just the fact that you thought, "Let's do this thing," that's pretty wow, Antonio.

Antonio Gustin:
I appreciate that. Yeah, it's been an adventure creating this project.

Annalies Corbin:
I can only imagine. And as a founder, and my listeners know I love talking to founders, I'm a founder myself, right? And I always start with my founders with the same question: What were you thinking? Founding things is hard. It's really hard. So, let's start with the big why this thing? Why'd you do this? What were you thinking?

Antonio Gustin:
It was actually out of desperation. And this is the latest version of the Creepy Crawly Zoo. And I can tell you that I never started out to be an educator or to create such an impact, and I'm a slow learner. These were things I discovered as the program was progressing, and I was making things up as I went along. And for 30 years prior to this event, I was running a traveling hands-on live insect exhibit.

Annalies Corbin:
So, you know all about insects though. You were in the right zone.

Antonio Gustin:
Oh, absolutely. This would not work if I had not been an entomologist.

Annalies Corbin:
Yeah.

Antonio Gustin:
So, I ran this live show. And I had a shtick where I got kids really worked up into this crescendo, and if they were afraid of bugs before I got there, they had completely forgotten that by the time it led to this part of the show where everybody got to take out and touch and hold live insects from all around the world. And it was an impact that lasted for years afterward.

And the way we got here was the pandemic. I had reached a peak where I was booked solid for the whole year. I was looking to found a permanent location that was an insect, reptile-themed science park, and I published a book the day the stay-home order was issued, and all of that came to an end. And everyone said, "If you wanna continue, you should really go virtual." And I said, "That sounds like a terrible idea." I can't imagine holding insects up in front of a webcam. You don't need me to do that. What we did, what the live show was about, was an experience that the kids had. The insects were this tool to make an impression.

And it just so happened that a few years prior, a friend of mine was also doing a program at a school, and he was from high school, and he went on to become a game designer for EA Sports, and I had never been introduced to virtual reality. And I have to tell you that I was blown away.

Annalies Corbin:
Yeah.

Antonio Gustin:
I could not-

Annalies Corbin:
It's pretty amazing. Yeah.

Antonio Gustin:
I couldn't believe this technology existed and it wasn't more popular. And when I took off the headphones for the first time, I looked at him and I said, "Do they make a macro virtual reality camera?" Because I knew immediately what I would do with something like that.

Annalies Corbin:
Do with it, yeah, yeah.

Antonio Gustin:
So, fast-forward a few years, I'm dead in the water. Everyone's trying to figure out how to continue. I did one virtual show, and it was exactly what I thought it was going to be. It was terrible. It was boring. And the worst thing I've ever found that an educator can be is boring, because people associate the feeling you give them with the subject you're trying to bring to life.

And I'm sitting in my office during this webinar with kids, and I'm looking at all the bugs behind me, and I'm thinking, "Man, if I could just put them in the terrarium with these animals, now that would be a magical experience." And unfortunately, the technology still did not exist. So, I started learning everything I could about virtual reality cameras, how they worked. I started searching on the internet, and it took me two years of trial and error. But now, once I got it in my head, and that was the only way forward, I was gonna make it happen whether anyone liked it or not.

Annalies Corbin:
That's awesome. True founder. True founder, too. I wanna give you that.

Antonio Gustin:
Yeah, once you get a bug, you just... no pun intended, it doesn't go away. And after about six prototypes, one day, I had this camera, it was about this big, and I was taking parts from one industry and another industry that were never meant to do what I wanted them to do, and I put them together and I bent them to my will. And I had this tarantula that was fairly active, and I put the camera in the terrarium. I filmed it, and I was expecting another failure. And when it was done, I went through all the processing with it. I didn't even own a VR headset at that time. I was using my phone and a pair of Google goggles to test this.

And I watched it and I was just gobsmacked. I was like, "Oh my God, I actually did it." I am inside a terrarium with a tarantula the size of a van, and you could see every hair on this tarantula's legs. And I was like, "Oh, I actually did it." And then, I thought, "Now what?" Everything was based on reaching that goal, and once I got it, I had started to play with some other programs in virtual reality. And prior to the pandemic, like I said, I wanted to build a virtual reality science park, and I ended up building the entire thing in virtual reality.

And so, we started recording different experiences, overlapping with reptiles and amphibians. Basically, anything that you could stare at from the perspective of being two inches tall that would just blow your mind. And it all came together, it took six years from the day I decided I was going to do this to the day we actually launched this on the Quest Horizon store.

Annalies Corbin:
That's pretty amazing. Yeah.

Antonio Gustin:
That was just the latest part of the journey. But it's really neat. I have to say, I'm pretty proud of how it turned out. We partnered with a gentleman named Dan Capps. Dan Capps I met in college when I was starting out the Creepy Crawly Zoo, and I got this idea. He was very popular in the entomology department and everyone knew who he was 'cause he would come out with this amazing collection of insects and lay them, and it was an amazing collection of insects. In all the years that I've been doing this, I have never seen a collection like it.

And Dan, he once had the world's largest private insect collection, and I ended up bumping into him again years later after he helped me get my start working with schools. And I thought, "Dan, do you mind? Do you feel like I'm stepping on your toes?" And he looked at me, he goes, "Tony, I have a full-time job." He's like I feel bad

saying no, I can't say no." And he's like, "If I have someone else to refer people to, that would be great."

And he gave me every bit of information he had on working with schools and helped me get my start. And then, two decades later, I ran into him again and we started this project, and we ended up doing a 3D scan of his entire collection that he traveled with the glass off, and then incorporated that into this virtual reality experience as well.

And when you go through the experience, you can pick up each individual display case yourself, hold it up, blow it up with your hands, just make it bigger, and you can read the label on each and every insect in that collection. And we merged all of this together to just be this multifaceted experience.

Annalies Corbin:
That's super, super cool. I love that. So, let's talk a little bit about the students', kids', adults' even, fascination with bugs, with reptiles. There's just something about it. And one of the things that in the materials that were pre-sent over to me before our conversation, there's this statement around how powerful insects are as a tool for inspiring scientific curiosity.

And I've seen that with kids. We run entomology programs at PAST Foundation. We've been doing camps and programs for many years that involve. And kids do in fact, they love that stuff. They're curious about it. It's just like kids' fascinations with dinosaurs. So, why do you think it is there's just this innate curiosity with this? And why do you think that we don't tap into those things more than we do?

Antonio Gustin:
That is an excellent question. And as far as why don't we tap into this more than we do, sometimes, I walk into a room and I don't expect to be the person that is the smartest person in the room. But I have a very unique perspective and probably a little bit of ADHD that makes me see things in chunks and patterns. And with the insects, sometimes it's a matter of time. For me, it was a full-time job just keeping all my live insects on top of traveling and doing the shows.

And it came to me by accident after years of doing this, where I realized how powerful insects were, not just to teach about insects, but I had an effect on kids that was lasting for years afterward into adulthood, where that day that I came to their school had stayed with them, and they either went into a scientific field of veterinary science, or some kids were in the military. I call them kids. They were kids when I met them,

but they were in the military, and they still kept pet tarantulas or something along that line.

And I started to run into parents who would complain to me when they found out who I was. They were like, "You."

Annalies Corbin:
Oh, you. You did that.

Antonio Gustin:
"I need to talk to you." And they're like, "You're the bug guy." And I said, "Yes." And they were like, "You know what? Ever since you came to my kid's school, I have not been able to take a vacation without packing nets and jars."

Annalies Corbin:
I love that, though. But that's the thing, right? That's the beauty, that's the power of curiosity, and it's something that we have often, we just we force out of young people. We put them in traditional settings. We don't allow them to explore, the hands-on component, and suddenly curiosity just withers as we get older in many cases. And I love this because it's just honoring the fact that we just wanna know stuff.

And I love that example because I had a similar experience as a kid, and I'm sure everybody you talk to can relate back to some sort of thing. Mine was with snakes. I'm not really a fan of snakes, I'll be honest, but there was a gentleman in our community, he had snakes, and he would talk with kids about these snakes. And he also had the little white mice and the rats that he fed the snakes. And I was the kid that went home with a black and white rat in a coffee can and showed up at home and said, "This little baby rat, hey, this is Rosebud." I named it Rosebud. Rosebud lived with me its whole life, and my parents would probably, like, throttle that man if they ever had the opportunity because the rat came home. It was a similar kind of thing, right?

Antonio Gustin:
Yeah. I got my start... okay, so I was a bug geek as a kid. I really was. In fact, my father was a teacher, and he would always encourage us to learn things, and there was this book from Nat Geo, which at the time it was a series called World, and it was for kids, and the book was called Creepy Crawly Things. And that book stayed with me my whole life, and that is where Creepy Crawly Zoo actually came from, from that influence from a book that I had when I was five.

And I had this insane curiosity about insects. I forgot all about insects as I got older. You get into music, girls, you go through that age where you're into sports and other

things, and it went on. And my whole passion got rekindled when I worked for a place called Hoffer's Tropic Life Pets, which was the mother of all pet stores in the Midwest, and I ran the reptile room. And I wanted to go to school for reptiles after already going to school for languages and art, but then that kind of came back to me again later in life.

And you can't go to school for reptiles at that time. But through that, I stumbled onto entomology. I was like, "Oh, hey, I used to love bugs when I was a kid. This will be great." And I thought it was gonna be easy 'cause I already knew so much about insects, and it wasn't at all. There was a lot to know. But I had a professor who was great at telling stories and made it a lot of fun.

And as I went through my college career, a bunch of us were sitting around and talking about how we all got into entomology. None of us had gone to school for entomology. Nobody knew we could go to school for entomology. And someone blurted out, "I wanna talk about bugs and I wanna get paid to do it." And I thought about that. I'm like, "Why isn't somebody doing that?" And I only started this as a means to facilitate to the young people like me that were growing up that they could do this, and that's how it started.

But once I really started getting good at my interaction with the kids and bringing these live animals they could touch and hold, and the decades that went by were all the stories we mentioned earlier where I'd run into parents, I have parents that were kids that I visited in their school come to my show with their kids. And I started to realize that insects were more than that. Kids were leaving my show, running home, and tearing apart their backyards, and they wanted more and more, and it lasted for a lifetime.

And I later recognized the power that they really had, and it was from watching the series Cosmos that did a great story on how every scientist gets started with this moment in childhood that lasted with them a lifetime, that I realized what the insects were actually doing that I was creating these moments for these kids to inspire a passionate curiosity.

And as you said before, insects were great for inspiring this curiosity, but it was even more than that because they're everywhere. They affect-

Annalies Corbin:
They are everywhere.

Antonio Gustin:
... everything. And a simple interest in insects can be connected to every science you can think of. They're just that diverse in form and function, and accessible in a way that nothing else is. I mean, we're fascinated with insects from the time we're old enough to crawl over an anthill and just stare at them, that they're... Sorry, I get so jumbled up and I get excited about this topic because they just can be connected to so much.

And once we start asking questions about insects, we start learning about plants. Even taking that as far as astronomy, insects use the moon to navigate at night. Dung beetles use the Milky Way itself to navigate. And the simple interest in that one topic can spiral a lifetime down a rabbit hole of curiosity and learning that could one day change humanity.

And I say that because you never know which kid sitting in front of you is the next Newton, Einstein, Curie. They all started the exact same way.

Annalies Corbin:
Yeah. And you're 100% correct, and I love that. Thank you for elevating that because it's absolutely true. I wanna talk a little bit about how... the reality of it is that this could be very episodic for many. Like we partner up with Antonio, he comes to our school, he comes to our community, we get to have this amazing experience, and that's fabulous and it's wonderful. And for some kids it is going to be life-altering, that they will carry it with them forever.

But that natural curiosity that all kids have, that they can experience when they're with you in that moment and all of your creepy-crawlies, right? How do we collectively, I'm not saying just you, but how do we collectively from your lens... I mean, it's remarkable. You've served about 1.5 million kids over the course of the years. That's nothing to sneeze at, so bravo for that. But that lends itself a perspective, if you will, right? Of how kids are curious, how kids ask questions, how kids get revved up to be curious, right? Because it's innate in all of us, and yet we tend to see that that does in fact get lost. And I'm really curious about the places or the educators that you've had the opportunity to work with repeatedly over and over again, they have you come back, right?

I have no doubt that you have seen and had conversations about curiosity with traditional educators, and talking with them about what they can do to foster this curiosity ongoing or what do you see as it relates to the trends of that? Because I'm an educator listening to you go on and on, and I can hear your excitement, right? I

don't have to see it, I can hear it. So, how do I take what Antonio knows and make it part of my everyday practice? Do you have any ideas about that?

Antonio Gustin:
Yes. Originally, when I started this, I thought I was helping educators by simply bringing a subject to life. So, you weren't just reading about it and looking at pictures. You had an intimate connection because you can say, "I held that. I know what its feet feel like when it crawls on my hand." And there, there was a genuine connection to the subject.

So, it worked for educators in if they did my show or brought it to their school before they taught about lessons or insects in their curriculum, it enhanced the anticipation of the subject and made it very easy to teach, because the curiosity was already there. If they had studied insects already, it worked as a way to bring everything they studied to life. So, they had a little bit more knowledge when they actually came into my show and asked great questions.

But it becomes more than that. With insects, once that excitement around that subject is lit, it can be used to connect to a lot of different things. So, sure, it's insects. Some people never see past that part that it's insects. But if you look at what insects do, and there's almost nothing you can find that they don't do, they make paper, they've invented flying, they're engineers, they have social structures even, you can start picking apart what you need from that topic to further other topics, and the curiosity is already lit by that.

So, I didn't expect teachers to go, "Oh, we're gonna base everything around insects," but I hoped that I could spark something inside the kids that made it easy for teachers to follow up on that. Because once they're curious, the work is done. All you have to do is add a little bit more, and they will start absorbing like a sponge because when I did my show, I had, like I said, a shtick. I made them laugh. I made them scream. And we worked to this crescendo. And then, I let them be responsible actually for the safety of my animals. And I'm sorry I get so passionate about this. I sometimes lose my train of thought. But that feeling that you give them is what they associate with the subject.

And so, it's really important I think for someone who's outside of education. It's different for people inside education that have a more formal structure and are expected to do different things. I get away with a lot because I'm not limited by that. But if you go into a school, how you make those kids feel is how they are going to feel about the subject that you wanted them to learn about.

And I learned this lesson, which I think is important to this, from a seventh-grade teacher that was a friend of mine. I went to her school every year, and I always felt that seventh graders were just a little bit too old for my shtick, that it was silly to them, but they kept having me back again and again. And I asked her, I'm like, "Are your kids really okay with what I do? And 'cause sometimes I feel like I'm maybe being a little condescending with that age group." And she looked at me, she was like, "Listen, I ask them every year about what they like the most about it, and they really do like it." And the thing they like the most was that they could tell that I was doing all these antics for them because I liked them.

Annalies Corbin:
Kids know when you're not being authentic. They get it.

Antonio Gustin:
I always did this because I liked them. Because I saw myself in them. I wanted to be the person that I wanted when I was sitting where they were sitting. And I looked at her, 'cause to me that was such an odd thing to say. I'm like, "Don't all your presenters like kids?" And she looked at me and was like "No. No, they don't."

Annalies Corbin:
Unfortunately, that would be true. Yeah, absolutely.

Antonio Gustin:
And I think that feeling of really liking them and being excited for them to learn this is also part of what sparks that curiosity in them and gets tied to the insects. And when you leave them with that feeling of feeling really good and it's tied to insects, that's what leads to them running home and tearing apart their backyards, 'cause there's still a positive feeling every time they see an insect, and that positive feeling can be tied to all the other lessons that you can tie to insects.

And I never cared that kids grew up to be entomologists. I just cared that they grew up to be curious, and maybe their curiosity about insects led them down any road. It doesn't even matter which road, as long as they continue to be curious.

Antonio Gustin:
Yeah. Absolutely. And that is one of those great things that we hope for with all of the kids that we encounter and we teach. So, I always like to think about the fact that folks are listening from all over as we wrap the conversation, and I always love to also close when I'm talking to founders to ask you, what's the thing you're working on next? You're a passionate guy, Antonio. You love what you're doing. It's clear that you love what you're doing, and it's really cool. And we will make sure that in the show notes

folks know how to get ahold of you, come to the website, all of those pieces and parts, and hopefully folks can see what this looks like, the Creepy Crawly Zoo 2.0. But help us understand what you're thinking about as that next horizon. What's the next cool thing that you're trying to tackle with this work?

Antonio Gustin:
Oh, I think I'm gonna be doing this work for the rest of my life. Honestly, this Creepy Crawly Zoo 2.0 was just the beginning of the vision. And virtual reality is such an amazing tool because, now, I'm not limited by being the person who has to be there to create that experience. Now, this experience can go out to the entire world at any time.

And what we built so far is great, but there is so much more that I want to add to it, including making it a multi-person experience where a teacher can take an entire classroom through this.

Annalies Corbin:
Oh, that would be super cool. Yeah.

Antonio Gustin:
That's the next big step, but then creating the world around it. So, I've always had this fascination with the plants that insects are really into. So, then, we want to tie local plants, things you find commonly. If you're looking for insects, it really helps to know what plants they feed on because you can help target them. So, then, we open the box about plants, trees, shrubs, fungi. And I think I'm gonna be building this world for a very long time and expanding on it.

Annalies Corbin:
I love that, and I hope that others will go on that journey with you 'cause it's fabulous. Any time we can get kids jazzed about science, I am all for it. So, I love this very much. So, please, please, please take a visit to creepycrawlyzoo.com. Lots of information will be there for you. Antonio Gustin, thank you so much for taking time out of your day to chat with us about all the creepy crawlies in the world and how cool it is to be enamored by all of that.

Antonio Gustin:
Thank you very much for having me. I know I have a tendency to ramble about this because my passion just... I get really excited, and this is what I'm like in front of a group of kids. It just oozes out. I'm sometimes even a little embarrassed by it. But I think it's something that it's really powerful and can change the future of our kids. And like I said, we don't have to tie it to entomology. Just stay curious.

Annalies Corbin:
Just stay curious. On that note, thank you so much for joining us today.

Antonio Gustin:
Thank you very much for having me.

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Annalies Corbin:
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