

“I Can Do This Too” Kids in the Garden at UNCP

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Dr. Gay

Welcome to *30 Brave Minutes*, a podcast of the College of Arts and Sciences at the University of North Carolina at Pembroke. In *30 Brave Minutes*, we'll give you something interesting to think about. I'm Richard Gay, Dean of the College of Arts and Sciences and with me are Associate Deans, Ashley Allen and Joanna Hersey. Joining us from the UNC Pembroke Kids in the Garden program, are Rita Hagevik and Kaitlyn Campbell from the Department of Biology, and Martin Farley from the Department of Geology and Geography. Now get ready for 30 Brave Minutes!

Dr. Allen

Thanks so much for being here with us today everyone. I thought that maybe we would start with just some very brief introductions about the departments that you're in, but also, maybe your areas of research interest, and then go straight into what the Kids in the Garden program is.

Dr. Hagevik

Ok, my name is Rita Hagevik, and I am a Professor in the Department of Biology, I am the director of graduate programs in science education, and my research is focused on sustainability, agriculture, environmental education and the use, particularly of GIS and other technologies, in the teaching of science.

Dr. Campbell

Hi, I'm Dr. Kaitlin Campbell, I'm an Associate Professor in the Biology Department, I'm also the Assistant Chair, and in the Biology Department, the research that I do, I love working with the undergrads there and we do a lot of research related to pollinator conservation. So, we've studied butterflies, hover flies, honey bees, native bees and I also do just insect ecology in general. So ants are another special interest of mine.

Dr. Farley

I'm Martin Farley, I'm a Professor of Geology, and Chair of the Department of Geology and Geography. My research specialty is called palynology, which is officially the study of organic walled microfossils, which includes a whole host of fossils, but principally you could say pollen and spores. And for our podcast today, the project we're doing I've in a sense gone biological to consider modern pollen, associated with the Kids in the Garden project.

Dr. Allen

Wonderful. Thanks so much you guys, so Rita, would you mind telling us how Kids in the Garden started, and what's involved here.

Dr. Hagevik

So, basically, the three of us came together and, just thought of what our interest areas were, and what we could do, you know, for schools and also to involve the undergraduate students, in research. So we came up with this idea and submitted it to Burroughs Welcome. So, the grant is funded by a student science enrichment grant from the Burroughs Welcome Foundation. So we need to mention our funders, but over time other smaller funds have been added to the program. That's what's so fun about these kinds of programs. But basically, the idea, the program is for middle and high school students, and also teachers in schools, to support them in STEM activities around pollinator conservation and pollinator research. There's Saturday morning activities throughout the year. There's a Bee Camp, the last two weeks in June, we have an outreach booth that, of course, the pandemic did change things, [laughs] but was pretty much, has pretty consistent outreach about once a month, somewhere, and at local community events. We have a garden and apiary at UNCP now, and there are tours and outreach events there.

We have a curriculum called Bee the Change, that we use with the schools, and we've established six school gardens in three different counties. So, the undergraduate students serve as something we call STEM ambassadors, and the campus garden and apiary is student run, and there's a garden manager that's a student, and so that's worked out great. It's amazing what students at UNCP are capable of actually, and they've been a huge success in the program and serving as near peer mentors for the middle and high school students, very important.

Dr. Hersey

That's great Rita, thank you so much. Can you talk about what elements need to be in place to make a program like this run well.

Dr. Hagevik

Great colleagues, I think, an openness to the students' ideas, and then I think the other thing is partnerships. Partnerships outside of the university, over the course of this project, we've added lots and lots of partners who have all contributed their own piece to the project, and made it, you know, just really great for everyone.

Dr. Campbell

Yeah, Rita, I want to add to that about the students and their ideas that they have, we've had some really innovative garden managers that just get really pumped about everything and, but our garden managers and all the interns that were working, they would do some really fun thing for the holidays, we had arts and crafts for everybody to do, and anybody that came could enjoy it. We made s'mores at the campfire and everything, and had hot chocolate and hot cider. They had a springtime in the garden too, another event like that to just celebrate spring. You know, when I came in, I actually didn't do pollinator research. It's because of this program that I started doing it, because it was, really we had this wonderful garden, so we could do all of the, you know, all the pollinator research with all the flowers out there. I had so many questions when I walked in that garden, like, what is there? And then, these students were like, 'well, you know, I don't know if I want to work on bees, but could I work on butterflies?' Uh, okay. I don't know that much about butterflies. Let's do it. And then they become the experts

and they really lead a lot of the research. So, I found that really exciting and just opened up a whole new area that I wasn't working on before.

Dr. Gay

So, one of the questions I would like to know more about is how our students at UNCP are involved. You've already mentioned a couple of really interesting things. And I'd like to hear more about this near peer mentorship program. Could you tell us a bit more about that please? And other ways that UNCP students are involved?

Dr. Campbell

Maybe, Rita, maybe I can talk about that a little bit, with the near peer mentorship. I think that's referring to how we had the undergrads mentoring the high schoolers and middle schoolers that were doing their research projects, for the science fair. And, this was really helpful. I was on maternity leave for one of the semesters during this program and the undergraduate students were already doing research with me for, like, the semester before. So they are very comfortable, you know, working with the students on these topics, and the high schoolers had to come up with totally new projects to work on. But they were able to mentor them.

For example, one of them was related to aggression and honeybee hives, and I went out, like, one time, I think, but the rest of the time the undergrads were running the show, and so they would swat at the front of the beehive with a glove, and then toss the glove at the hive. And then they would give them a couple minutes and then grab that glove really quick and put it in a Ziploc bag, and see how many bees had tried to attack that glove. And then they would go and measure, you know, how many resources were in the hive and relate that back with some statistics. And the students, the undergraduate students, were able to mentor the high school students on this process, because they were comfortable already working in beehives, and they understood how science works at that point. So that's, I think really valuable to be able to teach other people how to do science. You really learn it so much deeper.

Dr. Hagevik

And they, they really helped us out, because they're adults, you know, and they drive and, you know, they're responsible, our students. You know, so sometimes we had a time conflict. So, we have students who were presenting at the state science fair in Raleigh, and we have students that were presenting and another competition in Durham. Okay, you can't be in two cities at the same time. So then we had students who would volunteer to take the students to the Durham competition while we were at the Raleigh competition [laughs]. So, you know, there is always too much to do on a project like this, and the students, I think really enjoyed stepping up. I mean, I really feel like everybody benefited, you know, they got a lot of pleasure out of helping the students and sharing their research with the kids. And then, you know, of course, the students made sure that, you know, everybody was successful. So, Martin took students to science conferences. Do you want to talk a little bit about that, how that works?

Dr. Farley

I do want to talk a little bit about that, and everything that Kaitlyn and Rita said so far is true, and there's no doubt too that having undergraduates involved in the project was useful in a mentoring capacity. They could do things in the lab that the grade students couldn't too and,

their participation in things like the Saturday workshops, meant there were more people around to help explain to the fairly large number of middle and high school students what they were seeing, for example, in the microscope. Which Rita talked about how it was impossible to be in both Durham and Raleigh at the same time, well, it's more or less impossible for one expert on pollen to be looking down six or seven microscopes at one time too. So, the undergraduates were invaluable for that sort of application as well.

Dr. Hagevik

Right, yeah, definitely collecting the data, looking at the video, marking the videos, the students did the work, but, you know, they need supervision, especially when they're doing real research at that age, and, you know, they're motivated and enthusiastic, they just need a little guidance, yeah.

Dr. Allen

I love that, so, for the middle and high school students, if you had to choose, you know, the main skills that they're getting by being part of the program, what would those skills be? And in terms of getting into colleges that they want to go to, you know, I'm assuming this helps them a great deal actually, to have done real research before they even get to an institution like that. That's crazy.

Dr. Farley

One of those skills they're getting, I'm not sure I'd call it a skill exactly, is there being socialized into what science and scientific research is really like, and they're finding out that, although whatever they may have learned in high school might have made them think that science or scientific research is something that only Albert Einstein can do, it's something that they can actually do. When we took the high school students to the North Carolina Academy of Science meeting at High Point, and they set up the posters, and the other posters there were mostly from undergraduates from, particularly from these expensive private colleges. And they went around to look at these other posters, and discovered that they were doing work at least as good as these other college students, and they learned, I can do this too. And that's a very important lesson.

Dr. Hagevik

Yeah.

Dr. Allen

I love that you pushed those boundaries for them in a way. I mean, you're sort of their advocates in those spaces by saying, you know, we are bringing them, and they are going to showcase their research. It sounds like with the undergraduate students, they had a lot of leadership responsibilities. So I feel like not only are they growing as scientists, but they're also growing as leaders right? So, hopefully, when they do graduate, they have that extra set of social type skills that are going to help them succeed, but if you had to pick a skill that you feel like your undergraduates are walking away with, that you think was the most important, what would you say?

Dr. Hagevik

Well, I just want to say something really quick and then everybody else can chime in. But one thing that I think happened to me, personally, that happened to them too [laughs] so, this is a mutual happen to you. They became, like, bee ambassadors, so that's what we, that's what they started calling themselves, and conservation and environmental ambassadors, and they started telling everybody about their research and about how important it was. So, I really think it's becoming involved in something that's real. And Kaitlyn can talk more about this and Martin can too, but the amount of published literature on this topic has exploded in the last just couple of years, but we started this more than two years ago. So we were, just on the start of something and those kids knew it. They knew it was important. So, I think doing real research that's important, that you're contributing to the field, is critical.

Dr. Campbell

Yeah, I want to add to that. I think the key skills that the students get out of doing these projects, and working with the students, the one, that you said, Ashley, leadership that's so important, being able to lead. And then that gives them the confidence to be able to go on and do other things that are going to require leadership. The other is the ability to communicate well, and they're learning to communicate with us, they're learning to communicate their science in a way that other people can understand, that at these outreach booths for people that are not scientists, and then at scientific meetings for people that are scientists, to young children, or, you know, people younger than them, not that much younger, that don't know that much about science at all, but really are interested in it. And I just, I think science communication is so important and I try to also incorporate that in all my classes. But seeing, what one of them, like, really gets to my heart and it, like, I get tears in my eyes...seeing a student... gosh, just a moment [crying].

Dr. Allen

This makes me joyful. You're so passionate about it. It makes me happy.

Dr. Campbell

Seeing my students presenting their posters from a project that they started knowing nothing about it, to the end, and they're standing there, [crying], I just want to give him a big hug. I do.

Dr. Hagevik

Piggy backing on Kaitlyn, they're often afraid when they go, we got invited to present at a big meeting at BASF in Raleigh. They invite all the big universities, they invite undergrads and grads, graduate students who are doing agriculture related research, that's why we got contacted. They were scared. I mean, to go there, and it was not just presenting your research. It was a whole day, where they talked, you know, scientists, talked to them. Like, it was like a recruiting, like, come join us here, [laughs] you know, and then they had presentations and then they had awards. Kaitlin talked her students, some of the kids, into going, you have to talk them into it, and that were in the project, and they won, Caitlin took them and one of the students won an award and won money. So, it's just it's getting them, you know, helping them and supporting them to go because you're right, confidence. I would say gaining confidence is a big issue at least with the students at UNCP, they don't have the confidence. They have the

ability. They are capable, but they don't necessarily have the confidence and they're sometimes intimidated by the other people around them, you know?

Dr. Farley

One of the things that goes with all this is what we could call adaptability too, because if I had drawn up a list of the background characteristics that would have been ideal for students to work on this project, relatively few of the students that certainly I worked with, would have had most of these characteristics, but it didn't matter. It turns out that they can learn, they can adapt, they can become high performers in the project, and I think it's a broad lesson for undergraduate research in the sciences here at UNCP, that faculty shouldn't be waiting around for some perfect student to show up to collaborate with them on a project. You can use the students who are around, when we started we had to work some effort to recruit students, and then after the project got going, that was no longer an issue. We were sort of famous and our students were coming to us.

Dr. Hagevik

It's true!

Dr. Gay

And that sounds like there's a huge impact on the community as well, right? Because the students that you're working with, at all levels, both as undergraduates, and younger students are going out into the community as the ambassadors that you were talking about Rita earlier. So, could you talk a little bit perhaps about the impact on the community at large?

Dr. Hagevik

Well, we have citizen science projects that we do. So those, of course, become, you know, national projects that we contribute to, so you have an impact there. We have developed a partnership with the Lumbee Tribe of course, Kaitlin does service learning out there, and the Tribe garden out there, and we do outreach events through for the Tribe. We also have partnered with the Locklears and New Ground Farms, Appin Bees, because they are beekeepers. The pollinator gardens in the schools, of which one is at the central office of Robeson County Public Schools, and so that is like, now known throughout the county, but that's like, spread throughout the county that is a migrant education garden, so that has now spread to migrant education and those families, and that was also being funded on the food side. So, after you pick the vegetables and cook them, by Chapel Hill, they are nutrition projects, so, then we got connected there [laughs] so these types of projects do tend to just spread throughout, you know, the community.

Dr. Campbell

Yeah, I wanted to add in when you mentioned the New Ground Farm, with the Locklears, we do take our students out there during the summer camp, and they get to, a couple of times they've actually, you know, given them a food that they grew at the place and that could have been the first time they've actually eaten something, literally, just out of the ground, and I think that really impacts them. They're also just really wonderful, kind people, very knowledgeable about sustainable agriculture. We've had some of our undergrads do research at their site, because they don't necessarily use all of the land all the time, they don't always farm

everything, and we've helped him set up for an experimental study of cucumber disease and so I had a couple of students looking at pest and disease on cucumbers, to help them solve a problem. And they were, they were interns, too, with the campus garden, so they spend some of their time doing research in the campus garden, and some of their time doing research elsewhere out in the community.

Dr. Hagevik

Yeah, the students, just like the middle and high school students, they seem to find their niche, whatever their interests are, and the undergrads too. Right Caitlin and Martin? They seem to find their niche. Some are really interested in pollen and then they love microscopes, so they go work on pollen. Some love butterflies, some love bees, some just want to grow plants, some just love sunflowers. So they kind of find where they settle at.

Dr. Campbell

Yeah I've noticed like, some, you know, they have preferences for if they want to be outside more or indoors more, and there's always plenty to do with sorting specimens and pinning insects inside, looking under microscopes. And some people are, like, I just really want to go out and watch some flowers and see what visits, you know, like live action outside stuff instead.

Dr. Hagevik

And the pollen research involves more chemistry. So if they like more chemistry then they're going to go work on pollen.

Dr. Gay

Yeah, and, of course, when you find something you're really interested in, it makes learning that much more fun and it doesn't seem like work right? It's just a passion that you have, and you guys are clearly sharing your passions with these students, and it really is inspiring for all of us.

Chancellor Cummings

This is Chancellor Robin Cummings and I want to thank you for listening to 30 Brave Minutes. Our faculty and students provide expertise, energy and passion, driving our region forward. Our commitment to Southeastern North Carolina has never been stronger through our teaching, our research and our community outreach. I want to encourage you to consider making a tax-deductible contribution to the College of Arts and Sciences at the University of North Carolina at Pembroke, with your help, we will continue our impact for generations to come. You can donate online at uncp.edu/give. Thanks again for listening, now back to more *30 Brave Minutes*.

Dr. Gay

One of the questions I have is about all this great research you're doing, right? I've heard about many projects you've talked about already today. I would love to see some of the specific results of it and I can't always attend the conferences to review the papers or the posters that are presented. So, is there any place where we can see some of these really interesting results you must be finding?

Dr. Campbell

We do share some of our results on our Facebook page, you know, if we see something interesting out there, we want to share it. We also are working on publications. I have a student that's working on publishing information about her butterfly research. She was, this was really a fun project, it was Imani, she was out there every day marking butterflies with little paint pens, and she would catch them and mark them, and then release them in different colors for each day, and she could tell how long butterflies lived, or used our garden at least. And I think that's really interesting because some butterflies can live for weeks, a month, you know, Monarch butterflies can over winter in Mexico, but most butterflies have such short, little lives [laughs] but they're so important out there and they do what they can in their few days that they have. So, yeah, actually the number of recaptures that she got were pretty low. So that tells you how deadly it is to be a butterfly out there.

But I'm also working on a paper with another student that's about the hover fly work that she worked on for years, and I had her, I was so excited to get her as a freshman. So we kept her through the years that she was here, and she worked on, like, all the projects, and her hover fly work has been really interesting. We were comparing the number of hover flies, well they're like, they're flies, and they look like wasps kind of, they're black and yellow. They visit flowers and pollinate. She was looking at the hover flies in the garden versus the Pine Cottage lawn area and you could see such a difference. The pollinator garden has such a huge impact and bringing in pollinators and sustaining them over there, and over in the garden, you have, like, just a couple of species and very, very low abundance. So we did lots of those comparison things against Pine Cottage. Pine Cottage lawn is only like, I don't know, 100 meters away or less. So they could go over there, but there's nothing to do there. There's nothing good there to eat. In terms of like, the total number of bees that we found out there, it's incredible how much bee diversity we've had, something like 60 species of bees just in that garden. So that is a lot.

Dr. Gay

Wow.

Dr. Campbell

Yeah, and we're pretty proud of those numbers, and that's just surveying really during the summers, and there's a lot that are active more in the spring and the fall as well. So it's a special habitat.

Dr. Hagevik

And we published our results in Citizen Science, we have a book chapter that, in the works now it'll be published any day, and we're also publishing some of the lesson plans in NSTA Journals and sharing, you know, kind of the, how-to do you do this in your classroom, with teachers, so we've developed a tremendous amount of curriculum from this project. It's really pretty impressive, just out of probably desperation [laughs] but over time, it's evolved, you know, I mean, you know, you come up with these great ideas, but then you have to figure out how to teach it, right? Kaitlyn has a beekeeping class now that she teaches that's come out of this on this project.

Dr. Gay

And then, of course, those lesson plans get out to a broader audience and have even more impact beyond the, you know, just our local community here. So, your work has, is very far reaching it sounds like.

Dr. Hagevik

Yeah, those journals are international, they go all over the world.

Dr. Gay

I can say in my own personal garden I've noticed this year, I've had, I don't know if it's because of the time that I've been in the garden or what, but I feel like I've had a lot less in terms of pollinators. Butterflies, I haven't seen a lot of butterflies this year, where in some years they're just everywhere, and I feel like I've noticed a really a strong change lately. Have you guys seen any trends like that in the pollinator garden on campus, in terms of numbers?

Dr. Campbell

So we did measure the bees out there for four years. I think, and the very first year, I think that was the year we had the most actually, but I think it was because I was collecting, compared to the undergrads collecting. So, [laughs] you know, researchers have different abilities. I've been catching bugs for a long time, I can swipe pretty quick and I can see the little ones. So that year we had the most. But other than that, I don't think there were any really strong, changes throughout the year. Some years when we had a lot of rain it, when we go out there, we wouldn't be able to catch many, because they love the sunny days. So that can also influence the sampling.

But one thing that has changed a lot is our native bee houses that we put out, you know, we started out with like, one or two or something out there, right Rita? So these are like, little tubes that you put out, you can see them, they sell them in stores and stuff. They're not for honeybees, they're for like Mason bees and leaf cutter bees that are solitary non-aggressive, native bees, and you put them out and the bees just, you build it and they come, and they just will go and use those tubes.

And so, every year, I think, since we put them out, we've been collecting the cocoons that they put in there in the fall. So we can protect them for the winter. And we put them in a fridge over winter. We count them all, and we see what different species there are that end up hatching out, and then we release them back at the garden. And with that, there's been a huge number of increase, a huge increase in the number of cocoons that we've gotten. We've also put out more houses, but even then, I think, just per house, more cocoons, and you see the ones that have been there the longest are being used more frequently, and with more cocoons in them than the others too. So, that's been really interesting.

Dr. Hagevik

People often ask us, you know, well, what should we, you know, we want to help pollinators too, what should we plant? And we can share with them our data and we have lists now for our area that shows which things you are going to get the most, you know, pollinators coming [laughs]...

Dr. Campbell

Yeah.

Dr. Hagevik

...and which ones are good for native bees, and which ones are good for butterflies, right? And what do the hover flies like? So it's good that we can share that with other people.

Dr. Campbell

Yeah, in the summer of 2019 we spent seventy hours, person-hours, out there watching flowers, in these plots that were a meter square each, and I had you know, a whole team of undergrads, so it wasn't like I had to sit out there for seventy hours, but in total every person was sitting for 15 minutes looking at the flowers. They count all the flowers that were in that plot and then just count all the visits for everything, and categorize them. Was it a butterfly, a hover fly, a bumblebee, a honeybee or whatever? And so then, you can make cool pie charts and be like. these are the things that visit this plant, you can make cool bar charts that show, like, this plant is off the charts in terms of number of visitors that it gets. It's really neat to see which ones are preferred by different groups, and it's pretty consistent, you know, like, you can be like, this is a really good flower for honeybees in particular, or honeybees don't visit pretty much anything except this thing in the garden. One that honeybees love was the mountain mint, that one is a huge nectar producer and really, honeybees don't visit a lot of our flowers in the garden. What they want are huge fields of stuff all blooming simultaneously, because they recruit their sisters to go visit those flowers. And so if it's not a big enough patch, it's not worth it. Our garden is really great for the native bees, and bumblebees are, you know, they prefer the blues and purple flowers, and hover flies love the yellows and the white flowers and a lot of the little native plants.

Dr. Hagevik

And we have a state registered apiary at the garden, and so we've become involved with some of the local beekeeping associations, every county has one, Scotland County, Robeson County, and we've been invited to speak. We've been to their meetings. They come and talk to our students. So just the honey bee work has been, you know, really rewarding too.

Dr. Campbell

One of the things that I think is really interesting is when I talk to beekeepers in particular, I'll go talk at state, county beekeepers associations and they love the honey bee, and they want to know as much as possible about the honey bee but they don't really think about all the other bees, and they don't realize how many species of bees there are out there, the native bees. And that honeybees aren't even native to the U.S. Honey bees are actually a mascot then, because they get people interested. They're the ones that make the honey, no other bees do that, and they're the bees that are pollinating most of our crops and the other bees do that, but not as well. You can't bring in the thousands of native bees and drop them off at a site and have them pollinate those trees. So we're very reliant on the honey bee, and it is very important and it gives you kind of an opening to talk about the other bees like, don't forget about these ones too, and there's 4,000 other native bees in the U. S. and the honey bee is a single bee species that we rely on for so much. So that really puts it in perspective.

Dr. Gay

I hate to put you on the spot, but would you pick a bee, a solitary bee perhaps and tell us something about that, that we can watch out for in our own gardens?

Dr. Campbell

Oh, sure. Yeah. I think a great one for that would be the leaf cutter bees. Leaf cutter bees are super cute. They look kind of like honey bees, they're usually kind of black with whitish yellow stripes on them and they're very pointy on their tail end. They have a bunch of fuzz on the underside of their bellies, and they use that fuzz to collect the pollen, and sometimes you'll see this bee with just a whole bunch of yellow packed on its belly. They don't have the pollen baskets on their legs like honeybees. But what I think is just super cute about them, is that they cut out perfect little round circles out of leaves, they're called leaf cutters for a reason. They have these huge jaws and they cut out perfect circles. So if you see, like, on your rose bush or pea plant or something, you can see these circles cut out. Don't be upset about that. That's your little native leaf cutter bee come in and it cuts out this leaf, it holds it under its legs, and then it flies off and puts it into one of those tubes. So it'll find a hollow twig somewhere, and it'll line the inside of that, and then lay its egg and put that pollen from its belly with the egg. And then it'll close it off with another leaf and go get some more leaves and start doing another little one, and eventually those babies are gonna grow up and come out the next year. So the mama doesn't make big colonies or anything. She's not aggressive. And they're just, they are so cute. I love them so much.

Dr. Gay

I'm going to go home and check all of my plants for little round circles now.

Dr. Allen

I love that. Well, I would love to end by just talking about what is next for Kids in the Garden. I know that the Burroughs Welcome fund funding is coming to an end, but our campus garden and apiary is alive and well, and so I'm just curious as to what your plans are.

Dr. Campbell

I think for me, with the campus garden and apiary, we're still using that space as an awesome outreach location and it never would have gotten that way if it wasn't for the Kids in the Garden program. And now we have all these fun things we can do, like, we have honey tasting and we have our outreach booth. We have the citizen science projects that we've started, so we can do lots of teacher trainings related to some of these programs that we've come up with these, you know, lessons that we have. We go visit schools too. For the apiary, it's gonna be there, I'll keep it going. We have nine hives right now, and getting ready to sell some more honey. So, it'll be there, people can come take tours. It's perfect for the beekeeping class and it's the mascot for all bees out there.

Dr. Hagevik

And the, this program has really kind of changed into something much bigger. We now have a agricultural degree emphasis in the Biology Department, and the space, which, what kind of was a the dream of mine, but I didn't think it would happen, [laughs] but it did. It has become a

classroom space too, so it's more than just a garden where people do things, and kids can come and have programs. Now, it's actually a teaching space for the university, which I think is awesome. There's a whiteboard under the shelter. Kaitlin got WiFi put out there. I mean, it's a very usable teaching space. So, I think that the program's just gotten bigger. We took our ideas and applied for a large USDA grant with Utah State University and we got that, that is a 6.8 million dollar grant. And so that will take what we've done to the national level, because that's what USDA is interested, they want to take this to the national level. And we do have spots for undergraduates from UNCP, reserved spots, for them to study at Utah. Now, we just got to talk them into going to Utah in the summer for eight weeks [laughs] to do research. There's funds in there to support them to do that, which would be an awesome experience. That project has over twenty people, twenty collaborators, from three different countries. It's a very large project, it's a multi state project. So we're pretty excited about that.

Dr. Allen

I just want to say, thank you so much for being here with us today, just sharing about Kids in the Garden, and the important work that you've been doing with our students, with students in the community, and the huge impact that it's had both on our direct community, on our students, on our programming, and sharing with us a little bit about how it's going to continue to have an impact, across the nation. And I think that's awesome, and I can't wait to bring you guys back in the future and hear about how that work is going. So thank you.

Drs. Campbell, Hagevik and Farley

Thank you.

Credits

This podcast was edited and transcribed by Joanna Hersey, and our theme music was composed by Reilly Morton.

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