

PAYTON (Do you guys already implement water infrastructure activities?)

Yeah, we definitely do, especially during the summertime.

PAYTON With your after-school programs?

ZACH Summertime is a summer camp. So it's not really after school, but we do some school stuff. Right now, we have this right here behind you is a hydroponics unit, that holds about 25 gallons of water. So what I found out is teaching about water rights, you got to introduce them to something, so students love testing pH levels, they love testing PPM, parts per million. That's how we get the nutrients in the water for our plants. We started with that, and then I have a personal bias towards conservation, so then we get into conservation stuff as well.

MARQUES (How do you measure the impact of after-school activities on students' understanding of water conservation?)

Yeah, so we do surveys a lot. We have done surveys previously. We also currently in the program we're wrapping up, we've done exit slips as well to engage students attitude, students, feelings towards the lesson plans. We'll also try to engage their vocabulary, how much they know, how much they gain, especially in careers and pathways. So we want to make sure that students, what we're teaching them, we don't necessarily want them to regurgitate on a test, we're not looking for that. We're looking for how they use it in their everyday lives? Do we see a difference with how students know like, for example, plants, we talk a lot about plants in here. How do students do students know the simple, you know, anatomy of a plant, right? Do they know the simple processes of a plant? all that stuff is what we look for. And we take note of that, we take stories, we do of course, our quantitative results, how many kids came a day. But the quantitative stuff, we look for like, like I said, word choice, attitudes towards this program, things like that.



How are you involved with parents in the community and after-school activities set around water conservation?

It's a big yeah, that's great. So I was an educator before because I work in, say in public schools, and teacher engagement, at least when I was growing up, is not the same. and I don't know if it's the times or the places. or anything in between. But parent engagement is probably the most tricky part of being a teacher, I think. It takes a lot of effort, not everybody can do it. And frankly, we could do a lot better at it, especially here with my job. We don't engage parents nearly as much as we need to. And I think for a lot of after school programs, that's something they don't focus on, because if you think of an after school program, how it has always been, it's that extra between 3 PM and like 5 PM when his parent gets off that they can just have their kid be in a safe spot. And I think that a lot of people have overlooked that two-hour period as just kind of this holdover until the parents get back home. But if you think about it, that's one-eighth of a kid's life if they're there every day, which is a big impact if you're there from five to 18.

Alexandra: If you had to describe your after-school program to someone who knew nothing about it, how would you describe it?

Zach: Ah, how to describe it. Fun, chaotic. I mean, but that's like the heat of it, right? It's kind of, you know, I'm not here for simple, just day in, day out stuff. I'm here because you have to pivot at the last minute sometimes. You have to make adjustments. You got to make plays on the field, right? It's not your typical class. I don't care about grades. I don't care about tests. I care about what the kids learn. And I think that's what after school programs have a real niche and have a real, kind of power, that schools don't. Schools, I think, have a place and schools are great, and I think schools really do help kids learn. But there's this time period that doesn't add up between



work and school. I think you have a real opportunity to see the fun side of education where it's been missing a lot.

Justin: What separates the JJK curriculum and students from other schools in the area?

We have science. The reality is that some schools around here don't have science teachers. That's just not any st.louis thing when I was in say St.Louis public schools. I went through five math teachers when I was a geography teacher in one year. That included two months where we didn't even have a math teacher. So there's a lot of teacher shortages. So we offered just that extra thing of science that sometimes it's the only science the kids received that day. We also try to do their nutritional aspect too Grace,does cooking, I do cooking, Miss Tiffy, another educator does cooking classes. We try to teach the ways that not only you can grow your own food, but you can harvest it and cook it as well and make something actually really good. As all kids, like you know, uh sugar and snacks are king. Introducing them to a new recipe, in a recipe that we've grown from here is something exciting. Going back to the hydroponic unit, we harvested 13 pounds of lettuce from that unit, and most of that was donated to the kitchen here and they're making wraps out of it. So that's one example alone where we've grown something here and harvested it, and donated it to our own programs and that goes back to feeding our kids.

Payton: Do you have specific teaching methods or activities that have been effective to students?

Fun, not too much explaining. I've done where I've just lectured for 45 minutes. It works in college, maybe it doesn't even work in college. It doesn't work with kids. Less talking, more hands on, engaging. I've done programs where it's been talking a lot, and it just doesn't work. The kids don't want to be in your class. The kids don't want to pay attention. The kids wouldn't do anything but be in their class. When you make it fun, when you play games, when you go



outside and look at trees, the kids may not pick up everything that day, but you do that over and over again eventually they'll get it

Marques: What topics would you say would interest the students the most?

Science is interesting. The media, I think, affects a lot of kids, lots of kids want to be influencers, of course. Sports is another big thing that interests a lot of kids. Sports is a big thing in this community as well. I mean, you're at the JJK center. There is always somebody representing like there's always a national or state title that's won in East Saint Louis almost every year. I mean, sports are big. I have kids who told me they want to do stuff with math. We're doing a steam fair where lots of kids have volunteered to, who want to do science. I have kids who are big readers who will come into my classroom with a book and it doesn't happen often, but the kid will ignore my class to read a book, which is a weird option, because on one hand, I'm happy he's reading, but on the other hand, I need you to pay attention. But it's a ray of things. The older I get to realize that you can't really put everything into binary or things. Kids will always have a different, like there's always gonna be kids that are interested in something, so

SONIA (What methods or topics in your education system can easily be adjusted to teach water infrastructure?)

Getting outside, I think one thing that I've learned from being, like I said, a public school teacher in a formal education to this informal after-school education, I did not take my kids enough outside as much as I nearly should have. I was even fortunate enough to be in a school system where there was like a fountain with a man-made river that went through it. And like we could have talked about water conservation there. So a lot of what I would do if I were a teacher, I could do it over again. I would tell myself to go outside more, let the students like fuel the water. Let's do experiments like with a river. You know, what happens if you block the river? We can



talk about dams and conservation there. Does the water go out? Things like that. I think there are things to break it down a lot more than I think is happening in a normal, formal school system.

It's a lot of, you know, I think, especially for social studies, which I think water conservation hits a lot, and science. They're not the focus kind of test scores. It's really math and reading, right? So a lot of science and geography teachers are like, well, we need to read more. Or, you know, we need to get these terms so your reading scores go up, or we'll do the science that deals with more math so your math scores go up. I think science and social studies should go away from that. They shouldn't worry about test scores that much because they don't mean that much, even to begin with.. So, it's Wi- fight a losing battle.

Alexandra: How do you/would you like to incorporate technology in your after-school programs?

Zach: Drones! That's what I'm trying to get right now. We have a good drone program, it's probably one of my favorite ones. And I've been trying, begging and begging for a thermal imaging drone. And just no luck, no funding. All the technology that we, people we engineer all the time, from sensors that do soil sensors in the ground that students have an easy access to understand. Because all you do is, they look like mushrooms, honestly, you just take the tops off when you plug them into a computer and just bam, shows data. I think stuff like that, that's easy for kids to understand, where they can automatically pull up a chart, I think is great. We have this other organization we are working on: AI farms that are working on drones to help image our plants. I think that's cool because students love drones. Students love controlling drones. So just, you know, any technology that comes our way, opportunities that have technology, I think is always a good thing. Even if it doesn't always work out in the end, I think having access to technology is key, and vital. Without access to technology or these technological opportunities, I



can't have technology in my classroom. I can't teach technology in my programs. I gotta know about them, too. So if you guys have heard, I don't know if you guys talk about conferences, but like NSTA, they have, if you're interested in education or science, they have a convention a couple of times a year where they always have new technologies out for science teachers. It's some of the coolest stuff. If I was a millionaire, I'd buy it all, but I'm a teacher, so I don't have that money.

Is there anything else you'd like to see implemented in terms of curriculum design and or presentation that we haven't talked about yet?

Yeah, urban ecology. That's a big one for me. I'm a bird guy at heart. I love birds, so anytime I can sneak in like this guy, if I can sneak in a bird program, I will, or some sort of urban ecology. I think for such a long time, so like biology, for such a long time, I think urban spaces have been overlooked as biologically diverse. Like you know, like humans came in, humans got rid of all the animals, built up their cities, and now there's nothing left. I don't think that's true at all, especially in communities that are going the opposite way. So there's been a lot of urbanization here in East St. Louis. A lot of those industries are now gone. and so now we have neighborhoods that look like a farmhouse in the middle of a field, where lots of houses use that. That brings in back animals. Just from my office, I see deer, coyotes, skunks, fox, turkeys, hawks, eagles, all around here. just necessarily. If you go outside, you can hear chus frogs right now in throughout the summer, you love frogs, 24 seven because we're in the the swamplands, right? We're in America's floodplains with the Mississippi, right? So that would be one thing, is theology, but that goes back to water conservation as well, because it's all part of it. And yeah, I'm teaching plants, but I'm also teaching about plants in their parts because they play a bigger role, especially if that is agriculture as well.



So, y'all have any other questions? Any? There are some good questions. I'm very. So, well, can I ask you guys a question? Well, you guys are here, obviously in a teaching. Are you guys interested in teaching? Are you guys gonna do it interested in? Yeah. We're all freshmen, right? So we're still kind of figuring things out. My freshman year, I went to be a teacher, and then I went to schools and I did one to be a teacher. And then, I didn't get a degree in it, but then COVID hit, and my job left. SLPS needed a lot of schools, went back to my teacher. It was like, okay, this isn't as bad as I thought it was. So even though it costs me my hair, you can laugh at it, okay? right. Well, are you guys ready to see some kids? Yeah. Well, we got some tide. I would love your name if you guys would all me.