

# ACE for Wildlife Network Annual Fall Meeting

## **Emily Bernhardt (Woodland Park Zoo) 13:40**

Good Morning, everybody. Welcome to our annual all network fall meeting. I didn't realize until 30 seconds ago that I had the wrong start time on that holding slide. There it is 11am Pacific Time, not 10am Pacific Time. So, apologies for that. For those of you who this is your first ace for wildlife network meeting. Welcome. My name is Emily Bernhardt. I use she/her pronouns, and I am the empathy network specialist at Woodland Park Zoo, and I hope that you all are excited for an energizing and interesting two hours together. So if this is your first event, we as the ACE for wildlife network, or advancing conservation through empathy for wildlife network, are a learning network that facilitates the sharing of knowledge, data and experiences to drive conservation change through fostering empathy for animals and the environment that sustains them. We have folks joining us today in this room for our 27 partner organizations. These are AZA accredited zoos and aquariums that are formally committed to fostering empathy for wildlife as a conservation strategy. But we also have folks who are not at those organizations, and those are our individual affiliates. We have affiliates at zoos, aquariums, nature centers, universities, any conservation related organization is eligible for their staff to join as affiliates. So whether you're joining us in that capacity or from a partner organization, welcome. Here is our agenda for our time together. Today, we're going to have some award announcements. I want to have some exciting network updates. Theo Bamberger is going to talk about some updates from the empathy measurement and zoo and aquariums project. We'll have a brief, brief icebreaker so folks can get to know each other. And then we're going to hear from Alison Bowers on the recent literature review that they just published for the network comparing empathy for wildlife across the animal kingdom, a quick break, and then we're going to hear from two folks in our network on how they're infusing empathy into their community conservation programs. But I'm going to go ahead and turn it over to Marta to kick off our empathy Excellence Award announcements.

## **Marta Burnet 17:03**

Okay, great. Good morning, everyone. I'm Marta Burnet, Director of advancing empathy at Woodland Park Zoo. She her pronouns. We're so happy that you're joining us today, and we'd like to start off the meeting with a little celebration. We started something new this year, the empathy Excellence Award to acknowledge the innovative and inspirational work that so many of you have done in our past six years as a network so as you saw in the announcements, we have three most valuable resources awards based on a network vote This summer, and now it's time for the project award next. All right, so in the category of outstanding achievement for empathy projects within one department, we

17:52

have drum roll.

## **Speaker 7 17:55**

Okay? Minnesota zoo bringing empathy for animals to traditionally underserved audiences. They designed and implemented an ambassador animal education program for audiences with economic,

geographic or health related barriers to coming to the zoo. Their program structure and curriculum design were based on best practices for implementing culturally responsive programs as well as empathy for animals. And during a grant period, they had over 120 Ambassador animal programs off site and virtually that were provided for these target populations. And I know a lot of other organizations have used their tools that they developed as a result. So great work. Minnesota zoo next so in the category of outstanding achievement for multi department empathy projects of the small zoo, we have drum roll Henry Vilas their interpretive master plan focused on empathy, inclusivity and individual animal connection. Project, they developed a cohesive interpretive master plan, and their work resulted in the enhancement of nearly 80% of their Zoo's interpretive elements through the installation of new signage, murals and digital media, a pivotal feature of these elements is the incorporation of individualized animal information and narratives, and by conveying the unique traits and compelling storylines that foster empathy connections, they've ingrained empathy as an integral component of all messaging in the zoo. So congratulations Henry Vilas, and finally, in the category of outstanding achievement for multiple department empathy projects at a large zoo, we have the Zoological Society of Milwaukee. They're infusing empathy into biofacts programs, where they formalized their new biofacts program, creating a biofacts Interpretive Guide Video Series and creating a biofacts maintenance guide video series. These videos are now available worldwide on YouTube to assist other organizations in their bio, facts, practices, and I'm going to put those in the chat right now.

20:26

And whoops,

**Speaker 7** 20:29

I lost my notes, and now you can watch those if you hadn't already seen those. So congrats to all of our winners. We're going to be sending each of you a commemorative plaque, so celebrating your achievement and thanks to all of our nominees. It was a really tough choice, which is a testament to all of your hard work. And now back to Emily.

**Emily Bernhardt (Woodland Park Zoo)** 21:00

I was talking and I was muted. What I said was, congrats, y'all, those are really exciting projects. I have a couple network updates, the first one, and perhaps the most exciting one being we are ready to announce the dates of our next empathy Summit. So for those of you who are new to the network, every February, the network gathers either in person or virtually in February for a multi day empathy Summit. Our empathy summits are wonderful opportunities to explore new ideas, build on existing knowledge, contribute to future network projects and our vibrant community. So over three days in February, we will be convening 100% virtually over zoom and examining the seemingly limitless applicability of fostering empathy, examining individual and organizational empathy journeys and collaboratively shaping the trajectory of our work. So on the screen here, you can see some kind of sampling of the topics that we want to showcase. And these topics are directly based on feedback from y'all from previous events, what you have liked and what you want to see more of if you are interested in presenting at our virtual summit next Thursday, I believe that's the correct date, 1023, we will be posting the presentation proposal form on our discussion board. So highly encourage you to consider putting a proposal together, even if it's not on one of the topics you see on the screen here. The next announcement reminder is with regards to our 2025 empathy photo contest. So empathy photo contest

submissions will close on October 31 this contest is a great opportunity to showcase your unique perspective on empathy between animals and people and how it plays a role in conservation. Sarah just dropped a link in the chat so you can learn more about that contest, and on the slide you can see some submitted submitted photos from last year.

**Emily Bernhardt (Woodland Park Zoo) 23:12**

I also want to remind folks, before I pass the baton to folks from our steering and membership committees that our current committee call for service is open for one more week. So our call for service period ends next Tuesday, the 21st at 11:59pm Pacific time. And we have four committees that still have open seats available. So if you are interested in serving on the communications DEA I membership or steering committees, Sarah has just dropped the committee call for service information in the chat for you to check out. There. You can also learn more on our leadership opportunities page, to learn more about the work that each committee is doing and current representatives, if you join or express interest in joining a committee during our call for service, your term will begin in December of this year and extend through December of 2027 and after that, you have the opportunity to extend it for an additional year, if you so choose. If you are interested in that, please check out that committee overview document, and we call for service links that Sarah just dropped in the chat, and if you have any questions about serving on a committee, please reach out to us at [empathy@zoo.org](mailto:empathy@zoo.org), I'm happy to answer any questions that you might have, or put you in contact with the chairs of the committees that you're interested in. Alrighty, I am going to turn it over briefly to folks from our steering and membership committees, Liz from our steering committee and Heather and Chris from our membership committee, to give you some important updates on kind of some large document changes that happened earlier this year that we want to make sure everybody is aware of. So Liz, Heather and Chris, the baton is yours.

**Liz Gilles (MN Zoo) 25:01**

Hi. This is Liz from the Minnesota Zoo, and I am one of the co chairs of the steering committee. So one of the things I wanted to do was just talk a little bit about what the steering committee does, and then some of the some reminders about what happened in previous meetings. So the steering committee's job really is to help the network to set priorities, goals and structures that make our make sure our work is as impactful as possible. So I know sometimes people wonder what the steering committee is up to, and that's really our mission. And the in the world, we also do a lot with bylaws. And previously in at our last meeting in May, we had the ability to to pass the amendments for our bylaws. So we have, in the past, in this October meeting, had some conversations about bylaws, but we don't need to do that now, since we did that in May, you'll remember that some of the changes to the bylaws were an increase in committee size and also different partner participation requirements. So if you would like to go and take a look at the bylaws, you can go to the ACE for Wildlife website, and if you look under the section that's about us, there's at the very bottom a button that you can push on that will is one way to get to the bylaws so that you would be able to review them and kind of see what they say for now. And like Emily said, we're looking for other folks who are really interested in joining us on the steering committee, folks who really like to talk about strategic planning and think about the future of the network. So if you're a strategic planning nerd like me, I hope that you'll join us.

**Speaker 9 26:48**

Excellent. Thank you. Liz, so I am Heather Harrelson newtick. I use she her pronouns, and I am serving on the membership committee currently, and so I'll be talking a little bit about our network expansion plan. As you can see, the revised network expansion plan went to vote this spring, and so we are operating with an updated plan, including some really lovely criteria matrix that help the membership committee evaluate future partner organizations as they are submitting applications. And as you can see, we have another deadline for application, March the 31st so the committee will review those twice a year, and we are accepting a limited number of partner orgs. And much to Liz's point, things are linked in the Vilas. So if you have any curiosity about what that expansion review criteria matrix looks like, or what are some of the minimum qualifications to be a partner org within the network, please, again, follow the link at the about us, and that is directly linked to our Senate bylaws as well. We did just close applications for October. So if you have a pending partner org with us, partner org application with us, be aware that the committee will be reviewing those in the upcoming meetings. But past that, please go take a look at that document. There was a lot of work and thought put into it, both by committees and the team at Woodland Park, and it is a very wonderful resource for this committee to be able to evaluate our partner orgs as the

**Speaker 10** 28:41

Yeah, and I'll just jump in and add to what Heather saying, Hi. My name is Chris Berg. At shed aquarium, the membership committee has been up to a lot this year, and it's been a really great way to get involved with the network. So adding on to Emily's pitch, to asking folks to join some of these committees, it's been an incredibly powerful way not just to connect with ace for wildlife, but to learn a lot about how other organizations are structuring, how they're thinking about this kind of work. So as a part of the membership committee, we've tried to be really thoughtful about the ways that we're building up this expansion plan and learning a lot about other organizations along the way. So if you're someone that really wants to dig deeper, not just an ace, but the greater AZA community as a whole. These committees are just a fantastic way to do that. So I can add on to the pitch to join a committee. Please join up. It's great time.

**Emily Bernhardt (Woodland Park Zoo)** 29:38

Awesome. Thanks, y'all and yeah, committees are fun. Bunch of cool people kind of hang out with us, awesome. So please check out those documents if you have not already again, if you have any questions about our bylaws or expansion plan, you can also direct those to [empathy@zoo.org](mailto:empathy@zoo.org) and then those will be directed to the committees. Accordingly, I am going to go ahead and pass it to Theo Bamberger for our final update before we get into the meat of our meeting today. So Theo go ahead and take it away.

**Speaker 5** 30:12

Hi, folks. I'm Theo Bamberger. I use they, he pronouns, and I'm an evaluation strategist at Woodland Park Zoo, and I just wanted to kind of give a brief update to keep this project on all of your minds, on the empathy measurement in zoos and aquariums project up. Which Emily Can you do the next slide? Thank you. So for those of you who are new to the network or have forgotten about this project. This is a collaboration between Woodland Park Zoo, Seattle Aquarium, St Louis Zoo, Henry Vilas zoo, Alaska Sealife center, and the Zoological Society of Milwaukee. And we are working on developing some better tools for measuring empathy, specifically in our zoo and aquarium context, that we can get

validated and basically assure that they're valid, reliable, and something that we can use across organizations. So I just wanted to give like a quick update on what we accomplished. This summer, we have a draft survey instrument that we have been working on and testing, and things are looking very good for that, that is focused on empathy, stimulated by Zoo and Aquarium experiences, and then a couple of things more suited to early childhood, which is very just hard to survey a five year old. I don't know if anybody's tried, but it doesn't work very well. So we have a method and a protocol in the works for measuring emotions and the perceptions of animal emotions with kids and sort of that like three to seven ish range, so a little bit beyond early childhood on the upper end there, and you can see a sneak peek of what that looks like in this picture here, it's very high tech, and then a new version of the observation tool that some of you know and love, that is really focused on early childhood audiences and a specific activity. So it's really just to keep this on your radar and stay tuned for some opportunities to provide feedback on these instruments, or to even do some test data collection in the future, either next summer or the following.

**Emily Bernhardt (Woodland Park Zoo) 32:32**

Awesome. Thank you. Theo. I am really proud of all of us. We are five minutes ahead of schedule, which like almost never happens with our October meetings. So we get to use the full time that I've allotted for our icebreaker activity. So that means, in a couple minutes, after I kind of give these instructions, I'm going to pop you all into randomized breakout rooms for about 15 minutes. In these breakout rooms, y'all will participate in an exercise called 10 things in common. So in this breakout room, with the folks that you are with, after you've gone around and introduced yourself, where you work and what you do, you will work together to identify 10 things that everybody in your breakout room has in common. These can include places that you visited, jobs that you've done, favorite foods you have practice you do, etc, and somebody's responsibility in your breakout room will to not only keep a tally of like how many of those things you have identified, but what those commonalities are. So does that make sense to everybody? Does anybody have any questions?

**Speaker 3 33:45**

All right, fairly straight forward, so I'm going to go ahead and stop screen sharing for just a second.

**Emily Bernhardt (Woodland Park Zoo) 33:57**

All right, now I have to find where you all have went, you have went there. Okay, now I'm going to open these breakout rooms.

**Marta Burnet 50:26**

Hope everybody had good conversations there. Now, it's my pleasure to introduce Alison Bowers from the Social Ecology Lab at Stanford University, and Wilson Sherman, who is a network affiliate, formerly with Oakland Zoo and now a PhD student with the Institute of the Environment and Sustainability at UCLA, we started in early spring to dig into one of the questions on our learning agenda about whether there are, in fact, differences in our empathy across The Animal Kingdom and what might account for those differences. And Allison and Wilson are going to share a bit about the lit review and then open it to questions and discussion for the whole group. So feel free to either put your questions into the chat or save them for after the presentation. And now without further, ado, Alison and Wilson, take it away.

**Allison Bowers 51:24**

Thank you, Marta. Can you all see my screen? Yes, we can, okay, perfect for some reason saying it's paused on my end, but as long as you can see it, perfect, I can see it now too. So thank you, Marta, for that introduction and thank you to more importantly, for this opportunity to speak with you all and to do this research in the first place, I'm super excited when we get a chance to work with practitioners, folks doing this work on the ground, because for two reasons, one, it's selfishly it makes me feel good as a researcher, to see, oh, our research can have an impact. It can, can be relevant and useful on the ground, but also, even maybe more importantly, that it can. It's a chance to validate what we're finding right, that we can take these theories that we think about and we research and investigate and see do they hold up in practice. So it's such an honor to be here, and as Marta said, I will be joining, joined by Wilson. Is going to pop in for some slides as well, and he's also my connection to practice, although he has come to the dark side and is now working on his PhD, and I haven't spoken with him recently, whether he regrets that or not, maybe we'll have a chance to talk to him about that. But I always love Wilson's expertise and experience working in zoos and aquariums, because he keeps me honest. He was even as we were pulling pictures for this, he's like, Yeah, I don't think that picture is a good one. So he's, he's my gut check. So I so appreciate and Wilson will pop in and you'll hear from him in just a little bit, but a big thank you to Marta and her team in Woodland Park zoon for funding this and having us here, particularly in this time where we're researching universities kind of under attack. It's so nice to connect and feel like we do serve a purpose. So thank you. So I wanted to start just kind of going on an agenda on what we're going to talk about today. I Today, as Marta says, we're here to talk about our research review. It's the second of a short little series on empathy reviews, and I'll go over kind of the process of how we did that, what the main findings are. Then we'll kind of launch into practitioner strategies, which might be more interesting to you all, and how we think some of this research and evaluation could be useful on the ground. They will touch on what we kind of see as the research needs. And we'd love some input on that, to see if that aligns with what you all are seeing in your work and seeing as needs. And then I was running quick on my slides, we might have a lot of time for Q and A if you have lots of questions, we'd love to hear those if Marta and her team have questions, and then we actually have some discussion prompts too, because we selfishly like to hear from you all and see how a lot of this research and the findings resonate with you all. So we'll be kind of flexible and see how we're doing on time. So what did we do? There was first a review that was looked at the connection between empathy and wildlife conservation and action and caring broadly. And that was the first review that we did. Marta came to us with this question, and we were happy to dig into the research. It was a really fun review, because we do a lot of research reviews, and a lot of times what our overall finding is, hey, we need more research. There's not enough evidence, or the evidence is really complicated, and I'm not sure what we can say, but in this first review, it was really nice to find compelling evidence supporting the statement, right that empathy does, in fact, connect to wildlife conservation, caring and action. So I certainly invite you to check that out report if you haven't seen it, to read more about that. From that review, we identified some research areas that we thought would be interested to kind of dig into more, and one of those was we were noticing trends about empathy levels differing based on the animal in question. It's this idea of differential empathy that the empathy, the level of empathy, of vote changes based on the animal group, the animal species, sometimes even the individual animal that's under concern or being looked at then what we heard from Marta and her gang here was that on the ground that sometimes things weren't always lining up, that there would be some

animals you thought would really folks would have a hard time connecting with, but that they were having success connecting people on an empathy level with them. So we said, well, let's dig into this research. And so that's what we did. We followed a process similar to the one we used in our first review, where we looked first at the academic research. So these are peer review publications. We also looked at dissertations and master's thesis research, those through academic databases, Google Scholar doing casting a, really a wide net, using terms like empathy, animal species specific animals like bats or snakes, animals we knew that might be considered under appreciated terms like charismatic animals, that sort of thing. So we gathered up a bunch of that research, and then, as we did in the first one, we also reached out to folks on the ground working in zoos and aquariums and solicited any unpublished work they might have. And so that could include things like manuscripts they're working on to be published, but often was also evaluation reports, internal reports, that kind of thing, things that aren't shared publicly all the time. And so we we got several responses back, and also reviewed that research and evaluation as well. And then, once we gathered all that, there's over, like 400 500 studies, we also got lots of recommendations from the folks at Woodland Park Zoo and this network as well. We looked through all that and read through a lot, and then synthesized it, and are here to present what we learned from that. So don't try to read all this. This is like a really nasty slide. It's just a lot of text. What I'm hoping is you kind of take with the meta you take from this is that these were 12 studies that we found that focus specifically on the question of differential empathy, so they explicitly looked at, does empathy vary based on animal groups? So we looked at, as I said, like over 400 500 studies. A lot of them were talking about this idea, but these were the 12 that we identified as looking specifically at that, did empathy, empathy levels differ across animal groups. So what I so it's not a huge sample of studies, and what I hope you get from this slide too, is even in this small sample, there's still variation. You know, they took place in six of them were in Australia or the US, but also Brazil and Vietnam and in Zambia and Namibia and then some kind of all over because they were online, so it was unclear where the studies were. They also varied in design. We had some experimental ones, some based on interviews, surveys, observational and the samples. They weren't all the same. People that they were they were looking at. It was a lot of times, university students, sometimes elementary and high school students, sometimes visitors to zoos and aquariums, sometimes just the general public and the adults, and in some cases, even farmers. Is their specific sample. The setting also varied. So some of them were in a kind of artificial setting, in a lab, like in a university research lab. Some were in schools, some were online, and two of them were in either a Zoo and Aquarium, and those happened to be our master's thesis. So the other 10 studies here are peer reviewed literature, but we included two really high quality master's thesis, and those were the two that happened to take place in the zoo and aquarium. So what I'm hoping you're seeing this is it is a small study, and then we had a lot of variation. We were dealing with. These weren't the exact same kind of study. So not only did they vary in locations and where they took place and in their design, they also varied in terms of how they measured empathy. Sometimes it was self report, sometimes it was physiological measures like skin conductance to see if they could track an empathy response that way, and even in how they elicited that empathy response, it varied a lot. In some cases, they are asking people to look at animals in real life. These would be the studies right at the zoos and aquariums. Sometimes they were looking at people asking them to look at pictures or videos. But even the videos of pictures varied a lot. Sometimes it was just animals in their natural settings, but the three studies in Australia, they were very specifically looking at animals under distress. So these were animals that might be in pain or might be sick or in some kind of danger. And so all these studies, even a small

sample really, were looking at this question of how empathy differs in different ways. So it made it challenging to draw any really strong conclusions, but we tried to. And so this is, this is what we found. The first key finding we found is kind of a big general statement. We did find evidence that people do feel different empathy levels for different animals, but the pattern doesn't always follow expected hypotheses or what you might think it and this is what we kind of heard from, is the cuddliest animals that were getting the most empathy the two examples that stand out in the research, to me, one was the clownfish. And so one of the studies in Brazil included a clown fish in their group of like 2025 animals that they were measuring empathy levels for. And the clownfish came out on top, even though there were plenty of other mammals

**Speaker 11** 1:01:21

and animals that more kind of cute and cuddly. They hypothesized, as you might guess, that this is a Finding Nemo effect, that people were familiar with the clownfish and felt a connection because of the movies. And that's just their guess as to why. Another example was in one of the master's thesis at touch tanks at aquariums, looked at sea stars, sea urchins and sea anemones, and found that sea stars got more empathy than the other two, even though they're similar species. And there the author kind of guessed that it might be because sea stars are more common in touch tanks or easier to interact with. But it was just kind of it was interesting that once particular species got more empathy than others, the second finding. So a lot of the research was very focused on this idea of phylogenetic hierarchy. This is the idea that the closer an animal is on the evolutionary tree to humans, the higher the empathy level and people, the researchers, a lot of researchers, are really interested in this idea, I think because phylogenetic hierarchy comes up in other things, in ecology and biology. And so they were just applying what they knew to to empathy in an empathy context, and in general, they did find. The research shows that the closer an animal is to humans, the higher level of empathy. But again, exceptions exist. Certainly the clown fish also are proof of this, right fish being way further down the line from humans evolutionary but there are cases where people experience high levels of empathy for them. One of the other examples that popped up was a bat versus a kangaroo. A bat being closer to humans on the evolutionary scale, but higher levels of empathy expressed for kangaroos. And so this is just something again, researchers seemed really interested in this. To me, it was a little confusing, because what is they are we saying that people look at an animal and think, Oh, I'm close to that on the evolutionary scale, I empathize more with it. Or is it because those that are closer on the empathy the hierarchy are look more like humans, and so does it have to do with appearance? So it seemed really, really need more research before we can say much more about this. One of our other findings is something called the charisma gap. So you all know, charismatic animals are ones that evoke more positive emotional responses due to things like size or cultural significance or just relatability. And the research showed, a lot of researchers compared non charismatic to charismatic species, and found that, again, in general, empathy levels were higher for charismatic species. To me, this is kind of circular reasoning, right? Like if they a charismatic species, are called that because they have high levels of positive responses, then it makes sense, right, that empathy also has included it, but the research does back that up. But these type studies also said just because certain animals weren't charismatic, necessarily, that they couldn't be appreciated and they couldn't be empathized with, and that they just require some support. So that's what we're going to talk about, really in these next couple of slides. So I want to actually throw it to sorry Wilson, throw it to listen there.

**Wilson Sherman** 1:04:56

Thanks, Allison. Hi everybody. It's great to see many familiar faces. I totally miss working in a zoo, so just

1:05:05

be grateful. So yeah, as can you go back one, actually, sorry. Listen, all good, giving away all my

1:05:16

swirling it all

**Wilson Sherman** 1:05:19

Okay, so as Alison was saying, we find this differential for empathy for animals. And one of the things we did in this review is break down different characteristics that are shaping that differential empathy, and we find these three big categories. We've got characteristics of animals themselves, characteristics of the people experiencing that empathy, and then characteristics of the environment in which they're interacting. And the research is pointing to different ways that these things are shaping empathy outcomes. So we can go to the next slide, please. Thank you when it comes to shaping, when it comes to characteristics of the animals themselves, we kind of identified these two big categories. So there is this class of characteristics that are biological so related to this, we can't do anything about right phylogenetic distance, taxonomic classification. But then a lot of the research also identified these more subjective animal characteristics. And this is the finding that's really exciting to me, because this is the area where we as practitioners, as storytellers have a chance to shape empathy a little bit more. So there's findings that the esthetics of an animal, so what one perceives as beautiful shapes what's being empathized with emotional closeness, usefulness. So this is not just about kind of working animals, or animals that people interact with directly, but also usefulness to the environment, can shape the extent to which someone empathizes with them. So, you know, pollinators, for example, that's, you know, a role that they play that can help people understand and empathize with them. Danger is another one in this category, the extent to which someone perceives that an animal is or isn't dangerous can shape if they're empathizing with that animal or not. So this subjective category is where we can really start to tell different stories and provide information that might change someone's ability to empathize with a species. And I think the bat is an excellent example of how these biological and subjective characteristics come into play, right? Because the bat is, it's a mammal. It's relatively close to us on that scale, but they also come with these various cultural stigmas, right? Some people think they are scary, associated with Halloween, or they're dangerous and associated with disease. So it's one of these places where you can appeal to, you know, their million characteristics, right? They are careful mothers, they have social relationships. You can just show them a really cute picture like this with those big eyes. And then you can also talk about their role in the ecosystem and emphasize the ways that they're useful to us as pollinators, they have an important role in the environment. So those are the animal characteristics. We also have a range of personal characteristics. So one of the studies looked at a bunch of different students and identified some key demographic variables. So one is geographic location. They found that urban visitors and urban students tended to empathize more with certain animals than their rural counterparts. They also find that age plays a role, so younger students tended to empathize more in this study. And then, as we talked about, there's a range of ways that culture can come to play a role in this. So people have different folklore. They inherit different ideas and stories

about which animals are potentially ominous or more positive. But when I think about how culture influences empathy, I also think a lot about the Axolotl. I don't know if anyone noticed the kind of Axolotl obsession that started amongst the youth when they got out of that Minecraft. So there's all kinds of ways that culture is shaping what stories people have about the animals, like the Finding Nemo effect as well. And I think this really emphasizes, you know, the need to understand your community and the different kinds of people who are visiting your institution, and to hire diverse interpreters who can speak to and understand these kinds of cultural nuances, whether that's the difference between a rural and an urban visitor, or all kinds of different backgrounds. So we can go to the next slide something that the last category that we identified is these environmental characteristics. So this study showed that, well, there's a couple of studies actually looking at how aspects of the zoo and aquarium experience shape the extent to which one is empathizing with animals, and this can be everything from exhibit design, so the kinds of interactives that are available or signage, to the interactions one might have with a interpreter or animal care staff, and then the role that one's playing in that experience. So if you're a parent facilitating your child going through a touch tank, you might be focused on your child's behavior and not on experiencing empathy yourself in the way that an adult visitor visiting without children you know might be more engaged in a different way. So I'm sure that many of you are visitor experience zoo design nerds like me, I encourage you to check out the report where we get into this in a little more detail. I think I pass it back to Allison there.

**Speaker 11 1:10:34**

Thank you. Well said. So Wilson was talking about some of the specific variables, right? That that might explain why different groups of animals get different levels of empathy. And so what are the things that Woodland Park Zoo and Marta asked us to look into was, is there a model that explains this, right? That's being used across studies across context? And so we didn't find a dominant model. We found really, that people are using, you know, people are complex, right? And so as Wilson just went over a bunch of different variables, that it's some combination is causing these different levels of empathy, whether it's personal characteristics, characteristics of the animal or the experience. But we did see some models, and so wanted to just kind of share those models are useful because they can be like a roadmap, right for planning. They'd say, Okay, if I use this model, I can make sure that my programming touches on these four aspects for something. So we wanted to share these. We heard for Word on the street that a lot of folks in zoos and aquarium are using the Myers model, and that showed up some in the research, the Myers model is comes out of work with kids, but it's been used with people of all ages, and Myers identified for characteristics of the animal itself that would be impacting empathy. One being agency. Did the animal move around on its own? Is it seen as independent? The second one, coherence. Looking at the animal, does it? Does it appear to be one, organized whole, and not just a sum of different parts the animals? Affectivity? Can you see the animal is experiencing emotions and has feelings, and then continuity? Does the visitor have repeated experience, repeated exposure to that animal? So Myers outlines these as kind of a set of four characteristics that that affect how, how, how much empathy a person feels for an animal. Another model that we saw was simply called the Big Four, is a very general model, again, coming out of research cash dating back, I think, to like the 1970s and it is just hypothesized here again, that there are four characteristics of an animal that affect how one feels and empathizes with that animal. One being perceived intelligence. The theory being that the higher intelligence of the animal, the more we are to empathize with it, with the size. It's bigger the size, the more empathy. And the guess is that the bigger in size that people think, that

animal feels more pain, and so they empathize more. The esthetic appeal, you know, has to do with like kind of beauty, or the softness or fuzziness of an animal. And then the final one, lack of harmfulness. Is an animal perceived to be a danger? Is it? Is it perceived be harmful to the person? And so the big four model suggests that these are the four characteristics to really pay attention. The third model is the perception action model, and this comes out of neuroscience and cognitive psych, and it has to do not just with animals. It has to do with empathy in general, and empathy in particular, when the object of interest, whether it's another animal or a person, is in a distressing situation. And this model links to, like, the neural circuitry of our brains, and it's way above my pay grade. But from what I understand, it is that, based on these four factors, similarity, is there similarity between what is being empathized with and the one doing the empathizing familiarity? How much do you know about that animal which is connected to past experience. But here it's whether that past experience is positive or negative, because certainly you could know a lot about an animal, but if it's all through negative experience that's going to impact how you might empathize with that animal. And then salience, salience has to do with the something about that animal grab your attention, and so in the perception action model just relies on these four so there's some commonality across these models. A lot more research needs to be done if to show if one of these models is is more effective at predicting empathy. But certainly those are something to keep in mind as as designing programs. So something this wasn't necessarily a model, but it's something that came up, and certainly an idea that you all are much more familiar with than I am. But anthropomorphism, and for many of the researchers, they actually think anthropomorphism is like the cause of why people empathize with animals. They're saying that they empathize with animals that they see is more human, and we've seen that already in our discussion those phylogenetic as well as like esthetic appeal, but so but the idea is that if, if anthropomorphism is driving empathy, if people are empathizing with animals because they see them as closer to humans, then to tap into that strategy. And so I know there's been some controversy about anthropomorphism, and what I've learned is that the key is to use critical anthropomorphism, which says that you definitely can connect to these human characteristics, but make sure you're doing it in a way that is scientifically accurate and that you're not just like projecting feelings on that don't exist, or putting them in situations that don't align with the science. The key is kind of focused on genuine similarities, behaviors that actually are comparable and and there's so many resources, both in the ensure in the research, as well, as I saw it was one of the most popular resources here in the network. Was a great report that Marta, that came out of MARTA and WPZ about anthropomorphism. So we encourage you to look into that, to tap into this idea of anthropomorphism as the like the really the variable affecting empathy. Something that we thought was really fascinating that came up was this idea of awe and wonder. So awe is definitely having a moment in like psychology, a lot of others work out of Berkeley. It's written a great book on it, and you can catch him on a lot of podcasts talking about the power of awe. We talk about it a lot in our lab as connecting to nature based tourism experiences and all being just this idea of this powerful moment that can kind of override your existing thoughts and beliefs and can be really transformative. And so we saw some of this talk in literature on empathy. In fact, one of the studies very explicitly looked at the awe empathy pathway and found evidence that says, Yes, having an experience of awe around an animal creates empathy for that animal. And they even took that model further. Not only does it create empathy, it leads to increases in animal friendly behaviors. So this study was just fascinating for this connecting awe to empathy, but also because they looked at the role of education, and they said education can actually amplify this effect. So they had some really hard data showing that that these are connected in this way that is complicated, yes, but that there is a connection between our

empathy with education helping out to lead to behavioral changes that you might want to see. They also found what's creating that all when it comes to animals, and they they suggested it was a combination of beauty, esthetic appeal in it, and this idea of transcendence, that that you're recognizing that something is greater than yourself. And then, interestingly enough, threat that the idea that something like a massive predator may inspire awe just because it is a threat, so may be seen as a negative experience, but it's leading to awe. And so really, I think this is something that's going to be developing. So we'll keep our eye out on this, and certainly has implications for programming and for things that you do with your education and visitor experiences. If you can try to tap into and create experiences that elicit awe, then that will lead to, hopefully increased empathy. So looking at things like, the great thing is, it doesn't have to be a massive predator, something like, you think about a spider with the iridescent eyes. So finding in each kind of species or animal what's something that could evoke awe and tap into that. And I'll throw back to Wilson,

**Speaker 12** 1:19:19

yeah. So for this next section, we're going to get more into the kind of practicals of, okay, how are we doing this in real life, on the ground? And so I'm hoping we can do this together. So please get your typing fingers ready to contribute in the chat, because we have such a wealth of knowledge and experience and brilliance on this call. So what I'm going to do is I'm just going to talk about some of these big characteristics that we've identified, and I'll say a little bit about my experience with this at Oakland. But I really would like everyone to throw at some ideas, and I'll shout those out. We can learn together. You can go to the next slide, please. So the first is movement and behavioral characteristics, right? We know that people are empathizing more with animals that are active and that are exhibiting behaviors that they can identify with and understand. So for me, what comes to mind with with this are two things. First, how do we bring people in in moments when the animals are super active, or how do we help them connect with those active behaviors? And the flip side of that is, what do we do when the animal is inactive? Because, of course, the animals of the zoo are often not doing that super cool thing. So please throw in the chat how you're addressing this. I know, for me, what was really important here was connecting with animal care staff and finding ways, basically, like, not to gatekeep Really exciting moments, you know, so if there's going to be enrichment or a feed or some exciting training thing happening, how, even if that's not happening at a reliable time every day, how can we let our interpretive staff know so that we can bring people in and Bring people over and help them experience those moments. But working with animal care stuff also mattered for me in that realm, in the sense that it helped me understand new behaviors, especially about those less charismatic species. So I know one time a one of the keepers in the bug house taught me about how for the orb weaver exhibit, which is like a type of spider. When the misters go off, the spiders will kind of put out their their hands, and then they will drink the water droplets off of their off of their hands. So this is, like, a really cute thing to see. And so once I learned about this, it was a way for me to bring people in and say, Oh, hey, check out this really neat active behavior that you can identify with that's drinking, right? So maybe they're having a moment with a spider that they wouldn't otherwise. I'll look in the chat knowledge on natural behaviors and enrichments. Yeah, definitely. Bringing people in for enrichment is really important there, addressing concern when an animal is not invisible, yeah, absolutely. From some of our research, we know that that's shapes perceptions of well being, reframe moments that could perceive be perceived as the animal doing nothing. We also talk in the review about like having videos on hand, or having bio facts or ways to engage people. Lots of good stuff here in the chat. I

**Speaker 12** 1:22:26

hmm, awesome. Okay, read all those awesome comments. We also have cognitive and emotional characteristics. This is related, right? We know that people identify with intelligent animals and relationships. So when we can bring people in for training and enrichment, opportunities that demonstrate that intelligence, or when we can tell stories that demonstrate keep keeper, animal relationships and personalities, these can be really powerful. On this front, I think that one's especially cool for some of those animals, on the other side of the of the empathy gap, even something like the fact that the spiders get excited when they're when their exhibit is open, because they know there's about to be food, or, you know, fish that recognize their keepers, these kinds of things, who has thoughts that they want to share about how They're kind of highlighting those cognitive and emotional capacities, especially of less charismatic species. I'd love to hear,

**Speaker 2** 1:23:35

Oh, that's really cute. The hard work lullaby story,

**Speaker 12** 1:23:52

yeah, I love this story that Catherine has shared about highlighting this opportunity for the goats in the goat yard to use choice to choose one activity over another, and how you can kind of reframe or help people understand that that's those goats demonstrating their intelligence. That's great. Maybe we can move to the next one, which is physical characteristics. So I think you're highlighting esthetic appeal is really big, so especially so helping people to understand that insects are really beautiful when you look through a microscope, for example. And also, you know, we talk a lot about coherence. How do we help people understand an animal's body when it's something farther from us, phylogenetically and

**Speaker 12** 1:25:05

seen good comments about choice. Okay, I love, I love this example that Leanne has shared about the turkey vultures and and helping them to understand why an animal might look that way physically. I

**Speaker 12** 1:25:32

I love that example from Heather, too. And you know, we know that like that kind of learning through movement is really powerful. Yeah, I,

**Speaker 12** 1:26:00

yes, I loved as young, Ed Young's book as well. There's lots of examples from that one. It's called Hidden What's it? Called Hidden World? Something like that,

**Speaker 12** 1:26:16

an immense world. That's it. I'll put a link to that in the chat. But that's got a lot of great ways to connect with animals who have different kinds of like sensory experiences.

**Speaker 12** 1:26:42

So much great stuff in the chat. You guys are awesome. So we can move on to familiarity and experience. There's the book this, I think is, like, really powerful, especially with regular guests, repeat

members, you know, people who are participating in a zoo camp or program where they're going to be there more than once to check on the same animal day after day and develop something of a relationship with them and their expectations of them. I think at Oakland Zoo, there's a lot of like, big fans of certain goats in the goat yard, and we know that developing familiarity with animals helps people empathize with them. Yeah, I see a shout out from the Oakland Zoo team. Hi, Heather. Does anyone else have stories or examples of how they are creating familiarity with an animal over time?

**Speaker 12 1:27:51**

Oh, social media. I love that point from Megan, also so kind of creating, you know, an expectation even before people come to the zoo, so that they can expect or understand certain animals, and then come to see them, and then they can continue to connect with them when they're at home. That's something part of someone's kind of ongoing experience. I know that I've always loved the work that the Oakland Zoo's marketing team has done around telling certain medical stories or things like this, where, you know, people are checking in. Oh, how is Donna doing this kind of thing.

**Speaker 12 1:28:33**

Yeah, animals that were born at the zoo that people develop relationships with over years and years. I know I grew up going to the Santa Barbara Zoo and Jamina, the giraffe with the crooked neck, is like remains an icon years and years after she passed away, because people develop this kind of like attachment to her. I saw someone wearing a shirt about her the other day, and I

**Speaker 12 1:28:57**

like this comment from Ben about how social media allowed people to see what's happening with this animal day to day, and how they're developing that's a great example of how this kind of thing can help develop empathy. You guys are awesome. And

**Speaker 12 1:29:19**

then the last category, we'll move on to safety and threat perception, helping people understand the behaviors of animals they might perceive to be dangerous. So please, in the chat, let me know how you're kind of ameliorating these concerns or helping people understand them better. This one, I think, is a great example of how of just the power of education and helping people understand an animal's natural history. I know in my dissertation is about black bears and and a lot of times with that, I talked to a lot of practitioners who are doing like work in the field with bears and and it's not so much about about getting we don't want people to think that they aren't dangerous, right? We want people to have a healthy understanding of when an animal can pose a threat to humans and why that might be so. We don't want people to think that bears are going to be aggressive out of nowhere. But we do want them to understand that when they are backed into a corner or in someone's house, they can do certain behaviors, like a bluff charge that might end up scratching someone so so understanding the motivation behind some of these more dangerous behaviors, you know, in rattlesnakes, understanding when they will and won't bite, for example. But a big one with safety and threat perception that I think about is just that we can't always change someone's mind right away, and that's not necessarily our goal. Sometimes it's just about providing an opportunity to have a safe experience with an animal. I once had the opportunity to speak with a family. It was a mother and a daughter, and her daughter had actually been attacked by a coyote, and she shared that they came to the zoo because they knew her daughter

had a lot of trauma around this, and they came to the zoo because it was a safe space to be near animals and know that they weren't going to be in direct contact with them. So you don't know, you know what someone's background with an animal that they're afraid of might be, you know, in that case, it's not, my goal isn't to be like, Oh, coyotes aren't scary. You know, that's not an appropriate thing to say, but just creating a moment where someone can observe an animal at a distance and notice something new about it. That's, you know, a step in the right direction, potentially dangerous animal. I like that.

**Speaker 12** 1:31:57

Right? I like, I like what you've shared Sharon about, about just empathizing the infrequency of these kinds of events, not that the animal can't hurt you. It's not that they aren't dangerous. It's that these situations are rare, and we usually have some control over them, right? So

**Speaker 12** 1:32:31

Right? These were some great comments. Please continue to share such a wealth of knowledge again. So thank you all for your participation. I'll pass it back to Alison.

**Speaker 11** 1:32:39

Was great. Listen. We could have just let the chat go the whole time the I'm not surprised at all by the experience. So kind of wrapping up to what I feel humbled like, why am I sharing a step by step guide? And I think you all already know what to do, but I did want to say this, this step by step guide that is a part of that is in the report, comes from Marta. Marta and her team kind of looked at what we said and then created this step by step guide and beginning so I'm not going to it's in the report, so please feel free to visit that. But I would have just got to go over the steps, phase one being assessment. So if you're thinking about, hey, I really want to increase empathy levels for a certain animal. So that's the first step. Choose the animal, right? And then, as Wilson was talking about, right? Understand your audience. You know, we learned that some of the things that can affect empathy levels are demographics and culture and so knowing your audience. Third, assess your staff and volunteers. Are there certain staff members who are really good at empathy, you know, invoking empathy with animals and that kind of thing, and and work with the staff you have and provide training for those who need it. And so those are kind of the three steps of the first phase of assessment. The second step is planning. So you figured out your animal, you're figuring out who your audience is and what staff we're going to be working with. You're going to select and integrate the strategies that you come up with that match to that animal, and integrate it into the intervention, the program, the education that you're going to provide. Research did show that this layered interpretation really works. So you don't just have one strategy, it's a bunch of different strategies. And that makes sense, right? Because what creates empathy is complex, and so you're having to address all these different variables that can change depending on the animal, and change depending on the Vista, and change depending on all sorts of things. So if you've got a layered kind of experience, you're incorporating multiple strategies. And then, as we said, train and empower your staff, you know, share with them what the plan is, tap into, as we just saw, the tremendous amount of experience that's out there, and really empower them to make sure that they feel comfortable and can make a difference. And the third phase is the implementation. So launch and educate. So this is all your hard work. You launch into it. You make it happen. As a researcher, we really encourage you to measure the impact. We some of the best things that we

reviewed in this research were the evaluations and this. It doesn't have to be this like fancy report. Just do it some basic evaluation and share that. That's really key, because then we can all learn from everyone's experience, and then you can help us answer these questions about empathy, right? What? Why does this species get more empathy? Well, gosh, we we surveyed the visitors, and we found out that they're all from the same certain demographic, and there's some cultural reason for that, so just data could be really useful. But don't stop there. Once you're done, once you've measured it, refine and iterate. So go back and as you learn from others, and as you learn from hopefully, some good research to refine your program and and make it even better. So just kind of want to end with what we saw as the research gaps. We definitely need more studies that take place in zoo and aquariums. But it really, it was in the doctoral and the masters, the thesis and the dissertations that we saw a lot of this and so excited would be really excited to see more empathy studies being published that take place in zoos and aquariums, but I loved that Theo lab alumni there was talking about empathy measures. This is a real sticking point in the research. We're all kind of measuring different things, vanity, really hard to measure empathy. We had from questionnaires, but even with questionnaires, there's a lot of variety in it, and then physiological measures. So just a lot going on in terms of measurements, always an issue in social sciences. We'd love to see some more research specific to underrepresented animal groups. And so anything focused on like insects, we had a lot looking at the big, charismatic animals, but not so much on these more underappreciated ones. And then a lot of these things that we suggest, and then, oh my gosh, the plethora of suggestions that you all have. We'd love to see research around testing the actual effectiveness of it. We often know on the ground that these things work. You know in your heart of hearts that they're effective, but it's great to have research behind it. So these were kind of the research gaps that we we were seeing. I did want to end on a positive note. So many success stories, really, a lot that came in through the unpublished work. And so it's so excited to see amazing programs with spiders and cockroaches and vultures. So I definitely invite you to dig into the report, because we go into those there key takeaways. It is real different for empathy. Empathy levels do differ for a different species and different animals, but every animal can inspire empathy. It's just doing what you all do, providing the right support. There are some animals that are going to need more help. We did see evidence that strategic programming works, particularly in evaluation day. In evaluation data. And the success comes from the understanding that you all bring like what makes each species relatable. You know these animals, you work with them, what makes them exciting and relatable to others. And again, I always say, document and share your successes. That's what we build a research base. So thank you so much. I know I think we're about out of time. We went longer than I thought I even though I do talk really fast. And so if there's any questions, I will definitely look in the chat and you have Wilson and I's contact information, please reach out, and we would love to hear from you. Wilson, is there anything you wanted to add?

1:38:40

No. Thank you all so much.

**Speaker 7** 1:38:44

Thank you both. I think this was really fascinating, and I loved having folks throw examples in the chat. I think that's you know, shows the collective experiences and knowledge we have, and is really just such an amazing way for us to learn from each other and figure out, like, oh yeah. I saw some people saying,

Oh, I'm going to steal that. That's a great idea. So thanks so much for your presentation, Emily, are we tight on time? Or do we have time for a question

**Emily Bernhardt (Woodland Park Zoo) 1:39:13**

or two? We are tight on time. I want to make sure, since we are here for so long, to give folks five minutes for a quick break before we roll into our final item of the meeting. So thank you, Allison, thank you, Wilson. If you could drop your emails in the chat, that would be awesome, in case anybody has any questions that they want to direct right to you. Since I know we are, we've caught up. We're back on our schedule, so I want to make sure that folks have some time to take a quick break before we roll into our presentations from Cecily and AR. So we will come back at 1230 Pacific time, so 30 minutes after the hour, regardless of your time zone, and we'll come back and learn about how folks are applying an empathy lens to youth and community focused programming. And thank you again. Allison and Wilson

**Emily Bernhardt (Woodland Park Zoo) 1:43:45**

alrighty, everybody is doing a little bit of a vocal cue, in case folks are away from their laptops need a couple seconds to come back. Still. Got some time. Not 1230 yet. Not going to get us super early, but just popping that up in your brain. All right? Alrighty, it is now 1230 so I'm going to go ahead and pass the torch over to Cecily and AR. They are from the San Diego Zoo wildlife Alliance and Woodland Park Zoo, respectively, and they'll talk about some unique programs at their respective institutions that apply an empathy lens to youth and community focused programming. Both of you have the ability to screen, share and control your slides. Cecily. If that's okay with you, I'll pass the torch to you first perfect.

**Speaker 13 1:44:32**

Let me just put my slides up here. All right. Can everyone see my slides?

1:44:42

Yes, we can perfect. Hi. My

**Speaker 13 1:44:45**

name is Cecily garlino. I am one of the education program developers here at the San Diego Zoo Safari Park, which is a part of the San Diego Zoo wildlife Alliance. I'm really excited to share about our high school program, Conservation Corps with all of you today, but specifically the semester that we focus on empathy, we'll share a little bit of background and overview about our program before moving into the specifics of our semester on empathy, which will include some specific activities and discussions that we do with our students. And then I'll share a little bit on how we continue to look at conservation with an empathetic lens after the semester is over. So Conservation Corps is a four semester program intentionally designed to go in the order you see here on the screen, each of these being their own semester and back in 2023 even though the program had been around for a while, our team had decided to redesign the program, and when redesigning it and creating this curriculum map, they really felt it was important that empathy was in one of the earlier semesters, which would help shape the framework throughout the program, and to make sure that the students would have that opportunity To look at conservation through the lens of the full disclosure, I actually joined this team in March 2025 so I wasn't part of the redesign and restructure, but this is one of the programs that I do oversee and run,

and last semester, the first cohort of students that went through all four of those new semesters graduated, and I was there for that. So the objective of our program is to empower high school students to be the next generation conservation leaders, communicators and decision makers through critical thinking, awareness, empathy and advocacy. And so for the program, they meet on Saturdays, 10am to 4pm six times a semester, and they participate in a variety of activities, experiences and discussions on current environmental and conservation issues. Additionally, we host two optional Community Action days per semester, which we invite their family and friends to participate in as well, including things like beach cleanups, habitat restorations and even some tabling events. And then we also have an optional book club every semester. So when the immense world was talked about earlier, I was really excited, because that's one of the books that we read, and it usually will relate to the specific topic on the semester. And that just needs the book club meets just after the session for that day, and we thread empathy again through the whole program, but really in semester two, that's where we hone in on empathy through the different things that the students are doing. And so I have pulled a few different discussions and activities to share with some of you all today. This is not everything, but this is a good chunk of the stuff that we do with our students. Discussions are really what I like to think of as the bread and butter of our conservation corps, because this gives us the opportunity to introduce these topics, but also really gives the students the opportunity to use those critical thinking skills have these conversations as well as have them with their peers, and kind of develop that process. And so sometimes our discussions are done as standalone, they're paired with an activity, or they're even done as a thought swap that we do when we walk to different parts of the safari park. So for the first discussion that I have up here perspective and empathy is just talking about how our different perspectives and outside factors can impact how a group of people can view the same situation and then kind of in the same length of breath, is personal connections to Wildlife, a discussion on how their own experiences with wildlife cause them to be more empathetic towards a certain species and why, and then same, same but different barriers to empathy. So thinking about what that cute effect is, and then how that creates challenges for the not so cute and cuddly species, just like we were talking about earlier, snakes, vultures and insects. What makes it so difficult to create empathy for those different species and then really asking them to think about their own biases towards certain species and why they're more drawn to other species. We also do a discussion on plant empathy, which we think is really important. We have so many great plants here at the safari park. And of course, when people come here, they come to look mostly at the animals. And so we have a discussion with our students to think about the challenges that exist out there to create empathy for plants versus creating empathy for animals. And this is actually paired with an activity I'll talk about on the next slide. And the last item I have for discussion is a conversation on culture and empathy. So just talking about how different cultures may view different animals, especially domestic species like cats, dogs and cows, and then how this relates to different conservation strategies like re releasing an endangered species, hunting bands and predator proof enclosures. But what I really love about our discussions as we are currently in semester one, we are reading our book club, book some we love, some we hate, and some we eat, and the conversations we're having now in semester one are really going to flow into what semester two is as well. So those students who opt to join the book club, they're getting some of this conversation already, and so I'm excited to see how that flows into that next semester, and then a few different lessons and activities that I pulled out here. The Empathy word association is pretty much what it sounds like. It's the first activity we do with our students in the semester, getting them to think about what empathy is, what connections they already make towards empathy in general, and then

steering that to talking about why it's important to be empathetic towards wildlife, and how people's empathy impacts their interest in protecting wildlife as well. In our habitat design activity, we ask our students to create a habitat, but stepping into the shoes of guests for them to go into a habitat, look at the area. What draws empathy? What could they put in there to draw empathy, even if the species isn't out? What could they include in that? And then throughout our entire program, we do a few different wildlife care experiences. But within this semester, especially, we do an animal welfare training with our wildlife welfare manager, and then, as well as an opportunity to speak to different care specialists. And this gives them that kind of background too, especially being at the safari park, understanding the why, understanding how we work with the species, and also just developing that empathy within themselves. And then this last two activities here, the plant social media activity, pairs with our plant empathy conversation. I really love this activity. After they have that conversation, they get to go into the park. We assign them a different plant species, and they do a little photo shoot, and then they create a pseudo Instagram to for that plant that they were assigned, with the goal to create empathy for those different plant species. And then our last item here is the final project. Now this is something we have for each semester, a project that ties in, that they work on throughout the semester and in this final semester, or in this second semester, they are challenged to do storytelling through the lens of an endangered species, with the goal to create empathy for that species, as well as to encourage conservation action from their audience. And for this event, we do invite their friends and family to come to the safari park. We give them a few examples of what they can do, like writing a song or creating a website or a short story, but we give them kind of that free reign to choose whichever outlet they want to for them.

**Speaker 13** 1:53:20

So that is our semester two on empathy, kind of a really brief overview of what we do, but right the empathy doesn't just stop there. We continue to thread it throughout, but it really does set them up for success in those last two semesters that are a little bit heavier, in a way, and so because we hit empathy so early on, when we talk about things like CO existence and advocacy, they already have that lens to look at these different conservation challenges, to create different solutions for humans and wildlife. And then I just wanted to leave you with a quote from one of our recent graduates, she had said that through Conservation Corps, I was able to deeply understand how different methods from inspiring empathy for animals within the public to using science and advocacy to create governmental change could help catalyze positive momentum within the movement to protect animals and the environment. I have put my email up here in case you want to reach out. I know we'll have a little bit of Q A after this, but I did want to thank you for your time. Also pop my email into the chat for everyone as well. Thank you so much.

**Emily Bernhardt (Woodland Park Zoo)** 1:54:35

Thank you so much. That was really exciting. I will be touching these with you about the plant social media later on, but AR, I'm going to go ahead and pass the baton to you.

**Anna Rebecca** 1:54:54

All right, are people seeing the right screen? Can people hear me? Are we everyone? And I'm gonna set a timer, because I can absolutely talk about this forever. Hi everyone. Thank you so much. My name is Anna Rebecca. I go by AR. I am learning partnerships manager at Woodland Park Zoo, and

I'm going to be talking about CO designing a youth leadership nature coalition that we just started our pilot year this year, in February, the overall chat presentation I'm going to give today comes with a little bit of overview, a little bit of meat into the program that we did with our youth this summer. This is a year long program, and then a little bit of behind the scenes sharing, templates, tools. You'll kind of see how, what is it the sausage is being made, or how the bread is being needed, I don't know whatever that metaphor is, so that you can utilize some of the tools that we have for your own, yeah, youth based, community based programs. So that being said, yeah. A little bit into our project overview. So our program, youth leadership, nature coalition, is a three year cohort program where South Seattle youth in particular get to work with Woodland Park Zoo to one experience to develop and three establish a culturally relevant and sustainable nature experiences in their own communities. The purpose of this program is to really demonstrate and explore the connections between Youth Wellness that includes mental, emotional and physical wellness and nature, and seeing how connection to nature and access to nature can really help co regulate our youth's well being through engaging in land stewardship and environmental restoration, working with youth directly to empower their agency as young leaders, while modeling and mentoring what it means to program, to co design a program and then ultimately empower youth to lead their own environmental and social action projects in their communities. So because this is the three year program, the youth work as participants in year one. Year two, they co design with Woodland Park Zoo, and then year three, they are leaders with Woodland Park Zoo, supporting them behind the scenes as they engage in their own co design project. And this project came about in partnership with the Asian counseling and referral service and the Tom refugees community, both organizations that are based in South Seattle, predominantly working with Asian immigrant and refugee communities, also working with communities of different faiths and cultural backgrounds. And this whole idea came together, this idea of nature, connection and addressing and mental, emotional and physical wellness, because so many of our immigrant and refugee Asian youth were really struggling with anxiety, really struggling with sense of self identity. These are conversations that we had over a year ago, and then, of course, have been exacerbated with much of the political climate and a lot of the rhetoric that we've been hearing. So knowing that this is something that I mean, youth are tapped in. They are listening. This isn't something that they can escape. How can nature connection to nature? Action, conservation action be a tool or resource to support them? I am going to have some images. I don't expect you all to be able to read that. So this is a little bit of behind the scenes I am sharing public views of our Canva boards, so folks want to get into a little bit of what the conversation was like. You can look at those links, but we did work with our partners to identify program outcomes. We knew that we wanted to address what are different possibilities that the youth can explore. How can you be empowered, and what does mindfulness in nature look like? And through these ideas, we really facilitated some pretty in depth conversations. I'm going to give a shout out to Theo Bamberger, who is our evaluator on this project. He has been instrumental in really capturing a lot of these thoughts and making sense of these thoughts to really actualize this project itself. So anytime you see, kind of like a screenshot of something, that's all Theo's work. So with our partners themselves, um, we did come up with kind of a list of ideas of, what are ways to connect youth in nature. What does that actually look like? Here's another Canva, if you folks want to dig into that a little bit more. And then we worked with partners directly to think about, okay, we know that connection to nature can look a variety of different ways. That could be anything from nature, art, food, animal connection. Of course, we, as Woodland Park Zoo, have a bias. We're wildlife conservation organization, but through conversations and listening to our community partners, really

realize that the way that people think about the environmental world, the natural world, is much more complex and nuanced than sometimes our organizations think about them. So we really wanted to represent what is that breadth of experience, and then work with our partners directly to think about, okay, if the topic is tea and medicine, what are the actual program activities that we can utilize and create so that the youth can learn about this theme and topic that really have some tangible experiences. And then we also had conversations with youth directly. Theo and my colleague Melia did some listening sessions with youth ranging between the ages of, I believe, 11,12, to 18, to really think about, what are those ideas that rise to the top, that youth themselves will be interested in participating in so through all those conversations, we developed six nature experiences that youth engaged with. This past summer, we had 14 youth participate in the program, and those 14 youth had the opportunity to go bird watching, learn how to make tea and medicine with herbs and plants. They went tide pooling, hiking, salmon restoration, and they even did some urban gardening. And each of these activities were had a breadth of experiences. For example, bird watching was really geared towards, again, not just that mindfulness and connection to nature, but really think about, what does, what does conservation with? Sorry, that was kind of a little complicated. How is birding a part of conservation like? How can we connect with this wildlife that we see in our backyard and engage in action? And we did that a lot with salmon restoration as well. So each of them had their own kind of unique niche as to whether we were addressing mental wellness, physical wellness, emotional wellness, and the connection that back to conservation. And then here's a spreadsheet to be a little bit more into what each of those programs are. And then, as part of our nature experiences, one of the things we also encourage was reflection through journaling. So I wanted to share some highlights as to what our youth experienced in this program. So in an activity, at the very end, Theo would prompt them with a journal prompt. And each of those journal prompts varied, but some of the responses that our youth had to the actual program. Sorry, here are the journal prompts, included these two quotes, and I'll read them out loud, because I know sometimes handwriting can be a little bit difficult. I feel like I really need to just spend time in nature today and get some fresh air. Since summer started, I've been really busy and haven't had time to really breathe. I think my sisters and the people I've been out with would also love to get some fresh air and go on this little trail. Another comment was strengths that I bring to my community is participation and kindness to me, those are some things that I really feel happy about. What I need and what others bring is just themselves. I would appreciate from others is also kindness. So in contrast to some of other programs that you may have heard where empathy is like a product or an end goal or an outcome, our team really looks at empathy as a process, that it is something we do from the very beginning when we're building relationships and connecting with our partners all the way to the very end, When we're reflecting on our experiences together. So for us, empathy really came in when we had conversations with our community about what their priorities were, what their youth priorities were. I think it is helpful that the entire the majority of our team are people of color. So when we were talking about and be super candid, talking about immigration and deportation and queer and trans lives being completely erased.

**Speaker 14** 2:04:29

That is something that our team could directly connect with, and that led to a lot of very important conversations as to, how do we create a program that is very relevant for our youth? We also incorporated a lot of cultural and religious customs. So we had our charm refugee community youth. Are they practice. So incorporating prayer and incorporating different providing prayer mats and making

sure that the snacks that we have are halal, we're all incorporated all our nature experiences, had some form of perspective, taking and really thinking about, what is this land that we're on? Who are these plants and animals that we're sharing space with? What are their perspectives in our evaluation, I mentioned we had some journal reflections that also encouraged empathy towards the experience, towards peers and community. And of course, we're moving that forward into as we transition into our second year where we move our youth from participants to co designers. So really think about empathy for our peers, empathy for our communities, and empathy for the natural world, or what we also call ecological empathy. So with that being said, just want to leave it with a kind of quote, and thank you. One of my favorite quotes from Juan Luis superior, who is a biologist in Mexico who really recently passed away this year. He says, Lopez secure, Lopez de cuida, which is translated to that which is known is loved. That which is loved is cared for. So thank you all for your time. A huge thank you to everyone, particularly my teammates, Melia Whitney and Theo, and please feel free to email me if you have any questions. Awesome.

**Emily Bernhardt (Woodland Park Zoo) 2:06:18**

Thank you so much y'all. We have just shy of 10 minutes left, so if folks have any questions, I'll be monitoring the chat if you would like to put them in there, but otherwise, I do welcome folks come off mute if you have a question for either Cecily or AR about the work that they are doing. So I

**Emily Bernhardt (Woodland Park Zoo) 2:06:46**

can selfishly kick us off while we wait for questions to come to the chat. Could you talk a little bit more about the empathy for plants project that you do as part of your semester? Yeah.

**Speaker 13 2:06:58**

So for the semester, we start them with a conversation just on plants in general, and then the challenges drawing that empathy for plants versus different animals as well, especially because at the superior Park, we're also registered Botanical Gardens, so we have so many plants for them to see and experience, even though can guarantee, like most of the time, they're paying attention to the species. So then we give them a specific we break them up, they'll work in pairs, and we give them a specific plant species to focus on. And they really do. We have iPads for them so they can take different pictures. And there is a Instagram generator for fake Instagram, not a real one. And then they are challenged to make a few different posts, really trying to get the other students and people in general to draw empathy for the species, and how they do that is really up to them, and they have to think about what would draw empathy versus what wouldn't is it going to be information? Is it going to be other things? Is it going to be in how they present it?

**Emily Bernhardt (Woodland Park Zoo) 2:08:02**

There? Very cool. Thank you so much. That's like a very like hot topic, I think, in the network right now. So if you or anybody else at San Diego is interested, I think I dropped it in the chat earlier, but we have a learning group on fostering up with theater plants specifically, and a lot of it is going to be very conversational. So I really encourage if you're interested, not only you Cecily, but everybody else in the call. If you're interested, please attend. We'd love to have your brains together, and that's a part of that conversation. Question from Courtney in the chat for both of y'all, what is the payment system like? Are youth paid? Or do they pay to participate?

**Speaker 14** 2:08:40

Yeah, I can start with that, yes, the youth are paid in our program. So one of the things we heard directly from both our youth and our partners is that often, for these types of programs, the youth that we want to engage in. This case, this was bipoc youth, immigrant, refugee youth, they often have to make a choice between participating in a program or working or taking care of their siblings. So that was very instrumental for us in how we budgeted this program. Our youth since year one is program participants. Each of the youth receive a \$550 stipend to participate in half a year. That stipend increases every year. I think next year it's \$1125 and then year three, it's \$1225 that's because their responsibilities and their involvement increases over time. So part of that is they do have to participate in a minimum number of program activities. We do want to provide some leeway, because things happen. Youth get sick, they go on vacation school, but yes, the youth are paid

2:09:49

for our program.

**Speaker 13** 2:09:50

They either not paid. They do get high school volunteer hours. This is our our version of the volunteer program for our team. They don't have to pay to be part of the program. They do apply, and we are thankfully funded by some donors who let the teams apply, because it occurs so often on our site. So we've been really fortunate in that.

**Emily Bernhardt (Woodland Park Zoo)** 2:10:20

Looks like there was another question in the chat, but I think Theo answered it, unless there were some in that doc that are not in that Doc. They are for any reason. I'm not sure.

**Emily Bernhardt (Woodland Park Zoo)** 2:10:37

Any other questions for folks, feel free to pop them in the chat or come off mute. Okay, I

**Emily Bernhardt (Woodland Park Zoo)** 2:10:59

waited a little longer than usual, because usually, if I just do, like the seven educator seconds, like, that's a seven seconds, something will come in the chat, but I don't see anything else popping up. But both of our presenters shared their emails. I really encourage folks to connect with them afterwards. If you would like to discuss anything more that they talked about today. Otherwise, I know we are nearing the end of our time together. Thank you all for my cameras here. Thank you all for coming today. I really hope that you enjoyed both Cecily and ARS presentations, but also hearing from Allison and Wilson with their literature review. And I'm really glad to hear that y'all like the icebreaker prompt as well. We do have with the remainder of our events for 2025 scheduled in our events calendar. So like I said earlier, we have a learning group focusing on empathy for plants. We also have another one focused on using empathy in wildlife. CO existence conversations. We have a coffee chat that will feature Wilson and a couple other folks in the network as they talk about their path to advanced degrees. And then we have a learning group in December about storytelling. So a lot of the same themes that came up in our guest presentations today are going to be elaborated on in these kind of standalone events throughout now and the end of the year, and then again, just struggling back to the

beginning, you can now register officially for the virtual empathy Summit. That is the very first and only 26 event currently in our calendar. If you really want to get that on your books, you can go ahead there. But otherwise, if nobody has any other questions or things that we want to share, I can go ahead and close this out early, give us two minutes of our day back. So thank you all for coming, and I hope to see you all at another network event sometime in the near future, and I'll talk to you all later.

2:12:48

Thanks, everyone. Bye.