



BRIDGING THE NATURE GAP IN EARLY CHILDHOOD DEVELOPMENT: USING JEDI PRINCIPALS TO BRING NATURE AND

BIODIVERSITY BACK INTO THE NEIGHBORHOOD



Image: Children & Nature Network

"If we cannot grieve for our ailing planetary health, we cannot love it. It is not enough to weep for our lost landscapes, we have to put our hands in the earth to make ourselves and the earth whole again."

You can pass right by public and private places in the Rainier Valley, seemingly void of nature and plant life, and wonder what can be done to make amends. It is an understandable reaction to a distressing situation because we have long known that access to nature is an important component in childhood development. But where do we begin? Vireo Design Studio felt an overwhelming call to action to collaborate with a client's architect in a thoughtful community design/build process, supporting this multicultural community in the Rainier Valley--many unable to afford the cost of restoration and revitalization. The client, Tiny Tots Development Centers, is an early learning childcare organization with over 53 years of establishment in five King County locations. The community is home to a large African American and immigrant community with little access to nature and biodiversity.

Our community design relationship with Tiny Tots Child Development Centers focused on finding ways to enhance, access and connect children, staff and families to nature spaces. We creatively structured our conversations and events to meet them where they were and where they had been instead of trying to tie them to a preconceived reality. Collaborating closely with the client and the architect, we addressed specific and unique concerns to close the Nature Gap using JEDI principals (justice, equity, diversity, and inclusion):

Funding the Creation of Outdoor Learning Spaces.

We strove to eliminate as many financial barriers as possible by working with public and private partnerships to assist with the design and development of these spaces. Key funding partners included: PNC Bank Grow Up Great Program, Seattle Children's Hospital, City of Seattle

Department of Education and Early Learning, and local building grants. These organizations were an important first step to actively assist this community that has historically felt excluded from outdoor spaces.

Fear and Avoidance of Nature. ■

The nature interest in most children is naturally present, however we found preexisting fears and inhibitions about being in the urban natural environment with this group. Our diverse design and stakeholder team actively worked with staff and families to design safe space solutions, and to rebuild

(Fear and Avoidance of Nature.)

urban BIPOC relationships with nature. Besides developing more inclusive and accessible outdoor spaces, we promoted ongoing consistent active outdoor play, outdoor art activities and seasonal outdoor community events to gradually provide exposure to nature.



Community Representation.

Because of funding and related time constraints, the design team engaged with a small but diverse group of Tiny Tots families, staff and neighbors, rather than a wider community process for the planning and preliminary design work. With future funding, additional community representation may precipitate richer experiences for children, staff and families.

Outdoor Access Expectations of Children and Staff.

The design team discussed and clarified what more nature access and outdoor time for children meant. It would not be intense offsite camping and mountaineering trips, but would simply start by spending more time in outdoor spaces the staff and children felt safe in. We listened to staff about their memories and experiences in the neighborhood and translated those ideas into designed spaces and elements, such as an ethnobotanical memory trail, sensory and pollinator plantings, an outdoor theater, and an urban farm play area. Other ongoing areas of concern for improving outdoor play and exposure to nature include negotiating play spaces and elements with state education licensure inspectors. Many barriers in the pursuit of safety and conventional play area thinking still exist within the state licensing guidelines, and the client will continue to promote the implementation of natural elements in outdoor areas.

"Children as young as three years old have an adult-like preference for visual fractal patterns commonly seen in nature. Research findings suggest the preference for common natural fractal patterns develops early in life. The aesthetic experience of viewing nature's fractals holds huge potential health benefits ranging from stress-reduction to refreshing mental fatigue. Incorporating nature based fractals into urban environments can begin providing benefits from a very early age."

The Heart of Community Engagement.

During the preliminary creative design process and meeting with stakeholder groups, neighbors, and Tiny Tots staff, we quickly realized we were asking a community to live simultaneously in loss (loss of nature) and creativity. We had some difficult moments, but we were determined to understand where the next steps of the process would

take us. A breakthrough moment came when we let go of preconceived community design processes of information sharing vs. knowledge producing, and were willing to move into the moment where the community was living right then.

■ Considering Language Loss.

Nature and language are embedded in people and you can't separate the two. The design team proposed addressing the loss of BIPOC languages through a number of strategies--a year-round immersive outdoor classroom curriculum, teaching students to understand differing languages while exploring wildlife and the outdoors, and an ethnobotanical and historical 'memory trail' to provide children with an opportunity to see, feel and touch a restored daylighted stream with biodiverse native planting.

■ Ongoing Nature Connections.

Art programs combined with civics is helping early learners connect with nature. Tiny Tots provides children with creative learning opportunities about plants and animals, as well as discussion about the ways children can help protect nature. Additional site elements will be built incorporating work from pre-school children, creating art from upcycled materials destined for the landfill. Ongoing nature teaching and community events will increase inclusion by providing outdoor mentorship, bio-cultural restoration, and access to outdoor opportunities for otherwise underserved children.

■ Sequencing and Celebrations.

Due to the variety and timing of project funding available, designed elements, programs and spaces at Tiny Tots were implemented in phases. We recognized it can be difficult for a community to wait so long to see their dream

become a reality, so the client and design team collaborated on many celebrations of change after each building phase--ribbon cutting events, food, dancing, and grand opening celebrations of new outdoor spaces with neighbors and the regional press.

"Children who played outside 5-10 hours per week said they felt a spiritual connection with the earth, and believed their role is to protect it "

(2013) Van Wieren & Kellert, Journal of the Study of Religion, Nature and Culture,



Image: Vireo Design Studio

NATURE AND BIODIVERSITY RESEARCH

Using qualitative research methods, we examined data of nature environments and human made land use practices in this neighborhood and compared them to Capitol Hill, an adjacent neighborhood to the North. The data was collected through Google earth, City of Seattle GIS data¹, fieldwork observations, and interactions with community members who were cautious being around trees, green environments, and nature. Comparing the data, Capitol Hill contains roughly 12,509 trees whereas Rainier Valley has roughly 7,021 trees. These two neighborhoods contrast greatly in social equity, diversity, size (Rainier Valley is over twice the size of Capitol Hill) and has vastly unequitable tree inventories. The 2021 City of Seattle Tree Canopy² report states, “Neighborhoods impacted by racial and economic injustice not only started with less canopy but also lost more than the citywide average”. This public document states the racial and economic injustice regarding tree coverage which is also linked to biodiversity and reducing the heat island effect of climate change.

When we initially met with the Tiny Tots staff and families, they hadn’t realized they had lost their connection with nature. It was a process that happened slowly and silently over many years, what the environmental studies profession calls a ‘slow natural disaster.’ Most ‘natural’ disasters arrive rapidly with no warning, such as in the case of earthquakes or tornados, and are considered ‘rapid onset disasters.’ Slow natural hazards, including climate change, desertification, and environmental



Image: Vireo Design Studio

"How we approach restoration of land depends on what we believe 'land' means. If land is just real estate, then restoration looks very different. If land is a subsistence economy and restoring for natural resources, it is not the same as renewal of land as cultural identity."

~Robin Wall Kimmerer



Image: Adobe Stock

degradation such as that seen in the Rainier Valley, are very slow onset events, but can and should be considered as equally harmful disasters in terms of the damage and disruption to lives that they create. The lack of biodiversity isn't always noticeable in

communities unless it is specifically researched, published and addressed and it became an important first consideration during the design process for this site and provided the foundation of our site design.

1 <https://data-seattlecitygis.opendata.arcgis.com/>

2 <https://www.seattle.gov/trees/management/canopy-cover>



Image: NEEF (National Environmental Education Foundation)

OUTCOME: IT'S NOT JUST A PLAYGROUND..... IT'S NATURE BASED LEARNING

The design team felt the bridging of nature and biodiversity was a tangible success for this client, but we also learned many valuable lessons for future projects and the larger regional context. Methods of engagement and the build process can have positive ripple effects across individuals, communities, and entire neighborhoods well after the dust has settled. The physical built landscape has brought in a new reality for this community--one of mimicking nature. And although the site restoration goal was to re-introduce nature to reestablish biological function and structure, we were careful not to introduce an engineered monoculture pattern. We took an indigenous world view as the basis for site design--that the landscape is not a machine in a reductionist paradigm, but a community of species who are the driver showing us the way. The landscape at Tiny Tots has and will continue to become a renewal of relationships between the people and the land.

"You don't know what you don't know! We had to be brought back from what we thought was real. Trees are real, bugs are real. The landscape became an education model to all, reminding us how important it was for learning and well-being."

~Angelica Hicks-Maxie