



# Detroit Leadership & Environmental Education Program (D-LEEP)

## 2021 PROGRESS REPORT





## Executive Summary

The National Wildlife Federation's Detroit Leadership & Environmental Education Program (D-LEEP), which focuses on direct engagement with Detroit high school students, has thrived under difficult circumstances in its first two-plus years. Working in six high schools and conducting over 75 events, D-LEEP has engaged students, their families, and the community in powerful curriculum, partnerships, excursions, and projects. D-LEEP is supporting the next generation of leaders through education, promoting and facilitating job and skills development opportunities, fostering deep connections to nature in Detroit and beyond, and contributing to more resilient ecological and human communities. This programming has been particularly important for under-served youth during the pandemic. D-LEEP is setting a strong model for youth engagement not only within the National Wildlife Federation but also for other organizations in Detroit and beyond. D-LEEP is poised to expand its reach and impact in Detroit in Years 4-6 (2022-2025). While building and growing D-LEEP in Detroit, we are simultaneously building a model for future expansion across the region and country.



Worked in  
**6 Detroit  
high schools**



Conducted over  
**75 field trips  
and workshops**



Engaged  
**OVER 60 STUDENTS,  
300 FAMILY MEMBERS  
and 2,500 COMMUNITY  
MEMBERS**



## D-LEEP is setting the example for urban environmental engagement programs not only in Detroit but throughout the country.

Working in partnership to fill a need identified by the Detroit Public Schools Community District's Department of Science, the National Wildlife Federation's (NWF) Great Lakes Regional Center (GLRC) initiated this innovative after-school outdoor program in the fall of 2019. Focused on high schools, D-LEEP builds upon NWF's Earth Tomorrow program (founded in Detroit) as well as our nationwide EcoSchools program. The D-LEEP model is highly collaborative and leverages relationships with many other non-profit organizations operating in Detroit. The unique focus on creating and utilizing high-quality urban habitats combined with deep community engagement and STEM-based education, as well as career development training delivered through co-curricular lessons and hands-on experiences, sets the model for NWF and other organizations seeking to engage urban youth in conservation.

Year 3 of D-LEEP (the 2021/22 school year) comes under extraordinary circumstances: just as the program was hitting its stride in Year 1, the global pandemic shut down in-person schooling in Detroit and across the country. However, the NWF/Detroit Public Schools partnership for D-LEEP not only was sustained, but also expanded. Outdoor-based education was, and still is, one of the few COVID-safe activities and the model has been proven to be highly adaptable and successful. Moreover, D-LEEP is now a central part of the network of Detroit-based organizations working to increase habitat, uplift urban youth, improve water quality, and expand conservation networks throughout Detroit. These partnerships have positioned D-LEEP for tremendous growth and opportunity in Years 4-6.

### IMPACT TO DATE

By the end of 2021, D-LEEP has

- Worked in 6 Detroit high schools, including Marygrove, Denby, Cody, Academy of the Americas, and University Preparatory Academy.
- Engaged over 60 students.
- Engaged over 300 family members.
- Conducted 45 field trips.
- Conducted 35 workshops.
- Activated 2,500+ community members.



### HIGHLIGHTS

- Building 20 garden beds at students' residences through Keep Growing Detroit's Garden Resources Program, feeding more than 60 students and their families.
- Partnering with Detroit Outdoors and YMCA to enroll 7 D-LEEP students in the Bold and Gold summer work program where they learned how to backpack and connect with other students from across the city.
- Connecting more than 2/3 of the D-LEEP students with summer work, with half joining Growing Detroit's Young Talent.
- Taking students to Michigan's upper peninsula for a week-long retreat at Clear Lake Education Center in partnership with US Fish and Wildlife Services – Urban Connections program, Keep Growing Detroit and Black to the Land. Students learned from Indigenous elders how to harvest birch bark and spruce root to create baskets.



- Initiating the largest urban sugarbush program in the nation, where D-LEEP students learned from indigenous leaders how to harvest maple syrup in an urban park.
- Co-hosting the second annual "Black's Brown's and Kayak's" event, attended by D-LEEP families and over 100 black and brown Detroiters.
- Partnering with DynoDetroit indoor climbing gym where students met two professional climbers of color who came to the gym via the company Northface.



## D-LEEP Model

The D-LEEP program focuses on three key goals:

- **Expose high school students in Detroit to conservation and STEM-based career paths.**
- **Explore conservation as well as racial and environmental justice and history through an integrated curriculum.**
- **Create, utilize, and connect networks of high-quality urban habitats in Detroit to increase access to nature and improve wildlife habitat.**

Ultimately, D-LEEP is cultivating the next generation of environmental leaders capable of confronting challenges through outdoor experiences and a curriculum grounded in systemic analysis of the crises threatening ecosystems and wildlife. NWF's vision is to create a model that can be replicated in other cities, while remaining nimble enough to respond to local needs and conditions.

The D-LEEP model is based on a curriculum designed to be transformative in terms of scientific knowledge as well as personal exploration. This curriculum is backed by field trips and site visits that provide deeper connections and contexts, exposing students to professionals in the field as well as natural resources in Detroit and beyond. Partnerships and collaboration are deeply imbedded in the model, beginning with the Detroit Public Schools.

Detroit Public Schools staff contributed to the development of the program and the central Department of Science continues to provide support, particularly by identifying teachers and schools with interest in participating. At the individual schools, each school administrator has to approve and support the partnership with D-LEEP. Our partner teachers, mostly science teachers, recruit and chaperon excursions, implement curriculum, and support students and administrators in developing sustainability projects. A diverse array of community partner organizations like Friends of the Rouge, Black to the Land, Keep Growing Detroit, the Detroit International Wildlife Refuge, Huron Clinton Metroparks, and Detroit Outdoors offer unique programming and opportunities for hands-on learning. NWF is working with many of these same partners through our Sacred Grounds program focused on creating native plant gardens/habitats at houses of worship. D-LEEP students have opportunities to engage in these efforts, both participating in habitat/garden installation and learning from practitioners in the field about career paths and opportunities.

The curriculum is designed to take students on a journey that follows Michigan's seasons as well as a personal and historical learning path based in Indigenous knowledge and developing individual family trees that connect back to natural resource usage. For many students, it represents their first deep learning experience in outdoor activities as well as exploration of Indigenous cultures and the societal/natural resource connections. Career exploration and interaction with BIPOC conservation professionals are strategically integrated throughout the year, allowing students to see themselves in these fields and professions.

### FALL

Students spend time engaging in team building activities, digging into the roots of the ecological crisis, and learning about Indigenous Peoples. Students learn about the clear cutting of forests and visit some of the last remaining fragments of old growth forest in Michigan.

- **September:** (Curriculum) Indigenous history. (Activities) Fall foraging, cider mill.
- **October:** (Curriculum) Colonial settlerism impacts on land. (Activities) Fall foliage, urban gardens.
- **November:** (Curriculum) Elder knowledge oral history projects. (Activities) Archery, hunting, food preservation.





## WINTER

Students learn about their families through the oral history project, thinking deeply about the way their story is connected with the story of the land, economics, and environment. School-based teams begin to develop their sustainability projects while learning to get outside in winter.

- **December:** (Curriculum) Storytelling workshop. (Activities) Indoor climbing gym, ice skating.
- **January:** (Curriculum) Parent knowledge workshop. (Activities) Cross country skiing, downhill ski trip.
- **February:** (Curriculum) Ecological challenges. (Activities) Detroit sugarbush project engagement, sledding.

## SPRING

Students close the sugarbush project and begin spring citizen science projects. School-based teams complete their sustainability projects, building out and maintaining habitat in their school communities.

- **March:** (Curriculum) Finalize sustainability projects. (Activities) Bird watching, frog monitoring.
- **April:** (Curriculum) Garden and sustainability projects. (Activities) Tree planting, building gardens.
- **May:** (Curriculum) Complete sustainability projects. (Activities) Fishing camp, spring foraging.

## SUMMER

We celebrate the year's successes on Juneteenth! Students enroll in summer work programs, activities, and begin gardening in their family homes.

- **June:** (Curriculum) Juneteenth celebration. (Activities) Kayaking, canoeing, swimming.
- **July:** (Curriculum) Students graduate. (Activities) Summer leadership institute, camping trip.





## In Their Own Words and Experiences

While NWF is proud of the reach of our program and although we can measure impact in part by the number of students and activities, we believe the best measure of impact on youth is through their own words and experiences. The quotes below provide some insight into the transformative experience that D-LEEP has created.

"It was amazing to attend the skiing trip. 10 out of 10. It felt so good to get off the couch and go outside in the winter to build up a sweat a bit."

- SENIOR AT WESTERN INTERNATIONAL HIGH SCHOOL



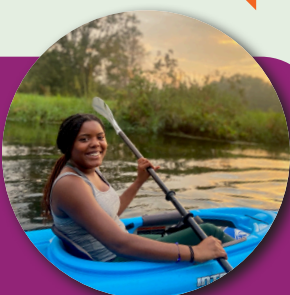
"It's every human's roots. We all stem from nature. It's a humbling and grounding experience to realize how big the world is. As someone from the city, it's amazing to see."

- D-LEEP ALUMNAE WHO IS NOW AT WAYNE STATE UNIVERSITY



"A lot of black and brown folks, especially impoverished peoples, don't have access to this kind of scenery or environment, places that are good for the body and the soul, every facet of what humans should be connected to... the essence of life."

- HOME-SCHOOLED DETROIT STUDENT



"At the Keweenaw Bay Indian Community, I reconnected with nature and got some hands-on experience building a birthing shelter from maple saplings, making a good fire using birch bark, foraging for mushrooms, and hiking the mountains."

- D-LEEP SUMMER RETREAT COUNSELOR



"I gathered wood, tapped some trees, harvested maple sap, and learned how to use a chainsaw. It was one of the first days I've really been able to get out of the house for real. Getting out, seeing what happens in real life, seeing a real life deer, in person, it's been amazing."

- SOPHOMORE AT MARYGROVE HIGH SCHOOL



"Experiences outdoors, learning from native people, using your hands...these skills will help youth work to better their environment, and learn to appreciate their environment because that's less of a thing...everyone so into their phones and social media."

- D-LEEP ALUMNAE NOW AT WAYNE STATE UNIVERSITY STUDENT





## COVID and the Year 3 Model Pivot

Unlike many other after-school programs which have shut down or been significantly reduced, D-LEEP has grown and evolved during the pandemic. In fact, some of the changes that we made to the D-LEEP model due to more limited in-person contact had some unexpected benefits that we plan to continue long after the pandemic recedes. Most importantly, we have developed an integrated hybrid in-person and virtual model that includes digital workshops with all students across the schools, a level of convening that is not possible in person due to logistical and transportation constraints. This not only allows for greater reach but also for more in-depth in-person programming since staff resources are more efficiently utilized. The revised model includes:

- **IN-PERSON TEAM MEETINGS (MONTHLY):** In each school, teachers and students meet to build leadership skills, reflect on the educational workshops, and plan their annual “sustainability project”. Students rotate leading community building activities chosen from a D-LEEP manual of team building exercises with the goal of fostering trust, leadership, and comradery.
- **DIGITAL WORKSHOPS (MONTHLY):** Students use their curriculum workbooks during monthly Zoom meetings with students from multiple schools. These are mandatory and are required to attend excursions.
- **EXCURSIONS (AT LEAST ONE PER MONTH, OFTEN 2-3):** D-LEEP students are invited to participate in additional field trips focused on providing opportunities to connect to nature each month.

- **SUSTAINABILITY PROJECTS:** Originally postponed by the pandemic, students work with teachers, administrators, and community partners to develop a project at their school or in the surrounding community. These sustainability projects address challenges associated with ecological collapse and climate change. We transitioned these projects to building garden beds at students’ residences during the last two years. This year students will develop native species habitats, plant trees, and choose projects that fit their interests and have a lasting impact at their schools and in the community.
- **SUMMER PROGRAMS:** D-LEEP facilitates students joining summer work program opportunities and provides opportunities for outdoor events, backpacking and camping with our partner organizations, leveraging resources from across Detroit.

The pandemic and restrictions required adaptations to executing the program such as hosting monthly as opposed to weekly meetings at schools, and shifting to mostly weekend excursions. These adaptations have been beneficial in allowing for cross-school interaction, greater participation from families, more efficient utilization of staff time, and increased opportunities for excursions with partners. These changes will all be carried forward into Years 4-6.



## D-LEEP Years 4-6: An Opportunity for Deeper Impact

Our vision is to significantly expand the reach and impact of D-LEEP in Detroit and beyond. Over the last two and a half years, with an annual budget of \$200,000, D-LEEP has successfully engaged students and families in a powerful curriculum, multiple outdoor activities, community-based sustainability projects, and skills/career development opportunities. The impact on the youth in the program and beyond has been tremendous for the students, their families, and the broader community. As a key partner of NWF's Ecoschools program and the Earth Tomorrow network, D-LEEP is a model for NWF education programs across the country. Assuming a steady state budget, the program would be able to continue to operate in approximately 5 schools annually, directly reaching approximately 60 students and their families per year.

With additional resources, D-LEEP would expand substantially in breadth and depth. Specifically, D-LEEP would be able to:

- **Grow the number of students and schools in the program.** Doubling the budget would lead to tripling of the number of students and schools engaged.
- **Build upon and formalize the existing curriculum** to help create a model for other cities.
- **Create and manage an extensive alumni mentoring network and a focused career pipeline** that includes resource management, advocacy, engineering, landscape management, and agriculture. This includes building upon the collaboration with NWF's national Eco-Leaders Program supporting conservation leadership among higher education students.

- **Expand partnerships** with organizations such as Detroit Audubon, Young Green Professionals of Color, the Healthy Waters Initiative at Wayne State University, Friends of the Rouge, Sierra Club, and Keep Growing Detroit.
- **Integrate an internship program** into our summer programming, including expanding students' summer agricultural activities.
- **Provide longer and deeper excursions** into the natural world, including fishing, hunting, and camping.
- **Plant significant wildlife habitat, trees, and native plants** at each school and the neighboring communities, making public schools into hubs of ecological activity. These scholastic pollinator hubs and learning centers will be interconnected with the habitat work of NWF's Sacred Grounds and Early Childhood Health Outdoors (ECHO) programs, and the work of our partners like Greening of Detroit and Detroit Audubon.

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**The National Wildlife Federation's Great Lakes Regional Center is actively seeking support for this expansion within Detroit and across the region so that we can have even more impact on underserved youth by fostering future leaders and creating a network of urban wildlife habitat and high-quality recreational spaces.**

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