# **Nature Explorers Toolkit**

## An Overview of Impacts of Nature on Mental Health

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### **Section 1: Project Background**

### Introduction

The *Impacts of Nature on Mental Health* is a research study about how enhancing our existing afterschool and summer camp programs (a proactive approach) and outpatient treatment for children with a mental health diagnosis (a reactive approach) with nature-based, behavioral health treatment techniques improves mental health outcomes among urban, economically-disadvantaged youth on the south side of Milwaukee, WI. These programs are collectively known as Nature Explorers, which has existed as an environmental health program in various forms since 2013. As the research study was developed, a new curriculum was built to make the programs more robust, replicable, and include both social emotional learning activities and Wisconsin Standards for Environmental Literacy and Sustainability.

By engaging cross-sector stakeholders (youth committees, schools, and community health center leadership) and experts (behavioral health clinicians, environmental and traditional youth educators, and academic evaluators) in program development, implementation, and evaluation, this study fills a gap in knowledge regarding the efficacy and feasibility of nature-based therapeutic interventions for youth in an urban environment, and creates a replicable, generalizable program model to inform sustainable practice change.

Nature Explorers' curriculum includes nature-based activities related to art, mindfulness, and environmental health and is designed to target five core treatment domains (Behavioral Regulation, Social Skills Building, Conflict Resolution, Coping Skills, and Responsibility).

The south side of Milwaukee includes some of the most densely populated neighborhoods in the city with the least access to green spaces. As such, our target population is primarily children aged 7 to 12 living in an urban environment with limited access to green space. This completely bilingual program seeks to leverage the protective effects of nature and advance health equity by providing alternative, nature-based therapeutic interventions to youth regardless of language, income, or insurance, and for whom opportunities of this nature are virtually nonexistent.

### What the Research Says

It is hugely important for children to spend time outside in nature. Nowadays, children spend much of their time in front of screens, which can cause physical and mental health problems like depression/anxiety, obesity, sleep problems, blurred vision, and more (Baum, 202; Gahagan, 2020; Strasburger, 2010; Kozeis, 2009). However, time spent outdoors has been shown to counteract those negative effects, which is especially important for children (Harrington et al., 2019; Oswalk et al., 2020). There's more good news though; children who spend time outside early on in life are more likely to develop a lifelong connection to nature (Asah et al., 2018). Additionally, children are constantly learning in nature, which helps them develop resilience, build confidence, and protects them from stressful life events (Razani et al., 2019; Sheldrake et al., 2019; Wells & Evans, 2003). Time spent in green and blue spaces also promotes physical activity, encourages happiness, lowers stress levels, and helps individuals of all ages feel more connected to the world around them (Centers for Disease Control and Prevention, 2021; Georgiou et al., 2021). Finally, nature has been called the "great equalizer", as it encourages

egalitarian play among children and provides the strongest protective impact for the most vulnerable children (Kirkby, 1989; Wells & Evans, 2003).

Nature Explorers focuses on taking children outside to participate in nature-based activities, offering these protective effects in addition to providing a stronger connection to the world around them. The program is also designed to allow children to learn and practice the <u>five skills</u> from CASEL's framework of social-emotional learning (Behavioral Regulation, Social Skills Building, Conflict Resolution, Coping Skills, and Responsibility). These social-emotional skills are shown to improve the health and wellbeing of children who practice them; they have higher levels of confidence and empathy, develop more positive social behaviors and relationships, and do better in school (Durlak et al., 2011; Farrington et al., 2012; Sklad et al., 2012).

In addition to the mental, physical, and social benefits of spending time in nature, we also include many activities around art and mindfulness. Not only is art really fun for children, but it's also good for their wellbeing. Children who participate in art activities have fewer problematic behaviors at school, see improvements in their writing abilities, and show more compassion for others (Kisida & Bowen, 2019). Further, although mindfulness is a new concept for many of the children we work with, they get better and better at it over time. The positive effects of practicing mindfulness are also well-known, from increased focus and attention, self-control, and academic performance to general wellbeing (Suárez-García et al., 2020; Alomari, 2023).

Although our programs highlight the benefits of nature for children, spending time outdoors has also been shown to benefit teachers. In one study, teachers expressed feeling a renewed sense of enthusiasm for their profession after spending time teaching outdoors (Pevec, 2005). As the quality of instruction can hugely impact the student learning experience, this finding has important implications.

### **Section 2: Partnering Organizations**

### Sixteenth Street Community Health Centers (SSCHC)

Sixteenth Street Community Health Centers has been operating for over 50 years as a non-profit community health center with various standalone clinics, in-school clinics, and administrative buildings. Also a federally qualified health center, SSCHC provides medical, dental, and behavioral health services at a number of locations, primarily on the south side of the city of Milwaukee and the city of Waukesha. The Department of Environmental Health & Community Wellness has existed in some form since 1969 and was founded to address the inequity in health issues caused by environmental factors among residents on the south side of Milwaukee. The coordination of the afterschool, summer camp, and outpatient treatment programs takes place within this department.

SSCHC has incorporated this research study into existing afterschool and summer camp programs as a proactive approach, as well as the outpatient Child and Adolescent Day Treatment (CADT) program that takes place at one of the behavioral health clinics, a reactive approach where children with a mental health diagnosis receive the program as part of their half-day treatment. The target population of these programs is primarily economically-disadvantaged and under- or uninsured Latino youth aged 7 to 12 residing on Milwaukee's south side.

Each program is designed to have two to three instructors present at all times, with group size unique to each program. CADT has a 1:3 teacher student ratio with a maximum of 6 children. The afterschool and summer camp programs currently offer a 1:5 teacher-student ratio with children participating. This number was reduced from a 1:10 teacher-student ratio in response to the COVID-19 pandemic, when it was necessary to keep numbers down, and maintained because of positive feedback from participants.

### Medical College of Wisconsin (MCW)

The Medical College of Wisconsin is a private medical school and graduate school of sciences headquartered in Wauwatosa, Wisconsin, just outside of Milwaukee. Since 1893, MCW has been a leader in patient care, research, education, and community engagement. MCW features world class research and academic medicine facilities such as the Cancer Center and the Institute for Health & Equity.

Although the afterschool and summer camp programs at SSCHC existed prior to the research study *Impacts of Nature on Mental Health*, SSCHC received a three-year grant with Advancing a Healthier Wisconsin (AHW) and partnered with the Medical College of Wisconsin (MCW) in 2020 to make the programs more robust and provide a mechanism for their evaluation. SSCHC and MCW have worked closely during the life of the grant to coordinate the research and disseminate study findings.

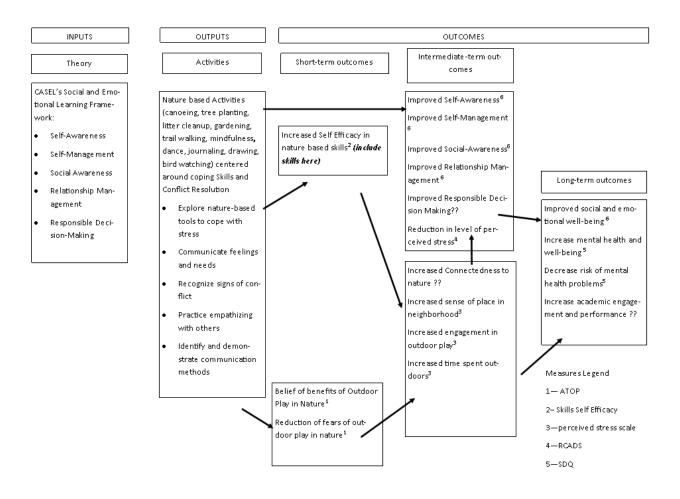
### Boys and Girls Club (BGC) at Milwaukee Public Schools (MPS)

SSCHC has had a relationship with Milwaukee Public Schools (MPS) through United Way of Greater Milwaukee & Waukesha County, Milwaukee Community Schools Partnership (MCSP) for several years. This has included a close relationship with Lincoln Avenue Elementary and Zablocki Community School, where the Nature Explorers program is currently being implemented with 3<sup>rd</sup>-5<sup>th</sup> graders, along with several other programs through a Community School Coordinator. A division of MPS, MKE Rec is also one of the funders of Nature Explorers.

As our afterschool program takes place outside of school hours, we have worked directly with the Boys and Girls Clubs of Greater Milwaukee (BGCGM) to implement our activities within the schools. BGCGM runs the Community Learning Center (CLC) as an afterschool program that focuses on character and leadership development, education, health and wellness, the arts, sports and recreation, and career development. To participate in our afterschool program, children must be enrolled in the CLC at either school.

## **Section 3: Program Goal and Logic Model**

The goal of Nature Explorers is to improve mental health outcomes among urban, economically disadvantaged youth on Milwaukee's south side. The presumed outcomes are improved social and emotional wellbeing, increased mental health and wellbeing, decreased risk of mental health problems, and increased academic engament and preformance. These outcomes were measured by the evaluation tools found later in this document.



### **Section 4: Design and Implementation**

### Recruitment

Recruitment efforts are different for each respective program within Nature Explorers. In the afterschool program, SSCHC works closely with each MPS school and BGC to coordinate recruitment efforts. These may take place at open houses or other school events, within classrooms, or outside of school hours at each school's CLC. Recruitment for the summer camp mostly takes place within the community through canvasing efforts, tabling at community events, social media posts, and word-of-mouth. In both programs, it is common that the sibling of a previous participant will hear positive feedback about our program and want to join when they reach an eligible age. Participants in the CADT program can be referred to day treatment by another provider within SSCHC or enrolled directly by a parent or guardian. Most participants have eligible insurance coverage for day treatment and are able to participate in Nature Explorers through that route.

In order to enroll, a parent or guardian of each child must fill out the registration forms, which can be found later in this document.

### <u>Prevention (Afterschool and Summer Camp)</u>

Two programs within Nature Explorers target prevention of mental health problems in children. The afterschool program includes two weekly proactive sessions for 11 weeks for a total of 20 sessions with holidays and school vacation days always taken into account. Six off-site field trips and one on-site field trip are also included and are 2.5 hours long. The majority of the sessions take place on-site at the schools and are 1.25 hours long. The program was designed so that sessions can be facilitated outdoors as much as possible in outdoor classrooms or elsewhere in the schoolyard. However, due to staffing shortages and inclement weather, sessions must sometimes be facilitated indoors. Depending on staffing levels, sessions are facilitated by the Health Education Coordinator and at least one other staff member of the Department of Environmental Health & Community Wellness and must always have a BGCGM staff member present.

Children participating in existing summer camp programming receive two three-hour proactive sessions per week for nine weeks for a total of 16 sessions, again taking holidays into account. When facilitated on-site, the summer camp program takes place at a local county park where SSCHC also implements other programs. Sessions are facilitated by at least two staff members from SSCHC.

The nature-based experiences differ depending on the season and range from hiking to trail walking, mindfulness, canoeing, gardening, land stewardship, art-focused drawing, painting, poetry, photojournalism, as well as instruction about environmental science topics such as native plants, biodiversity, and watersheds. Social emotional learning topics are also included in the curriculum, sometimes as the entire lesson focus (e.g. conflict resolution activities) and sometimes as the theme of a nature-based activity (e.g. communication while canoeing). Our suggested curriculum can be found further in the document.

### Treatment

The third program within Nature Explorers is facilitated as nature-based therapy for children participating in SSCHC's Child and Adolescent Day Treatment program. These children often have a mental health diagnosis such as attention deficit hyperactivity disorder (ADHD), depression, or anxiety. The program includes one three-hour, responsive, nature-based therapeutic intervention session per week with an average participation of six weeks, although many children participate in several cycles of the program. Each six-week cycle includes four off-site field trips to different green spaces around the city to do activities like canoeing, hiking, rock climbing, and equine-assisted team-building activities, as well as two on-site sessions that include nature-based activities whenever possible.

This program offers a 1:3 teacher-student ratio with a maximum of 6 children. Staff facilitating this program include the Health Education Coordinator and another staff member of the Department of Environmental Health and Community Wellness in addition to a mental health technician from the behavioral health clinic and sometimes a student in a graduate-level mental health study program. This program is primarily focused on five core social-emotional learning domains (Behavioral Regulation, Social Skills Building, Conflict Resolution, Coping Skills, and Responsibility) implemented in a nature-based setting. Children participate in activities including but not limited to gardening, ice skating, hiking, canoeing, mindfulness, journaling, and art. This program has a greater focus on social emotional learning skills and does not address environmental science topics. Our suggested curriculum can be found further in the document.

### **Program Elements**

Both preventative and treatment program curricula include structured lesson plans. Each lesson includes a check-in question, team building or art activity, a main activity, and a mindfulness activity to conclude the day. On some days a field trip takes place, but the structured elements stay in place when possible.

As much as possible, the program activities should take place in a nature-based setting such as an outdoor classroom, county park, or city playground. Most activities can be adapted to take place indoors as needed, although the intention of the program is to give children as much time in natural spaces as possible.

In the event of inclement weather, there are several possible alternatives for program implementation. We reserve an indoor camping session and schedule one indoor field trip as an alternative in the case of inclement weather. Further, virtual reality headsets have been used when the program was unable to go outside, offering participants a virtual nature experience. Although spending time outside is ideal, some research has shown that it's possible to reap the benefits of nature through the use of images and sounds of nature through photography, audio, video, or virtual reality types of exposures (Hsieh et al., 2023; Jo et al., 2019).

### Incentives

As a thank you to families participating in the evaluation, memberships or vouchers to a parks and recreation organizations in the city were offered, valued at between \$60 and \$100. The intention of the

incentives was to extend the field trips so that children could try out activities as part of the program and then continue participating in them with their families after the program had ended.

### Field Trips

All outdoor adventures are in local green or blue spaces near where patients and students live, learn, and play. Field trip experiences include experiential activities such as canoeing and rock climbing at a local <u>urban ecology center</u>; hiking and photo scavenger hunt at a <u>nature center</u>; nature-based programming at a local <u>zoo</u>, <u>horticultural conservatory</u>, and <u>state park</u>; winter activities at an <u>urban state forest</u> and <u>nature center</u>; environmental stewardship on a local <u>river trail</u>; equine-based teambuilding activities at an <u>urban stable</u>; and arts-based activities at a local <u>sculpture garden</u>. These field trips are seen as an opportunity to partner with local organizations doing similar work and can be adjusted based on the community. The themes to look for at field trip sites are nature, environmental health and stewardship, art, and mindfulness.

Field trips expand on and continue things learned indoors. For example, the canoeing activity targets behavioral regulation (following instructions), social skills building (working with others to move the canoe), and positive coping skills (using canoeing as a meditative activity), whereas a land stewardship activity like tree planting or litter removal targets other domains like conflict resolution (working together to find the best place to plant new trees) and responsibility (teaching about the consequences of litter on the natural environment and human health).

### **Field Notes**

There are many moving factors that occur when working outdoors with children. And of course, not all evaluations capture what is going on day-to-day during programs. Field notes have been a great way for staff to document children's interactions, outside factors, behavioral challenges, and other things that cannot be measured. Field notes are written observations recorded during or immediately following participant observations while facilitating programming and are considered critical to understanding experiences encountered in the field. Field notes are a collection of documents from a researcher's observed experience in a specific setting or environment. Documents such as written notes, reports, and materials from the environment, including pictures and videos, can all be used to help the researcher become immersed in the environment under observation.

These field notes are kept in a centralized electronic location with adequate privacy procedures in place, which has allowed all facilitators to contribute their own observations and stay up to date on important information learned about participants or observed during sessions.

## **Section 5: Budget**

An estimated budgeting resource for the <u>yearly</u> programming cost of all programs is below. These estimates include program supplies and field trips costs, but do not include any staff time. The amounts included take into account a maximum of 6 participants at a time in the CADT program per cycle (approximately 20 total participants per year, as some stay for more than one cycle), 10 participants in the summer camp program, and 10 participants at each of the two schools in the afterschool program.

CADT (4 trips * 7 cycles = 28 total)	Budgeted	Notes	Total budgeted	17,600
Field trips	3500			
Buses	13,300			
Program supplies	300			
Art supplies	500			
Summer camp (10 trips)	Budgeted	Notes	Total budgeted	7600
Field trips	1250			
Buses	4750			
Snacks	300			
Program supplies	1000			
Art supplies	300			
Afterschool (14 trips * 2 = 28 total)	Budgeted	Notes	Total budgeted	19,000
Field trips	3500			
Buses	13,300			
Snacks	600			
Program supplies	1000			
Art supplies	600			
Total budgeted	44,200			

### **Section 6: Evaluation Tools**

The expected outcomes of the program were measured by evaluation tools including: the Revised Child Anxiety and Depression Scale (RCADS), the Strengths and Difficulties Questionnaire for 4- to 10-year-olds or 11- to 17-year-olds (SDQ), the Attitudes Toward Outdoor Play (ATOP) scales, the Perceived Stress Scale - Children, and a skills self-efficacy evaluation developed by the project team. All tools were available in both English and Spanish for parents/guardians and children. The tools are available without charge for non-commercial use.

### **Pre- and Post-Evaluations**

All participants are evaluated before starting and after completing programming by program staff to measure any changes or improvements to their social and emotional health. Parents/guardians and children are evaluated through different evaluation tools. Parents or guardians complete a demographic survey, the Revised Children's Anxiety and Depression Scale (RCADS), a self-report questionnaire that assesses symptoms of depression and anxiety in children and adolescents, and the Strengths and Difficulties Questionnaire (SDQ), a brief emotional and behavioral screening questionnaire for children and adolescents.

Children do a separate evaluation from their parent or guardian with a trained evaluator. The evaluations for participating children are the Attitudes Toward Outdoor Play (ATOP Scale), the Perceived Stress Scale, and a skills self-efficacy valuation that was tailored to the specific activities the curriculum included and skills students learn while participating in the programs.

### Consent Form and Photo Release

This program was implemented as an Institutional Review Board (IRB) approved research study with approvals obtained from the Medical College of Wisconsin IRB. To participate in the research, a parent of each child must complete a consent form, and the child then gives their assent to participate. The consent form details the purpose of the study, the program details, what is asked of the parent and child, potential risks of participation, and potential benefits. The consent must be signed by both the parent and child. Once the consent form is filled out, evaluations can be completed and program participation may begin.

## **Section 7: Outcomes**

Data on the demographics of the project can be found below. This is a preliminary data summary and data analysis/results will be added after all data collection ends in the summer of 2024.

	Summer Camp	CADT	After School	All Cohorts
Total Enrolled	18	48	56	122
Average Age (years)	9.44	10.71	9.33	9.90
Sex				
Female	11	19	40	70
Male	7	29	14	50
Missing	0	0	2	2
Race				
Hispanic	14	37	38	89
Black	1	3	1	5
White	2	5	1	8
Asian	0	1	1	2
American Indian	0	0	2	2
Other/Mixed	1	2	11	14
Missing	0	0	2	2

### **Section 8: Lessons Learned**

There were several lessons learned between the theoretical design of the program and the practical implementation. There were quite a few challenges within the afterschool program. First, staff turnover made communication with the schools more challenging than expected. It was necessary to rely more heavily than planned on the SSCHC staff members who work at the schools through the Community Schools Partnership to ensure there was sufficient buy-in with the schools. Staffing shortages also meant that we weren't able to go outside for most of our sessions, so the nature-based program needed to be adapted to take place in a classroom. An additional challenge with the afterschool program was that travel time often required facilitators to cut sessions short, meaning that a check-in question at the beginning of the session and a mindfulness activity at the end as originally planned weren't feasible. One suggestion was to implement some activities on the bus, but this was not very effective in practice due to challenges with students' attention and safety issues while the bus was in movement. Finally, students did not respond well to classroom-based, instructional sessions. They were much more excited about experiential activities, including most field trips. Since we were unable to go outside, it seemed that spending the entire day at school in classrooms made the children feel burned out from more learning. We did not notice this issue with the summer camp program or CADT.

Another lesson learned relates to our communication with the schools during the afterschool program. It was relatively challenging to get signed papers back from parents in a timely manner. This was due to the fact that many parents had time constraints that made meeting in person challenging. Many parents preferred to sign the evaluation documents electronically and do the survey over the phone. These parents often sent the signed permission slips needed for our organization to school in their children's backpacks, meaning that the afterschool staff needed to collect and return them to us. As a result, some evaluation papers were misplaced and some permission slips had not been returned to us by the time the program started. The latter was not a serious problem, as the permission slips are really necessary for the field trips, which begin in the second week of the program.

Further, the implementation of CADT was different in reality than expected while designing the program. Although the program was originally designed to be implemented in six-week cycles with the same children during those six weeks and a week of recruitment in between, children in fact began participation at any point along that six-week period. In addition, some children participated for longer than six weeks. That meant that the cycles were constantly changing with new students being added in and existing students graduating from the program. This affected program implementation in the sense that the curriculum was written for the first session to be an introduction to the program with more team-building activities and the final session to conclude the children's time together and in the program. This meant that the sessions occurred in a much different way than was designed, without the consistency that was originally planned. Further, sessions had to take children's moods and behaviors into account more than originally realized, with some sessions being adapted on the spot as a result. One suggestion during program implementation was to develop a type of "activity suitcase" in which to place ideas for different activities to allow facilitators to pick different activities that were suitable and still effective. This idea was good in concept but more difficult in practice, as it made session preparation difficult. All session materials are kept off-site so it wasn't always feasible to have facilitators bring many different materials.

### **Section 9: Resources**

- 1. Social emotional learning
  - a. CASEL Framework of Social and Emotional Learning
  - b. <u>Icebreakers to build social emotional skills</u>
  - c. Social emotional check-in questions
  - d. Social emotional learning training
- 2. Lesson plan ideas
  - a. <u>Inquiry-based lesson plans</u>
  - b. Lesson plans from the US Environmental Protection Agency
  - c. Educator resources from the National Institute of Environmental Health Sciences
- 3. Curriculum and activity guides
  - a. Project WET
  - b. Project WILD
  - c. Great Lakes in my World
  - d. Environmental Education Activity Guide
- 4. Icebreaker and filler ideas
  - a. Environmental Education Group Games and Activities
  - b. MPS's Culture, Climate, and Alternatives to Suspension Toolkit (pages 5-7)
  - c. Restorative Schools Toolkit
- 5. Outdoor game ideas
- 6. Trainings
  - a. Trauma-informed care
  - b. Mental health first aid
  - c. Nonviolent Crisis Intervention
  - d. Social emotional learning

### **Section 10: Curriculum**

Although each program has its own unique curriculum, all three curricula draw from many of the same topics and activities. All three curricula include activities related to art, mindfulness, and social emotional learning, with nature as the classroom. As the total session time differs between each program, some sessions are excluded or expanded depending on the program.

### Topic List (Afterschool and Summer Camp)

Topics included in the curricula for the afterschool and summer camp program can be found below:

- Team building
- Coping skills
- Communication
- Self-expression
- Conflict resolution
- Labyrinths
- Poetry in nature
- Photo Scavenger Hunt
- Outdoor activity (rock climbing, canoeing, fishing, etc.)
- Biodiversity: Native and invasive plants
- Watersheds
- Green infrastructure
- Accessing and utilizing a local river
- Aquatic and riparian habitats
- Ecosystem exploration
- Indoor camping (alternative lesson for inclement weather)

# Day 10 Building Conflict Resolution

Learning Objective: Students will...

• Build conflict resolution skills: Recognize signs of conflict, and develop healthy boundaries

**Program:** Afterschool

**Location:** School

Travel Time: None

Materials: Circle mats

Setup: None

Check In					
Check in Question (3:00-3:05)	Staff 1	Was there a time during KK River Explorers where there was a conflict? Let's bring that to mind, what was the reason for the conflict? How was the conflict resolved? Let's talk about other examples. Conflict is normal, people get together because we like different things and doing different things. How do we resolve a conflict?			
Team Building Activity (3:05-3:15)	Staff 2	Silent Ball Students sit on top of their desks and toss a squishy ball to other students, one at a time, around the room. The number one rule is to remain silent. If a student isn't silent, they are out and must sit on their chair or on the floor. They are out if they don't catch the ball. If they fall off the desk, they are out. You can throw in fun variations, like clap once or clap twice between tosses. You can also set rules, like no toss-backs.			
Nature Art (3:15-3:30)	Staff 1	Thumbprint flowers and contour drawing			
		Nature Based Activity			
Activities (3:30-4:00)	Staff 1 and Staff 2	Explanation of Conflict What is conflict? Conflict is when people have different ideas that they do not agree on. It's how we resolve the conflict that matters. Do you think conflict can ever be a good thing? We're going to do some activities now that can show us how to work together when			

we're facing a challenge together.

### 1) Chocolate River

As a group, children will work together to get across the "river" with only the materials given to them (circle mats). In order to get across the river, they have to work together and resolve conflicts that may arise between team members.

### 2) Human Spider Web

Participants will work together to solve a problem. Like other teambuilding activities, individuals do not win or lose; success comes through group cooperation.

### Directions

Ask each participant to form a circle and join right hands with another person in the group. Participants must choose someone who is not standing next to them. They then repeat this step with their left hand, choosing a different person not standing next to them. Instruct players to untangle themselves without letting go of hands. To make the game more challenging or to temper take-charge personalities, prohibit speaking for select individuals or use props such as blindfolds.

### Solution

Participants will use methods such as twisting, untwisting, and stepping over each other to untie the web. Often the web is untied in a way that leaves some people facing outward from the circle and others inward. This is an acceptable solution. Sometimes, a group will hit on a solution very quickly. If this happens, start the activity over from the beginning. If the activity proves too hard, allow the group to choose one switch in hand clasps.

### **Processing Questions**

Possible processing and debriefing questions include:

- What made the task easier or more difficult?
- What strategies did you use?
- How did you decide which tactics were working and which ones were not?
- Did anyone stand out as a leader? What roles emerged?
- How does this activity apply to your group outside the team-building environment?

### **Check Out**

Wrap Up (4:00-4:10)	Staff 1	<ul> <li>These are the things I saw that I really liked</li> <li>What did you find difficult about working together as a team?</li> <li>Was there anything that made the activity easier?</li> </ul>
Mindfulness Minute (4:10-4:15)	Staff 2	Pull from deck (50 Mindfulness Activities for Kindness, Focus and Calm)

# Day 8 Biodiversity Part I: Native and Invasive Plants

Learning Objective: Students will...

Identify native plants

• Compare and contrast native and non-native plants

Program: Afterschool

**Location:** School

Travel Time: None

Materials: flowerpots, painting supplies, web of life string/cards

Setup: None

	Check In					
Check in Question (3:00- 3:05)	Staff 1	Nature charades Take 20 small slips of paper and write one different word or phrase on				
Icebreaker (3:05-3:15)	Staff 2					
		Nature-Based Activity				
Intro to Biodiversity (3:15-3:30)	Staff 1	<ul> <li>Let's talk about biodiversity. That's a big word, right? So let's break it down.</li> <li>Words that start with "bio" refer to living things. For instance, "biology" is the study of living things.</li> <li>The word "diversity" means that there is a variety. You might have heard the word "diversity" used to describe groups of people with many different backgrounds.</li> <li>When we put it all together, "biodiversity" means a variety of living things. Do you think biodiversity is a good or a bad thing? Why?</li> <li>It keeps different plant/animal populations at balanced levels</li> <li>Germs can spread more easily and cause more disease</li> <li>We depend on nature for different things (trees, food, etc.)</li> </ul>				

Ecosystems with good biodiversity have many different kinds of native plants. What do you think native means? What are native plants? Native plants are flowers, grasses, trees, etc. that belong in their ecosystems, providing food for local wildlife, and they don't take over the places that they grow. They help keep the balance of the web of life. When we have biodiversity (lots of different native plants), we have balance. But what do you think happens when something throws off that balance? What does it make you think of when I say "throw off balance"? Answers will likely include things like climate change, pollution, greenhouse gasses, etc. Another way that nature gets thrown off balance is when an **Invasive Species** takes over an ecosystem. What is an invasive species? And why are they a problem? An invasive species is a plant or animal that is not part of the local ecosystem but has been brought there (either on purpose or by accident) by traveling humans. The reason invasive species are bad is because of the way they take over, and harm native species. Think of weeds: weeds spread very easily, and they kill other plants. Weeds are a kind of invasive species, and there are many types of weeds. • One thing that we can do to prevent the spread of invasive species is by pulling/removing them Today we're going to do an activity to help us understand the delicate balance that exists within an ecosystem. Web of Life Staff 2 1. Label a set of cards with various organisms, and parts of the food Activity chain. Examples: sun, plant, pollinators, animals, etc. Use some of (3:30-4:00) the yarn to make a necklace with each card. 2. Pass out one necklace card to each student. 3. Everyone should now stand in a circle. Ask the students to think about which card represents the resource that all life needs to grow (the sun). Hand the end of the yarn to the student with the "sun" card. This student should wrap an end around his/her hand.

		<ol> <li>Now ask, "What would be next in the chain?" or, "What uses the sun directly to grow?" The students should decide that the answer is a plant. The person holding the sun card, while still holding onto one end of the yarn, should then toss the other end to the student with the plant nametag. You may then ask a question such as, "Who needs the plants to live?" in order to have the students think of where the yarn will go next. Continue through the list in the same manner until all the labeled cards have been used and each student is holding a piece of string.</li> <li>Ask the group to step back until the string is taught.</li> <li>The student with the original end of string (sun nametag) should now gently begin tugging. If someone feels a tug during this time, he/she should tug in response. This should progress until everyone is tugging, which will also cause the web to shake. You may now note that all things in the ecosystem are connected.</li> <li>At this time, an invasive species should be introduced. The invasive species will kill off the native plants and will not feed the animals.</li> <li>Ask the students how the stressor impacts the entire ecosystem, when one of the links is damaged by stress. Have one or more links drop out of the circle due to the introduction of the invasive species. Have students continue their discussion on how the entire ecosystem is affected if one or more organisms are lost. Repeat this process until enough links have dropped out to illustrate the effect stressors have on the ecosystem.</li> </ol>
		Check Out
Wrap Up (4:00-4:10)	Staff 1	<ul> <li>What is an invasive species?</li> <li>Why are invasive species harmful?</li> <li>What can we do to help? Educate ourselves and remove invasive species when you can</li> </ul>
Mindfulness Minute (4:10-4:15)	Staff 2	Pull from deck (50 Mindfulness Activities for Kindness, Focus and Calm)

## **SPRING 2024 LOCATION SCHEDULE**

<u>DAY 1</u>	<u>DAY 2</u>
Monday - 2/26	Wednesday – 2/28
LINCOLN	LINCOLN
Monday – 3/4	Wednesday - 3/6
LINCOLN	Swimming @ Pulaski Pool
Monday – 3/11	Wednesday – 3/13
LINCOLN	Scavenger hunt @ the Mitchell Park Domes
Monday – 3/18	Wednesday – 3/20
LINCOLN	MKE Riverkeeper @ LINCOLN
Monday – 3/25	Wednesday – 3/27
NO SCHOOL – SPRING BREAK	NO SCHOOL – SPRING BREAK
Monday – 4/1	Wednesday – 4/3
LINCOLN	Photo scavenger hunt @ Schlitz Audubon
Monday – 4/8	Wednesday – 4/10
LINCOLN	NO SESSION
Monday – 4/15	Wednesday – 4/17
NO SESSION	Team-building / River clean-up @ MKE Urban Stables / KK River Trail
Monday – 4/22	Wednesday – 4/24
LINCOLN	Coping Skills @ Pulaski Park
Monday – 4/29	Wednesday – 5/1
LINCOLN	Fishing @ UEC Menomonee Valley
Monday – 5/6	Wednesday – 5/8
LINCOLN	Rock Climbing @ UEC Riverside Park
Monday – 5/13	Wednesday – 5/15
LINCOLN	LINCOLN

**3pm-4:15pm** - Regular sessions **3pm-5:30pm** - Field trips - No session

## Suggested Schedule (Summer Camp Program)

## Nature Explorers Summer Camp 2023 - Activities Calendar

<u>Monday</u>	<u>Wednesday</u>
6/19: 12-3pm	6/21: 12-3pm
Pulaski Park: Summer Camp Introduction	Pulaski Park: Creating a labyrinth
6/26: 12-3pm	6/28: 12-3pm
Pulaski Park: Team building activities	Milwaukee Public Museum: Museum Exploration
7/3	7/5: 12-3pm
NO CLASS	<u>Urban Ecology Center (Menomonee Valley)</u> :
	Mindfulness in Nature
7/10: 12-3pm	7/12: 12-3pm
Schlitz Audubon: Hiking and poetry	<u>Pulaski Park</u> : Water day!
7/17: 12-3pm	7/19: 12-3pm
KKRT: Water safety	Pulaski Park: Native plants lesson from Milwaukee
	Public Museum
7/24: 12-3pm  Mitchell Park Domes: Scavenger Hunt	<b>7/26: 12-3pm</b> <u>Pulaski Park</u> : Conflict Resolution
ivitchen Fark Domes. Scavenger Hunt	<u>rulaski ratk</u> . Collilict Resolution
7/31: 12-3pm	8/2: 12-3pm
Pulaski Park: KK River City	<u>Urban Ecology Center (Menomonee Valley):</u> Fishing in the valley
	and valley
8/7: 12-3pm	8/9: 12-3pm
Pulaski Park: Camping in the park	<u>Urban Ecology Center (Riverside Park):</u> Rock Climbing
8/14: 12-3pm	
<u>Pulaski Park</u> : Last day celebration	

### Topic List (Child and Adolescent Day Treatment)

Topics included in the curricula for the Child and Adolescent Day Treatment program can be found below:

- Building a relationship with nature
- Coping skills
- Communicating how you feel
- Conflict resolution
- Reflection

### Lesson Plan Example (Child and Adolescent Day Treatment)

### **Day 4: Conflict Resolution**

Learning Objective: Students will...

• Build conflict resolution skills: Recognize signs of conflict, and develop healthy boundaries

Location: Three Bridges Park/Hank Aaron Trail

Travel Time: 13 minutes

Materials: Cameras, scavenger hunt sheet

Snack: Apples and trail mix (9:50-10:00)

**Setup:** Walk the trail ahead of time and figure out locations to hide things.

		Check In			
Introductio n (8:10- 8:15)	Staff 1	Two staff members act out conflict in two different scenarios; one that shows conflict or unhealthy boundaries and one that resolved the conflict by sharing.			
		<ul> <li>What did you just see?</li> <li>What do you think was good behavior, and what do you think was bad behavior?</li> </ul>			
		Conflict happens all the time, it's okay that conflict happens. Think of a time when you had conflict and think of ways you could have reacted better to resolve the conflict. Sometimes when I feel I am encountering conflict and might not react in a way that is kind I take 10 big breaths, and I want to show you how to do it.			

	Staff 2	Take 10 Breaths				
Mindfulnes s (8:15- 8:20)		Bring yourself back to that conflict and imagine it is happening, now try taking 10 deep breaths. Close your eyes or look down at the floor and put your hand on your belly. Now, breathe in so deeply that the air fills your belly. Let's breathe out slowly together. (If 10 breaths are too many, start with five and work your way up together with practice.)				
		For a variation, ask children to hold her thumb and middle finger together in each hand and pretend they are holding a butterfly or a feather. Ask them to imagine that each slow exhale makes it flutter gently. You can also show them how to trace up and down each finger of her opposite hand slowly, inhaling as she traces up and exhaling as she traces down.				
		Na	ture-Based Activity			
Seasonal Activities	Staff 1 and 2	Spring/Summer	<u>Fall</u>	<u>Winter</u>	<u>Inclement</u> Weather	
(8:30- 10:55)	anu z	1) Load bus (8:25) Healthy boundaries bus talk	1) Load bus (8:25) Healthy boundaries bus talk	1) As a group play Pictionary (8:25-8:50)	1) As a group play Pictionary (8:25-8:50)	
		2) Arrive at 3 Bridges Park (8:45) and walk to open grassy area	2) Arrive at 3 Bridges Park (8:45) and walk to open grassy area	2) Break (8:50-9:00)  3) Scavenger hunt at clinic:	2) Break ( <b>8:50</b> - <b>9:00</b> )	
		3) In two teams, students will play Pictionary based on nature items (8:45:9:05)	3) In two teams, students will play Pictionary based on nature items (8:45:9:05)	Children are paired with a partner and will follow a scavenger hunt activity sheet. Children will use cameras and be photojournalists	at clinic: Children are paired with a partner and will follow a scavenger hunt activity sheet. Children will use cameras and be photojournalists	
		4) Outdoor Scavenger hunt: Children are paired with a partner and will follow a scavenger hunt activity sheet.	4) Outdoor Scavenger hunt: Children are paired with a partner and will follow a scavenger hunt activity sheet. Children will use	and document scavenger hunt. Children will take pictures at every stop they make (9:00-10:30, with a 10-minute snack break	and document scavenger hunt. Students will take pictures at every stop they make (9:00-10:30, with a 10-minute snack break at (9:50-	

		Children will use cameras and be photojournalists and document scavenger hunt. Children will take pictures at every stop they make (9:05-10:30), with a 10-minute snack break at (9:50-10:00)  5) Load bus (10:35)  6) Arrive at clinic (10:55)	cameras and be photojournalists and document scavenger hunt. Children will take pictures at every stop they make (9:05-10:30), with a 10-minute snack break at (9:50-10:00)  5) Load bus (10:35)  6) Arrive at clinic (10:55)	(9:50-10:00) 4) Break: (10:50-11:00)	10:00) 4) Break: (10:50-11:00)
			Check Out		
Check-Out Question (11:00- 11:05)	Staff 2	<ul> <li>How did you feel when working with your partner/team when doing the scavenger hunt?</li> <li>What was the time you and your partner disagreed about something?</li> <li>How did you know you were disagreeing or there was a conflict with your team/ partner? What happened? How did you resolve it?</li> <li>Were you able to respect each other's boundaries when conflict arose? Why or why not?</li> </ul>			
Art Activity (11:10- 11:25)	Staff 1	Practicing Mindfulness through Art  Sit for 30 seconds and close your eyes, feel the ground below you, think about what you hear etc. (Let them sit and take a minute before beginning art journaling. Children will receive their journal, markers, crayons, and or color pencils and will draw.)  "I want you to think about what you learned/experienced today about healthy boundaries and recognizing signs of conflict. Journal or draw how it could be helpful for you to use at school or home."			

## **Section 11: Registration Materials**

Forms for Afterschool and Summer Camp

**Registration Form** 



## Afterschool Program – KK River Explorers 2024

Participant name(s):						
School Name:						
Mother/Guardian Name and Tel	lephone:					
	ephone:					
Best Day to Call: Sun □ Mon □ Tues □ Weds □ Thurs □ Fri □ Sat □						
Best Time to Call: 9-11am □ 11am-2pm □ 3-7pm □ Other						
Address:						
Emergency Contacts: Emergency Contact 1 (only to be	used if parent/guardian cannot be reached):					
Emergency contact I (omy to be	asea in parenty guardian cumot be reachedy.					
Relation to participant (i.e. uncle	e, aunt, grandma):					
	Mobile phone:					
Emergency Contact 2 (only to be	used if parent/guardian cannot be reached):					
Relation to participant (i.e. uncle	e, aunt, grandma):					
Vork phone:Mobile phone:						
Known allergies (please list any/	all allergies participant has experienced):					
Medications (list any/all medicat	tions participant is currently taking):	_				
Preferred Medical Provider (opti	ional):					
Physician's name: Phone:						
Dentist's name: Phone:						

## **Liability Release**

Name (please print clearly)

### **RELEASE OF LIABILITY**

wish to voluntarily participate in the following Sixteenth Street Community Health Center ("SSCHC") Program(s) ("Program'
Name of Program:
I understand that signing this Release of Liability ("Release") is a prerequisite for participation in the Program and that thi Release applies to attendance, participation, observation, and use of all Program activities.
<ul> <li>ACKNOWLEDGEMENT. I understand that there are risks and dangers inherent in participating in any adventure, sporactivity, or training associated with the Program. These risks include physical or emotional injury or harm, including but no limited to falls, sprains, broken bones, concussion, water-related injury, temperature-related injury or illness, equipmer failures, and/or the actions or inactions of others. I understand that such risks cannot be eliminated due to the nature of the Program activities.</li> <li>I understand that I am responsible for my own health and safety and acknowledge that I am physically capable of participating in the Program and properly using any equipment involved.</li> <li>I acknowledge that I have either had a medical exam by my physician, who has permitted me to participate in the Program or I have decided to participate in the Program voluntarily and without my physician's permission.</li> <li>I agree to follow all SSCHC rules and policies while participating in the Program.</li> <li>I understand that I have the right and freedom to complete or not complete any activities or undertakings in the course of the Program, as well as the right to modify their intensity and speed.</li> <li>I agree to inform Program leaders and coordinators of any conditions, including physical, mental, emotional, of behavioral difficulties, that may impact or interfere with my ability to participate in the Program.</li> <li>I agree to inform Program leaders and coordinators if I am not feeling well in the course of any Program activity.</li> </ul>
ASSUMPTION OF RISK. I agree to assume all risks and hazards incidental to participating in the Program and agree to release and hold harmless SSCHC and its officers, agents, employees, assignees, successors in interest, contractors vendors, agencies, sponsors, officials, and volunteers for any harm or injury that I may suffer as a result of my participation in the Program. I further assume all risks associated with any medical or physical condition I may have.  WAIVER. In consideration of services provided, I, for myself and for any minor child for which I am parent, legal guardian, or otherwise responsible, hereby release, waive, and covenant not to sue for and shall defend, indemnify
and hold harmless SSCHC and its officers, agents, employees, assignees, successors in interest, contractors
vendors, agencies, sponsors, officials, and volunteers ("Released Parties") from any and all economic or non economic losses, liabilities, claims, damages, suits, actions, attorney's fees, costs, expenses, or demands, of ever
kind and nature whatsoever, including for bodily injury, property damage, death, or loss, WHETHER CAUSED II
WHOLE OR IN PART BY THE NEGLIGENCE OF THE RELEASED PARTIES, or otherwise, to the fullest extent permitte
<u>by law, arising from or alleged to have arisen from my or my child's presence or participation in the Program, and</u> the presence, observance, or participation of any family member, dependent, or guest, including any minors in th
Program.
I represent that I have carefully read this Release and fully understand its contents. I understand and acknowledge that I are relinquishing legal rights by signing this Release and further affirm that I am voluntarily participating in the Program and voluntarily relinquishing such rights. If I am under 18 years of age at the time of participation, my parent or legal guardian has thoroughly reviewed this Release and consents to its terms and authorizes my participation.
Participant Signature Date
Participant Name (please print clearly)
If the participant is under 18 years old, a parent or guardian must sign below:
Parent / Legal Guardian Signature Date

#### **Photo Release**

### **GENERAL PUBLICITY CONSENT & RELEASE ("CONSENT & RELEASE")**

I give my permission to SSCHC or its assignees the absolute and irrevocable right and unrestricted permission to use my and/or my child's name, likeness, image, voice and/or appearance as such may be embodied in any photos, video recordings, audiotapes, digital images, and the like, taken or made on behalf of SSCHC.

I agree that SSCHC has complete ownership of such material, including the entire copyright, and can use said material for any purpose consistent with SSCHC's mission. These uses include, but are not limited to illustrations, bulletins, exhibitions, videotapes, reprints, reproductions, publications, advertisements, and any promotional or educational materials in any medium now known or later developed, including the internet and on social media platforms such as Facebook.

I also recognize that these audio, video and image recordings are the property of SSCHC. I acknowledge that I will not receive any compensation for use of such images, video, likeness, etc.

I hereby release and discharge SSCHC, and its agents, representatives and assignees from any and all claims and demands arising out of or in connection with SSCHC's use of the above materials, including any and all claims for invasion of privacy, right of publicity, misappropriation or misuse of image, and/or defamation.

I represent that I have carefully read this Consent & Release and fully understand its contents. I understand and acknowledge that I am relinquishing legal rights by signing this Consent & Release and further affirm that I am voluntarily participating in the Program and voluntarily relinquishing such rights. If I am under 18 years of age at the time of participation, my parent or legal guardian has thoroughly reviewed this Consent and Release and consents to its terms and authorizes my participation.

Participant Signature	Date
Participant Name (please print clearly)	
If the participant is under 18 years old, a parent o	or guardian must sign below:
Parent / Legal Guardian Signature	Date
Name (please print clearly)	

## Form for Child and Adolescent Day Treatment (CADT)

### **Permission Slip**

## PARENT PERMISSION AND WAIVER FORM

	174KEIVI	FIELD TRIPS		
I, the parents/	guardians of	_	, understand t	hat my child will be
	n the activities as outlined b	•	teenth Street Comr	nunity Health Centers'
	escent Day Treatment prog			
Trip date	Activity	Location	Transportation	on Initial
2/6	Jaws, Claws, & Paws	MKE County Zoo	Bus	
2/13	Snowshoeing	Havenwoods State For	rest Bus	
2/20	Working with Clay	Lynden Sculpture Gard	den Bus	
2/27	Team Building / Hike and Clean-Up	MKE Urban Stables / K River Trail	KK Bus	
for our son/da provided. In the SSCHC staff to effort will be no contact me are hereby give me hospital if an analymetric way. WAIVER  We recognize, problems are rehold harmless suits, demands such activities, beyond the condisasters, civil Sixteenth Street to rules established.	agreement with the purpose ughter to participate. We use event of an injury requiring attend to my son/daughter hade to contact me to recess unsuccessful, I grant permy permission to the supervinction of serious illness of the however, that unanticipate how the	inderstand that adequating medical attention, I or if the injury warrants we my specific authorization for necessary my sing SSCHC staff to take cours on the trip and I or if the supervising the alth Centers and it is and expense, (including the cours of the child and the immunity Health Centers is and wars. In the every independently for resulting to the accept for weather the course of the	ate and appropriate hereby grant perm further medical attraction before action edical treatment to e my child to the phannot be located.  The semployees from a ling attorneys' fees he costs of medical ers, including, but no vent that a student easons of health, actions attorneys' feestheatons attorneys' feestheato	e supervision will be ission to the supervising tention, I expect every is taken. If efforts to be given. In addition, I hysician, dentist, or the sip, which situations or ther agree to release and any and all liability, claims, and costs) arising from services, or any cause of limited to, natural must return to a coident, failure to conform
Childs Name (F	Please print)	Parent/Guardian Nam	ie	Date
Parent Signatu	ire	<del></del>		
Home Phone:	Wor	k Phone:	Cell Phone:	
Emergency Co Emergency Ph	ntact Name:one:			

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