



# Wild earth

**KINGSTON MIDDLE SCHOOL  
NATURE CONNECTION AND  
EXPERIENTIAL EDUCATION PROJECT**

**Year 1: FINAL REPORT**  
August, 2018



FOR PUBLIC POLICY INITIATIVES







## I. Introduction

Wild Earth provides transformative experiences in nature that cultivate character, confidence, passion, and grit in today's youth. Its *Kingston Middle School Nature Connection & Experiential Education Project* brings this philosophy to the Kingston City School District's two middle schools through three component parts: 1) two day-long nature immersion field trips, one at the beginning and one at the end of the school year; 2) guided recess; and, 3) after-school program. Wild Earth hopes that its programming will enhance students' social and emotional wellness in three areas: 1) building inner character; 2) strengthening and supporting the social, emotional health and well-being of students; and, 3) regenerating healthy and whole school and classroom communities.

In the 2017–18 school year, the *Kingston Middle School Nature Connection & Experiential Education Project* targeted 5th grade and was implemented in Kingston's two middle schools; Miller Middle School and Bailey Middle School. Wild Earth contracted with The Benjamin Center for Public Policy Initiatives at SUNY New Paltz to conduct an evaluation of the Kingston project. This is the final evaluative report of that work.

## II. Research Design

As stated, the *Kingston Middle School Nature Connection & Experiential Education Project* aims to improve students' social and emotional wellness. For the first year of the project, specific goals included:

- Implementation of project activities in Kingston City School District's two middle schools, to include field trips for all 5th grade classes, thirty-two sessions of guided recess (sixteen in each school), and thirty-two after-school sessions (sixteen in each school) serving sixty at-risk students (thirty in each school);
- Growth and improvement in students' social and emotional wellness; and,
- Increase students' comfort in, and knowledge of, nature and outdoors.

## Method: data collection and analysis

The research team used a process evaluation and an outcomes evaluation to measure progress toward project goals.

### *Process evaluation*

The process evaluation used qualitative data collection techniques to document and assess implementation of project activities.

*Interviews and focus groups:* The research team conducted focus groups with teachers and lunch monitors, and interviews with school administrators, guidance counselors, and Wild Earth staff to gather information about the number and character of project activities and to discuss challenges associated with implementation.

*Observations:* The research team observed eight guided recess sessions (four at each school) in the fall and six guided recess sessions (three at each school) in the spring. Two of these sessions were indoors. The team also observed four non-guided recess days (two at each school) for comparison.

All qualitative data were aggregated and analyzed to yield information about project activities.

### *Outcome evaluation*

The outcome evaluation used quantitative and qualitative methods to assess project impact on students' social and emotional wellness.

*Survey:* A survey, created by the research team, was used to measure social and emotional wellness and growth of students. To develop survey items and determine the best way to measure effects in Wild Earth's stated wellness areas, the research team conducted a comprehensive literature review about social and emotional learning (SEL) in adolescents. Survey items were compiled from empirical research that had used validated measures, and listed in a database until the search became repetitive. This search yielded over 150 questions. Questions were categorized by SEL construct, as reflected in the literature; relationship building, classroom engagement, positive peer interaction, connection to school, self-efficacy, risk attitude, grit and perseverance, empathy, curiosity/passion/purpose, gratitude, school/classroom climate, taking on leadership roles. Given Wild Earth's focus on nature exploration, the team developed questions to target knowledge of, and comfort in, nature and outdoors.

The research team met with Wild Earth staff to review the SEL constructs as identified in the literature and to determine which resonated with the Kingston project. *Table 1* lists the resonant constructs, along with links to definitions and wellness areas.

The research team then created a pilot survey comprised of the all questions collected from the literature review that fell within each of the selected constructs, with a four-point response framework as was prevalent in the literature. For example, a question designed to measure empathy stated: "I feel bad when someone

gets their feelings hurt." Respondents were then asked to rate how well this statement describes them along a four-point Likert scale, (1) this describes me perfectly, (2) this describes me a little, (3) this does not describe me, (4) this does not describe me at all. The survey was then tested with thirty-eight subjects. Data from the pilot were entered into a database and analyzed using factor analysis to determine the appropriate questions for the final survey. The final survey is in *Appendix A*.

Surveys were administered to students at Miller Middle School and Bailey Middle School three times: 1) early fall, prior to the first Wild Earth field trip; 2) late winter, after the first field trip, fall sessions of guided recess and the after-school program; and, 3) late spring, after the final field trip and more Wild Earth exposure through guided recess and the after-school program.

*Recess referrals:* The research team analyzed disciplinary referrals issued during recess as a measure of student behavior on guided recess and non-guided recess days. We collected data for the spring semester only and compared guided recess days (ten in each school) to two adjacent non-guided recess days (twenty in each school), avoiding Mondays and Fridays as these days tend to have higher referral rates generally.

Survey data were analyzed using a statistical method (generalized linear model with repeated measures) that allowed for the assessment of changes in students' survey responses from the first survey administration to final survey administration. Recess referral data were examined for simple frequencies.

Interviews and focus groups of teachers, lunch monitors, administrators, guidance counselors, and Wild Earth staff, and observations of guided recess were analyzed for outcomes in addition to process. All interviews and focus groups, except for those with the lunch monitors, were conducted at the end of the school year, after the final



TABLE 1. LINKS BETWEEN WELLNESS AREAS AND SEL CONSTRUCTS, DEFINITIONS<sup>1</sup>

Wellness area	SEL construct	SEL Construct Definition
Building inner character	risk attitude	trying new things even if they are hard and if there is a risk of failure
	grit/perseverance	persistence, continued effort to tackle a problem or challenge
Strengthening and supporting the social health and well-being of participants	empathy	understanding and relating to the feelings of others; considering others' feelings when acting
	self-efficacy/confidence	belief in self; taking responsibility for self and decision-making
	comfort with nature/ outdoor knowledge	ease and comfort with being outdoors, preference for outdoor activities
Regenerating healthy and whole communities	positive peer interaction	getting along well with peers, ability to work with peers

<sup>1</sup> See resources section for citations.

\* We recognize that there is overlap among the wellness areas and the SEL constructs; it could be argued that self-efficacy/confidence relates to the 'building inner character' area rather than strengthening and supporting social and emotional health, for example, and that risk attitude and confidence are closely related. This chart depicts the way the wellness areas and SEL constructs are operationalized for the purpose of this work.

Wild Earth field trip to capture the effect of the full year of programming. Because lunch monitors were most intimately involved with guided recess and not the field trips, we conducted these focus groups in the spring, during the last of the guided recess sessions, but prior to the final field trip. All qualitative data were aggregated and analyzed using a constant comparative methodology, which allowed the identification of themes related to project outcomes and goals.







## Sample

*Students:* This evaluation focused only on the fifth grade. The researchers selected two academic teams at each middle school. Each team was comprised of two homerooms. At Miller Middle School, one team was integrated (meaning both homerooms on that team included general education students and students with special needs) while the other team had one integrated homeroom and one homeroom with general education students only. At Bailey Middle School, one team was integrated and one team was general education students only. There were 102 students on the two teams at Miller Middle School and 100 students on the two teams at Bailey Middle School, bringing the total sample to 202 students.

Parents were given the option of excluding their children from the research. These exclusions, plus absences over the three survey administrations resulted in a sample size of 142 for the survey.

*Teachers:* The research team conducted two focus groups, one at each school, of teachers from the teams involved in the study. Four teachers from each school, for a total of eight, participated in these focus groups.

*School administrators:* The research team interviewed two school administrators (one principal, one vice principal) at Miller Middle school, the principal at Bailey Middle School, and the guidance counselor responsible for 5th grade at Bailey Middle School.

*Lunch monitors:* Focus groups with lunch monitors included four monitors at Miller Middle School and three monitors at Bailey Middle School.

*Wild Earth staff:* The research team interviewed seven Wild Earth staff members who were involved with field trips, guided recess, and the after-school program. We also maintained contact with the project manager of *Kingston Middle School Nature Connection & Experiential Education Project* and the executive director of Wild Earth throughout the year. While these were not formal research interviews or contacts, we nonetheless gathered important project logistics information from these contacts.





And, perhaps *most importantly*, students were excited about, and eager to participate in, Wild Earth programming.



### III. Findings

All school stakeholders were very enthusiastic about *Wild Earth's Kingston Middle School Nature Connection & Experiential Education Project*. School administrators, guidance counselors, teachers, and lunch monitors spoke very highly of all aspects of the project. And, perhaps most importantly, students were excited about, and eager to participate in, Wild Earth programming. “We love Wild Earth,” “the kids are excited for the field trips,” “Wild Earth activities give the kids something to do, but they are also learning,” were just a few of the positive and supportive comments that we heard during data collection.

The value that these schools place on Wild Earth is reflected in the ways that it is becoming an institutionalized component of their SEL programming. Both middle schools have included Wild Earth in their School Comprehensive Education Plan (SCEP), an accountability plan that New York State Education Department requires of Focus Schools (schools that have a demonstrated pattern of low performance for some demographic subgroups). The SCEP requires schools to document their plans for improvement; Wild Earth's inclusion in them is evidence of administrators' belief that Wild Earth is part of that trajectory. Further evidence of institutionalization was noted when school administrators included Wild Earth in a curriculum planning meeting to create links between project activities and the curriculum, so as to enrich the Wild Earth experience and to ensure that it is brought back to the classroom. And finally, Wild Earth has become a fixture on the playground. When administrators noted that conflicts often arise during two popular recess activities—basketball and football—Wild Earth was their solution;

they asked Wild Earth instructors to join the students in these activities to model positive sportsmanship and help mediate conflicts.

Finally, the research finds that Wild Earth activities nurtured SEL characteristics in students. In all three project components (field trip, guided recess, after-school) we noted activities that encouraged students to interact positively with peers; take risks; persevere through a challenge; demonstrate empathy; develop confidence in a new-found skill; and develop comfort in nature. Administrators, teachers, lunch monitors, and Wild Earth instructors also noted evidence of these characteristics in students as they participated in Wild Earth activities; we heard many heartwarming stories. And the qualitative data suggest that some of the SEL attributes nurtured during Wild Earth programming translated into pro-social behavior in the school and classroom. Finally, some of the quantitative outcomes indicate positive growth in students' social and emotional health over the course of the year, although we must be careful not to make a causal claim here. Overall, we find positive impacts of *Wild Earth's Kingston Middle School Nature Connection & Experiential Education Project*.

#### A. Findings: process evaluation

We begin with an accounting of project activities, to assess fidelity to the planned project.

*Field Trips:* The Wild Earth staff conducted twenty-two field trips in total for the 5th grade, eleven in the fall semester and eleven in the spring semester. This met the established goal. One team of students (two homerooms, about fifty students) at a time participated in each field trip. Each trip was staffed by nine Wild Earth instructors; one Wild Earth staff served as the trip leader while other Wild Earth staff led small groups of students in activities (two instructors to a group). Classroom teachers, guidance counselors, and aides also attended the field trips; school staffing was determined by the school's assessment of the needs of the students on any particular field trip.





Field trips ran from 8:30am–1:30pm. During the morning, students were divided into small groups to enable deep immersion into a specific skill and outdoor experience. The group then came together for lunch. After lunch, Wild Earth staff offered a range of activities from which students could choose.

*Guided recess:* Wild Earth staff conducted thirty-six guided recess sessions during the course of the year; eight in each school in the fall and ten in each school in the spring. This exceeded the initial goal of thirty-two sessions (sixteen in each school). Seven or eight Wild Earth instructors were present at each guided recess, serving approximately 200 students. During guided recess, Wild Earth instructors offered a range of activities for students, all of which were optional. Guided recess activities were designed to provide specific experiences, such as team building, risk taking, access to nature, or to provide an outlet for students' midday energy. For example, at the nature table, students could touch animal pelts or skulls, taste tea made from different herbs, and examine baskets made from natural fibers. At cordage, students made items (bracelets, dream catchers) from ropes of different widths and textures. Stumps was a one-on-one tug-of-war game in which students tried to dislodge each other from a tree stump. In Noodle-Ninja, a blindfolded student attempted to bop his/her peers as they ventured close and Zoo Keeper and Keeper of the Keys were variations on the game of tag. Activities changed from week to week to provide variety for students and to attempt to engage different students each week.

The number of students who participated in guided recess activities varied each session, as students could move into and out of activities in the course of a recess period. Weather was often a factor in participation; when the ground was wet, students were required to remain on the blacktop. Wild Earth adjusted activities accordingly. On particularly cold

afternoons, fewer students ventured outdoors and so participation overall was lower. And on days with heavy precipitation, guided recess sessions were convened indoors. Indoor guided recess still aimed to engage students and develop skill, but the activities varied slightly (no big energy games). Researchers, administrators, and Wild Earth staff estimate that seventy percent of students participated in a Wild Earth activity for at least some time in a given guided recess session.

*After-school program:* Wild Earth also conducted an after-school program at both middle schools. This program ran for a little over one hour, once a week during the regular after-school activity period, which meant that participants could take the late bus home. There were eighteen after-school sessions at Miller Middle School and sixteen at Bailey Middle School (two sessions were cancelled, one due to Halloween and one for a schoolwide event) over the course of the school year.

The after-school program was initially intended to serve at-risk youth. Wild Earth's plan was to have guidance counselors and teachers select at-risk students to participate regularly in this after-school programming. Obtaining this consistent, regular participation from specific students proved to be difficult, however, because it runs counter to the established after-school processes, in which students can choose from a wide range of activities that they sign up for that day during lunch. Further, Miller Middle School is situated on wooded land, which made it easy to implement Wild Earth activities, but Bailey does not have easy access to wooded areas. Wild Earth instructors initially planned to take Bailey

after-school students off campus to venture into the woods. But this required parent permission. This negatively impacted student participation in Bailey’s after-school program in the fall; Wild Earth served approximately twelve to fourteen students each week in the after-school program at Bailey, while they were able to serve twenty-five to thirty-three at Miller. In the spring, Wild Earth decided to forgo the permission slips and keep students on campus. In addition, Wild Earth dropped its strategy for serving at-risk youth only. Instead, students signed up for the after-school program on the day of during lunch, as they did for other activities. Participation in the after-school program at both schools soared to capacity.

The intent of the after-school program was to nurture positive relationships among participating students, deepen mentoring relationships between students and Wild Earth instructors, and promote deeper engagement with the natural world through Wild Earth activities. After-school activities mirrored those at guided recess and were implemented to align with students’ needs. For example, if a group of students was particularly restless on one day, the instructor might begin the afternoon with a high energy game that allowed for an outlet while still promoting cooperation and positive interaction. More generally, students were given the opportunity to choose an activity to engage in for the duration of the session. Students worked in small groups, learned the process for building a fire, listened to stories—or told stories themselves, or walked observantly through the woods guided by an instructor.

### B. Findings: outcome evaluation

#### Survey

The survey offers a quantitative measure of student growth on the SEL constructs. We analyze the data by measuring the difference in mean scores for each construct from the initial to the final survey administration. The analysis includes 5th grade students at Miller Middle School and Bailey Middle School who completed both the first and final survey; this brings the analyzed sample to 142. A positive delta indicates a positive outcome; conversely, a negative delta indicates a negative outcome. Results are reported in *Table 2*.

Data show that all of the constructs have a positive outcome; means on the final administration of the survey are higher than at the initial administration of the survey. It must also be noted, however, that none of the outcomes is statistically significant. Thus, although the positive delta indicates an improvement in measures of social and emotional health over the course of the school year, the lack of significance means that these outcomes are not different from what we might find by chance.

While it is disappointing that none of the constructs show statistical significance, it is also not surprising. Social and emotional growth is very difficult to measure quantitatively, particularly for an early adolescent population. Much can influence a child’s responses to a survey about peers and friendships and internal sense of self on any given day. Nevertheless, the positive direction of these constructs is encouraging and we are hopeful that we may see some more positive, significant results as

TABLE 2. SEL CONSTRUCTS, DIFFERENCE IN MEANS, INITIAL TO FINAL SURVEY (DELTA), N=42

	Positive peer interaction	Empathy	Confidence/self-efficacy	Risk attitude	Perseverance/grit	Nature
Difference in means, initial to final survey (delta)	.47	.28	.11	.01	.30	.35
P-value	.12	.18	.75	.96	.12	.24



TABLE 3. INDIVIDUAL SURVEY QUESTIONS, DIFFERENCE IN MEANS, INITIAL TO FINAL SURVEY (DELTA), N=142

Question	Construct	Difference in means, initial to final survey (delta)	P-value
1. It makes me sad to see a kid who can't find anyone to play with	Empathy	0.23	0.00
2. When something is really hard, I ask the teacher for help to make sure I understand it	Perseverance	0.21	0.00
3. I think before I act	Self-efficacy, confidence	0.18	0.02
4. I make friends easily	Peer	0.15	0.05
5. I get along well with other kids	Peer	0.11	0.09
6. I make good decisions	Self-efficacy, confidence	0.12	0.10
7. I like playing outside	Nature	0.12	0.11

Wild Earth’s Kingston project becomes more firmly entrenched in the school culture through additional programming in the future (additional grade levels and guided recess and after-school sessions) and building connections with students over time.

We explored the SEL outcomes further by examining student responses to individual survey items. This analysis yielded seven items that showed significance; we report only these (*Table 3*). All of these seven items demonstrate positive growth from initial to final survey administration. Two items (4, 5) fall within the “positive peer interaction” construct, which suggests an increase in students’ positive relationships with peers. Further, item 1 “It makes me sad to see a kid who can't find anyone to play with,” falls within the empathy construct, but also indicates that students’ relationships with, and in this case inclusivity of, one another grew from the first to the second administration of the survey. Two items fall within the “confidence/self-efficacy” construct, indicating that students’ sense of confidence in themselves increased over the school year. And finally, one item within the “nature” construct also showed positive growth.

While we cannot claim that participation in Wild Earth caused these positive outcomes, we can speculate that Wild Earth, as a component of the schools’ plans for promoting social and emotional health, may have had some influence here. Again, future research on the Kingston project—with increased Wild Earth contact, continuity of participation and mentorship over time activities—may offer additional insights.

### Recess referrals

Referrals are issued for student misbehavior at recess. We analyzed recess referral data for the spring semester to determine whether there was a difference in the number of referrals issued during guided recess days and non-guided recess days. *Table 4* shows that for both middle schools combined, there were three times as many referrals on non-guided recess days as on guided recess days.

It would be easy to conclude that these outcomes are due to the additional staffing on guided recess days. But the qualitative data convince us that this is not just about numbers. Guided recess offered opportunity for productive play and provided structured outlets for children’s mid-day energy. Students gravitated to Wild Earth’s activities, which allowed them to run and be noisy, or to explore something new. According to one

administrator, “They [Wild Earth activities] were structured, yet flexible, and provided additional support for students and also a focus. There was a lot less aimless running around [when Wild Earth was] here.” This observation was echoed by a lunch monitor who stated; “Wild Earth gives the kids a focus and something to do. There are many fewer behavior issues when they are here.”

Qualitative data

*Positive peer interaction:* By all accounts, Wild Earth activities promoted teamwork, cooperation, and positive peer interactions. During field trips, teachers were impressed by students’ gracious and positive engagement with one another. “We saw students complimenting and encouraging each other during the field trips.” Several teachers also noted students’ willingness to work with classmates outside of their peer group. This is particularly meaningful for this age group, teachers felt, as students often cling to their friendship group in cliques. But the greatest evidence of Wild Earth facilitating peer interactions came from a videogame-oriented student who told a teacher that Wild Earth is more fun than video games because he can “actually play with friends instead of talking over a headset.”

Several teachers stated that the fall field trip aided students’ transition to middle school. During this field trip, students played together and engaged with one another; the field trip provided an easy setting for students to engage with classmates who had attended other elementary schools. Teachers specified that the small group work during the field trips nurtured the

development of new friendships and also facilitated positive engagement with Wild Earth activities, instructors, and teachers. Further, the shared experience of Wild Earth contributed to an overall cohesiveness within the academic team, even after the return to school, according to some teachers. “Wild Earth allows [students] to share a common experience...and makes [students] more comfortable with each other in the classroom.” These teachers reported that the shared experience and bonds created during Wild Earth contributed to more cooperative discussions in their classrooms.

During guided recess, students were engaged with each other in positive ways. Likewise, administrators noted team work and cooperation among students on their visits to the playground during guided recess days and they reported that both individual behavior and student interactions were more positive and collegial on these afternoons. “I can tell you, anecdotally, that [problematic instances] diminished when Wild Earth was here on guided recess days.” This was corroborated by lunch monitors, who noted far fewer behavior issues on guided recess days. Further, Wild Earth instructors noted fewer arguments and less exclusivity on the basketball court and the football field once they joined those activities.

Wild Earth instructors noted positive peer interactions during the after-school sessions. One instructor told of a moment when she was working with seven students, each using a bow drill to try to generate smoke. This is a taxing activity that required intense focus, perseverance, and some physical strength and coordination. The students were serious about their task and very engaged, and focused on their bow drill. Finally, when one student was able to generate smoke, the group erupted in cheers. “There was such camaraderie. When just one student got smoke, it was all of our success. The smoke belonged to everyone.”

*Confidence and self-efficacy:* Teachers noted examples of self-efficacy and confidence among their students during

TABLE 4. RECESS REFERRALS

	Positive peer interaction
Guided recess days (20 days/both schools)	3
Non-guided recess day (average, 20 days/both schools)	9.5





the Wild Earth field trip. Most felt that participating in Wild Earth did not engender these traits, but rather allowed for the expression of them in already-confident students. Students who exhibited leadership traits in class demonstrated this confidence and leadership during the field trips. There were a few exceptions, however. One teacher described a student who is normally reticent and quiet in class. This child thrived during the Wild Earth field trip and emerged as a leader over the course of that day. Later in the year, this student chose a nature-based topic for his “teach the teacher” project, and displayed much confidence when he led the class through his lesson. This teacher attributed this student’s new-found confidence—in himself and his knowledge of nature—to the Wild Earth experience.

One Wild Earth instructor told a story of emerging confidence in an after-school student who was a recent immigrant to the United States and who sometimes had trouble relating to his American peers. This student had an interest in birds, shared by the instructor. Together they would identify birds in the woods and then the student would report back the next week about birds that he had seen around his home. The instructor made

sure to emphasize this student’s expertise each week; this helped him to gain confidence in himself and gave him a focus for engaging with peers.

Self-efficacy and confidence were noted generally during guided recess. Many of the guided recess activities required a level of confidence; students who tried a new tea or who were the center of attention in the Ninja activity—and agreed to be blind-folded while they tried to whack their peers with a soft noodle as they scurried around them—demonstrated a confidence in themselves.

*Risk attitude:* Researchers noted several guided recess activities that encouraged risk taking among participants. The tea activity required personal risk, for example, as students experimented with new smells and tastes. Other activities involved some social risk. The stump activity is a good example of this; students struggled to dislodge one another from their perch on a small tree stump, using a rope that is pulled between them. In this activity, there is a single point of focus—all eyes of those waiting in line are on the two students on the stumps—and there is a clear ‘winner’ and ‘loser.’ We watched as students engaged in this activity over and over. Some held the

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winning spot for a few turns, others were dislodged immediately. Nevertheless, students returned to the line and engaged again and again. It is not unusual to see youth engage in these kind of games—baseball is another example of an activity with risk of high-visibility failure—but Wild Earth provided an opportunity for all students, not just athletes, to engage this experience in a supportive and non-competitive way.

For some students, guided recess activities served as a refuge from what is often a chaotic part of the day. Further, they provided a focus for students who have difficulty engaging with peers or who find the energy and noise of the playground overwhelming. One administrator felt that the availability of Wild Earth activities during recess gave these usually reticent students the “cover” they needed to be able to engage with groups of peers. For these reticent youth, engaging in Wild Earth activities at all was a sort of risk.

The field trips offered many opportunities for risk-taking, especially for this predominately urban student population for whom, teachers and administrators noted, “outdoors” usually means a city park or playground. Spending the entire day in the woods, and all the activities that entails, was out of the range of most students’ experience and thus required some level of risk-taking. Teachers reported that students embraced Wild Earth field trips and engaged fully with activities. And while some students were more cautious than others, there were no instances of students disengaging or refusing to participate.

But while risk-taking was evident during Wild Earth field trips and guided recess, teachers stated that they did

not see this attitude carry over into classroom activities or academic tasks. “There is no connection with physical risk taking and taking risks academically,” stated one teacher, emphatically.

*Perseverance and grit:* Perseverance was evident during guided recess as students plugged away at cordage or worked with peers to create a rhythmic drum beat. There is some overlap, here, with risk attitude; students who take a risk by participating in an activity in which they have just “failed”—being pulled off the stump, for example—also exhibit grit and perseverance by getting back in line to try again.

Teachers noted instances of grit and perseverance on the field trips, and felt that it was something that Wild Earth instructors consciously advocated; “Wild Earth tells them to try something and not give up.” One teacher described watching a usually-distracted student persist through the difficulties of making a fire. She noted that Wild Earth staff worked with the student, persevering with him just as they were encouraging him to persevere with the activity. This student succeeded in building the fire and “was proud of his success.”

Another teacher told of a student who demonstrated perseverance while on the Wild Earth field trip by embracing his role as “fire maintainer.” This student, whose individualized education program (IEP) calls for frequent refocusing, was tasked with maintaining the fire by blowing on it. He concentrated on this job for a long time and without the “focus” reminders that he usually requires and that are specified in his IEP.

Several teachers felt that the grit and perseverance demonstrated by some students during field trips was sustained throughout the school year. They told of students with behavioral challenges or students who become quickly frustrated when confronted with a challenging academic task who were able to demonstrate, within the nature-based context of the Wild Earth field trip, their capacity for focus and perseverance. Teachers



were then able to use these moments of demonstrated perseverance as reminders to their students throughout the school year.

*Empathy:* The small group activities during field trips and the after-school program were ideal settings for nurturing empathy. Wild Earth staff encouraged students to recognize that certain activities could be difficult or scary for their peers and to encourage one another as they tried new things. One teacher noted that her students demonstrated empathy during the field trip when she herself got stuck crossing a stream. She expected that the students would poke fun at her and was surprised when they, instead, used their own experience of getting stuck to help alleviate her anxiety and also get her unstuck. After helping her, these students then helped peers stuck in the same predicament.

Teachers disagreed about whether the empathy demonstrated during Wild Earth field trips carried over into their classrooms. Some felt that it did; these teachers cited examples of students continuing to compliment each other about events that happened on the field trip even after the trip had ended. Other teachers reported that the empathic interactions they noted during the field trips did not persist once students returned to the classroom.

*Comfort and knowledge of nature:* Field trips, which offer a day-long immersion in the wilderness, were designed to increase students' comfort with, and knowledge of, nature and the outdoors. Teachers stated that they were unsure of whether the field trip experience actually increased students' knowledge of nature. They noted the potential for this, however, and expressed interest in working with Wild Earth to develop explicit connections between its activities and the school curriculum. Teachers felt that these connections would help deepen students' experience of Wild Earth and extend its impact further into the classroom. As of the end of the school year, this work had begun; Wild Earth staff met with school

administrators and teachers to create links between Wild Earth activities and the curriculum.

Teachers agreed that the field trips enhanced students' comfort in nature, at least for the duration of the outing. While some students were tentative at first, they ultimately found their footing as the day progressed and overall, students enthusiastically embraced the opportunity to be outside for the day. Several teachers commented that the outdoor setting allowed kinesthetically-inclined students to shine and to demonstrate skills that are not always salient in an academic setting. But here again, as with some other measures of social and emotional growth, they were unsure whether the Wild Earth experience translated into more outdoor activity in students' home lives.

Even though students eagerly anticipated the spring Wild Earth field trip, some teachers felt that activities during this second trip were a little repetitive and so did not capture students with wonder as completely as the first field trip had. Nevertheless, students were happy and engaged. "It was still fun."

Some guided recess activities incorporated elements of nature. The nature table, which displayed animal pelts, animal skulls and bones, baskets made from natural fibers, herbs and other nature-oriented subject, allowed for the exploration of different elements of the natural world. These specimens—maybe especially the animal



pelts and skulls, which some students thought were cool and others thought were creepy—facilitated conversations about wildlife and outdoor citizenship between participants and Wild Earth educators. Likewise, the tea tasting activity introduced students to different plants and herbs that they could find in nature.

### **Additional observations**

*Recruitment into the after-school program:* Wild Earth worked through initial difficulties with student recruitment for the after school sessions and adjusted its programming to accommodate the schools’—and students’—needs. Instructors recruited students into the after school program during the signup period at lunch. This enabled them to target students who they felt, given their experience with field trips and guided recess, needed additional mentoring or who showed some inclination toward nature exploration. We witnessed this recruitment process on multiple occasions and in those moments, we watched Wild Earth staff engage students from their point of interest, noticing new sneakers (“your new kicks are fire”), or asking after a family member (“I haven’t seen your sister at recess lately, where is she?”), or drawing them in more generally; “Hey! We missed you last week and I don’t see your name on the [afterschool sign up] list. Come hang with me this afternoon.” This method worked; spots for the after school program filled up quickly.

Instructors felt that the most valuable part of the after school program was their ability to build deeper connections with these students. “The development of friendships and bonds with adults is the most important part of the after school sessions,” remarked one instructor. Often, Wild Earth instructors invited children with challenges, whether behavioral, social, or sometimes even a language barrier, to participate. Wild Earth staff met this challenge by developing a pro-active approach to these challenges; “here’s what you need to do in order to be able to show up at Wild Earth today” and “the woods don’t care how cool you are” were common refrains during the after-school program. And they found that

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## The power of same-race adult mentors and role models cannot be underestimated.

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kids responded: “over the course of the after-school program, we saw kids’ behavior improve and they transitioned more easily into the after-school experience.”

*Continuity of connection:* A foundational element of the Kingston project is to promote positive connection and interaction among youth and between youth and adults. Wild Earth attends to this goal by having consistent staffing throughout its programming, which means that students are interacting with the same instructors in each part of the Kingston project throughout the year. As stated, we witnessed instructors using a common interest they might share with a student—music, sneakers, basketball, birds—to draw students into Wild Earth programming and continue to build relationships. This is an important element of Wild Earth’s Kingston work and we noted its impact as we watched students flock to Wild Earth instructors during guided recess, and interact comfortably and happily with them.

Further, the fact that several Wild Earth instructors are people of color was particularly meaningful for Kingston students, who themselves are a diverse group. Instructors were familiar with students’ culture and could speak to them from that place of familiarity. Indeed, several instructors could not move through the cafeteria without being surrounded by students. In one very specific instance, instructors told of a student who had recently emigrated from the Caribbean latching onto an instructor who was also of Caribbean descent. The power of same-race adult mentors and role models cannot be underestimated.

Wild Earth understands the importance of diversity in its Kingston staff and is seeking to further diversify its staff as the Kingston project grows.



*Shared experience and transition to middle school:* School administrators and teachers emphasized the value of the Wild Earth field trips as a shared experience among classmates and teachers which, they felt, contributed to the building of a community. This common, shared experience connected students to one another, their teachers, and Wild Earth staff. Teachers felt that this contributed positively to cohesive classroom culture that they sought to build in the early days of school and then nurture throughout the year.

This was particularly meaningful for the 5th grade students, because of their newness to the middle school. Teachers felt that the fall field trip aided in students' transition to middle school by providing a fun, outdoor space for making new friends and developing a comfort level within their new school.

*Demonstration of nonacademic strengths:* The Wild Earth field trip provided a setting where students could demonstrate non-academic strengths. Teachers, administrators, and guidance counselors noted that this helped to buoy students' confidence and also allowed teachers to see strengths in their students that might not have surfaced in an academic setting. Teachers gained a new perspective on some students, which they were then able to carry back to the classroom and to future interactions with students.

### **Challenges and considerations for moving forward**

There were a few challenges that surfaced over the course of our research. First, we learned that the field trips required more paperwork than usual field trip requirements (Wild Earth disclaimers as well as school permission slips). Further, ticks were a major concern for parents. School personnel reported that they spent considerable time fielding phone calls from parents about the danger of ticks. School administrators felt that Wild Earth handled this well; ticks are a serious concern and Wild Earth approached it as such. As this will continue to be a concern into the future, school

administrators are hopeful that they can work with Wild Earth to develop a proactive communication plan.

Lunch monitors were sometimes wary of Wild Earth nature-based recess activities. While they appreciated the value of introducing students to new things, they worried that students might attempt to replicate these activities without Wild Earth supervision. Of particular concern was the tea tasting and fire making—that students might search for an herb they had tasted during the tea activity but misidentify the plant or that they might attempt to make a fire on their own. Monitors are not trained or comfortable with supervising that kind of activity. It is very likely that the Wild Earth staff caution students against trying these activities without proper adult supervision. It may be fruitful to convene a quick meeting with monitors in the coming year to assure them of safety practices.

### **IV. Analysis summary**

*The Kingston Middle School Nature Connection & Experiential Education Project* is clearly having an impact on both middle schools. Qualitative data analysis revealed positive outcomes for all SEL measures, though some more than others. The most resounding evidence was found in the area of positive peer interactions, confidence, and perseverance. Quantitative outcomes on individual survey items in these two areas affirm findings of growth in these areas. Further, teachers noted spillover effects from Wild Earth activities to their classrooms in regard to peer interaction and perseverance. That there were fewer referrals during guided recess sessions further reinforces these positive findings and speaks directly to project goals of strengthening supports for social and emotional health and well-being of students (*Table 4*).

While the finding of no statistical significance for SEL constructs (*Table 2*) is disappointing, it is not altogether surprising. SEL is very hard to measure and effects are not easily captured. Nevertheless, we are encouraged by the positive direction of the change in means from initial to final survey administration, which indicates growth in

those areas. Further, findings of positive and significant outcomes for individual survey items (*Table 3*) give confidence that there were improvements on some measures of students' social and emotional growth. At an institutional level, both schools have incorporated Wild Earth's programming into their School Comprehensive Education Plans and have worked to

strengthen connections between Wild Earth and the school curriculum. Wild Earth's Kingston project, most notably the field trips, aided in 5th graders transition into middle school. It also provided a venue for students to demonstrate nonacademic strengths; teachers noted the value of this both for student confidence and also for their own knowledge and understanding of their students.

## V. Conclusion

Outcomes for the first year of *Wild Earth's Kingston Middle School Nature Connection & Experiential Education Project* are positive and encouraging. All project implementation goals were met—and sometimes exceeded—in this first year. Positive outcomes were identified for social and emotional growth. While we cannot claim that Wild Earth's project caused these, we can be certain that Wild Earth was part of the landscape within which Kingston City School District's middle school students learned and grew over the course of the year.

Importantly, both middle schools view Wild Earth as a fundamental part of their programming to enhance the social and emotional growth of their students. Wild Earth is included in their School Comprehensive Education Plans, which detail plans for school improvement. And school administrators included Wild Earth in a curriculum planning meeting to ensure deeper links between Wild Earth project activities and the school curriculum. Finally, both schools eagerly embraced the expansion of the Kingston project for the 2018–19 school year (two guided recess sessions in both schools each week and the inclusion of a 6th grade after-school program). The institutionalization of Wild Earth into the fabric of the schools will likely enhance its impact.

The plan for evaluation of Wild Earth will change slightly for year two, to accommodate increased programming and reflections on the research process in year one (see *Appendix B* for scope of work). Sixth grade students and teachers will be added to the sample. We will survey all students in fifth and sixth grade. Teachers will be interviewed over the course of the spring semester, to avoid the end-of-the-year stress. Two fifth grade teachers will be interviewed in the fall, after the first field trip, to gauge impact on students' transition to middle school. Research instruments will be adjusted and updated; the survey itself will be shortened to facilitate administration. Researchers will consider the most recent developments in the measurement of adolescent social and emotional growth and amend research instruments as appropriate, without comprising the ability to assess potential longitudinal gains. As in year one, we will analyze recess referral data and will interview administration, guidance counselors, and recess monitors. Finally, we will collect student writing about Wild Earth, through short prompts given during the after-school program, for inclusion in our analysis.



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Appendices available upon request.









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