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Wilderness Inquiry Evaluation Brief: 2019 Minnesota Floating Classrooms

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Wilderness
Inquiry



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Introduction

Through developmental experiences, youth build the skills, attributes, and mindsets they need to reach their goals, become aware of themselves and their role in society, and succeed in education and career (Nagaoka, Farrington, Ehrlich, & Heath, 2015). There is a broad range of competencies that diverse stakeholders argue are necessary for individuals to develop during their formative years. This includes social and emotional learning (SEL) competencies (e.g., self-awareness, relationship skills); competencies identified as key for employability (e.g., problem solving, critical thinking); and others related to “21st century readiness” (Deeds, Van-Ee, Tsin, & Lerner, 2017; Osher et al., 2016). There is a growing awareness that the development of these attributes cannot solely be the responsibility of schools and that out-of-school learning opportunities can help to meet the demand for youth developmental opportunities – especially when they emphasize the important role that experience plays in learning (Baker, n.d.; Nagaoka et al., 2015).

When considering the impact of out-of-school learning programs, it is best to view them on a systems level. Individual programs cannot meet all the demands for youth development, but collectively they can provide a range of opportunities that compliment young people’s formal schooling. Out-of-school programs join with K-12 education, youth employment, and other domains to provide a continuum of services to young people. This constellation of services in turn works to develop in youth a range of outcomes, including SEL competencies, career readiness, and health and wellness (Deeds et al., 2017).

Project Overview

Through its programming, Wilderness Inquiry (WI) offers youth unique opportunities to participate in outdoor learning experiences. For example, through WI’s Floating Classroom project, Minnesota’s youth of all backgrounds and abilities participate in fun and engaging water-based activities that also provide them with important environmental, cultural, and science-focused content.¹ Participants connect to the natural world through hands-on, outdoor learning. In particular, the Floating Classroom project and the larger Canoemobile program seek to:

- Engage underserved youth and young adults in the outdoors;
- Provide outdoor recreation and education that builds confidence and skills;
- Increase academic achievement through place-based learning;
- Provide resources, curriculum support, and professional development opportunities for teachers;
- Connect participants to educational and career opportunities across the outdoor sector; and
- Inspire the next generation of citizens to enjoy, explore, and protect public lands.²

The majority of participants engage through a one-day introductory experience that is designed to inspire “confidence, curiosity and wonder.”³ However, some youth will participate through overnight or multi-day experiences that are designed to help youth further develop a stewardship ethic, increase confidence and improve relationships, and learn about possible future recreational and career interests.

¹ The Floating Classroom project is a subset of WI’s Canoemobile program. For more information, see <https://www.wildernessinquiry.org/programs/canoemobile/>

² Information taken directly from <https://www.wildernessinquiry.org/programs/canoemobile/program-overview/>.

³ See the WI Pyramid of Engagement at: <https://www.wildernessinquiry.org/programs/canoemobile/program-overview/>.

Intended Outcomes

Among the myriad skills and attributes youth are expected to develop over the course of their development, WI has identified three areas that its programs are uniquely designed to foster in youth: persistence, environmental stewardship, and future science/career interests.

Persistence. Persistence in this context means individuals' willingness to try something new, which is related to the Big Five personality characteristic *openness to experience*. Research has demonstrated that individuals who are more open to experience enjoy positive life outcomes, including greater upward career mobility. Importantly, openness to experience does not remain static for individuals over time, meaning that youth programming has the potential to encourage development of this trait (McCrae et al., 2002; Nieß & Zacher, 2015).

Environmental Stewardship. Environmental stewardship can be viewed as a component of the SEL competency *responsible decision-making*, defined as "the capacity to make choices based on realistic evaluations of consequences, well-being, ethics, safety, and social norms" (Osher et al., 2016, p. 646). A higher capacity for responsible decision-making should contribute to more positive youth outcomes in terms of interpersonal skills and academic performance (Weissberg & Cascarino, 2013).

Future Science/Career Interests. WI and the Floating Classroom program are especially interested in developing students' interests in science and the environment. Interest in pursuing a STEM-related career is typically developed during childhood and adolescence. Out-of-school learning programs (such as outdoor field experiences and summer camps) that incorporate science are an important compliment to schooling for growing student interest in science and may be especially important for increasing the representation of underserved groups in the STEM fields (Leonard, Chamberlin, Johnson, & Verma, 2016).

Methods

Wilderness Inquiry Participant Survey

The WI Participant Survey is an 11-item, retrospective pre-post survey⁴ intended to examine changes in three areas for youth who participate in WI programming: *Persistence*, *Environmental Stewardship*, and *Future Science/Career Interests*. Respondents indicate how well each item describes their behaviors before and after the trip using a scale of *very untrue of me*, *somewhat untrue of me*, *somewhat true of me*, and *very true of me*. In Table 1, we present each of the items and their associated factors.

Table 1. Survey Item by Factor

#	Survey Item	Factor
1	I like to try new things.	Persistence
2	I am likely to try a new outdoor activity.	Persistence
3	I believe I will be able to accomplish the things I decide I want to do.	Persistence
4	I think about ways to overcome challenges when trying something scary.	Persistence
5	I am interested in helping the environment.	Environmental Stewardship
6	It is partly my responsibility to care for the environment.	Environmental Stewardship
7	I know something I can do to make the environment better.	Environmental Stewardship
8	I am interested in jobs where I would work in nature.	Future Science/Career Interests
9	I am interested in jobs that have to do with science.	Future Science/Career Interests
10	I am interested in science.	Future Science/Career Interests
11	I would like to go on a field trip where I learn about science.	Future Science/Career Interests

⁴ A retrospective pre-post survey allows evaluators to collect information about how a participant felt before the program ("retrospective pre") and after ("post") the program in a single data collection event.

WI Participant Survey Versions

Two versions of the WI Participant Survey were used in 2019 – the WI Day Trip Participant Survey (referred to as “Day Trip Survey”) and the WI Extended Trip Participant Survey (referred to as “Extended Trip Survey”). These surveys both include the 11 items described above, but the Extended Trip Survey includes two additional items in which respondents are asked to share the highlight of their trip and something they learned about themselves (see Appendix A for a copy of the Day Trip Survey and Appendix B for a copy of the Extended Trip Survey). Survey respondents completed either the Day Trip Survey or the Extended Trip Survey, as applicable, upon completion of their 2019 trip. WI staff members attempted to only administer the survey if the programming provided was “typical” (e.g., the survey was not administered if the canoeing portion of the trip was rained out).

WI Participant Survey Administration

Day Trip Survey Administration. The Day Trip Survey was administered to a sample of the Day Trips that occurred in 2019. An attempt was made to collect survey responses from approximately 75 middle school participants and 75 high school participants across each of four location categories as defined by the National Center for Education Statistics: rural, town, suburban, or city (Gevert, 2015), for a total of 600 respondents (300 middle school and 300 high school).⁵

Ultimately, there were 545 survey respondents, which fell short of the 600 goal (see Table 2). The survey respondents were overwhelmingly from middle schools (94%), with only 6% from high schools. In addition, the target sample size of 150 participants per location was exceeded for the rural and city categories ($n=211$ and 219 survey respondents, respectively), but was underrepresented in the town and suburban location categories ($n=22$ and $n=93$ survey respondents, respectively). Because of the differences in sample size by these location categories, we combined the results from respondents in the rural and town locations in order to ensure an adequate sample size for our location analyses.

Table 2. Day Trip Survey: Participant Sample by Grade Level and Location

School Grades	Rural/Town ^a		Suburban		City		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Middle School (5–8)	233	100%	82	88%	199	91%	514	94%
High School (9–12)	-	-	11	12%	20	9%	31	6%
Total	233	100%	93	100%	219	100%	545	100%

a. This category combines rural participants ($n=211$) and town participants ($n=22$).

Extended Trip Survey Administration. The Extended Trip Survey was administered to participants in all of the Extended Trips that occurred in 2019. The goal was to administer the survey to approximately 200 participants; ultimately, 172 participants completed the Extended Trip Survey.

WI Participant Survey Data Analysis

The data from the Day Trip Survey and Extended Trip Survey were analyzed separately, and we present the results separately in this report; however, we used the same data analysis methods for each survey.

Mean Scores. For each of the three factors (*Persistence, Environmental Stewardship, and Future Science/Career Interests*), factor pre- and post-means were calculated for each individual only if the individual had provided a pre- or post-trip self-rating for all items within a given factor. For individuals who had both a pre- and post-mean in a given factor, we were able to determine the difference

⁵ WI staff members selected the trips at which to administer the survey. In order to meet sampling goals, all Day Trips from the suburban, town, and rural locations were administered the survey. A sample of city trips were administered the survey to obtain the 150 survey respondent goal.

between the means and the percent change⁶ between them. Next, we computed the average of the factor's pre- and post-means. For example, the Day Trip *Persistence* pre-mean was based on 463 scores and the post-mean was based on 456 scores, but only 408 individuals had both a pre-mean and post-mean. The mean difference, therefore, was based on 408 individuals who provided self-ratings for all items in that factor. The same procedure was used to calculate the standard deviations and percent changes for each factor.

Tests of Significance. To test whether the overall pre-post changes were statistically significant, a paired-samples *t*-test was conducted for each factor separately. A statistically significant result indicates that the post-mean is statistically higher than the pre-mean, indicating a statistically significant change from the pre- to post-trip ratings. The overall pre-post changes were analyzed for the Day Trip and Extended Trip data separately (i.e., six paired samples *t*-tests were conducted, 2 trip types by 3 factors). An alpha level equal to 0.05 was used for each of the six tests.

We next tested for pre-post differences within each factor based on demographic characteristics (location, grade band, race/ethnicity, and gender) by conducting independent *t*-tests when comparing two categories (e.g., male vs. female), and by conducting one-way analysis of variance (ANOVAs) when comparing three or more categories (e.g., rural/town vs. suburban vs. city). An alpha level equal to 0.05 was used. These tests were performed only when sample sizes were methodologically appropriate. If the differences between groups' pre-post change were found to be statistically significant for a given factor, this would indicate that the tested groups experienced different levels of change within that factor. If differences between groups were *not* found to be statistically significant, this would indicate that, on average, the tested groups experienced similar levels of change within each factor.

Item-Level Analysis. We calculated and present in this report the percentage of respondents selecting each response category (*very untrue of me*, *somewhat untrue of me*, *somewhat true of me*, *very true of me*) for all 11 closed-ended items on both surveys (for both the pre- and post-trip ratings).

Open-Ended Responses. The two open-ended survey items on the Extended Trip Survey ("*What was the highlight for you during the trip?*" and "*What was one thing you learned about yourself on the trip?*") were analyzed independently by CAREI evaluators who reached agreement on common themes.

Wilderness Inquiry Teacher Survey 2019

Upon completion of a Floating Classroom Canoemobile trip that occurred between June–November 2019, WI staff members sent an email to the teacher (or other adult) in charge of planning and coordinating the trip asking them to complete the online 2019 WI Teacher Survey.⁷ On the survey, teachers were first asked the extent to which they agreed with 14 closed-ended items related to their attitudes about the trip and about their students' experiences on the trip (using a scale of *strongly disagree*, *disagree*, *agree*, *strongly agree*, or *unable to answer*). Respondents also provided demographic information about the participating students and school. Finally, the teachers were asked why they would or would not recommend the trip to colleagues and whether they had any additional feedback about the trip. See Appendix C for a copy of the WI Teacher Survey email invite and the WI 2019 Teacher Survey.

⁶ The percent change is calculated as follows: $\{[(Post_{MEAN} - Pre_{MEAN}) / Pre_{MEAN}] * 100\}$.

⁷ Approximately 72 emails were sent; teachers who received the email were encouraged to forward the link to other teachers who may also have been on the trip.

Survey data for the 14 closed-ended items were analyzed and are presented by the four topic areas of the teacher survey. For each item, the percentage of respondents who selected each response option is shown. The two open-ended survey items were analyzed independently by CAREI evaluators who reached agreement on common themes.

Wilderness Inquiry Participant Survey 2019 Results

In this section, we present the survey results from a sample of respondents who participated in WI programming in 2019. Overall, 717 participants completed one of the surveys, including 545 participants who completed the Day Trip Survey and 172 participants who completed the Extended Trip Survey. We present the demographics for the trips separately as well as overall.

Demographics of Day Trip and Extended Trip Survey Respondents

Participants were asked to provide their grade level, gender identity, and race/ethnicity. Overall, three-quarters of respondents (76%) were between Grades 4–8. However, there were differences between the Day Trips and Extended Trips; while the majority of Day Trip Respondents (89%) were between Grades 4–8, nearly all Extended Trip respondents (91%) were between Grades 7–12 (see Table 3).

Table 3. Self-Reported Grade Level

Grade Level	Day Trip (n=499)		Extended Trip (n=169)		Overall (n=668)	
	n	%	n	%	n	%
Grade 4	123	25%	-	-	123	18%
Grade 5	130	26%	2	1%	132	20%
Grade 6	77	15%	12	7%	89	13%
Grade 7	66	13%	36	21%	102	15%
Grade 8	51	10%	16	10%	67	10%
Grade 9	7	1%	13	8%	20	3%
Grade 10	6	1%	16	10%	22	3%
Grade 11	9	2%	21	12%	30	5%
Grade 12	24	5%	51	30%	75	11%
Other	6	1%	2	1%	8	1%

Note. Grade level information was not provided by 49 respondents overall, including 46 Day Trip and 3 Extended Trip respondents. Total percentages may not equal 100% due to rounding.

Overall, 50% of respondents identified as female, while slightly fewer identified as male (44%), 2% identified as non-binary, and 5% preferred not to answer this item. These responses were similar across the Day and Extended Trips (see Table 4).

Table 4. Self-Reported Gender Identity

Gender Identity	Day Trip (n=465)		Extended Trip (n=139)		Overall (n=604)	
	n	%	n	%	n	%
Female	230	50%	74	53%	304	50%
Male	206	44%	58	42%	264	44%
Non-Binary	5	1%	4	3%	9	2%
Prefer Not to Answer	24	5%	3	2%	27	5%

Note. Gender identity information was not provided by 113 respondents overall, including 80 Day Trip and 33 Extended Trip respondents. Total percentages may not equal 100% due to rounding.

Overall, nearly half of respondents (47%) identified as White/Caucasian (see Table 5). This was followed by individuals who identified as two or more races (14%), Asian (11%), Hispanic or Latino (11%), and Black or African American (9%). While the majority of Day Trip participants identified as White (56%), the Extended Trip respondents reported more variation, with at least 15% of respondents identifying as Asian, Black or African American, Hispanic or Latino, White, or Multi-Racial.

Table 5. Self-Reported Race/Ethnicity

Race/Ethnicity	Day Trip (n=489)		Extended Trip (n=166)		Overall (n=655)	
	n	%	n	%	n	%
American Indian or Alaska Native	24	5%	3	2%	27	4%
Asian	44	9%	28	17%	72	11%
Black or African American	25	5%	34	21%	59	9%
Hispanic or Latino	36	7%	33	20%	69	11%
Native Hawaiian or Pacific Islander	4	1%	-	-	4	1%
White/Caucasian	274	56%	35	21%	309	47%
Two or More Races (Multi-Racial)	69	14%	25	15%	94	14%
Other	13	3%	8	5%	21	3%

Note. Race/ethnicity information was not provided by 62 respondents overall, including 56 Day Trip and 6 Extended Trip respondents. Total percentages may not equal 100% due to rounding.

Day Trip Survey Results

Day Trip Respondent Changes, by Factor

In Table 6, we present the Day Trip pre- and post-program means and standard deviations (SDs) for each of the three factors, as well as the mean difference between the pre-post means and the percent change in the pre-post means. In Appendix D (Tables D1–D3), we provide this information by demographic characteristic for each of the three factors. To interpret the mean scores, recall that the four response options included *very untrue of me*, *somewhat untrue of me*, *somewhat true of me*, and *very true of me*. A mean score of 1 would thus align with *very untrue of me*, while a mean score of 4 would align with *very true of me*. In other words, a higher mean indicates that respondents provided higher self-rating, on average, for items within that factor. On average, Day Trip respondents changed by approximately 10% from their pre- to post-ratings on the *Persistence* factor, 9% on the *Future Science/Career Interests* factor, and 6% on the *Environmental Stewardship* factor.

Paired *t*-test results indicate that there were statistically significant differences in the pre- and post-mean values for all three factors for the Day Trip participants [*Persistence*, $t(407)=8.388$, $p \leq .05$; *Environmental Stewardship*, $t(414)=4.339$, $p \leq .05$; *Future Science/Career Interests*, $t(390)=5.967$, $p \leq .05$]. This means that the change from the pre- to post-trip ratings for all three factors is not likely to be due to chance and that, for all three factors, the overall post-mean score was higher than the overall pre-mean score. To examine changes for each factor by demographic characteristics, we conducted independent *t*-tests based on respondents' self-reported race/ethnicity (white or students of color)⁸ and respondents' self-reported gender identity (male or female only, due to small sample sizes in the other gender categories); a one-way ANOVA was used to examine differences based on geographic location of the school (rural/town, suburban, or city). We did not conduct similar tests based on grade band due to a small high school sample size. For all three factors, there were no statistically significant differences between the groups in any of the demographic categories; for example, there were no statistically significant differences in the pre-post change for *Persistence* between males and females or between white students and students of color.

⁸ Participants were grouped into two race/ethnicity categories of white students and students of color to ensure similar sample sizes in each group.

Table 6. Day Trip Pre- and Post-Program Means, Mean Difference, and Percent Change, by Factor

Factor	<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Persistence	408	3.16	.67	3.36	.65	.22	9.8
Environmental Stewardship	415	3.28	.71	3.41	.72	.12	6.3
Future Science/Career Interests	391	2.74	.83	2.93	.85	.17	8.7

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. The pre-mean value includes anyone with a pre-mean score, and the post-mean score includes anyone with a post-mean score; however, the mean differences include only individuals with both pre- and post-mean scores. Therefore, you may not always be able to replicate the mean percent change shown in the table. For example, if you calculate the percent change for *Persistence* using the values in the table $\{[(3.36-3.16)/3.16] \times 100\}$, you will not get a change of 9.8%.

Day Trip Item-Level Results, by Factor

In this section, we present the item-level response information for the Day Trip pre-and post-trip ratings, organized by each of the three factors. In Figures 1–3, the “Pre” row for each item shows how respondents felt about themselves before the trip; the “Post” row shows how they rated themselves after the trip. (Appendix E provides the same information as shown in Figures 1–3 below, but in table format for the Day Trips.)

Persistence. The percentage of Day Trip respondents selecting *very* or *somewhat true of me* for the four *Persistence* items increased from the pre- to post-program ratings by 2–9 percentage points (see Figure 1). The greatest change of 9 percentage points occurred for the statement, “*I think about ways to overcome challenges when trying something scary*” (item 4; from 72% to 81%). The smallest change was for the statement, “*I like to try new things*” (item 1; from 87% to 89%).

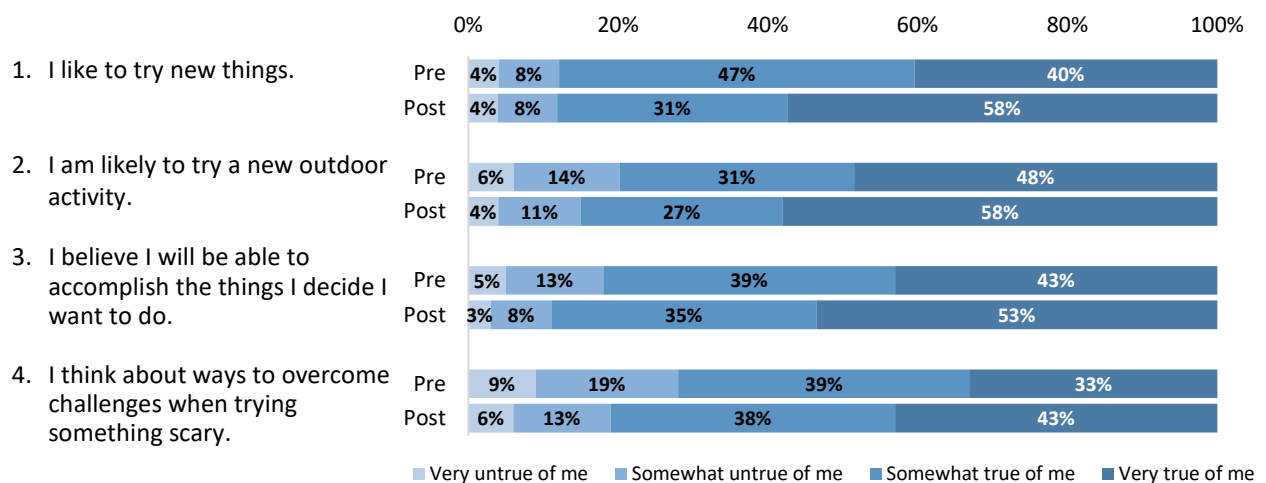


Figure 1. Persistence Item-Level Responses for Day Trip Survey Respondents

Environmental Stewardship. The percentage of respondents selecting *very* or *somewhat true of me* for the three *Environmental Stewardship* items increased from pre- to post-program by between 2–4 percentage points (see Figure 2); each of these items thus reflected a similar, though small, change. The greatest change of 4 percentage points occurred for the statement “*I am interested in helping the environment*” (item 5; from 84% to 88%). Overall, respondents also reported that it is partly their responsibility to care for the environment and that they know something they can do to improve the environment.

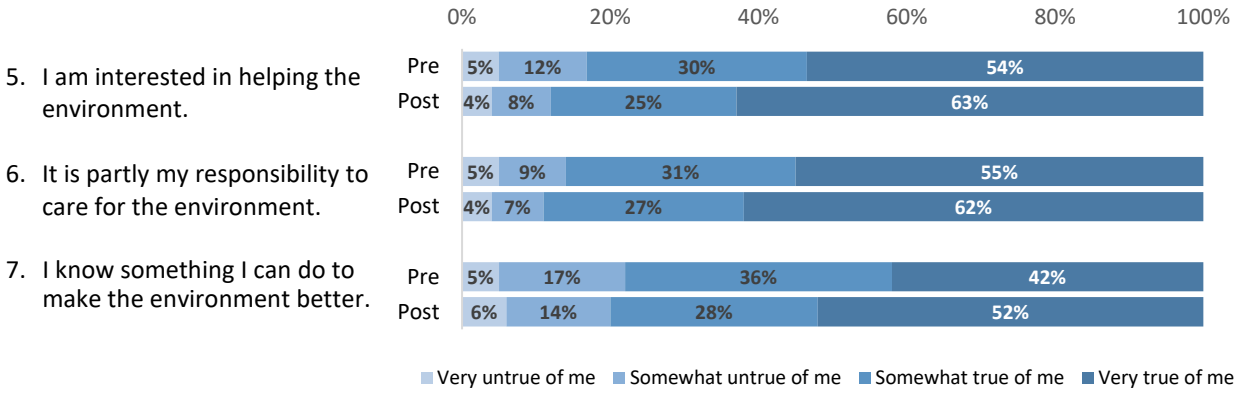


Figure 2. Environmental Stewardship Item-Level Responses for Day Trip Survey Respondents

Future Science/Career Interests. The percentage of respondents selecting *very* or *somewhat true of me* for the four *Future Science/Career Interests* items increased from pre- to post-program by between 5–12 percentage points (see Figure 3). The statement with the greatest change – which was also the greatest change among all survey items for the Day Trip participants – was “*I am interested in jobs where I would work in nature*” (item 8; from 60% to 72%). Overall, respondents also reported that they are interested in jobs that have to do with science, that they are interested in science, and that they would like to go on a field trip where they learn about science.

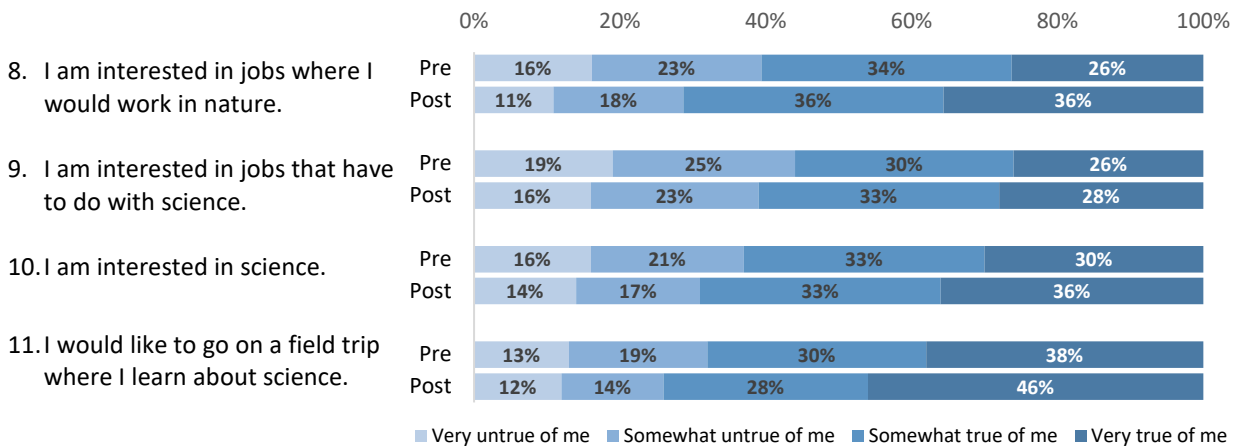


Figure 3. Future Science/Career Interests Item-Level Responses for Day Trip Survey Respondents

Extended Trip Survey Results

Extended Trip Respondent Changes, by Factor

In Table 7, we present the pre- and post-program means and standard deviations (SDs) for each of the three factors, as well as the mean difference between the pre-post means and the percent change in the pre-post means for the Extended Trips. In Appendix F (Tables F1–F3), we provide this information by demographic characteristic for each of the three factors. On average, Extended Trip respondents changed by nearly 12% from their pre- to post-ratings on the *Persistence* factor, 10% on the *Future Science/Career Interests* factor, and 9% on the *Environmental Stewardship* factor.

Paired *t*-test results indicate that there were statistically significant differences in the pre- and post-mean values for all three factors for the Extended Trip participants [*Persistence*, $t(153)=7.330$, $p \leq .05$; *Environmental Stewardship*, $t(151)=6.768$, $p \leq .05$; *Future Science/Career Interests*, $t(156)=6.778$, $p \leq .05$]. This means that the change from the pre- to post-trip ratings for all three factors is not likely to be due

to chance and that, for all three factors, the overall post-mean score was higher than the overall pre-mean score. To examine changes for each factor by demographic characteristic, we conducted independent *t*-tests based on the grade band of the sampled school (middle or high) and respondents' self-reported gender identity (male or female only, due to small sample sizes in the other categories); a one-way ANOVA was used to examine differences based on self-reported race/ethnicity (Asian, Black or African American, Hispanic or Latino, White/Caucasian, Multi-Racial; not all categories were included due to small sample sizes). We did not conduct similar tests based on geographic location due to unequal sample sizes across groups for Extended Trip participants. For all three factors, there were no statistically significant differences between the groups in any of the demographic categories.

Table 7. Extended Trip Pre- and Post-Program Means, Mean Difference, and Percent Change, by Factor

Factor	<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Persistence	154	3.08	.58	3.35	.54	.29	11.7
Environmental Stewardship	152	3.16	.66	3.41	.62	.24	9.2
Future Science/Career Interests	157	2.72	.80	2.90	.83	.22	10.3

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. The pre-mean value includes anyone with a pre-mean score, and the post-mean score includes anyone with a post-mean score; however, the mean differences include only individuals with both pre- and post-mean scores. Therefore, you may not always be able to replicate the mean percent change shown in the table. For example, if you calculate the percent change for *Persistence* using the values in the table $\{[(3.35-3.08)/3.08] \times 100\}$, you will not get a change of 11.7%.

Extended Trip Item-Level Results, by Factor

In this section, we present the item-level response information for the Extended Trip pre-and post-trip ratings, organized by each of the three factors. In Figures 4–6 below, the “Pre” row for each item shows how respondents felt about themselves before trip; the “Post” row shows how they rated themselves after the trip. (Appendix G provides the same information as shown in Figures 4–6 below, but in table format for the Extended Trips.)

Persistence. The percentage of Extended Trip respondents selecting *very* or *somewhat true of me* for the four *Persistence* items increased from the pre- to post-program by 6–14 percentage points (see Figure 4). The greatest change, of 14 percentage points, was for the statement “*I am likely to try a new outdoor activity*” (item 2; from 73% to 87% pre to post). This was followed by a 12 percentage point change for the statement: “*I think about ways to overcome challenges when trying something scary*” (item 4; from 77% to 89%). A third statement increased by 7 percentage points: “*I believe I will be able to accomplish the things I decide I want to do*” (item 3; from 83% to 90% pre to post). Finally, there was a 6 percentage point change for the statement “*I like to try new things*” (item 1, from 87% to 93%).

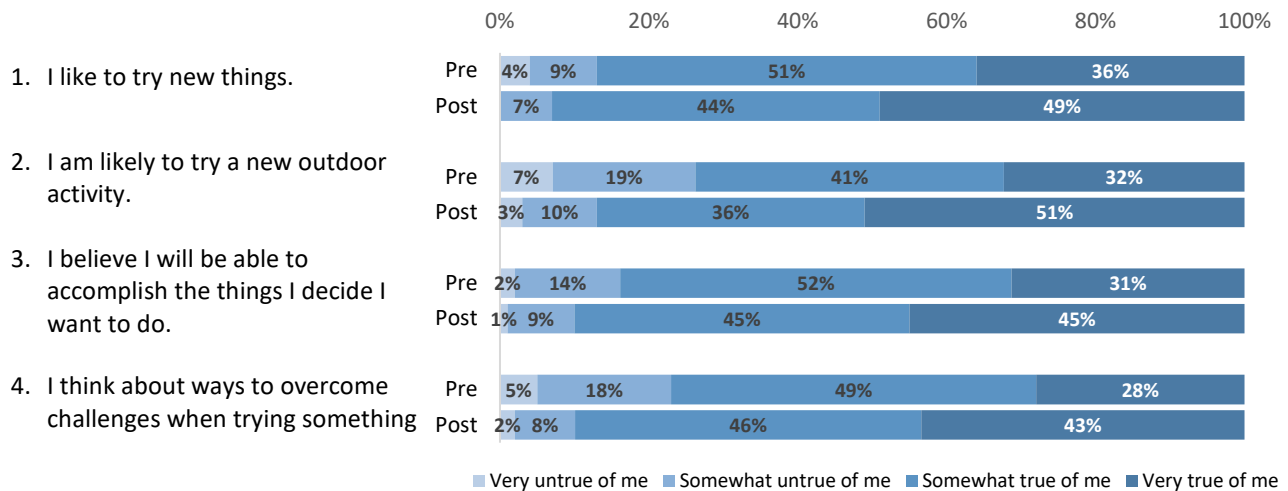


Figure 4. Persistence Item-Level Responses for Extended Trip Survey Respondents

Environmental Stewardship. The percentage of Extended Trip respondents selecting *very* or *somewhat true of me* for the three *Environmental Stewardship* items increased from pre- to post-program by between 6–9 percentage points (see Figure 5). The greatest change of 9 percentage points occurred for the statement: “*I know something I can do to make the environment better*” (item 7; from 79% to 88%). Two items increased by 6 percentage points, including: *I am interested in helping the environment*” (item 5; from 82% to 88%) and “*It is partly my responsibility to care for the environment*” (item 6; from 83% to 89%).

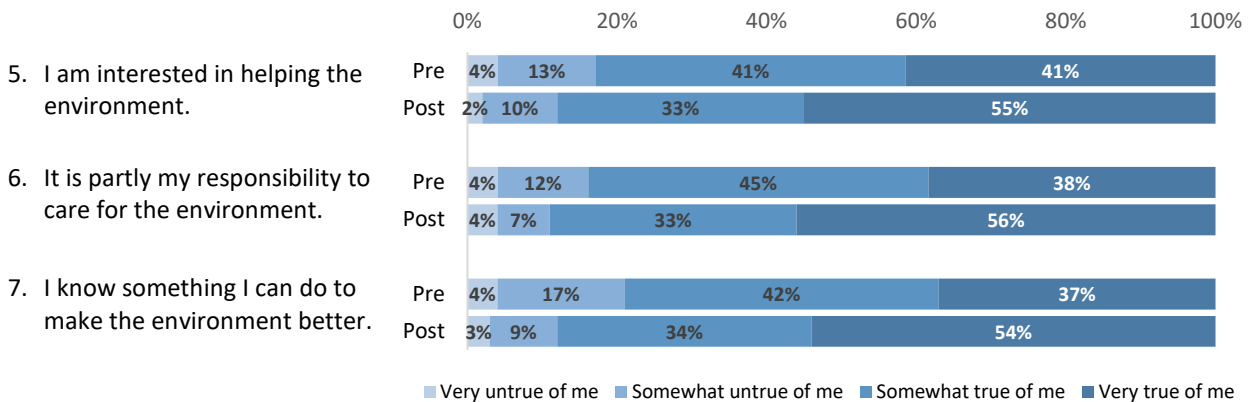


Figure 5. Environmental Stewardship Item-Level Responses for Extended Trip Survey Respondents

Future Science/Career Interests. The percentage of respondents selecting *very* or *somewhat true of me* for the four *Future Science/Career Interest* items increased from pre- to post-program by between 3–16 percentage points (see Figure 6). The statement with the greatest change – which was also the greatest change among all items for the Extended Trip Survey respondents – was “*I am interested in jobs where I would work in nature*” (item 8, from 51% to 67%). Respondents also reported that they would like to go on a field trip where they can learn about science (item 11, from 70% to 77% selecting *somewhat* or *very true of me*); that they are interested in science careers (item 9, from 59% to 65%); and they are interested in science (item 10, from 67% to 70%).

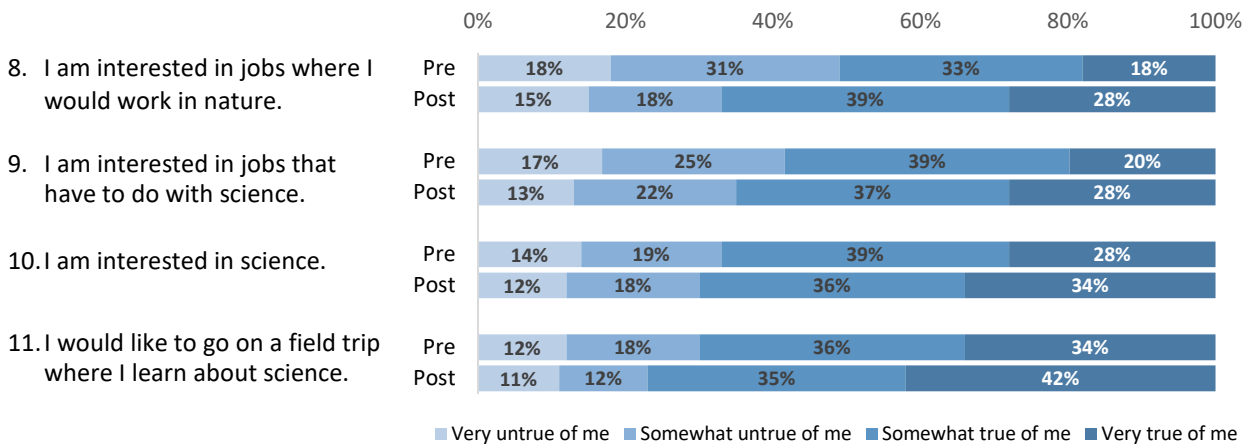


Figure 6. Future Science/Career Interests Item-Level Responses for Extended Trip Survey Respondents

Extended Trip Open-Ended Responses

In addition to the survey items, participants completing the Extended Trip Survey were given the opportunity to offer open-ended responses to two items: “*What was the highlight for you during the trip?*” and “*What was one thing you learned about yourself on the trip?*” In this section, we review separately the responses shared by respondents for each of these items. In our results, we present quotations from respondents in italics. Note that spelling and punctuation may have been edited for clarity, but the meaning and intent of the quotations have not changed in any way by this standardization.

Trip Highlights. Of the 172 Extended Trip Survey respondents, we analyzed responses from 151 individuals who responded to the open-ended item “*What was the highlight for you during the trip?*”⁹ Of these 151 respondents, nearly all shared at least one positive highlight of the trip, while one person said their highlight was “*leaving.*” The highlights that respondents described fell into five broad themes:¹⁰ 1) they enjoyed the trip activities (48%, $n=72$); 2) they valued time with friends, having fun, and having free time (37%, $n=56$); 3) they enjoyed aspects of nature such as seeing wildlife or going to specific nature sites (20%, $n=30$); 4) they liked the food (9%, $n=13$); and 5) they enjoyed learning new things or having new experiences (7%, $n=10$). In addition, 8 respondents (5%) mentioned a range of other highlights that did not fall into larger themes, and 6 people (4%) provided responses such as “*everything*” or “*every day.*” We discuss each of these areas below.

Trip Activities. For nearly half of the youth in the Extended Trip programs (48%, $n=72$), the best part of their experience related to the trip activities. This included canoeing ($n=20$); hiking ($n=19$), with special focus on the night hike; swimming ($n=11$); camping and camping-related activities, such as setting up the campsite ($n=9$) and cooking over the campfire ($n=7$); fishing ($n=6$); and the boat tour ($n=4$). For example, feedback from some of the respondents included the following comments:

I really liked canoeing.

As a group we went on a night hike, and that was pretty cool.

⁹ Responses from 21 of the 172 individuals were not coded due to a lack of clarity or because they did not provide a highlight.

¹⁰ Comments could be coded into more than one theme. For example, if a participant mentioned that two highlights of their trip were spending time with friends and enjoying nature, that individual’s response would be coded into two themes.

Dinner, hiking, and campfire.

Learning how to camp using minimalistic strategies.

Experiencing camping for the first time.

Campfires, canoeing, and exploring.

My highlight was going on a hike, enjoying the view, and canoeing.

Friends, Fun, and Free Time. A second highlight of the trip for the Extended Trip respondents (37%, $n=56$) involved meeting new people, spending time with friends, and having fun. Many of these individuals ($n=21$) specifically enjoyed getting to know the other participants, while many others ($n=15$) described (in a more general way) having fun by spending time with friends. Other highlights for participants included playing games, including Ghost in the Graveyard, Ninja, volleyball, and 500 ($n=13$); spending time with the guides ($n=4$); and spending time in the cabin ($n=1$). Six individuals wrote that their highlight was “*having fun.*” Highlights from some of these respondents include:

I like all the games we played.

The highlight of the trip was getting closer to other people.

Cooking and helping the staff people.

Getting to know people, their personalities.

Being out in nature with new friends.

Making new friends, memories, and experiences.

Being able to hang out with friends and teachers.

Nature. Next, many participants (20%, $n=30$) shared that their trip highlight related to experiences in nature. This included taking in scenic views such as the lake and rock garden ($n=9$); seeing or getting a chance to touch animals, including snakes ($n=6$); stargazing ($n=5$); and visiting waterfalls and rivers ($n=4$). Finally, a few respondents appreciated the opportunity to explore or be in the woods ($n=2$), to visit the park ($n=1$), and to care for the environment ($n=1$). For example, some participants wrote the following:

Looking at the stars and going to the waterfall.

Going under the waterfall in St. Croix.

Hiking and learning about different trees and the views.

Being out in nature with new friends.

Touching the snake and sleeping in a tent.

Food. Fourth, a highlight for participants was the food on their trip, as noted by 13 respondents (9%). In particular, participants mentioned s’mores, brownies, and pancakes. As one participant wrote, their highlight was “*Eating brownies and s’mores.*”

Learning and Trying New Things. Another trip highlight for participants was the opportunity to learn and try new things or visit new places (7%, $n=10$). As some of these respondents shared:

The highlight for me on this trip would be meeting new people and being able to learn new things.

Going new places.

Learning about other jobs that I would like to do some day.

Going to Canada.

Other Highlights. Finally, 6 respondents (4%) described a variety of other highlights that did not fall into the more common themes. These highlights included sleeping ($n=3$), taking a break from technology ($n=2$), and facing one's fears ($n=1$). As some of these participants wrote:

Sleeping and waking up early.

Hanging out with friends without phones.

Counselors teaching and encouraging us to get our hands dirty.

Facing my fears.

Lessons Learned. Of the 172 Extended Trip respondents, we analyzed responses from 140 individuals who responded to the open-ended item "What was one thing you learned about yourself on the trip?"¹¹ These responses fell into four broad themes: 1) they learned about themselves and their own attributes, skills, or needs (39%, $n=55$); 2) they enjoyed or learned about an activity or interest (38%, $n=53$); 3) they learned what they did not enjoy or what they found to be challenging areas for them (23%, $n=32$); and 4) they learned other new knowledge or information (3%, $n=4$). Each of the four identified themes are discussed below.

Individual Attributes, Skills, and Needs. The greatest number of Extended Trip respondents wrote about specific attributes, skills, or needs that they learned about themselves through their experience on the trip (39%, $n=55$). Of those respondents, 28 reflected on themselves positively about talents and traits, using adjectives such as *creative, inclusive, outgoing, social, and brave*. Others reported learning to persevere in the face of fear or challenges and learning to believe in themselves ($n=15$); learning about their own sleeping habits and needs ($n=6$); learning how to relate to the other participants ($n=5$); and learning to take a break from everyday routines or technology ($n=2$). As some of these respondents shared:

I learned that in some moments I can be very extroverted and then my introverted side comes out, but it was nice.

That I care about peoples' feelings.

No matter where you are, you don't need internet to make you happy and you can have fun with people.

I'm a good leader.

I'm better at asserting and explaining my beliefs than I thought.

I can do more than I thought when out of my comfort zone.

I can do whatever I put my mind to.

¹¹ Responses from 32 of the 172 individuals were not coded due to a lack of clarity or because they did not provide a lesson learned about themselves.

New Activities. Extended trip respondents highlighted learning about or enjoying one or more of the activities they participated in over the course of the trip (38%, $n=53$). Specifically, they reported that they learned that they either enjoy being outdoors or that they learned about nature ($n=28$); that they learned about camping in general and specific skills such as starting a fire or setting up a tent ($n=18$); that they learned about or enjoyed canoeing ($n=3$); and that they learned a variety of other skills and activities such as learning how to pack for trips ($n=2$), enjoying hiking ($n=1$), learning how to throw a Frisbee ($n=1$), teambuilding ($n=1$), and learning new games ($n=1$). As some participants shared:

I learned that I love canoeing.

I ended up liking nature way more than I thought.

I learned that there are different trees and plants here.

To overcome anything and start a fire.

It is good for me to be outside for a few days, it gets me relaxed.

I learned that I really love nature.

Areas Participants Did Not Enjoy. When asked what they learned about themselves on the trip, 32 participants (23%) provided at least one example of something they learned they did not enjoy or of areas that were more challenging for them. Many of these respondents ($n=11$) learned about their own habits, such as their tendency to get scared, tired, or easily annoyed. Others reported learning that they did not enjoy the following: nature and the outdoors in general, the bugs, or the cold ($n=9$); particular activities such as canoeing, hiking, or games ($n=8$); or camping, including sleeping in tents ($n=3$). Finally, one person noted that they did not enjoy the trip as much as they expected they would, and another individual did not enjoy traveling with all of the gear. As a few of these individuals reflected:

I am not very outdoorsy.

I learned that I'm actually a scaredy cat.

I don't like camping in the rain or sleeping in a pool.

I dislike forest hikes.

Other Knowledge Learned. Finally, a few participants (3%, $n=4$) described learning other knowledge not described above, including learning about possible careers of interest and that they valued their experience. As some of these individuals wrote:

I really would want to work on a job like the ones they showed us.

How to do new things and learn about nature and keep the environment clean.

I am glad I came because I almost didn't. With that said, I have learned new things and have been given great opportunities.

Wilderness Inquiry Teacher Survey 2019 Results

Demographics of Teacher Survey Respondents

The WI Teacher Survey was completed by 33 teachers. The majority of these teachers reported working in an urban setting (69%, $n=22$); followed by those in a rural setting (19%, $n=6$); and those in a suburban setting (13%, $n=4$). Overall, 42% reported working at an elementary school ($n=14$), followed by 33% who reported working in a middle school ($n=11$), and 27% in a high school ($n=9$).¹²

¹² Respondents could select multiple responses for grade configuration.

Teacher Survey Results

Teachers were first asked to rate their level of agreement to five statements about their students' learning experiences and engagement while on the trip (see Table 8). Nearly all survey respondents either *agreed* or *strongly agreed* with all five items, indicating that teachers believe their students had positive learning outcomes and were interested in the trip activities. Specifically, at least 94% of respondents either *agreed* or *strongly agreed* that their students learned a lot on the trip (item 1), that students learned things relevant to the learning goals of their school (item 2), that they learned about the health of their public lands and waterways (item 3), that they exhibited a high level of engagement during the trip (item 4), and that the trip was a valuable experience for students (item 5).

Table 8. Teacher Perceptions of Students' Learning Experiences and Engagement

Statement	<i>n</i>	Strongly disagree	Disagree	Agree	Strongly agree	Unable to answer
1. My students learned a lot on the trip.	33	-	-	45%	55%	-
2. My students learned things on the trip that are relevant to the learning goals at my school.	33	-	-	36%	58%	6%
3. My students learned about the health of their public lands and waterways.	33	-	-	55%	45%	-
4. My students exhibited a high level of engagement during the outdoor experience (they paid attention, respected others, and participated enthusiastically).	33	-	3%	33%	64%	-
5. Overall, I think the trip was a valuable experience for my students.	33	-	-	30%	70%	-

Teachers were next asked to indicate their level of agreement to five statements about their students' interest in science and the environment as a result of the trip (see Table 9). At least 94% of respondents either *agreed* or *strongly agreed* with four items, indicating highly positive perceptions of the ways in which the trip engaged students' interest in these topics. Specifically, teachers believed that because of the trip, students feel more connected to their public lands and waterways (item 6), that their students are more interested in helping the environment (item 7), that they will be more interested in science (item 9), and that they will be more open to new experiences (item 10). On the other hand, 19% of respondents *disagreed* that students are now more aware of jobs in the outdoors/environment, and 6% of respondents indicated that they *were unable to answer* this item (item 8).

Table 9. Teacher Perceptions of Students' Interest in Science and the Environment

Statement	<i>n</i>	Strongly disagree	Disagree	Agree	Strongly agree	Unable to answer
6. Because of the trip, I believe my students feel more connected to their public lands and waterways.	32	-	6%	53%	41%	-
7. Because of the trip, I believe my students are more interested in helping the environment.	32	-	-	63%	38%	-
8. Because of the trip, I believe my students are more aware of jobs in the outdoors/environment.	32	-	19%	50%	25%	6%
9. Because of the trip, I believe my students will be more interested in science.	32	-	3%	66%	31%	-
10. Because of the trip, I believe my students I will be more open to new experiences, even if those experiences are challenging for them.	32	-	3%	38%	59%	-

Respondents also provided their level of agreement to two statements about their connection to students after the trip and their perception of hands-on field trips as a way for students to learn about science (see Table 10). All respondents either *agreed* or *strongly agreed* that hands-on field trips, such as the WI Floating Classroom Canoemobile trip, are one of the best ways for students to learn science topics (item 12). In addition, the majority of respondents (84%) *agreed* or *strongly agreed* that they have a stronger connection to their students because of the trip (item 11); however, 16% indicated that they were unable to answer this item.

Table 10. Teacher Attitudes and Beliefs

Statement	n	Strongly disagree	Disagree	Agree	Strongly agree	Unable to answer
11. Because of the trip, I feel I have a stronger connection to my students.	32	-	-	28%	56%	16%
12. I believe hands-on field trips like these are one of the best ways for students to learn science topics.	32	-	-	13%	88%	-

Finally, respondents were asked two items about the trip logistics and the trip leaders (see Table 11). Over 90% of respondents either *agreed* or *strongly agreed* that the trip logistics were well-coordinated (item 13) and that the trip leaders were knowledgeable (item 14).

Table 11. Teacher Perceptions of Trip Logistics and Staffing

Statement	n	Strongly disagree	Disagree	Agree	Strongly agree	Unable to answer
13. Trip logistics were well-coordinated.	32	3%	3%	34%	59%	-
14. Trip leaders were knowledgeable.	32	-	3%	34%	63%	-

Open-Ended Teacher Feedback

Teacher respondents were also asked if they would recommend the trip to colleagues (by selecting *yes* or *no*) and then explaining why or why not. They were also asked if they had any final comments about the overall program that they wanted to share. Of the 33 respondents, 26 reported that they would recommend the trip (79%), and no respondents reported that they would not recommend the trip. Several of these respondents explained their response or provided positive feedback about the overall program, while some did not; in addition, several respondents provided overall feedback without reporting whether or not they would recommend the program. In all, 30 respondents provided written feedback that we reviewed and summarize in this section.

The common themes¹³ that emerged from respondents' written feedback related to the following: the valuable and unique learning opportunities for students on the trip (57%, $n=17$); the fun and engaging nature of the experience (40%, $n=12$); the knowledgeable and supportive WI staff (37%, $n=11$); and the well-organized logistics of the trip (20%, $n=6$). In addition, 8 teachers (27%) offered suggestions about how to improve the trip or shared aspects that detracted from the experience. We discuss each of these areas below, and quotations from respondents are presented in italics. Spelling and punctuation may have been edited for clarity or to preserve confidentiality, but the intent of the quotations has not changed in any way by this standardization.

¹³ Comments could be coded into more than one theme.

Valuable and Unique Learning Opportunities

The primary topic discussed by respondents (57%, $n=17$) related to the activities and learning experiences students participated in during the trip. For example, of these 17 respondents, 10 individuals discussed how the trip provided a learning opportunity for their students by offering them the chance to learn more about the outdoors, canoeing, environmental science, and team-building. As some of these teachers wrote:

It was a great learning opportunity. The students loved it. It was hands-on, exciting, and educational.

The students had a great time learning about canoeing and how the river works.

Combining outdoor activities with natural science is a win-win.

Excellent hands on experience....There is nothing like a hands on experience to help students learn and retain information.

Some of these respondents ($n=9$) specifically described how the trip offered students access to experiences they would not normally be able to participate in and that the trip allowed students to take appropriate risks in a safe and supportive environment. For example:

WI pushes our students to take on an individual risk of canoeing and they ensure that every student will achieve this risk – when many students are afraid of water or physically being strong enough, can't swim, or have limited experience with water sports.

They [WI] are great to work with and my kids and staff always really enjoy the experience. Most of our kids would never get the experience to canoe let alone canoe on the Mississippi.

Students in rural areas are no longer the kids who grow up outside. These short but meaningful trips are memorable and can be the boost students need in late elementary school to motivate them for pursuing their passion in science and the outdoors.

Highly Engaging and Fun Trip

Next, teachers discussed how the trip was a fun and engaging experience for their students (40%, $n=12$). Five respondents elaborated further by describing how students were highly engaged by the staff and activities. As a few individuals shared:

The staff was amazing, the experience was incredible. Kids were engaged, it wasn't over the top, it was educational, it was meaningful, it was fun. Absolutely the best field trip....The kids were so in tune after we got back and many wrote they felt more focused for finals.

[WI is a] great way to build a connection with the environment and students.

It was just a great experience. We all learned so much and had so much fun.

The students and I enjoyed and valued the experience immensely.

Knowledgeable and Supportive WI Staff

The third primary theme discussed by respondents was that WI staff members were experienced and able to engage students in the activities (37%, $n=11$). Others appreciated staff members' ability to be flexible and adjust plans as needed. Some of these teachers wrote the following:

WI staff do a fantastic job of engaging with students and making them feel welcomed and capable.

The trip guides were excellent. I was really impressed with their organization and their immediate connection with our students.

The kids had a great day - the leaders were extremely patient and knowledgeable.

Well-Organized Trip

Finally, several respondents (20%, $n=6$) appreciated that the trip was well-organized. For example, three teachers shared:

[The trip] was well-organized and administered.

Everything was wonderful. We really enjoyed the staff, the park, and the great flow of the trip.

We appreciate your knowledge, enthusiasm, and logistical coordination.

Suggestions to Improve the Trip

In addition to positive feedback about the trip, 8 teachers offered ideas or suggestions for improving the trip (27%). Of those, 4 respondents (50% of the 8 teachers) expressed concern that staff members were underprepared or acted inappropriately, given their leadership roles. For example, in one instance, a staff member did not have a first aid kit to assist an injured student, and in other instances there was a perception that some staff members lacked training in how to help younger students understand and connect with the topics of instruction. As these respondents explained:

My biggest concern was that the staff was not equipped with medical equipment. One of my students fell and...no one had any ice packs or anything to help her. We could have brought these kind of items with us, if that was expected. This was never addressed prior to the trip.

My only suggestion would be to prep the staff for work with younger children. I realize most children who work with WI are older than my students, who are 1st graders; however, for the occasions when they are working with younger students I think there could be more staff learning and preparation for what is age appropriate interpretive and instructive language.

Although some of the staff were very knowledgeable about the topics, some of the newer staff were not trained as well and were not. Students and teachers noticed and become less engaged. Sometimes WI staff don't adjust language and teaching style to the grade that they are working with. Students just entering 6th grade may not know what Co2 is etc. Also, some younger students process information differently and if you don't allow them to process it, they will not become curious learners. Be patient with students and how they need to take in information so that you encourage curiosity and continued learning.

Another teacher wrote that while they would still recommend WI to others, they had some concerns about the behavior of some of the WI staff. This person noted:

We have worked with WI for a few years and have always appreciated the care and knowledge the trip leaders have brought to the trip. In the past, we've been grateful for their high level of knowledge in science and also youth development. However, this year's trip was disappointing. During the teambuilding activities, WI staff redirected our students' behavior using methods that don't align with best practices for youth behavior management (yelling, expressing anger/frustration at students not engaging/paying attention, etc.). Additionally, when one group had completed their teambuilding activity ..., a WI staff told them they had cheated by using a material they found...and deliberately destroyed [what] they had built. Our students and staff were surprised by this behavior from WI staff and felt uncomfortable with the partnership.

In addition to recommendations related to staff preparation and behavior, 3 teachers (38% of the 8 teachers who offered suggestions) provided ideas for improving the instructional content of the course by offering more science instruction or other activities. Their comments included:

Please consider making the Mussels Exhibit more interactive rather than Q and A. After the team building, kids become bored easily.

I would love to see WI develop a menu of options for activities on their trips. We've used them A LOT over the last 7 years and they never seem to have anything new to say.

Wish it would've been a bit more educational with the science field.

Finally, of the 8 teachers who provided suggestions or feedback, 2 teachers (25%) described communication challenges related to the trip. Both teachers described a desire for more information ahead of time – one described logistical/scheduling challenges due to a lack of information about the trip, and another described a lack of communication from the program about the fact that there would be a film crew filming the students' trip. This teacher explained that knowing this ahead of time would have allowed them to inform the students' families in the event that there were any privacy concerns. As these two teachers shared:

The coordination of the program was almost non-existent. I tried to reach out several times to the coordinator to see what we needed to have ready as a school and I was unsuccessful. I had to reach out to a principal that I knew already had the program and she gave me some information. Changing lunch times and schedules one day before was chaotic. Then the same day we ended up changing times and lunch times. We were able to manage but this is something that could have been organized ahead of time and prevented frustrations and confusion from teachers and staff.

Another issue that came up (that I have already been in touch with WI about) was the filming crew that was with our group that day. We had not been alerted that a film crew would be filming our trip (if we had known, we would have let students, staff and families know ahead of time in case that would make any of them uncomfortable), and the film crew's presence impacted the process and flow of the trip in a way that made our students and staff uncomfortable....Based on our past experience, we believe that this trip experience was an anomaly and still plan to work with WI in the future. However, if something like this happens again, we will need to rethink our partnership with WI.

Summary

Wilderness Inquiry's (WI) Floating Classroom project aims to connect participants to the natural world through hands-on, outdoor learning and to help youth develop across three specific areas: *Persistence*, *Environmental Stewardship*, and *Future Science/Career Interests*. Participants are able to participate in Day Trips or Extended Trips. To measure the program's progress in meeting its goals, three survey measures were used: two participant surveys and one teacher survey. First, an 11-item WI Participant Survey was administered to a sample of Day Trip participants to measure changes in youth across the 3 factors. Second, an identical survey was administered to a sample of WI Extended Trip participants, with the addition of two additional items in which respondents were asked to share the highlight of their trip and something they learned about themselves. Finally, a 14-item WI Teacher Survey asked teachers about their perceptions of their students' experiences and learning outcomes from their trip, their attitudes and beliefs related to the trip, and their perceptions of trip logistics and the trip leaders.

Overall, 545 participants completed the Day Trip Survey and 172 participants completed the Extended Trip Survey. For both the Day Trip and Extended Trip Surveys, the statement with the greatest change from pre- to post-trip was "*I am interested in jobs where I would work in nature*" (item 8). In addition, for both the Day Trip and Extended Trip Surveys, results show that the change in participants' ratings from pre- to post-trip was statistically significant for the three factors of *Persistence*, *Environmental Stewardship*, and *Future Science/Career Interests*. Analysis of the Day Trip and Extended Trip data found no statistically significant differences between any of the demographic groups for any of the three factors.

The open-ended items on the Extended Trip Survey lend additional insight into those participants' experiences. Of the 151 Extended Trip respondents who provided a highlight of their trip, the majority described how they enjoyed the trip activities (e.g., canoeing, swimming). Other highlights mentioned by respondents included spending time with friends, having fun, having free time; experiencing nature; the camp food; and learning and trying new things. In addition, 140 respondents described a lesson learned, which included learning about their own attributes, skills, or needs; enjoying or learning about an activity or interest; learning about what they did not enjoy; and learning about a new topic.

The WI Teacher Survey, meanwhile, was completed by 33 teachers. Results indicate that teachers had positive perceptions of their students' learning experiences and engagement, students' interest in science and the environment, and trip logistics and staffing. The majority of teacher respondents (79%) reported that they would recommend the trip, and no respondents reported that they would not recommend the trip. Suggestions to improve the trip related to ensuring that a first aid kit is available on all trips, improving staff preparation for working with younger students, addressing some concerns related to staff behavior, improving the instructional content of the course by offering more science instruction or other activities, and improving communication with teachers prior to the trip, especially about the program schedule. Overall, teachers believed that their students had valuable and unique learning opportunities, that the experience was fun and engaging for students, that the WI staff were knowledgeable and supportive, and that trip logistics were well-organized.

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Appendix A: 2019 Wilderness Inquiry Day Trip Survey

WILDERNESS INQUIRY DAY TRIP SURVEY

This is a survey, NOT a test. There are no right or wrong answers. Your responses are optional, but your answers will help make our program better. If you choose not to answer, it won't affect your relationship with Wilderness Inquiry or your school. *Thank you for your help!*

DIRECTIONS. Read each statement below. First, think about how you were before the trip and rate yourself in the **BEFORE TRIP** columns. Then, think about how the trip may have changed you and rate yourself in the **AFTER TRIP (NOW)** columns. Choose the best answer for each statement by completely filling in an oval.

BEFORE THE TRIP					AFTER THE TRIP (NOW)			
Very Untrue of Me	Somewhat Untrue of Me	Somewhat True of Me	Very True of Me		Very Untrue of Me	Somewhat Untrue of Me	Somewhat True of Me	Very True of Me
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. I like to try new things.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. I am likely to try a new outdoor activity.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. I believe I will be able to accomplish the things I decide I want to do.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. I think about ways to overcome challenges when trying something scary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. I am interested in helping the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. It is partly my responsibility to care for the environment.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. I know something I can do to make the environment better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. I am interested in jobs where I would work in nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. I am interested in jobs that have to do with science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. I am interested in science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. I would like to go on a field trip where I learn about science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

• Use a pencil or blue or black pen.
 • Fill bubbles completely.
 • Do not mark answers with Xs or ✓s.

Correct Mark: **Incorrect Marks:**

ABOUT YOU: Completely fill in the oval that best applies.

12. I describe myself as:

- American Indian / Alaska Native Native Hawaiian / Pacific Islander
 Asian White
 Black / African American Two or more races (Multi-racial)
 Hispanic or Latino Other

13. I describe myself as:

- Female
 Male
 Non-Binary
 Prefer not to answer

14. What grade are you in?

- 4th grade 6th grade 8th grade 10th grade 12th grade
 5th grade 7th grade 9th grade 11th grade Other

Appendix B: 2019 Wilderness Inquiry Extended Trip Survey

WILDERNESS INQUIRY EXTENDED TRIP SURVEY

This is a survey, NOT a test. There are no right or wrong answers. Your responses are optional, but your answers will help make our program better. If you choose not to answer, it won't affect your relationship with Wilderness Inquiry or your school. *Thank you for your help!*

DIRECTIONS. Read each statement below. First, think about how you were before the trip and rate yourself in the *BEFORE TRIP* columns. Then, think about how the trip may have changed you and rate yourself in the *AFTER TRIP (NOW)* columns. Choose the best answer for each statement by completely filling in an oval.

BEFORE THE TRIP				<ul style="list-style-type: none"> Use a pencil or blue or black pen. Fill bubbles completely. Do not mark answers with Xs or ✓s. <p>Correct Mark: <input type="radio"/> Incorrect Marks: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	AFTER THE TRIP (NOW)			
Very Untrue of Me	Somewhat Untrue of Me	Somewhat True of Me	Very True of Me		Very Untrue of Me	Somewhat Untrue of Me	Somewhat True of Me	Very True of Me
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>1. I like to try new things.....</p> <p>2. I am likely to try a new outdoor activity.....</p> <p>3. I believe I will be able to accomplish the things I decide I want to do.....</p> <p>4. I think about ways to overcome challenges when trying something scary.</p> <p>5. I am interested in helping the environment</p> <p>6. It is partly my responsibility to care for the environment.....</p> <p>7. I know something I can do to make the environment better</p> <p>8. I am interested in jobs where I would work in nature</p> <p>9. I am interested in jobs that have to do with science</p> <p>10. I am interested in science</p> <p>11. I would like to go on a field trip where I learn about science</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ABOUT YOU: Completely fill in the oval that *best* applies.

12. I describe myself as:

<input type="radio"/> American Indian / Alaska Native	<input type="radio"/> Native Hawaiian / Pacific Islander	13. I describe myself as:
<input type="radio"/> Asian	<input type="radio"/> White	<input type="radio"/> Female
<input type="radio"/> Black / African American	<input type="radio"/> Two or more races (Multi-racial)	<input type="radio"/> Male
<input type="radio"/> Hispanic or Latino	<input type="radio"/> Other	<input type="radio"/> Non-Binary
		<input type="radio"/> Prefer not to answer

14. What grade are you in?

<input type="radio"/> 4th grade	<input type="radio"/> 6th grade	<input type="radio"/> 8th grade	<input type="radio"/> 10th grade	<input type="radio"/> 12th grade
<input type="radio"/> 5th grade	<input type="radio"/> 7th grade	<input type="radio"/> 9th grade	<input type="radio"/> 11th grade	<input type="radio"/> Other

15. What was the highlight for you during the trip?

16. What was one thing you learned about yourself on the trip?

Appendix C: Wilderness Inquiry Teacher Survey Email Invite and Survey

EMAIL INVITE

Hi <First Name>,

We had a great time working with your group during our recent WI adventure! We would appreciate it if you could take a moment to let us know how we did by completing a short online evaluation: **[INSERT LINK]**

Your responses to this survey are very important and will be used to provide successful experiences for future program participants. If you were not on the trip, please send this email to the appropriate teachers/chaperones.

Ready to set up another trip? Let's talk! Email or call anytime.

Sincerely,
[WI Staff Member]

WI 2019 TEACHER SURVEY

Wilderness Inquiry is partnering with the University of Minnesota's Center for Applied Research and Educational Improvement (CAREI) to evaluate its programming. One way to learn more about the program is to hear from teachers about their students' experiences, as well as your own perspectives about your most recent Wilderness Inquiry trip.

This survey is administered and analyzed by CAREI, so no one at Wilderness Inquiry will see your individual responses. In addition, responses will be kept confidential and reported in aggregate only, so no individual can be identified. Quotes may be used, but they will not be connected to any individual. Your responses on this survey are optional, but your answers will help make the program better. Every response is valuable. If you choose not to answer, it won't affect your relationship with Wilderness Inquiry, your school, or the University of Minnesota.

Thank you in advance for your help!

Please indicate the extent to which you agree or disagree with the following statements about your students' learning experiences and engagement on the trip.

Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Unable to answer
1. My students learned a lot on the trip.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My students learned things on the trip that are relevant to the learning goals at my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. My students learned about the health of their public lands and waterways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. My students exhibited a high level of engagement during the outdoor experience (they paid attention, respected others, and participated enthusiastically).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Overall, I think the trip was a valuable experience for my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate the extent to which you agree or disagree with the following statements about how the trip may have changed your students. Because of the trip, I believe my students...

Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Unable to answer
6. Feel more connected to their public lands and waterways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Are more interested in helping the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Are more aware of jobs in the outdoors/environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Will be more interested in science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Will be more open to new experiences, even if those experiences are challenging for them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate the extent to which you agree or disagree with the following statements.

Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Unable to answer
11. Because of the trip, I feel I have a stronger connection to my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I believe hands-on field trips like these are one of the best ways for students to learn science topics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. The trip logistics were well-coordinated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Trip leaders were knowledgeable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Select the grade configuration of your school (select as many as apply):

- Elementary
- Middle
- High

Select the setting in which your school is located:

- Urban
- Suburban
- Rural

Select the grade(s) of your students who attended the trip (select as many as apply):

- 4th grade
- 5th grade
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- 12th grade
- Other

Would you recommend trip participation to a colleague?

Yes. Why?

No. Why not?

Please share any final comments about the overall program (lessons and trip).

Thank you for responding to our survey! Please click on the right arrow key below to submit your survey.

Upon exiting the survey, you will be redirected to the Wilderness Inquiry website where you can find out about additional opportunities and receive a special rate on your next personal adventure.

Appendix D: Day Trip Results by Demographic Characteristics

Note: There were no statistically significant differences between pre-post means for any demographic characteristic.

Table D1. Day Trip Persistence Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Location	City	168	3.14	0.65	3.29	0.69	0.21	9.6
	Suburban	75	3.10	0.75	3.29	0.70	0.16	7.3
	Rural/Town	165	3.20	0.64	3.46	0.58	0.26	11.2
Race/Ethnicity	White/Caucasian	203	3.17	0.67	3.37	0.66	0.22	9.8
	People of Color	161	3.16	0.65	3.38	0.62	0.25	10.7
Gender	Female	173	3.18	0.66	3.41	0.66	0.23	9.6
	Male	153	3.18	0.68	3.35	0.63	0.18	8.8
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	14	2.88	0.86	3.31	0.63	0.30	14.9

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where *n* ≤ 5 respondents.

Table D2. Day Trip Environmental Stewardship Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Location	City	178	3.28	0.72	3.38	0.76	0.11	6.4
	Suburban	76	3.22	0.82	3.29	0.77	0.03	4.5
	Rural/Town	161	3.31	0.66	3.49	0.65	0.18	6.9
Race/Ethnicity	White/Caucasian	207	3.32	0.68	3.46	0.71	0.13	6.6
	People of Color	164	3.24	0.72	3.38	0.70	0.14	6.4
Gender	Female	175	3.38	0.63	3.52	0.65	0.14	6.7
	Male	156	3.19	0.75	3.32	0.74	0.14	7.2
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	16	2.92	1.09	3.33	0.94	0.17	9.4

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where *n* ≤ 5 respondents.

Table D3. Day Trip Future Science/Career Interests Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Location	City	167	2.83	0.80	2.96	0.87	0.17	9.5
	Suburban	72	2.49	0.88	2.68	0.84	0.11	7.9
	Rural/Town	152	2.76	0.83	3.00	0.82	0.18	8.2
Race/Ethnicity	White/Caucasian	197	2.74	0.85	2.96	0.88	0.16	8.0
	People of Color	158	2.74	0.80	2.92	0.82	0.20	9.9
Gender	Female	160	2.82	0.82	3.01	0.84	0.16	8.6
	Male	153	2.67	0.85	2.86	0.89	0.16	8.2
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	15	2.41	0.92	2.85	0.91	0.17	7.4

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where *n* ≤ 5 respondents.

Appendix E: Day Trip Item-Level Responses by Factor

Table E1. Day Trip Item-Level Responses by Factor

Factor	Item	Pre/ Post	<i>n</i>	Very untrue of me	Somewhat untrue of me	Somewhat true of me	Very true of me
<i>Persistence</i>	1. I like to try new things.	PRE	510	4%	8%	47%	40%
		POST	497	4%	8%	31%	58%
	2. I am likely to try a new outdoor activity.	PRE	498	6%	14%	31%	48%
		POST	489	4%	11%	27%	58%
	3. I believe I will be able to accomplish the things I decide I want to do.	PRE	491	5%	13%	39%	43%
		POST	485	3%	8%	35%	53%
	4. I think about ways to overcome challenges when trying something scary.	PRE	491	9%	19%	39%	33%
		POST	485	6%	13%	38%	43%
<i>Environmental Stewardship</i>	5. I am interested in helping the environment.	PRE	494	5%	12%	30%	54%
		POST	482	4%	8%	25%	63%
	6. It is partly my responsibility to care for the environment.	PRE	498	5%	9%	31%	55%
		POST	483	4%	7%	27%	62%
	7. I know something I can do to make the environment better.	PRE	491	5%	17%	36%	42%
		POST	479	6%	14%	28%	52%
<i>Future Science/Career Interests</i>	8. I am interested in jobs where I would work in nature.	PRE	494	16%	23%	34%	26%
		POST	473	11%	18%	36%	36%
	9. I am interested in jobs that have to do with science.	PRE	491	19%	25%	30%	26%
		POST	473	16%	23%	33%	28%
	10. I am interested in science.	PRE	490	16%	21%	33%	30%
		POST	472	14%	17%	33%	36%
	11. I would like to go on a field trip where I learn about science.	PRE	491	13%	19%	30%	38%
		POST	475	12%	14%	28%	46%

Appendix F: Extended Trip Results by Demographic Characteristics

Note: There were no statistically significant differences between pre-post means for any demographic characteristic.

Table F1. Extended Trip Persistence Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Grade Band*	Middle (Grades 5–8)	53	2.93	0.65	3.15	0.64	0.24	11.6
	High (Grades 9–12)	101	3.16	0.52	3.45	0.45	0.31	11.8
Race/Ethnicity	American Indian or Alaska Native	≤5	-	-	-	-	-	-
	Asian	28	3.14	.61	3.42	.49	.28	11.3
	Black or African American	27	3.02	.53	3.29	.61	.32	12.8
	Hispanic or Latino	29	2.92	.51	3.21	.55	.30	12.2
	Native Hawaiian or Pacific Islander	≤5	-	-	-	-	-	-
	White/Caucasian	33	3.25	.41	3.43	.39	.20	7.0
	Two or More Races (Multi-Racial)	22	3.14	.61	3.42	.50	.31	13.4
	Other	8	2.88	.74	3.13	.85	.25	10.0
Gender	Female	66	2.99	0.56	3.34	0.53	0.36	14.4
	Male	53	3.17	0.52	3.40	0.50	0.26	9.8
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	≤5	-	-	-	-	-	-

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where *n* ≤ 5 respondents.

*Grade band was determined by the grade configuration of the sampled school, rather than by using the self-reported grade level of survey respondents.

Table F2. Extended Trip Environmental Stewardship Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Grade Band*	Middle (Grades 5–8)	49	2.87	0.75	3.07	0.76	0.22	10.0
	High (Grades 9–12)	103	3.31	0.56	3.58	0.45	0.25	8.8
Race/Ethnicity	American Indian or Alaska Native	≤5	-	-	-	-	-	-
	Asian	27	3.37	.50	3.64	.39	.27	9.4
	Black or African American	27	2.95	.64	3.23	.75	.35	13.5
	Hispanic or Latino	31	3.13	.58	3.29	.64	.15	5.3
	Native Hawaiian or Pacific Islander	≤5	-	-	-	-	-	-
	White/Caucasian	33	3.41	.47	3.63	.45	.23	7.5
	Two or More Races (Multi-Racial)	23	3.13	.68	3.35	.61	.20	9.2
	Other	6	3.00	.78	3.17	.72	.33	14.6
Gender	Female	63	3.10	0.58	3.39	0.59	0.27	9.4
	Male	54	3.21	0.62	3.39	0.67	0.22	7.8
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	≤5	-	-	-	-	-	-

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where *n* ≤ 5 respondents.

*Grade band was determined by the grade configuration of the sampled school, rather than by using the self-reported grade level of survey respondents.

Table F3. Extended Trip *Future Science/Career Interests* Pre- and Post-Program Means, by Demographic Characteristics

Demographic Characteristic		<i>n</i>	Pre-Mean	Pre-Mean SD	Post-Mean	Post-Mean SD	Mean Diff	Mean % Change
Grade Band*	Middle (Grades 5–8)	52	2.64	0.84	2.72	0.91	0.18	9.2
	High (Grades 9–12)	105	2.75	0.78	2.99	0.77	0.24	10.8
Race/Ethnicity	American Indian or Alaska Native	≤5	-	-	-	-	-	-
	Asian	28	2.63	.80	2.84	.83	.21	10.9
	Black or African American	28	2.75	.90	2.99	.96	.28	11.4
	Hispanic or Latino	30	2.47	.81	2.72	.76	.26	13.1
	Native Hawaiian or Pacific Islander	≤5	-	-	-	-	-	-
	White/Caucasian	34	2.94	.66	3.03	.71	.14	5.6
	Two or More Races (Multi-Racial)	23	2.88	.73	3.01	.81	.15	6.8
	Other	8	2.34	1.03	2.72	1.03	.38	20.6
Gender	Female	66	2.52	0.81	2.77	0.86	0.28	13.3
	Male	55	2.93	0.72	3.02	0.82	0.16	6.4
	Non-Binary	≤5	-	-	-	-	-	-
	Prefer Not to Answer	≤5	-	-	-	-	-	-

Note. The *n* represents the number of respondents who have both a pre- and post-trip self-rating in the factor. Results are not displayed where $n \leq 5$ respondents.

*Grade band was determined by the grade configuration of the sampled school, rather than by using the self-reported grade level of survey respondents.

Appendix G: Extended Trip Item-Level Responses by Factor

Table G1. Extended Trip Item-Level Responses by Factor

Factor	Item	Pre/ Post	<i>n</i>	Very untrue of me	Somewhat untrue of me	Somewhat true of me	Very true of me
<i>Persistence</i>	1. I like to try new things.	PRE	166	4%	9%	51%	36%
		POST	168	0%	7%	44%	49%
	2. I am likely to try a new outdoor activity.	PRE	167	7%	19%	41%	32%
		POST	164	3%	10%	36%	51%
	3. I believe I will be able to accomplish the things I decide I want to do.	PRE	166	2%	14%	52%	31%
		POST	163	1%	9%	45%	45%
4. I think about ways to overcome challenges when trying something scary.	PRE	163	5%	18%	49%	28%	
	POST	166	2%	8%	46%	43%	
<i>Environmental Stewardship</i>	5. I am interested in helping the environment.	PRE	164	4%	13%	41%	41%
		POST	162	2%	10%	33%	55%
	6. It is partly my responsibility to care for the environment.	PRE	164	4%	12%	45%	38%
		POST	163	4%	7%	33%	56%
	7. I know something I can do to make the environment better.	PRE	162	4%	17%	42%	37%
		POST	167	3%	9%	34%	54%
<i>Future Science/Career Interests</i>	8. I am interested in jobs where I would work in nature.	PRE	163	18%	31%	33%	18%
		POST	165	15%	18%	39%	28%
	9. I am interested in jobs that have to do with science.	PRE	163	17%	25%	39%	20%
		POST	166	13%	22%	37%	28%
	10. I am interested in science.	PRE	165	14%	19%	39%	28%
		POST	167	12%	18%	36%	34%
11. I would like to go on a field trip where I learn about science.	PRE	165	12%	18%	36%	34%	
	POST	167	11%	12%	35%	42%	