

SHOWING THE BENEFIT OF OUTDOOR EXPOSURE ON MENTAL HEALTH

Jefferson County, CO

PROJECT INTRODUCTION

Camp ENOR is an Environmental Discovery Day Camp based out of Jefferson County, Colorado. The camp runs for 4 weeks through the summer and serves the Denver Metro Area (Golden, Wheat Ridge, Arvada, etc). The camp promotes youth development through its STEAM themes (Science, Teamwork, Environmental Education, Art, and Math) and consists of four subcamps divided by incoming grade level: Owl's Roost (4th grade), Eagles Nest (5th grade), Falcon's Aerie (6th grade), and Raptor's Retreat (7th and 8th grade).

The goal for this internship was to expand upon the Outdoor Education curriculum by adding a supplemental layer of Mental Wellness Education. This project was piloted with the Raptor's Retreat subcamp and aimed to provide the campers with a mental wellness toolkit. The Raptor's Retreat subcamp was chosen for the pilot due to their increased comprehension levels and flexibility with participation.

The Curriculum

Three out of the five days within each camp session were assigned mental wellness themes. Tuesday's theme was Grounding, Thursday's theme was Mindfulness, and Friday's theme was Gratitude. On Tuesdays, the campers had the opportunity to practice a grounding technique while doing a portion of the day's hike individually. On Thursdays, the campers had the opportunity to practice nature journaling. On Fridays, the campers had the opportunity to practice gratitude journaling. Each activity followed a formula of activity introduction, activity execution, activity debrief/lecture. Journaling was an integral part of each activity.

To track the camper's experience, the campers filled out Pre- and Post-Surveys at the beginning and end of each week. The Pre- and Post-surveys were adapted from the Revised Environmental Identity Scale. Each camper was assigned a number at the beginning of the week when filling out the Pre-Survey and completed the Post-Survey with the corresponding number. Quantitative data was averaged and analyzed in Excel, while Qualitative Data was analyzed using Thematic Analysis techniques.

THE DATA, SUMMARIZED

Timeframe	Average Pre-Survey Score	Pre-Survey Standard Deviation	Average Post-Survey Score	Post-Survey Standard Deviation	Percent Change	Nature Impact on Wellbeing
Week 1	5.67	0.87	5.94	0.84	4.7%	4.6
Week 2	5.3	1.02	5.62	1.01	7.2%	4.3
Week 3	4.85	1.1	5.08	1.14	4.8%	4.07
Week 4	5.08	1.2	5.03	1.6	-1%	4.2
Overall	5.23	1.07	5.45	1.2	4.03%	4.3

Pre-Survey Question 11

- Resource Gathering
- Research
- Curriculum Usage
- State of Being

Post-Survey Question 11

- Resource Gathering
- Research
- Curriculum Usage
- State of Being
- Community Dependence

Pre-Survey Question 12

- Physicality in Nature
- Sensory Engagement with Nature
- Quiet Time in Nature
- Appreciation/Admiration of Nature

Post-Survey Question 12

- Physicality in Nature
- Sensory Engagement with Nature
- Nature for Self-Regulation
- Appreciation/Admiration of Nature

RESULTS

- Overall, the Mental Wellness Curriculum saw a 4.03% increase in mental wellness and pro-environmental attitudes. Every week except for Week 4 saw an increase of 4% or higher. Week 4 saw a decrease of about 1%.
 - All weeks reported high belief that nature has a positive influence over their mental wellbeing
- There was slight evolution to the themes that came from the thematic analysis.
 - For Pre-Survey to Post-Survey Q12, there was a slight increase in campers referencing the skills/principles discussed in the Mental Wellness Curriculum. With this slight increase, Quiet Time in Nature did seem to evolve into Nature for Self-Regulation. Nature for Self-Regulation also involved camper responses where they spoke about self-nourishment, such as eating or sleeping.
 - Other themes for Q12 (Pre- and Post-), Physicality in Nature and Sensory Engagement in Nature, stemmed from the large amount of responses where campers referenced moving and utilization of 4 senses.
 - Some campers, when responding with sensory feedback, would also tie in an admiration of nature with their response. The frequency of these types of responses led to the categorization of "Appreciation/Admiration of Nature"
- From the feedback received, the most popular activity was the Individual Hike. Campers reported that they enjoyed the activity due to the lack of noise. They also reported it evoked calming feelings.

NEXT STEPS

Camp ENOR will continue to use this curriculum in the following years of camp. There are adjustments that can be made to its administration, such as making changes to timing in survey administration or adding Post-Survey questions to the Pre-Survey to allow for expanded data tracking. The collected data will be used to help shape the Mental Wellness Curriculum so it can be applied to the other subcamps operating within Camp ENOR.