Appendix: Assessment Table

Assessment Question	Measure Used in Survey of Student Participants	Results
Learning effectiveness of field trips compared with traditional classroom	Student Rating from Poor (1) to Excellent (4)	Average student rating = 3.7 on a 4.0 scale (N = 20). Average student rating of learning effectiveness of field trips between good and excellent. (See Figure 2a for bar graph.)
	Student Preference (Field vs. Classroom)	A large majority (80%) of students prefer field trips over traditional classroom (5%), with 15% rating their learning effectiveness equal. (See Figure 2b for pie chart.)
	Open-Ended Question	Students express appreciation and enthusiasm for experiential and hands-on learning aspects of course. They repeatedly mention how field trips enhance their understanding of course topics. (See Table 2 for representative comments.)
Learning effectiveness of team-based projects	Student Rating of HighWaterLine Project from Poor (1) to Excellent (4)	Average student rating = 3.5 on a 4.0 scale (N = 20). Average student rating of learning effectiveness of HighWaterLine project between good and excellent. (See Figure 2a for bar graph.)
	Student Rating of Water Quality Project from Poor (1) to Excellent (4)	Average student rating = 3.6 on a 4.0 scale (N = 14). Average student rating of learning effectiveness of Water Quality project between good and excellent. (See Figure 2a for bar graph.)
	Open-Ended Question	Students appreciate the creative aspects of the projects. They benefit from "real-world" application of course topics. (See Table 2 for representative comments.)
Learning effectiveness of social media assignments	Student Rating of Instagram Assignments from Poor (1) to Excellent (4)	Average student rating = 3.6 on a 4.0 scale (N = 20). Average student rating of Instagram assignments between good and excellent. (See Figure 2a for bar graph.)
	Open-Ended Question	Students enjoy using an app they are familiar with to do assignments. They also appreciate the creative aspect of the assignments. (See Table 2 for representative comments.)
Effectiveness of peer leader	Student Rating of Overall Impact of Peer Leader from Poor (1) to Excellent (4)	Average student rating = 3.9 on a 4.0 scale (N = 20). Average student rating of impact of peer leader is excellent. (See Figure 2a for bar graph.)
	Student Benefits of Peer Leader (Academic vs. Social)	A majority (70%) of students benefited both socially and academically from the advice and resources provided by the peer leader,

		while 15% reported academic benefits only and 10% social benefits only. Only 5% of students did not benefit in either aspect. (See Figure 3a for bar graph.)
	Open-Ended Question	Student responses indicate that the peer leader provided essential support for both academic and social aspects of being first-year science student in college. (See Table 2 for representative comments.)
Overall effectiveness of course with transition to urban life	Student Rating of Effectiveness of Course in Transitioning to Life in NYC from Poor (1) to Excellent (4)	Average rating by students from out-of-town = 3.3 on a 4.0 scale (N = 16). (See Figure 2b for bar graph.)
	Open-Ended Question	Students are enthusiastic overall about how the field trips helped them adapt to city life and appreciate the environmental problems unique to the city. One local student, however, did not appreciate the field trips. (See Table 2 for representative comments.)

From article "Promoting STEM Persistence Through an Innovative Field Trip-Based First-Year Experience Course" by Emma Kamen and Alessandra Leri*Department of Natural Sciences, Marymount Manhattan College, 221 E 71st St., New York, NY 10021
*Corresponding author: aleri@mmm.edu, (212) 517-0661.