

P-5220: Collaborative Science Outreach

Grant implementation final report

In the 2024-2025 school year, grant funds from Greeley After-Hours Rotary supported 17 Field Experiences facilitated by the Poudre Learning Center for students attending S. Christa McAuliffe S.T.E.M. Academy. Twelve of these programs were in-school experiences, in which PLC Ambassadors led lessons in McAuliffe classrooms and outdoor spaces surrounding the school. Five of these programs were on-site experiences at the PLC, where students participated in a day-long educational adventure. Together, these programs engaged approximately 900 students across all grades Kindergarten through 8th.

Each lesson used in the programs is aligned to state academic standards and is personally selected by the teacher according to the content being covered in the classroom. Whenever applicable, students used NASA GLOBE tools and resources during lessons to practice scientific data collection, discuss relevant scientific careers, and explore the topic of citizen science. For McAuliffe, the program topics were as follows:

- **Kindergarten:** Animal adaptations and habitats
- **1st Grade:** Bird adaptations, bird nests and habitats, outdoor skills
- **2nd Grade:** Pollinators, animal adaptations, fossils and paleontology
- **3rd Grade:** Water quality testing, aquatic macroinvertebrates, groundwater resources
- **4th Grade:** Animal senses
- **5th Grade:** Native biodiversity, species interactions, aquatic macroinvertebrates, water quality testing
- **6th Grade:** Aquatic macroinvertebrates, water quality testing, watershed modeling, groundwater resources
- **7th Grade:** Native biodiversity, species interactions
- **8th Grade:** Animal adaptations and habitats

McAuliffe students from four grade levels were surveyed after their on-site Field Experience to collect information about the efficacy and impact of PLC programming. Across 323 students, 82% reported that they felt more inspired to take care of nature after their program. 72% of students felt that they could teach a friend something new about the respective content covered in their program. In ten post-program evaluations, McAuliffe teachers rated both the quality of instruction and value of the experience for their students at a 4.8 out of 5. When asked what the highlights of the day were, the teachers praised the hands-on activities,

exploration and observation opportunities, time outdoors, and tools students were able to use like binoculars.

In summary, these opportunities provided by the Greeley After-Hours Rotary were beneficial to participating students, teachers, and PLC staff. Not only did these experiences expand youth's understanding of natural science topics and deepen their relationship with the outdoors, they also strengthened the PLC's connection to S. Christa McAuliffe S.T.E.M. Academy. Additionally, PLC staff gained skills in incorporating outside resources like NASA GLOBE into existing lessons. This is sure to have a lasting impact on future programming opportunities with McAuliffe and other schools seeking similar experiences.



McAuliffe 5th grade students conducting a streamflow test on the Poudre River.



McAuliffe 5th grade students identifying and counting aquatic macroinvertebrates to assess the health of the Poudre River.