



NORTH CASCADES INSTITUTE MOUNTAIN SCHOOL 2023/24 PROGRAM REPORT

Mountain School is our three-day, two-night environmental education program for 5th grade classes that has served tens of thousands of regional students since 1990. While spending time at the North Cascades Environmental Learning Center, students are immersed in hands-on, interdisciplinary lessons and activities focused on ecosystems, naturalist skills, interconnectedness, and more. Participants develop connections to nature and their fellow classmates while becoming inspired to continue learning about public lands and the natural world. *Mountain School was disrupted in the 2023-24 school year due to the Sourdough Fire, which unfortunately necessitated the cancellation of the first half of the program (see page 2 for details).*

▶ Student quotes are from reflective postcards, written to themselves and mailed after Mountain School.

INSPIRATION to continue learning and connecting with public lands and the natural world

“ *I love how the wind fills me up with energy and the view ... it's just beautiful! With the mountains and the lake. Oh! And the snow on the peaks. All I know is that I will miss Mountain School forever!*

– Roosevelt Elementary student

PROGRAM OUTCOMES



SUPPORT SCHOOLS in meeting state and national education standards

“ *Mountain School gives many students in our school the experience of a lifetime. It brings out another side in students and encourages perseverance, a love of nature, and an introduction to the amazing outdoors around us.*

– Centennial Elementary teacher



CONNECTION to nature and fellow classmates through cooperative learning

“ *I am leaving this place happy with new friends and life experiences. I will never forget this... I am so excited for what comes next!*

– Blaine Elementary student



KNOWLEDGE of North Cascades ecosystems and scientific processes

“ *Students really enjoyed learning and were making lots of connections between the curriculum being taught at Mountain School and what they had learned in their classrooms about ecosystems.*

– Madison Elementary teacher



The Sourdough Fire

In the late summer and early fall of 2023, the North Cascades Environmental Learning Center was threatened by the Sourdough Fire, a lightning-ignited wildfire that started just half a mile from campus. Eventually growing to more than 7,000 acres, the fire burned through rugged, remote terrain to the north and west of the Learning Center. We evacuated our staff and program participants in early August and did not regain access to campus until October. While the Learning Center was protected, the impacts of the firefighting efforts and lengthy evacuation led to many repair, clean-up, and maintenance projects that needed to be completed before reopening.

Due to the fire, Mountain School—and the rest of the Institute’s programs held at and around the Learning Center—were canceled through the end of 2023. While we were deeply disappointed to cancel, we provided as much assistance as possible for schools to find other outdoor education experiences for their students.

During the closure, our Mountain School manager and coordinators continued to refine the program’s new curriculum, streamlined behind-the-scenes structures and logistics to enhance the student experience, and developed new place-based, timely, and relevant lessons.

All Mountain School students now participate in a new **Wildfire Management** lesson: from a space on campus where they can see burn scars from the Sourdough Fire, students observe the landscape, make hypotheses about how wildfires grow and move, and learn about different strategies to manage fire.

“Our trail group, The Goats, started and ended our time at Sourdough Creek. After talking about how the creek acted as a fire break for the Sourdough Fire, a student yelled, ‘thank you!’ at the creek. Our whole trail group joined in: *‘Thank you, Sourdough Creek!’*”

The Wildfire Management lesson was well received by students, who frequently mentioned it in their reflective writing as a highlight of their time at Mountain School. As a generation that has spent their childhoods experiencing increasingly severe wildfire seasons and lowland smoke, today’s students are uniquely—and unfortunately—primed to deeply connect with the lesson’s themes and content.

Outcomes & Evaluations

To gauge the effectiveness of Mountain School and assess the impact on students, we conduct post-program teacher surveys.

During the fall closure, Mountain School staff continued refining the objectives for the program’s curriculum, North Cascades Connections. **Teachers consistently rated the program as effective or highly effective at achieving the curriculum objectives:**

97% Develop empathy for others’ viewpoints by collaborating in discussions, participating in team building, and sharing perspectives

61% Understand indigenous presence in the North Cascades region since time immemorial and how indigenous land stewardship practices can be applied during their time at Mountain School

74% Demonstrate interactions using abiotic and biotic factors in an ecosystem to develop and compare models that connect two or more of Earth’s systems

65% Explain the climate in the North Cascades and then make connections about how changes in climate influence phenomena seen in the area

87% Explore real world problems by designing solutions that integrate science, engineering, and care for their natural and human communities



Teachers also reported these benefits:

77% increased comfort and enjoyment being outdoors

68% increased respect for nature

59% increased teamwork and cooperation among students

85% increased understanding of the connection between the North Cascades and their local ecosystem

81% increased awareness of conservation issues

75% increased understanding of public lands and National Parks

76% increased awareness of personal choices on the environment

75% increased understanding of humans as a part of nature



“ I have a student who does not see herself as a learner, and even on the first day of Mountain School she called herself ‘stupid.’ By the end of the second day she was clearly leading the group in inquiry and enthusiasm—she was the most alive I have ever seen her. Mountain School allowed her to see her strengths and discover the joys of learning.

— Parkview Elementary teacher



Participant Snapshot: Spring 2024

1,165 YOUTH participants

55% Students are from **LOW-INCOME** households (qualify for free & reduced lunch)

224 TEACHERS & CHAPERONES

18% Students with **DISABILITIES**

25 Schools in the **NORTH CASCADES** ecosystem served

46% Identify as **PEOPLE OF COLOR**

100% Schools received **TUITION SUBSIDIES**

20% Students are **ENGLISH LANGUAGE** learners

Participant demographics aggregated from Washington Office of Superintendent of Public Instruction data.



Part of our passionate and talented Mountain School team.

Stories & Observations

Mountain School’s impacts are often explained best through qualitative **comments and observations from instructors**. Here are a few from this season:

“While we were on our hike that focused on river formation we happened upon a muddy spot on the trail, where the road crosses over Deer Creek. We stopped to think and talk about how humans have impacted water sources and control where water flows, but also how often water wins out, as evidenced by the puddles that are a hallmark of that trail. In response to this, a student hollered, ‘so water is the boss around here!’”

“After explaining what lichen is to my trail group, a student said, ‘So it’s like a unicorn!’ He went on to explain all the different fantastical creatures that are a mix of two different animals. Because lichen is a hybrid of algae and fungi (and/or bacteria), it holds some magic for that student, and for me as well.”

“One of my personal favorite observations was witnessing students engage and bond with each other in ways they otherwise may not have back at school. When I asked the students in our closing reflection if they had spent quality time and formed new friendships with anyone this week, every student raised their hand.”

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— Institute program instructor

“We formed rivers and watched them flow in the sandbox during our Rivers unit and hands-on activity. The students worked in groups of 3-4 and practiced taking turns, communicating kindly to one another, applying new concepts and terms like erosion and meandering, and presenting in front of the entire trail group. They were able to get creative, utilizing items from nature to enhance their river models: palm-sized rocks as mountains, sticks as bridges, and douglas fir cones as trees. From the details and design I witnessed the students bring to this activity, there may be some future landscape architects in the group!”

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