

Introduction:

Teacher Power, Teacher Impact

*Scholarship from the University of Minnesota's
Climate Literacy Teacher Leader Fellows*

Catherine Cavanaugh, University of Minnesota-Twin Cities, Minneapolis, MN, USA

Nick Kleese, University of Minnesota-Twin Cities, Minneapolis, MN, USA

Abstract

In this introduction, we offer our observations on the first year of the University of Minnesota's Climate Literacy Teacher Leader Fellowship Program—an eight-month professional development program that brought together sixteen in-service Minnesota teachers to deepen their knowledge of climate literacy education and produce scholarship that forms the content of this special issue. What are the possibilities when in-service educators are provided time, space, support, and funding to develop, create, teach, plan, assess, and share climate justice curricular projects? We hope their work in this issue gives you a peek into real-life classrooms in Minnesota that are brimming with ideas, creativity, innovation, and learning.

Keywords

Multidisciplinary climate literacy education, professional development, teacher leaders, preK-12, Minnesota education

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Overview of the Climate Literacy Teacher Leader Fellowship Program

The Center for Climate Literacy's mission is to prepare young people to live well and thrive on a climate changing Earth by transforming education from within. We attempt to advance this mission through several avenues, but the heart of our work is in support of the in-service, classroom teachers who are themselves the core of our education system.

We are not the only organization committed to supporting teachers. UNESCO (2026) named teacher training as one of four pillars in their Greening Education Partnership, their proposal to advance climate literacy education globally. The UN's Sustainable Development Goal 4.7 (n.d.), which seeks to "ensure that all learners acquire the knowledge and skills needed to promote sustainable development" by 2030 (n.p.), includes teacher education and training as a core metric by which to measure progress. Even the World Bank advocates for increased funding for climate education and teacher training (Sabarwal, 2024). These calls rest on an assumption—one that we at the Center share—that no climate education policy or curricular mandate can be effective without well-supported teachers capable of implementing it.

This is why we inaugurated the [Climate Literacy Teacher Leader Fellowship Program](#) (CLTL). Based on a pilot program in the 2022-2023 academic year, the 2025-2026 CLTL Fellowship was designed to equip a cadre of sixteen in-service preK-12 Minnesota teachers to become climate literacy education practitioners, mentors, and leaders in their schools and districts. In effect, it is something between a graduate level course and an extended professional development experience—a combination of scholarly study and practical projects. Once a month, Fellows met in person on the Twin Cities campus to discuss shared academic and literary readings, write and workshop climate literacy curriculum for their own classrooms, and reflect on their experiences implementing them. Together, Fellows reached thousands of students—all while meeting their content area learning standards. They presented their work to their fellow educators, community members, students, and other stakeholders at the first ever Minnesota Climate Literacy Education Symposium in May 2026. Their insights, resources, and materials are recorded in the articles you will read in this special issue.

You will read more from the Fellows in years to come, too. Designed as a three-year program, the Fellowship is meant to support teachers in taking on increasing professional development responsibilities, including serving as mentors to incoming Fellows and leading professional development experiences in their schools and districts.

This “train the trainer” approach is strategic. It accelerates climate literacy education by decentralizing the professional development process while also recognizing in-service educators for the experts and leaders they already are.

There is a final note to make about the ethos of the Fellowship program: we are adamant that participating teachers must be financially compensated for their effort. We are aware, however, that this is a rarity in education. For so long, teachers have been asked—or told—to take on additional labor *pro bono*. Whether it is supervising the concession stand at a basketball game, staying late to help students catch up on homework, or attending additional training, teachers are expected to do so for free because they *love* what they do. We believe that teachers’ love for their work is not mutually exclusive from additional compensation for that work. Moreover, if the climate crisis is to be treated as the existential threat that it is, then we ought to also treat the labor involved in facing it with the same seriousness.

Teaching Climate Literacy in Minnesota

Minnesota, home to the ancestral and contemporary lands of the Dakota, Ojibwe, and Ho-Chunk nations, is a state that prides itself on its more-than-human nature. The cities of Saint Paul and Minneapolis, which together comprise the Twin Cities, have parks systems that are regularly celebrated as among the nation’s best (Trust for Public Land, 2026). Outdoor recreation counts for upwards of \$13.5 billion of the state economy (Explore Minnesota, 2024). However, this affinity emerges in the wake of historical and ongoing violence against the Native Minnesotans who were and are original caretakers of this land. This violence has begot other violence, too: extractive logging and mining industries, pipeline construction, and forever chemical pollution threaten ecological wellness across the state and further exacerbate harms against Native nations and marginalized communities writ large.

This contradiction has a valence in education, too. Despite Minnesotans’ outspoken affinity for the outdoors, there is currently no state mandate to teach climate literacy across content areas. Granted, climate education is included in the state standards for science (Minnesota Department of Education, 2022), based on the [Next Generation Science Standards](#); human relationships with the environment and climate are also thematized in the geography strand of the social studies standards (Minnesota Department of Education, 2024). There is also [Indigenous Education for All](#), a state-wide mandate that all schools include instruction using tribally endorsed resources on Native Nations and Communities within Minnesota, which recognizes Native stewardship of the

land and water (Minnesota Department of Education. n.d.). However, given that academic standards for all content areas are revised on a ten-year cycle, it will be a long while before English Language Arts, Math, Art, and other content areas are required to incorporate climate literacy.

Another reason for the efficacy of the grassroots approach is that it enables educators to create curriculum that responds to ecological issues important to their communities. Minnesota winters are particularly beloved but are also particularly impacted by rising global temperatures. Statewide, over the past 50 years, annual ice coverage has declined an average of 10-14 days, shortening ice fishing and hockey seasons; over the past century, daily average winter minimum temperatures have increased 7.3 degrees, reducing days of snow coverage (Minnesota Pollution Control Agency, 2026). Again, the grassroots approach to climate literacy education enables teachers to adapt—indeed, create—curriculum relevant to their context.

Of course, there are numerous other challenges facing Minnesota teachers. For the 2025-2026 school year, there was no greater challenge than Operation Metro Surge. In December 2025, the Department of Homeland Security began sending thousands of immigration and customs enforcement officials to the Twin Cities area (and soon beyond) in what would become the largest immigration operation ever conducted in the United States. The operation, which has since been labeled a “siege” and “occupation” (Swanson, 2026), left chaos, trauma, and hardship in its wake. On January 7, the day Renee Good was murdered, Border Patrol agents set off tear gas at Roosevelt High School in Minneapolis, just as classes were letting out for the day (McVan, 2026). On January 20, Liam Conejo Ramos, a five-year-old student in Columbia Heights (a Minneapolis suburb), along with his father, was seized while walking home from school (Shockman, 2026). In response, many districts shifted to remote learning even as schools themselves became sites of legal support, food distribution, and other mutual aid. As is so often the case, individual educators stepped in to help organize, facilitate, and offer direct assistance to students and families who were sheltering at home. During this turmoil and its ongoing aftermath, our teacher Fellows worked to support their communities while also remaining committed to infusing climate justice into their classrooms and schools.

In a broader context, this Fellowship occurred at a time when climate, environmental and sustainability education—and education in general—are under attack. Since January 2025, the new administration has taken aggressive steps to dismantle all climate action and policies, defund climate research, and hobble federal agencies such as NASA, EPA,

NOAA, NPS and others, whose mandate was to monitor, study, and protect the integrity of the Earth system in North America and worldwide. Among other things, NOAA's 2024 Climate Literacy Guide was removed from their website. This wholesale attack is compounded by decades of inaction—including lack of educational standards and practices. Yet it also makes each single effort toward climate literacy education more crucial than ever. The hard reality is that no executive order is able to cancel the accelerating climate emergency. All existing research shows that we have entered a period of Earth system shifts that will bring unprecedented economic, demographic, political and other real-life disruptions. Our choice is to design education that empowers young people to understand what's going on, why, and how they can help create the world they want to see. At the Center for Climate Literacy, we are committed to advancing any and all educational initiatives oriented at ensuring thriving and livable futures for young Minnesotans. Our children's futures are not anyone's call but their own.

Facilitator Reflections

We, Drs. Catherine Cavanaugh and Nick Kleese, faculty members at the University of Minnesota's Center for Climate Literacy, supported the Fellows throughout the program. We are both former classroom educators—Catherine taught elementary grades and Nick taught high school English. Informed by our experiences in classrooms and by our scholarly work, we attempted to embody a pedagogy of “guides on the side” rather than “sages on the stage” (King, 1993). In our planning sessions, we often reflected on how providing time, space, and funding to the teacher Fellows allowed them to do what they do best: plan, teach, and assess in caring, authentic, and culturally relevant ways in their own contexts. This special edition is a celebration, showcase, and acknowledgement of how their expertise and brilliance serves students in real-world classrooms.

In addition to providing faculty support to the teacher fellows, we also had a stellar group of guest speakers, or “the Avengers of climate literacy” as one of our guest speakers termed this group, join us for our in-person sessions throughout the year. We offer our deepest gratitude to Cochi Iturralde and Daniel Bryan of [Pachysana](#), Jothisna Harris of [Change Narrative](#), B. Rosas of Climate Generation, Molly Sturges of the [Bakken Center for Spirituality and Healing](#), Jenna Gray Eagle of [Minnesota Pollution Control Agency](#), and Ryan Perez and Melody Arteaga of [Monarcha Movement](#) for their generosity, expertise, and care.

Issue Preview

This special issue is organized into three sections: Secondary Grades, Middle Grades, and Early Grades. The content of the articles varies. Some articles share curriculum and resources. Others offer reflections on practice and pedagogy. There are documentaries, short stories, student works, and more. Collectively, this range testifies to the feasibility of climate literacy education across all grade levels and content areas. The scope also testifies to the creativity, wisdom, and dedication of classroom teachers themselves. We hope this special issue gives you a peek into real-life classrooms in Minnesota that are brimming with ideas, creativity, innovation, and learning. We also hope this special issue inspires many more like it in the days and years to come.

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