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Summer 2025

Climate Literacy in Education

*A pocket journal
for teachers*

Special Issue:
Climate Justice
Education



About *CLE*

Climate Literacy in Education (*CLE*) is an open-access, double-anonymous, peer reviewed journal sponsored by the Center for Climate Literacy at the University of Minnesota and published through University of Minnesota Libraries. *CLE* publishes practical, teacher-oriented content on all aspects of climate literacy education at all grade levels and across all subject areas (primarily K-16 but including teacher education and professional development). We are a pocket journal focused on classroom practice which is why the articles we publish are short: 2000 words or less. Our content is written in jargon-free prose accessible to the general audience. All submissions are peer-reviewed by two anonymous readers. Authors can expect to hear results within two weeks after submission. We publish on a rolling basis.

We welcome submissions in the following categories: Curriculum, Reflections, Critical Essays, and Creative & Multimedia. For detailed submission criteria pertaining to each category, please visit our journal website.

We look forward to working with you!

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Introduction

Why We Need Climate Justice Education

Marek Oziewicz, University of Minnesota, Minnesota, USA

Nick Kleese, University of Minnesota, Minnesota, USA

In the accelerating chaos of summer 2025, it is tempting to surrender to the inevitability of the futures we dread. It is easy to extrapolate a future that emerges from alliances between billionaires and autocrats; a future of technofeudalist overlords enserfing humanity in cyber fiefdoms; or a future in which “market forces” bleed the Earth dry of anything that can be commodified. With the uncanny second coming of the President that had (twice) withdrawn the U.S. from the Paris Agreement, it is easy to quote Yeats’ lines about things falling apart: “The best lack all conviction, while the worst / are full of passionate intensity.” In short, it is easy to forget that the future is yet undetermined.

This remembering is only the first step. It forces us to confront the real question: what will you do to craft a future you want to see for yourself and your loved ones? Do you have the courage to name that dream and keep it alive? It will take tremendous courage indeed. One of the best novels yet to imagine a transition to an ecological civilization is Nick Fuller Googins’ *The Great Transition* (2023). At one point, a teenage wildfire survivor is asked by an older friend: “The world’s ending but it’s not over yet. What’re you planning to do with the freedom you still got?” When Larch shrugs in response, Dr. Alex offers the following suggestion:

Time to start figuring it out... Because you got a future. A good one. I can see that. Anyone can see that. But you got to work for it. That’s why you need to help out. Not for me. Not for those other[s]... down there. For you. I’m telling you, my dude. Helping—it’s the only thing that helps. Be part of something. Join a team. It’s the most human thing we can do. It’s in our DNA. It’s how we shed our skins. Might not be the only way, but it’s a good way (p. 77).

This is the choice we have today. This is the choice declared by [89% of the world's population](#) who care about climate and want to see decisive action taken by governments on securing livable futures. The [89% Project](#) is a partnership between *The Guardian*, *Agence France-Presse* and dozens of other news organizations across the world. We, too, can choose to be part of something. Since January 2025, the new administration has taken aggressive steps to dismantle all climate action and policies, defund climate research, and hobble federal agencies including NASA, EPA and others. The National Ocean and Atmospheric Administration's 2024 guide to Climate Literacy was scrubbed from government sites—its metadata remains, but attempting to access it [results in a "Page Not Found" message](#) and redirects to the CLEAN network. Thousands of scientists, research personnel, conservation workers, National Park Service personnel and other staff essential for studying and protecting the Earth system have been laid off or placed on indefinite leaves. Coupled with the government's invective to cease all activities related to diversity, equity, and inclusion, is the attack on the Department of Education. This includes projects carried out under the auspices of the National Science Foundation and the National Endowment for the Humanities.

On April 4, the Center for Climate Literacy received a note of termination for the NEH-funded Teaching Climate Justice with Young People's Literatures and Media summer institute for K-12 teachers. The three-week institute was planned for June and July 2025. The goal was to provide twenty-four teachers with an opportunity to develop a literature-based, theory-informed, actionable understanding of climate justice for the ELA classroom. Participants would design lesson plans, activities, and learn how to use young people's narratives and media as portals into exploring climate justice issues.

The focus on climate justice—defined as considerations of climate change vulnerability relative to responsibility—was central for two reasons. First, climate justice is the most efficient strategy to reckon with the violence against the planet and its peoples that have shaped ideologies, practices, and institutions responsible for ushering in the climate emergency. Second, climate justice is a key framework for envisioning transformational change for planetary and human health. Since 2022, when the UN General Assembly declared that access to a clean environment is a universal human right (United Nations, 2022), the achievement of climate justice has been acknowledged as one of the biggest structural challenges for solving the climate crisis. This is why a consideration of climate justice was included in the 2022 IPCC Sixth Assessment report. This is why, for the first time ever, an entire chapter on climate justice was featured in the 2023 Fifth National Climate Assessment (USGCRP, 2023). The importance of climate justice will only grow in the years ahead. We were not surprised when we received over 150 applications from all over the country.

When the Department of Government Efficiency (DOGE) shuttered the offices of National Endowment for the Humanities, we were told that “the termination of your grant represents an urgent priority for the administration”—or, rather, that climate literacy education no

longer aligns with the “needs and priorities” of the federal agencies. There will be no federal support for education that empowers teachers, students, and communities to adapt and thrive in a climate-changing world. Instead, as we learn each day, there will be more support for protecting fossil fuel interests. On April 8, under the auspices of “unleashing American energy,” the President signed an executive order that will limit states’ ability to “...sue energy companies for supposed ‘climate change’ harm under nuisance or other tort regimes” (White House, 2025). The United States Secretary of Energy, Chris Wright, the former CEO of Liberty Energy—North America's second largest fracking company—expresses the administration's deeper feelings toward the climate movement, calling it “sinister” (Lustgarden, 2025). Lee Zeldin, the current administrator of the Environmental Protection Agency, has orchestrated a near complete rollback of climate regulations. “Today is the greatest day of deregulation our nation has seen,” Zeldin said when announcing the initiative. “*We are driving a dagger straight into the heart of the climate change religion* to drive down cost of living for American families, unleash American energy, bring auto jobs back to the U.S. and more” (EPA, 2025, emphasis ours). Both Zeldin and Wright’s denial of the climate crisis’s severity is in direct contradiction to previous positions, including during their confirmation hearings.

We launched this special issue because we believe that conversations about climate justice are essential. The accelerating climate crisis cannot be cancelled by an administrative decision. We believe that climate justice education is critical to support young people’s right to livable futures. We are committed to this fight because at stake, really, is everyone’s future. We are also committed because, as teachers, it is our duty to empower young people to develop the values and capabilities they need to design the just, green, regenerative, and sustainable world we all want to see. We are committed to do so together. This is what climate justice is all about.

Climate Literacy in Education was launched in 2022 with a mission to promote resources, materials, ideas, and questions for the teaching of climate literacy as a transdisciplinary capacity. As we have endeavored to do in our five issues so far, this approach broadens the meaning of climate literacy beyond a strictly scientific knowledge to a socioscientific and cultural competence. Crucially, it operates through considerations of climate justice.

This issue collects the voices of teachers and educators, applicants to the cancelled Institute, in response to the question: “Why do we need climate justice education”? It is also the first completely anonymous issue of *CLE*, which the editorial collective opted to do to ensure the teacher contributors remain safe. While deidentified, the voices ring out. They offer us actually taught curriculum, student perspectives, poetic reflections, and demands. We hope these voices will help clarify the need for education that provides students with the contexts and skills necessary to understand climate justice as 1) an essential framework for addressing the socioeconomic, ideological, and other drivers of the climate emergency, and 2) a strategic solution, whose application to considerations of climate change impacts, burdens, and futures is necessary to ensure a just transition to an ecological civilization.

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This is How We Will Survive and Hold Together

A Found Poem: Parable of the Sower by Octavia Butler

High School Teacher
English Language Arts
California

I can take a lot of pain without falling apart
I get a lot of grief that doesn't belong to me.
The officials permitted their town to be taken over, bought out, privatized
Statelines and borders are closed
Leaders who don't know what they're doing
They're still anchored in the past
Waiting for the good old days to come back
A little more hypocrisy to keep the peace.

Sea level keeps rising with the warming climate
Tornados smashing hell out of Alabama, Kentucky, Tennessee
Three hundred people dead so far.
A blizzard freezing the northern midwest.
New York and New Jersey, a measles epidemic.
California, the rain stopped -

Dust dry reservoir.
Too big, too poor, too black, too Hispanic to be of interest to anyone
We're a rope, breaking, a single strand at a time.

There is no end to what a living world will demand of you.
Most of our households couldn't afford another big bill
Most of the dead are street poor who have nowhere to go
Who don't hear warnings until it's too late for their feet to take them to safety
That reality scares me to death.

There's so much to do before it can even begin
All people did was take back things they had given
Change does scare most people
But there's nowhere to go. Not if you don't have money.
We can't live this way!

A community's first responsibility is to protect its children
Now use your imagination
Cool, pale light glows from it
Darkness brightening.
Hang on to your notes
I want to hear some of your poetry
We need you to help us survive here
Your teachers are all around you
I'm not going to let you get hurt.

We can get ready
Get ready to make a life
In spite of the scarcity and the violence
Rebuilding, fortifying, doing whatever we can
Find the rest of what we need within ourselves, in one another.
The essentials are to educate and benefit community
Win back their trust
Kindness eases change
Best to begin by teaching
The weak can overcome the strong if the weak persist.
Imagine that.
Live! We are Earthseed.

In the bright, clear, early morning sunlight
Like looking through a vast, open window
There's a huge, half ruined garden
Where they don't hide the stars
Where we buried our dead and we planted
California native and naturalized plants.
Oak trees
Take root.
The life that perceives itself changing will save you.
We've got work to do building a future that makes sense.

It will work
For we are Earthseed
Anyone can be.



Finding Possibilities in Oral Histories of Local Environmental Change

High School
English Language Arts
Maine

I had not expected climate change to come up. But it did.

Last October, my Environmental Literature class met three community old-timers at the end of an earthen pier jutting from one of the many peninsulas along Maine’s Midcoast. This was our second stop on a field trip focused on the history of the lands and waters in our school district. The goal was to gather grist for poems exploring local intersections of human and natural history, poems inspired by our state poet laureate’s hardscrabble collection *Midden*, about nearby Malaga Island. On the pier, my 11th and 12th grade students huddled against the cold as a member of the historical society spoke to us about how different groups of Indigenous people used the surrounding land over eras spanning millennia. What he said next surprised me.

He pointed to the head of the cove six miles north and described how, when he grew up there sixty years ago, the waters by the shore teemed with shellfish, and lobster buoys filled the cove. He described 150-year-old photographs showing people driving horse-drawn sleighs across the frozen salt waters. Now, though? He told us that now, there are only periwinkles and a scattering of wild mussels and oysters near these shores. Anyone who can afford it drops their lobster pots far down the cove in cooler, deeper water. And the last time these waters froze solid was well before our lifetimes.

This man never used phrases like “climate change” or “global warming”, but his testimony may have been the semester’s most powerful climate lesson. It was for me, at least. It left me to reconsider how, in a rural area like ours, I might teach the climate crisis and climate justice: not through statistical histories but through oral histories. In fact, that is how so many of our area’s farmers and duck hunters, lobstermen and Wabanaki basketmakers pass on their wealth of intergenerational knowledge. Their stories hold decades of climate observations, and because they are stories, where better to share and use them than in the English Language Arts classroom, among the community’s next generations?

Now, as I look ahead to next school year, I aspire for my students to begin our environmental action unit not by reading climate fiction, researching youth activists, or studying local climate data but instead by listening to the stories of community old-timers. I hope that these stories make the climate crisis more personal and reveal the disproportionate impacts that climate change has within our own community, allowing us to envision climate justice locally before situating it within a global movement. As exciting as this sounds, it also sounds daunting to me as one teacher only a few steps into my journey as a climate educator. This is why we need institutions like the Center for Climate Literacy, organizations like the Maine Environmental Education Association, and homespun networks of climate educators: they inspire and sustain us, help expand our individual capacities, and make meaningful climate justice education seem possible.



Climate Justice in Minnesota

Eighth Grade
Language Arts
Minnesota



(L-R) Student art in front of the high school Tipi, tipi sponsored by our Native American Parent Committee and Native American Student Association, outdoor classroom on Bdewakantunwan Dakota homelands.

We, at my school, are blessed to live on the land of the Bdewakantunwan Dakota homelands. It is our job to honor the history of our land.

I understand climate justice as such: the climate crisis affects people differently depending on where they live, their resources, and their ability to recover from disasters. Poor communities often struggle more to rebuild after climate-related disasters compared to wealthier areas. Ensuring fair treatment and equitable distribution of the burdens and benefits related to the climate crisis is essential to making its effects more equal for everyone. In the city where I teach, transportation is easier, allowing for lower emissions, while in Minneapolis, navigating the city can be more challenging. To make a positive impact, we can focus on reducing pollution, using less oil, cutting back on coal power, and shifting toward greener solutions. Taking steps to lessen reliance on fossil fuels and adopt sustainable practices can help fix the world and create a more resilient future.

Our high school offers various ways for students to engage in climate justice and climate literacy. While specific programs aren't explicitly listed online, the school emphasizes student voice, innovation, and meaningful educational experiences. Students can choose clubs that focus on climate issues such as the sustainability club. The Native American Student Association, also known as NASA, is a student-led organization dedicated to raising the voices of Native American students every day in our public schools. Every year, NASA holds several events to celebrate and to educate. Students in NASA coordinate celebrations on Indigenous People's Day at all of our city's schools. NASA students have also had opportunities to visit the prairie farms on the Nation and learn to cook healthy and native foods. Visits to the Prairie Island Buffalo Project are available to students.

He Mni Can, also known as Barn Bluff, is an important cultural and spiritual site for the Dakota people. For centuries, it has served as a place for gathering, ceremonies, and worship. Recognizing the need to preserve this history, the Prairie Island Indian Community collaborated with the city on a multi-year restoration project, which was completed in 2021. This effort ensured the Bluff remains accessible for the Dakota people and continues to be a place of cultural significance for future generations. Beyond restoration, the project also aimed to educate the broader community about the site's historical importance, reinforcing the connection between Red Wing's natural landscapes and Indigenous heritage.



Dakota Restoration Project at He Mni Can

As a teacher in this place, I believe it's essential for our students to understand the deep history of this land—especially the Dakota people. At the same time, climate justice is a necessity due to the treatment of Indigenous people in our city. We have faced climate-related challenges, and our community is actively working toward solutions. From our city's Climate Action Work Plan—which aims to drastically cut emissions by 2040—to the ways we come together after

environmental hardships, I want my students to see that climate action is possible and necessary. In our classroom, we explore local partnerships, sustainability efforts, and the intersection between social and environmental justice to prepare students to be engaged citizens.

I am excited to collaborate with others to enhance my facilitation of climate studies for my students. By incorporating children's literature, biographies, interviews, and personal narratives from the people of our city, I aim to make climate education more engaging and locally relevant. Through storytelling, students can connect deeply with environmental issues, understand diverse perspectives, and recognize the impact of climate change on our community. This approach fosters critical thinking, empathy, and active participation in climate justice initiatives.



Mural dedication



Bees Matter

Kindergarten - Second Grade
Science, Language Arts, and Art
California

You know those rare moments in teaching that stick—really stick—with you? In 2016, I was walking my kindergartners to lunch when I noticed a bee crawling on the ground. This was nothing unusual, as I teach in California’s rural Central Valley. Our beautiful school is surrounded by almond and cherry orchards and grape vineyards. But as we walked, I noticed dozens of bees on the sidewalk crawling or spinning. I wasn’t then a bee expert or lover at the time, but as a human, I felt they were suffering and wanted to help them. And I wasn’t alone. The kindergartners wanted to help them, too.

Together, we started to research bees. Bees around the world are dying, but there isn’t a consensus on the reason why. Experts blame parasites, chemicals, poor nutrition or pathogens. Some blame droughts. Regardless, we have a crisis. I wanted to do something, and the something that I can do is educate... and plant flowers. Turns out, kids also enjoy helping pollinators.

Primary teachers often focus lessons on their local community, so (in my opinion) climate justice is best taught through local issues. Most of my students’ parents are migrant farm workers, so my students are familiar with farming. And with a beehive in a tree on the playground, they know to not upset the bees. What they didn’t know is the importance of our fuzzy friends to us.



Student collecting pollen

Through [art](#), science experiments, [dramatic play](#) and writing, I teach about pollination in my classroom. My hope is by understanding the importance of pollinators, they are enthusiastic about promoting pollination through growing their own flowers at home. And they do—I've been sent many photos of students' sunflowers (I provide seeds in my treasure box) in their own yards. I get it. It's some sunflower seeds in some little hands in a tiny town in Central California. But, just like those seeds, big, beautiful ideas started small.



Student art depicting Super Bee



Climate Justice Is More than a Political Football

Lead Librarian
Texas

Climate justice education is essential because it offers students the tools to truly see the interwoven threads of social and environmental challenges woven by the climate crisis. It's a shift from simply learning scientific facts about a changing climate to understanding its uneven impact, particularly on those communities already facing hardships. This approach encourages a deeper contemplation of historical currents, political landscapes and cultural norms. It's about nurturing informed, empathetic hearts and minds ready to engage actively in their communities.

When the lens of climate justice is missing from education, we risk blindness, ignorance of the disproportionate burdens carried by some, and failure to address the very roots of environmental injustice. Too often, the discourse around climate education becomes muddled, reduced to a question of belief rather than understanding. In some places, like my home state of Texas, the very term "justice" can be tossed about, losing its true meaning in the pursuit of political maneuvering. Students might grasp the science of climate change, yet fail to see why certain populations are more vulnerable or see how systemic inequities shape the environmental realities we face. Our young people need to be equipped to advocate, for themselves and for others, to carry these insights into whatever paths they choose as adults. They need the critical thinking skills to truly grapple with the climate crisis.

Being from Texas, a place I deeply appreciate for its natural wealth, I also feel a growing concern with our changing demographics. Sometimes, the prevailing political winds here seem to dismiss anything touching on "climate" or "justice" as simply part of a political agenda. As educators, we need to find ways to empower our students without getting caught in that crossfire. I envision an educational approach that weaves together different disciplines: science with social issues,

economics, and ethics. This interconnectedness would foster a true inclusiveness, ensuring that climate education is accessible to every student.

Beyond just lessons, we need to help them plan for action, inspiring students to become solution creators. They need to learn to examine the disparities in who is exposed to pollution, who has access to green spaces, and who is most vulnerable to extreme weather. In many communities, the reality is stark: lower-income areas often face more challenges along with fewer resources for adapting and recovering. Within our classrooms, these injustices might even be reflected in our students' own lives— the child with asthma from poor air quality, the lack of safe places to play outdoors. This underscores the urgent need for education that tackles both the causes and the consequences of environmental inequity. We must help them understand that this is the world they will inherit.

By placing climate justice at the heart of education, we do more than just prepare students for a changing world; we empower them to become the architects of a more just and sustainable future. Shouldn't our schools aim to equip students not only to adapt but also to actively shape a better tomorrow? Isn't that, at its core, the aspiration of every educator and every school?



Black Lives Matter in the Climate Conversation

Seventh and Eighth Grade
Science
North Carolina

During the 2015-2016 school year, as attacks on Black people and other communities of color increased in the news, my 7th and 8th graders wrestled with the response of the newly emergent Black Lives Matter movement. Though not completely, their responses were very much along racial lines, with many of my students of color fervently and openly supporting Black Lives Matter, while more of my white 7th grade students arguing for all lives to be centered when the topic came up in our daily student news, project work, or seminars.

Near the end of our unit on climate in third quarter, I decided to utilize Naomi Klein's article "[Why #BlackLivesMatter Should Transform the Climate Debate](#)" with my students. As we dug into the article in a Socratic seminar, I posed the question: "Whose lives in the room were affected directly daily by climate change? Did anyone in the room have to think about climate change all the time?" Once they were over the shock that even their science teacher didn't think about the topic all the time, we were able to have an honest conversation that none of us in this particular classroom did. As we dug further, many students began trying to figure out who did and began referencing the [Zinn Education Project's Indigenous Peoples Climate Summit](#) role play and Klein's film *This Changes Everything*. It was here that students began to identify how the crisis more heavily impacted people of color throughout the world, even though it was the decisions of largely wealthy and white corporations that needed to shift to bring about this change. One student shared: "Remember the climate summit. Those people are affected by climate today, everyday. They are Native Americans, Pacific Islanders, and Africans. They aren't most of us. And they aren't the ones causing the climate to change with big factories or cars or energy." And the next

student echoed this: “The same thing with most of the people in the video. It’s not rich people who are affected. It’s not the people who are destroying the climate.”

Additionally, students agreed that the actions that would help those most affected are the best decisions for all of us too: “Well, if people had listened to the demands of the people at the indigenous climate summit, then the indigenous people who aren’t able to farm or fish anymore or live on their islands, we’d help them a lot and stop climate change. Which would really help all of us too.” Slowly, student after student began making connections of how the principle of “Black Lives Matter” is similar, that centering those oppressed does not diminish others’ lives, it instead focuses and strengthens the conversation towards a shared liberation. In their reflections, a real shift was clear: “Do white people have to think about being white most of the time? It’s kinda like how most of us don’t have to think about being affected by climate change all the time” and “Black lives matter and if we work to stop racism everything would be better. Freedom for everyone is always better. Why wouldn’t stopping climate change be better as well? For the people in the video and for Black people and for everyone.”

It was through this concrete science lesson that these 48 twelve to fourteen year old students were not only able to grow deeper in their climate science knowledge, but maybe more importantly grew in their understanding of racial justice and equity, finally able to grasp this abstract concept and shift their understanding; a shift my teaching partner and I felt throughout the community the remainder of that year.



Planet Protectors

Middle School
Media Specialist
Florida

The following is the transcript of a [student-created podcast](#) about the greenhouse effect.

TRANSCRIPT

Hey everyone, welcome to Planet Protectors. I'm STUDENT.

And I'm STUDENT, and today we're tackling a super important topic that affects everyone, the greenhouse effect.

Yep, it might sound like gardening, but it's actually a big part of climate change. So, let's dive right in while keeping it super middle school friendly.

Okay, so do you even know what the greenhouse effect really is? Kind of... could you explain it really quickly?

The greenhouse effect is when certain gasses in Earth's atmosphere trap heat from the sun. These gasses include carbon dioxide, methane and water vapor.

Oh, so it's almost like an invisible blanket that keeps Earth warm enough to live on...

But here's the problem: humans are adding too many of these gasses, especially from things like burning fossil fuels, which is making the blanket way too thick. That's heating up the planet and causing climate change.

So, I went on vacation with a friend recently. She was talking about how climate scientists are studying how rising temperatures can affect ice melting, sea levels, wildfires, droughts and extreme storms.

Wow.

Yes, she's totally right, and the greenhouse effect is the main reason behind all of that. It's also why leaders around the world are making climate agreements and trying to reduce emissions.

I've been doing a lot of research and found that scientists also track greenhouse gasses using satellites and machines. I assume they're finding ways to reduce carbon using new technology like carbon capture and renewable energy.

Isn't the greenhouse effect bad, though?

It's not bad. It's necessary for life. The problem is [that] people are making it too strong. You know, I assumed that it just wasn't real. Weather changes daily. Climate is long term. Even scientists agree that climate change is happening, and it's caused by people just like us.

Do you really think one person can make a difference?

Of course I do. Small actions equal big impact when lots of people do them.

Okay, here's the good news, there's a lot we can do, even as kids, like turn off electronics and lights when you're not using them walk, bike or carpool when you can reduce, reuse and recycle and plant trees or help with the school garden, and also talking about it just like we are right now.

So, to recap what we covered today: the greenhouse effect keeps Earth warm but too much of it is causing climate change. Scientists are working on solutions, and we can help, too.

Whether it's riding your bike, recycling or planting a tree, you're making a difference.

That's it for now. Thanks for joining us on Planet Protectors. Keep asking questions, keep learning and keep protecting our planet. Bye!



Fascists Fear Education

Why We Need Climate Justice Education Now

Higher Education
Education Policy
Illinois

I recently saw a young person wearing a t-shirt that read: “Fascists Fear Education”. My peal of laughter dispelled my feelings of dread and helplessness—but the respite was brief. The shirt was a bit too accurate in describing the current assault on higher education.

The United States has pulled back on her national and global commitments to addressing the climate crisis, simultaneously dismantling the Department of Education, rescinding grants and contracts to universities, and disrupting life- and planet-saving research across institutions of higher education. And yet, democracy and education are mutually inclusive (Dewey, 1916; Williams, 2017). The mere fact that we are here, in this particular moment in time, when America’s grasp on democracy is tenuous, is itself a failure of public education.

The “problem of sustainability” is “the problem of education” (Orr, 1994, p. 7). Within the United States, the climate crisis is discussed, often poorly, through science (Stoknes, 2014) in terms of earth systems and processes that explain the greenhouse effect or loss of biodiversity. However, the roots of the crisis, namely colonialism and capitalism, are historical and social in nature and linked to the economic, political, and cultural realms of humanity across generations. These complexities have been communicated even less effectively than the science of climate change and are thus not well-understood by the American public. In turn, this has created the conditions that have allowed the pseudo-debate around the climate crisis and its anthropogenic origins to persist. This is a uniquely American problem.

Our fellow global citizens have accepted that the crisis is not only human-driven, but that some of us are more responsible than others. Large, Western, and industrialized countries have

historical and contemporary carbon footprints that eclipse those of the Global Majority. And while the impacts of climate change touch every corner of this globe through the increased frequency of storms and wildfires, prolonged drought, and rising tides, these impacts are not distributed evenly across geographies, nor is their severity and the ability to adapt and mitigate. The poorest and most vulnerable communities, within the United States and across the globe, experience the impacts of climate change most acutely and bear the least responsibility (Bullard, 1983; Islam & Winkel, 2017).

As America abdicates her global leadership position, as well as her responsibilities and duties to other countries, education must fill this vacuum. The pace with which the crisis is changing our world is faster than initially projected. Our curriculum, from early childhood to higher education, must then evolve faster and be oriented toward a hopeful and just future. Our children and communities have the right to learn to live on a planet under pressure which requires that education be an instrument of democracy and free from fear. Those of us who teach must also bravely transform to meet this moment so that all citizens and species of Earth may flourish on a warming world.

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The Story of More

Tenth Grade
English Language Arts
Florida

My students this year asked me if I have personally witnessed climate change, and I was very honest with them: Yes, I have. As a native Floridian, I personally have seen how real estate development has encroached upon the Everglades. I have seen sea-level rise first-hand in Miami Beach, with King tides flooding streets. I have also seen the increase of destructive hurricanes, including Hurricane Andrew, which I lived through when I was thirteen years old.

For the past five years, I have incorporated the book *The Story of More* by Hope Jahren with my English Language Arts students. I start by telling my students that although reading science-based texts can be boring or the technicality of the information can be difficult to understand, Hope Jahren is able to share the history of climate change in such a way that anyone reading the book can understand. She uses history and facts to paint a story of how we, as human beings, have arrived at this point, detailing small changes we each can make to make a difference when it comes to the climate crisis.

As a final project, I have had my students create presentation boards or short videos based on the different sections of Jahren's book: Life, Food, Energy, and Earth. I believe that to truly learn about a topic you should be able to talk about it with others and so I wanted to provide my students with ways to springboard into those kinds of conversations. The result was me giving them a two-part project. Part one: create a button. Part two: create a Public Service Announcement (PSA).

For the button, students could use an image, quote, fact, or a mix from the book for the creation of their button. This allowed the students to be creative, while at the same time allowing them to share their knowledge with students around the school if they were asked about the button. The second part of the project was for the students to create a one-minute PSA based on

facts they had learned from the book and share how people can make a difference when it comes to climate change. Most students created audio clips, [like this spoken word track](#). A few created short videos.

I was so pleased with the variety of ideas and creativity used in making their buttons and PSAs. This project gives me hope for the future of our planet and the consciousness of our youth that our planet is finite, and we can live with less and share more. The young people of our country do care about planet Earth and recognize that science is here to help us make better decisions to preserve what we have for our future.



Example of student-made button



The Pope and I

Third Grade
Math and Science
Florida

I am not Catholic. Yet when Cardinal Robert Prevost became Pope Leo XIII, I was exhilarated, inspired, and hopeful. Here was a man who the *Wall Street Journal* described as “from the U.S., but of the global south” and who has been described by many as “a citizen of the world.”

To achieve climate justice, I believe people need to think of themselves as citizens of the world (or global citizens) and not only as citizens of a town, state or country. Climate justice requires this mindset because our climate knows no boundaries. It relates to taking responsibility for and taking action to ensure the well-being and survival of humans or other living organisms, regardless of where they are located on Earth in this era of climate crisis. It is grounded in the idea that one’s location, characteristics, or station in life should not cause one to disproportionately bear the costs and adverse impacts of climate change or of efforts to reverse or mitigate its effects.

To lay the foundation for climate justice, I work hard to help my third-grade learners understand that we are members of many different and significant local, regional, and global communities that may include family, our classroom, our city, state and country, our fellow beings around the world, and, importantly, our natural world. We learn how important it is to be able to contribute to and function in all of them. This includes learning to respect others’ existence, perspectives and experiences, to communicate constructively with others, to actively support each other, and to value and sustain our natural world.

In practice, building this foundation involves a wide range of activities ranging from a virtual exchange with peers in Mexico to food tastings to meeting with our city’s mayor. With these activities my goal is to set the stage for my students to take action as they develop a sense of responsibility and deep feelings of empathy toward others—ones that extend beyond their immediate surroundings and ones that encompass all beings—just as Pope Leo XIII has done.

Without them, we will not be able to meet our moral obligation to save what Pope Leo's predecessor called "our common home."

In his 2015 papal encyclical *Laudato Si: On Care of Our Common Home*, Pope Francis emphasized that its message was addressed to all people and wrote:

Authentic human development has a moral character. It presumes respect for the human person, but it must also be concerned for the world around us and take into account the nature of each being and of its mutual connection in an ordered system...

The climate is a common good meant for all, and belonging to all...

If present trends continue this century may well witness... an unprecedented destruction of ecosystems, with serious consequences for all of us...

Climate change is a global problem with grave implications: environmental, social, economic, political and for the distribution of goods. It represents one of the principal challenges facing humanity in our day. Its worst impact will probably be felt in developing countries. Many of the poor live in areas particularly affected by phenomena related to warming.

Pope Francis' words from a decade ago capture why I am committed to teaching about climate justice. Pope Leo XIII inspires me to redouble my efforts.



Hope is in Our Hands

Higher Education
Humanities
Minnesota



*T. knitting with mohair wool, on a quilt their
grandma made for them.*

I grew up with my grandma, and she has always been a sewer. She makes quilts, primarily. I grew up hearing the whir of her sewing machine going on downstairs and sitting with her when she was hand stitching the binding. She is a big inspiration for why I love textile and fiber art.

I am a crocheter. My grandma tried to teach me multiple times. At the beginning of my college career, it stuck. I've been crocheting for six years.



*Checkered vest made
with alpaca yarn*

More recently, I was gifted one of her old sewing machines, and so I've been starting to sew. I've been making clothes for myself, mostly.

So much of fiber and textile methods are interconnected. My skills crocheting garments transferred into being able to sew clothes with fabric.



Two sewn dresses

The very act of making something by hand, particularly garments in a world full of fast fashion, is inherently related to the environment, consumption, and climate change.

There is so much fast fashion in the world, and especially in the United States, that we're divorced from the construction of our garments. Most people don't know what it takes to make just a shirt. And often the shirt has been made from synthetic materials, which contributes a ton of carbon emissions.

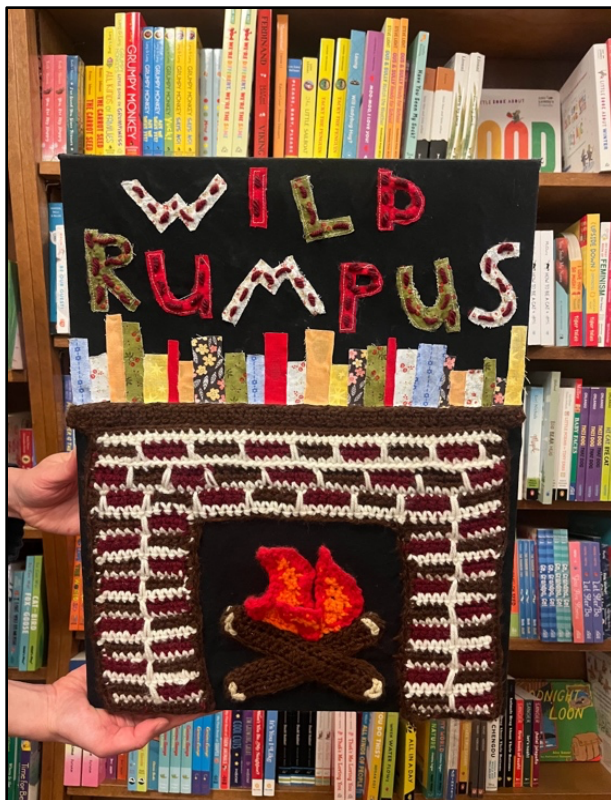
I think about my art as slow fashion, to go against consumerism, because it takes a long time to make one garment, especially if you're knitting or crocheting every stitch by hand.

Each year, the fashion industry creates fourteen times as many garments as there are people in the world. That is mind-boggling to me. There's such a surplus of clothes in the world, and it's not stopping; from 1960 to 2019, textile waste has increased over eight times. It is just not an unsustainable industry, but yet it is one of the fastest growing consumer industries in the world and one of the top three consumer industries for producing carbon emissions.

In college, courses on environmental biology, social class, and pedagogy opened my eyes to environmental racism and environmental justice—especially how certain groups are bearing the brunt of the climate monstrosities, including poor communities and communities with primarily Black and Brown folks. For a group project, we read *Toxic Communities* by Dorceta E. Taylor, which highlighted examples throughout the country. Communities don't have any say in a factory being built, or they get money incentives to have this factory in their community. Years later, they notice various health effects, like higher rates of asthma and cancer.



T.'s capstone project for an art and identity course



Fiber art T. created for bookstore catalogue

I work at an indie bookstore in my city, and it is very community-minded—not only regarding the people who work there, but for the greater community, too. This is a place for joy, love, books, and people who love books. In this age of book banning, we are wanting people to read whatever they want and feel supported and loved in those choices.

The free little libraries are also giving me hope. I am so grateful to live in a city where literacy is valued. The little libraries are community-centered, and a lot of times they're done with so much care.

I just read *The Service Berry* by Robin Wall Kimmerer. She wrote about gift and circular economies, where things go round and round, and it's not transactional, money changing hands and ownership but spreading the wealth in the community. For instance, my friend's birthday is coming up soon, and every year she does a clothing swap. That is a beautiful example of how we *do* have resources that we can share.

And making art with my friends, you know?

Yeah, so this is what's giving me a lot of hope.



Daily squares

ATTENTION HUMANS!

Planet Earth
Milky Way Galaxy

And now a word from Planet Earth...

Ahem...

ATTENTION HUMANS!

You do not have a climate problem. You have a human problem. All life is connected. So the greed and willful ignorance of a few humans is going to hurt all humans. But guess which humans are already suffering first? and most?

This message from your Really-Trying-to-Help-You Earth was NOT brought to you by the Department of Government Efficiency.

Well, now it's up to them.

If I had fingers,
I would cross them.