

# SPOTLIGHT FROM THE FIELD:

# **Berkeley Heights Township Public School District**

LaMicah Lindsey and Rachel Renbarger

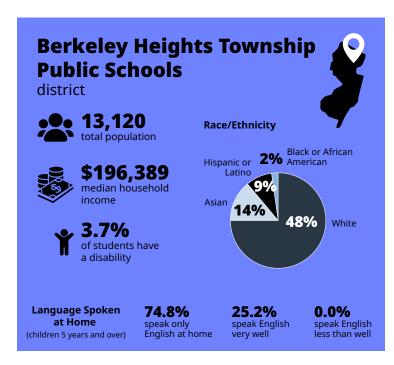
Education systems must equip young people with the knowledge and skills they need to address the long-term effects of climate change, which they will feel for the rest of their lives.

To advance climate change education in the United States, FHI 360 proposed four research-based strategic recommendations:

- Enact policy to support climate change education at national, state, district, and school levels
- Provide access to high-quality curricula and materials that are grounded in scientific evidence.
- Support educators with training and professional development.
- Scale up out-of-school time and work-based learning models.

This spotlight shows one school district's actions in these areas, exploring first steps, successes, and challenges. We hope this example helps other districts and states develop their own vision for advancing climate change education and prepare their students for a more sustainable future.

In the Berkeley Heights Township Public School District (BHPS) in New Jersey, many students attend school on a lush, green 43-acre campus surrounded by nature. But it wasn't until 2020 that all New Jersey students needed to learn about climate change. That was the year New Jersey became the first state in the country to incorporate climate change education standards in all grades and across multiple subjects. According to the New Jersey State Department of Education, the standards are "designed to prepare students to understand how and why climate change happens, the impact it has on our local and global communities and to act in informed and sustainable ways." However, having standards is only part of the equation. This spotlight explores how BHPS is strengthening climate change education by creating a district-wide vision, activating student engagement in an after-school



environmental club, and drawing on key partnerships and professional development that takes climate change education beyond the science classroom. BHPS demonstrates how districts can take initial steps to shift climate change education from a school-based approach to a district-wide approach without statewide support.



All photos by Jessica Scranton for FHI 360 of students and staff of Durham Public Schools in September 2022.

#### **GOING BEYOND THE STANDARDS:** WHAT STATES CAN DO

State policymakers are critical assets in improving district-wide climate change education, as **they** are responsible for selecting science standards and determining educators' access to essential **support**. Statewide standards are a crucial first step, but they do not include what states can or should do to ensure climate change instruction happens in every classroom. New Jersey encourages districts to use state and local grants to support climate change education since funds are not allocated to support these policies (and the state does not ensure implementation of climate change education). The New Jersey Department of Education website provides a host of educator supports from kindergarten through 12<sup>th</sup> grade. Resources focus on climate change's impact on New Jersey, student advocacy and science opportunities, organizations in New Jersey that support climate change education, sample climate change units, and evaluation of climate change instructional materials. There are several other next steps that a state could take, including providing all districts with funding for professional development or highlighting district models and exemplars to accelerate implementation.

Strategic recommendation: Out-of-school time and work-based learning models

### Tapping into Students' Enthusiasm Outside the Classroom

Many schools and districts have climate change education champions engaging students in fun, evidence-based climate change activities outside of the school day, supplementing the traditional school day and providing students with opportunities to benefit from interdisciplinary programs, learn about climatefocused careers, and increase their science identity. At Berkeley Heights' only high school, Governor Livingston "We need to respect the students" ideas more. My big takeaway is, just get out of the way of the students. Let them go. Let them figure it out."

- Environmental Club advisor Lara Mendenhall

"As someone who's kind of a product of all these different opportunities, I'm so grateful honestly for my teachers and for them extending these opportunities to me. Just having these opportunities has brought me to a different level, where I feel like I'm really set for a career in general. I've done so much project work and talked to so many different people."

- Former Environmental Club President

High School, the **Environmental Club** is advised by Lara Mendenhall, an environmental science teacher and renowned educator, Mendenhall, who has been with BHPS for more than 10 years, noticed the lack of environmental initiatives in the district and wanted to make a difference. Through her environmental science course and the Environmental Club, she was able to identify students with a passion for environmental stewardship.

#### GOVERNOR LIVINGSTON HIGH SCHOOL'S **ENVIRONMENTAL CLUB INITIATIVES:**

- Educating students in the club, other schools in the district, and the broader BHPS community on environmental issues and on plant and animal species native to New Jersey.
- Creating climate-friendly solutions on school properties, such as native plant rain and pollinator gardens and an arboretum on campus.
- Volunteering with like-minded and local environmental organizations such as the Berkeley Heights Environmental Commission, Watchung Reservation Trail Stewards, and Great Swamp Watershed Association to accomplish club goals.
- Advocating for sustainability policies at the district and state level through petitions to the district Board of Education and state legislature.

The club started with only a handful of students and has evolved to include more students every year. Club members also reached out to lower grades, visiting the district's elementary and middle schools to spread awareness about climate change through planting trees and teaching younger kids about the state's native plants and wildlife. The club helped engage students in climate change initiatives that they might not have been exposed to otherwise. For example, through a partnership with Rutgers University and the chairman of the local environmental commission, the club created two rain gardens on the high school campus. These rain gardens are now maintained by the students, who gained new insights about both native plant species and careers in environmental education. A former president of the club stated, "As someone who's kind of a product of all these different opportunities, I'm so grateful honestly for my teachers and for them extending these opportunities to



me. Just having these opportunities has brought me to a different level, where I feel like I'm really set for a career in general. I've done so much project work and talked to so many different people."

The club has been popular among AP Environmental Science students, but the district recognized that the perception that the club is just for those students may have limited the club's diversity. To help address this, the club plans to engage elementary and middle school students by hosting events and activities during the school day and outside of school hours to expand opportunities beyond the high school walls. Educators who want to engage students through out-of-school time opportunities should build student momentum with one group of students, help create district-wide support, and then expand with the help of community members and local organizations and universities.

Strategic recommendation: Policy to support climate change education at multiple levels

## Collaboration Leads to District-Wide **Policy**

Districts must bridge the gap between broader statewide recommendations (i.e., standards) and how each teacher and staff member implement those recommendations. In this regard, BHPS district staff noted that developing a district-wide shared vision on sustainability was challenging due to staff turnover and teacher burnout. Environmental Club advisor Mendenhall found that leveraging student voices was a more proactive first step for enacting broader change.

At Mendenhall's suggestion, the Environmental Club wrote petitions calling for the district Board of Education to create a district-wide policy on sustainability. To make sure their views were reflected in the district's plan, club members created model projections and budget information on sustainability practices and developed a report to present to the Board of Education. For example, students documented how switching to more energyefficient LED bulbs would save thousands of dollars over the next decade. The combination of student passion and money savings helped board members realize there was no reason to not consider sustainability in all district decisions. As the interim superintendent Robert Nixon stated, "It's hard for people to not want to get behind students who are passionate about an initiative."



After the Environmental Club's presentations and multiple conversations, the club, administrators, teachers, and community members worked together to codify this shared passion into a formal policy called the Green Initiative. The initiative is a five-year district plan outlining primary goals, action steps, and outcomes that incorporate sustainability into K-12 education by ensuring that climate change education standards are addressed. Launched in fall 2023, the Green Initiative encompasses sustainability broadly, including environmental infrastructure such as charging stations. One sub-goal of this initiative is to establish a Green Team Task Force within each school to work toward the districts' sustainability goals. The task force consists of teachers, administrators, students, and community members. As the initiative is relatively new, Governor Livingston High School is currently the only school that has piloted a task force. Members of this task force were selected based on their involvement with the state's climate change education standards and their passion for addressing climate change. In the coming months, the district science specialist, superintendent, Green Team coordinator, and the Environmental Club advisory board will discuss strategies for creating task forces at each school and define their roles at the district level.

The district-wide vision for improving climate change education has led to some successes. The district seized the opportunity to apply for local funding, winning a \$6,600 Climate Awareness Education grant to jumpstart their district-wide initiatives to implement climate change curriculum standards. With this grant, BHPS was able to purchase hydropower kits, wind turbine kits, solar-paneled toy cars, CO2 monitors, water quality testers, and climate-fiction novels for English teachers. More successes have come from the broader educational community. For example, a facilities staff member was awarded a grant to install LED lights throughout the entire district, significantly reducing energy consumption and the need to replace traditional incandescent bulbs. Local community members also sought funding that provided tree saplings to help the district's replanting efforts. Even though the BHPS community has supported climate change education and sustainability efforts in previous years, the district policy has now engaged more individuals and led to concrete plans to ensure progress beyond the enthusiasm of a few champions. Part of this progress includes providing new educators with highquality professional development across the district.

# Strategic recommendation: Training and professional development

"Anyone, anywhere, can be a climate action teacher; climate education is not just the responsibility of science or environmental science teachers. We must teach climate education throughout all disciplines, including language arts through climate fiction novels and physical education through discussing how climate change affects sports and outdoor activities. We have to empower our teachers to inspire our students."

- Green Team Coordinator

## **Equipping Teachers in All Disciplines**

Because district policy states climate change should be taught in all K-12 classrooms, BHPS has acknowledged the importance of providing climate change professional development to help teachers effectively incorporate the new standards. As a result, the district's Green Team Coordinator, Dennis Dagounis, now provides annual professional development specifically for second-year teachers over three days before the school year begins.

In one of the professional development sessions, elementary, middle, and high school teachers covering various subjects learn about implementing the new standards and explore resources that include hundreds of climate change education lessons created by teachers for all grades and disciplines. Participants work in small groups around six large posters, each centered on a climate change topic such as rising sea levels, severe weather, consumerism, and new technologies. Surrounding each main topic are bubbles labeled with different disciplines (e.g., English language arts, science, math, world languages, social studies, physical education/ health, performing and visual arts, computers, and design and thinking). Teachers brainstorm ideas at each poster for incorporating climate change into lessons across various subjects. The session concludes with a review of these ideas and discussion on how to create lessons from the topics.

The district decided to focus this professional development on second-year teachers after determining that the new initiative would be better suited for teachers who are not in their first year. But now, there is talk of expanding the training to all teachers in the entire district. This professional development serves as a first step to help teachers become familiar with climate change content, which is often cited as a barrier to climate change education work.

BHPS prides itself on forging partnerships with climatefocused organizations to help build capacity. These collaborations provide professional development for administrators, teachers, and staff, enhancing the district's commitment to climate education. Take Action Global (TAG) stands out as one of BHPS's most prominent partners, offering evidence-based resources and insights into promising climate change education practices (see box on next page).





#### HOW A KEY PARTNER SUPPORTS PROFESSIONAL **DEVELOPMENT**

TAG is an education nonprofit and United Nations partner that seeks to "[empower] students, teachers, and partners, to reverse climate change and realize environmental justice for all." TAG became a key partner for climate change education in New Jersey because of the support from the state Department of Education, which provided school districts with grants to enact climate change education in self-directed ways. BHPS applied for a scholarship through TAG to receive professional development from TAG for interested teachers as part of its Climate Action Schools program, which includes:

- 10-month synchronous virtual programming featuring climate change pedagogical strategies
- An online global community of teachers
- Opportunities for students to interact with climate science leaders, such as those from NASA and the LEGO Build the Change Institute
- Ongoing professional development opportunities for teachers interested in specific climate change content knowledge in follow-up years

TAG fosters district systemic change by obtaining administrator support for teachers across grade levels and subject areas to participate (e.g., stipends, substitute teachers), as well as ensuring that the climate change projects align with state standards and can be woven into existing curricula — without adding to teachers' workload. TAG helps coordinate formal certifications, continuing education credits, or university credits based on teachers' completion of the program. TAG also works with district and school administrations to identify passionate educators across grade levels and subject areas. The organization further promotes systemic change by helping teachers find community partners to support classroom or school projects. Working with local organizations and scientists gives schools access to resources and the expertise of people invested in the district, as well as additional advocates for continuing climate change education work.

Advocating for sustainability policies at the district and state level through petitions to the district Board of Education and state legislature.



## **Key Takeaways**

BHPS offers important insights that districts can use to further their own climate change education efforts. Specifically, district staff and educators can consider the following recommendations:

- 1. Engage students in out-of-school time instruction to provide them with active and interdisciplinary climate change education that connects them to their environment and teaches them skills for climate advocacy.
- 2. Empower students and community members to codify the climate change education work in district-wide policy to ensure the work continues beyond a few dedicated climate champions.
- 3. Partner with organizations, particularly those that have high-quality professional development, to support teachers' instruction.