

ADAPTATION & RESILIENCE

The COVID-19 pandemic has highlighted the need for the public education system to become significantly more resilient in the face of disruption. The pandemic has also exacerbated underlying inequities for students of color and low-income students. Likewise, the impacts of climate change — from floods to heat waves to wildfires — are already disrupting schools across the country and similarly exacerbating inequities. Schools must proactively adapt to these worsening climate impacts, anticipate likely climate risks related to health and learning, and support students as the impacts of climate change worsen.



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.

Climate change is leading to an increase in the frequency and severity of extreme weather.¹ Hurricanes, wildfires, flooding, and high heat have impacted schools and communities around the country — a trend that is predicted to continue. In their wake, these extreme weather events bring trauma, uncertainty, and destruction to communities, families, and schools.

The worsening effects of climate change will take a toll on students' mental and physical health, as well as their opportunity to learn. The community-wide trauma experienced in the wake of extreme weather events impacts children and youth as they experience and witness loss, damage, and dislocation.² Air pollution and poor air quality contributes to the development of asthma.³ Heat impairs student learning, with a disproportionate effect on Black and Latino students, and heat waves have increasingly pushed schools without sufficient infrastructure to close for "heat days."⁴

Yet, considering the opportunity for schools to adapt and be better prepared for the worst impacts of climate change can also help them build resilience and serve as community hubs of climate resilience. By leveraging schools as foundational pillars in every community and equipping them with sustainable infrastructure, clean energy, and essential services, schools can retain critical functions in the event of severe weather and provide shelter and support to community members.

Impact of Climate Change on Health and Learning

One of the most widespread impacts of climate change is rising heat and an increasing number of hot days each year. By the middle of the 21st century, most areas in the United States are predicted to experience 20 to 30 more days per year with temperatures 90°F and higher.⁵ Significant portions of the country will also experience many more days above 100°F each year, with much of the south predicted to have more than 50 per year by the end of the century.⁶

Increasing heat waves and poorer air quality can be especially dangerous for children's health due to their ongoing physical and behavioral development.⁷ Specifically, climate change can result in increased prevalence of asthma and allergies. Asthma already affects over 5 million children and youth under age 18, with Black children being twice as likely as white children to have asthma.⁸ Students with asthma experience higher rates of absenteeism, which impacts their learning.⁹ Children are also particularly susceptible to heat-related illnesses, especially if they have chronic health conditions such as asthma or diabetes.¹⁰ Heat, droughts, snowmelt, and sea rise will impact the availability of safe and healthy food and water which in turn can impact brain development.¹¹ Indigenous children and communities often face particularly high health risks related to the impacts of climate change on water quality, air quality, and food access, in both urban and rural settings.

Rising temperatures due to climate change are also increasing the number of students who attend school in heat islands.* In 2019, the Trust for Public Land found that 36% of the country's 50 million public school students attended school on a heat island.¹³ Between 2013 and 2019, there was a 32% increase in the number of students attending schools that were 10°F hotter than surrounding areas, and low-income students are more likely to attend schools in heat islands than non-low-income students.

Research shows that heat has detrimental effects on student learning, which schools need to consider as they adapt to climate change.¹⁴ In the last several years, schools across the country have already had to close or adjust their schedules in response to extreme heat and buildings without air conditioning.¹⁵ This leads to lost learning time and reduced access to school-based supports

and activities. School closures due to heat disproportionately affect students in low-income communities who are more likely to attend schools with outdated facilities.¹⁶ As high heat becomes more common in parts of the country that are normally cooler, some schools will need to add air conditioning for student health and wellbeing. As schools install air conditioning systems they should consider strategies including energy-efficient heat pumps, clean electricity, and geothermal heating and cooling to ensure the installation of air conditioning does not increase emissions.

There are a variety of strategies schools can consider to reduce the worsening impacts of climate change on students' opportunity to learn. For instance, addressing indoor air quality in school buildings, building green roofs and sustainable schoolyards, and ensuring access to healthy food and clean water can help support children's health and wellbeing.¹⁷



WHAT WE'VE HEARD

Eco-Anxiety. Even without directly experiencing the worst climate impacts, as students witness and learn about climate impacts, they may develop eco-anxiety — persistent worries about their own futures and the prospects for future generations.¹⁸ In our first listening session, Dr. Aaron Bernstein of Harvard Chan C-CHANGE shared that strong relationships with supportive adults in school can be a protective factor for eco-anxiety. Schools can also take an active role in reducing eco-anxiety by helping students learn how they can take climate action and develop agency to contribute to climate solutions.



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.

*Heat islands have an average temperature 1.25°F higher than the surrounding city or town.

Extreme Weather

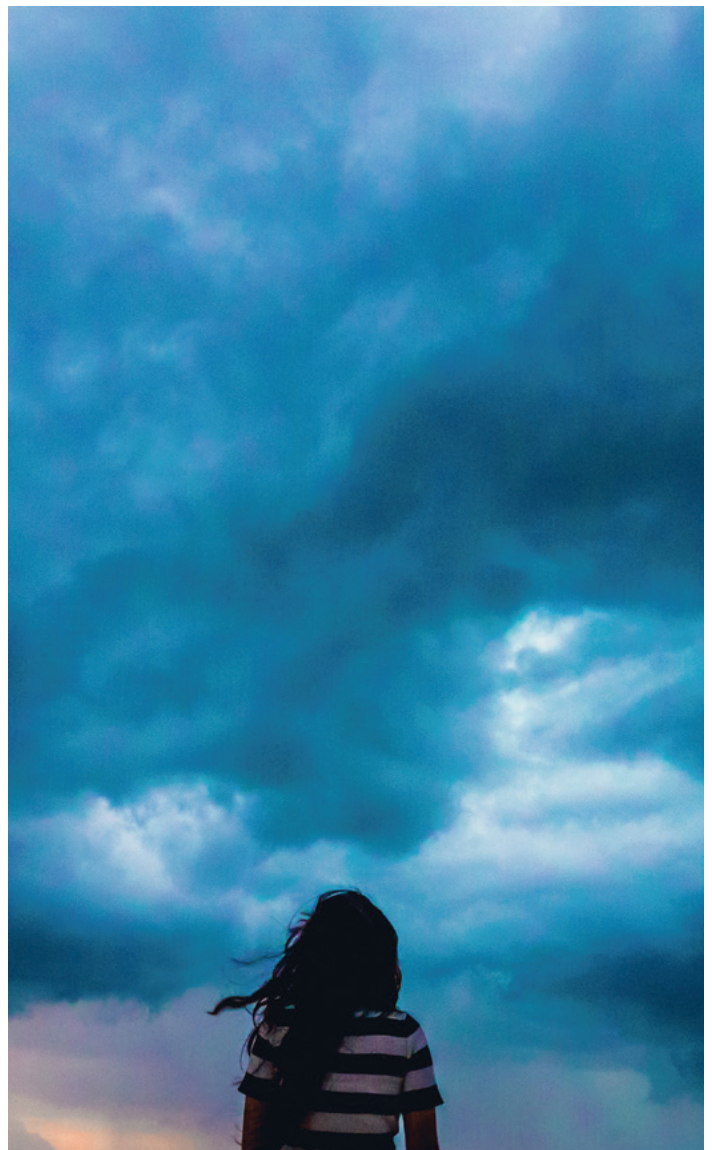
Extreme weather events are already impacting students, communities, and schools across the country and will only increase with climate change. In California, the Camp Fire caused thousands of students to lose their homes and damaged or destroyed more than a dozen schools, which were then closed and relocated to shopping centers, warehouses, and other vacant facilities.¹⁹ In Puerto Rico, damage from Hurricane Maria caused students to miss an average of 78 school days and over 200,000 Puerto Ricans relocated in the wake of the storm, with states like Florida receiving an influx of newly arrived students.²⁰ As these events continue to occur, schools will need to develop plans to ensure supports for students and families.



EXTREME WEATHER AND STUDENT MENTAL HEALTH

Many students experience trauma in the wake of severe weather events. Hurricanes, floods, wildfires, and other extreme weather often cause fatalities, homelessness, and food insecurity, among other challenges. These experiences can cause trauma responses and mental health issues for children and youth.²¹ In the past year, the pandemic, resulting economic recession, and ongoing systemic racism have also taken a toll on students' mental health, particularly for students of color and low-income students whose communities are also disproportionately impacted by climate change.²² Addressing students' mental health needs can help schools adapt to climate change and foster students' resilience.

Schools can support students' mental health before, during, and after extreme weather events by increasing their capacity to provide these services and social emotional support.²³ Most schools already have a shortage of mental health staff and educators receive little if any training on supporting students' mental health needs.²⁴ Schools that plan ahead by creating partnerships with nearby districts, providing tiered supports, and training educators and school staff on trauma-informed practices and eco-anxiety, can be better prepared when extreme weather strikes.²⁵ Building capacity to support students' mental health now can also help students recover from the pandemic and develop resilience and coping skills.



WHAT WE'VE HEARD

At our listening session on adaptation, we heard from Dr.

Victor Carrion who has worked extensively with children, youth, and school counselors after hurricanes in Puerto Rico and wildfires in California. He spoke about the importance of giving students "the opportunity to build resilience." He noted, we can support students by "strengthening their support system, the strengthening of their families, [and] the resources that we provide educators... We also need to increase the coping tools that kids may have themselves."



EXTREME WEATHER AND CONTINUED ACADEMIC SUPPORT

Extreme weather often causes schools to close due to power outages, flooding, or other infrastructure challenges. This can lead to lost learning days and access to school-based student supports.

Allowing schools to use virtual learning when students are unable to be in the building can minimize disruptions to student learning. States require a minimum number of instructional learning days or hours each year and utilizing virtual learning when schools are closed can help schools avoid falling below that minimum threshold. While virtual learning has been widespread during the pandemic, few states have policies that specifically allow virtual learning in the event of inclement weather. As of October 2020, 13 states had policies that address virtual learning or nontraditional instruction days.²⁶

The COVID-19 pandemic and widespread virtual learning have highlighted the disparities in access to the internet and digital devices, both of which are necessary to reduce learning disruptions. In fact, prior to the pandemic an estimated 15 million students lacked adequate internet access and an estimated 10 million lacked access to a digital device for virtual learning.²⁷ While pandemic-related efforts have substantially reduced these numbers, the majority of those efforts are not long-term solutions and will expire within one to three years.

In order to be effective, policies that support virtual learning must go hand-in-hand with improving access to the internet and digital devices. Gaps in access to devices and the Internet are a challenge in both rural and urban areas.²⁸ Expanding internet and digital device access is critical to advancing equity and ensuring that all students can continue their academic learning and support services even when schools are closed. Providing training and support for educators and families on how to use digital devices and online platforms can ensure all students are able to benefit from increased digital access.²⁹



Photos by Allison Shelley for American Education: Images of Teachers and Students in Action.



EXTREME WEATHER AND ENROLLMENT CHANGES

Climate migration can impact school enrollment.³⁰ When extreme weather events such as hurricanes cause widespread devastation, large numbers of families may move to different areas where they have family support or other opportunities to regain stability in the face of loss. As families migrate within the U.S. and arrive from abroad, schools and districts may see upticks in enrollment in the middle of the year.³¹ At the same time, areas affected by sea level rise or other climate impacts may see drops in enrollment.³²

Many students whose families relocate due to climate impacts may have experienced trauma and loss, making both academic, social emotional, and mental health support especially important for incoming students. Districts that plan ahead for how to deal with climate-related enrollment changes may be better able to serve students and families. Assessing districts' likely climate risks, and building relationships with nearby districts can help better prepare communities for potential climate impacts.



WHAT WE'VE HEARD

Miami-Dade County Public Schools
Superintendent Alberto Carvalho

shared with us how extreme weather events such as Hurricane Maria led to mid-year influx of new students. Superintendent Carvalho spoke about the district's plans to serve incoming students in three different scenarios, depending on the rate of new student arrivals — accepting students at all schools, setting up one to three registration centers, or establishing new full-service schools to serve newly-arrived students. Each plan is designed to meet students' academic, physical health, mental health, and social emotional needs. In the aftermath of Hurricane Maria, the district also expedited the process for hiring newly-arrived teachers from Puerto Rico.

“To us, both sides of the coin are important. Academic preparation, but side by side with social emotional support and mental health support, considering the trauma that these children arrived with after living through a hurricane disruption or an earthquake in Haiti.”



Photos by Allison Shelley for American Education: Images of Teachers and Students in Action.



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.

The Role of Schools in Community Resilience

Schools have an opportunity to be centers of community resilience and support in the face of climate impacts. Schools are already community hubs, with many schools providing access to food, healthcare, and social services to students, families, and other community members, which has become even more crucial during the pandemic. In the case of widespread power outages, infrastructure damage, and other community challenges, schools have the ability to provide critical resources such as food, shelter, electricity, and healthcare. In particular, schools that use renewable energy such as solar panels coupled with battery storage — also known as solar microgrids — can maintain these functions even if other buildings in the area have lost power. Many schools serve as emergency shelters, and creating solar microgrids on these schools can improve resilience, as seen in several schools in Florida.³³



BRIGHT SPOTS

In Santa Barbara Unified School District, the district is intentionally preparing schools to serve as community hubs in the event of power outages and extreme weather. In 2018, Santa Barbara experienced a mudslide after a wildfire, shutting down the city for two and a half weeks and preventing students from getting to school. That experience motivated the community and district leaders to transform school buildings into solar microgrids that can use solar energy to maintain core functions in the event of power outages.³⁴



WHAT WE'VE HEARD

Laura Capps, a school board member in Santa Barbara Unified School

District, highlighted the importance of schools as hubs of community resilience in emergencies:

“When everything else is shut down from these extreme climate events, we need our schools to have the lights on. We need those kitchens to keep working, so that we can continue to feed kids and families... In fact, our office of emergency of our county did their briefings every day from one of our high school auditoriums.”

The Role of Schools in Community Adaptation

School grounds make up an estimated 2 million acres of land across the country, making land use another opportunity for improving sustainability and helping communities adapt.³⁵ Leveraging school grounds in adaptation planning can help reduce community heat and flooding and increase access to green space.

Currently, many outdoor spaces at schools include large swaths of heat-trapping asphalt, which can contribute to flooding and higher temperatures within neighborhoods. Often the localized effects at schools themselves can be even more extreme, making it dangerous for children to play outside in hot weather. On a 63°F day, students at one school in Oakland, CA measured surface temperatures as high as 115°F on the unshaded playground.³⁶

Access to green space — outdoor environments with trees or other native plants — is beneficial for reducing heat, reducing air pollution, and improving physical and mental health for communities, but access to these spaces is currently inequitable.³⁷ On average, parks that serve people of color are half as large and five times as crowded as those that serve majority-white populations. Parks that serve low-income households are four times smaller than those that serve predominantly high-income households.³⁸

Redesigning school grounds to replace asphalt with green sustainable schoolyards can support student wellbeing and make green spaces more accessible to communities.³⁹ These schoolyards can also help reduce stormwater runoff and community flooding.⁴⁰



WHAT WE'VE HEARD

In Chicago, a partnership between schools, local water authorities, a community-based organization, and the mayor's office is creating green schoolyards that support student health and resilience to climate change. As we heard from Healthy School Campaign's Kenneth Varner, "As our climate is changing, it's important to think of schools as multipurpose use buildings. Our schoolyards are designed to hold 150,000 gallons of water per rainstorm," which is increasingly important as flooding becomes more common.



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.

While the impacts of climate change present many challenges to students, families, and communities, schools have the opportunity to be part of climate solutions, build resilience, and help communities adapt. Schools that consider the potential impacts on their community, plan ahead for those impacts, and leverage partnerships can be better prepared for potential disruptions and help advance a more resilient society.

Citations for Adaptation & Resilience

1. National Aeronautics and Space Administration, "The Effects of Climate Change," August 9, 2021, <https://climate.nasa.gov/effects/>
2. Susan Clayton, Christie Manning, Kirra Krygsman, and Meighen Speiser, "Mental Health and Our Changing Climate: Impacts, Implications, and Guidance," American Psychological Association and ecoAmerica, March 2017, <https://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf>
3. Center for Climate, Health, and the Global Environment, "Climate Change and Asthma," Harvard T.H. Chan School of Public Health, accessed August 17, 2021, <https://www.hsph.harvard.edu/c-change/subtopics/climate-change-and-asthma/>
4. R. Jisung Park, Joshua Goodman, Michael Hurwitz, and Jonathan Smith, "Heat and Learning," *American Economic Journal: Economic Policy* 12, no. 2 (May 2020): 306-39, <https://www.aeaweb.org/articles?id=10.1257%2Fpol.20180612>
5. U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment, Volume I, <https://science2017.globalchange.gov/chapter/6/>
6. Heidi Cullen, "Think It's Hot Now? Just Wait," *New York Times*, August 20, 2016, <https://www.nytimes.com/interactive/2016/08/20/sunday-review/climate-change-hot-future.html>
7. U.S. Environmental Protection Agency, "Climate Change and the Health of Children," May 2016, <https://www.cmu.edu/steinbrenner/EPA%20Factsheets/children-health-climate-change.pdf>
8. U.S. Centers for Disease Control and Prevention, "Most Recent National Asthma Data," March 30, 2021, https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm
9. Healthy Schools Campaign and Trust for America's Health "National Collaborative on Education and Health: Leading Health Conditions Impacting Student Attendance," accessed August 18, 2021, <https://healthyschoolscampaign.org/wp-content/uploads/2015/12/School-Health-and-Attendance-Chart.pdf>
10. Jamesine Rogers Gibson, "Climate Change Affects Students' Well-Being: Case Study of Extreme Heat in San Joaquin Valley and Need for Climate-Smart Schools," Union of Concerned Scientists, November 7, 2019, <https://blog.ucsusa.org/jamesine-rogers-gibson/climate-change-affects-students-well-being-case-study-of-extreme-heat-in-san-joaquin-valley-and-need-for-climate-smart-schools/>
Center for Climate, Health, and the Global Environment, "Climate Change, Heat Waves, and Health," Harvard T.H. Chan School of Public Health, accessed August 17, 2021, <https://www.hsph.harvard.edu/c-change/subtopics/climate-change-heatwaves-and-health/>
11. Center for Climate, Health, and the Global Environment, "Climate Change and a Child's Brain" Harvard T.H. Chan School of Public Health, accessed August 17, 2021, <https://www.hsph.harvard.edu/c-change/subtopics/climate-change-and-a-childs-brain/>
12. U.S. Environmental Protection Agency, "Climate Change and the Health of Indigenous Populations," EPA-430-F-16-053, May 2016, <https://www.cmu.edu/steinbrenner/EPA%20Factsheets/indigenous-health-climate-change.pdf>
13. The Trust for Public Land, "School's Out: In A Time of Compounding Crises, America's Schoolyards Are Packed With Potential," 2020, https://www.tpl.org/sites/default/files/Schools-Out_A-Trust-for-Public-Land-Special-Report.pdf
14. R. Jisung Park, Joshua Goodman, Michael Hurwitz, and Jonathan Smith, "Heat and Learning," *American Economic Journal: Economic Policy* 12, no. 2 (May 2020): 306-39, <https://www.aeaweb.org/articles?id=10.1257%2Fpol.20180612>
15. Valerie Strauss, "When is it too hot to go to school?" *Washington Post*, August 16, 2019, <https://www.washingtonpost.com/education/2019/08/16/when-is-it-too-hot-go-school/>
Lillian Reed, "About 35 Baltimore-area schools without air conditioning dismiss early amid June heat wave," *Baltimore Sun*, June 7, 2021, <https://www.baltimoresun.com/education/bs-md-schools-close-heat-20210607-20210607-2big6ph46nct3ftc435zvdfr4-story.html>
16. Mary Filardo, Jeffrey M. Vincent, and Kevin J. Sullivan, "How crumbling school facilities perpetuate inequality," *Phi Delta Kappan* 100, no. 8 (April 2019): 27-31, <https://kappanonline.org/how-crumbling-school-facilities-perpetuate-inequality-filardo-vincent-sullivan/>
17. Healthy Schools Network, "National Healthy Schools Summit Report: COVID, Climate, Children, and Schools," 2021, https://drive.google.com/file/d/1f2yyQ4foTNxyiEwTF_E3Sk_BTfTOGIl/view
U.S. Environmental Protection Agency, "Using Green Roofs to Reduce Heat Islands," July 20, 2021, <https://www.epa.gov/heatislands/using-green-roofs-reduce-heat-islands>
The Trust for Public Land, "Schoolyards: The park access solution that's hiding in plain sight," August 6, 2019, <https://www.tpl.org/schoolyards>
18. Susan Clayton, Christie Manning, Kirra Krygsman, and Meighen Speiser, "Mental Health and Our Changing Climate: Impacts, Implications, and Guidance," American Psychological Association and ecoAmerica, March 2017, <https://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf>
19. Emily Katz, Laura Schifter, and Alexandra La Pinta, "A State Policy Landscape: K12 Climate Action," The Aspen Institute, 2020, <https://www.k12climateaction.org/blog/statepolicy-landscape-2020>
20. Ibid
21. Jennifer L Barkin, et al., "Effects of extreme weather events on child mood and behavior," *Developmental Medicine and Child Neurology* 63, no. 7 (July 2021): 785-790, <https://doi.org/10.1111/dmcn.14856>
22. Nirmita Panchal, Rabah Kamal, Cynthia Cox, Rachel Garfield, and Priya Chidambaram, "Mental Health and Substance Use Considerations Among Children During the COVID-19 Pandemic," Kaiser Family Foundation, May 26, 2021, <https://www.kff.org/coronavirus-covid-19/issue-brief/mental-health-and-substance-use-considerations-among-children-during-the-covid-19-pandemic/>
Lynn Jolicoeur and Lisa Mullins, "How COVID Isolation, Loss And Racism Deepened Crises For Children Of Color," *WBUR*, June 25, 2021, <https://www.wbur.org/news/2021/06/25/boston-kids-of-color-mental-health-pandemic>
23. U.S. Centers for Disease Control and Prevention, "Helping Children Cope with Emergencies," September 1, 2020, <https://www.cdc.gov/childrenanddisasters/helping-children-cope.html>
24. Amir Whitaker et al., "Cops and No Counselors: How the Lack of School Mental Health Staff is Harming Students," American Civil Liberties Union, 2019, https://www.aclu.org/sites/default/files/field_document/030419-acluschooldiscipline-report.pdf
Emily Fulks, Emily Katz, and Yosmary Rodriguez, "School mental health training for teachers leaves room for improvement," *Child Trends*, August 20, 2019, <https://www.childtrends.org/blog/school-mental-health-training-for-teachers-leaves-room-for-improvement>
25. National Child Traumatic Stress Network, "Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework," 2017, https://www.nctsn.org/sites/default/files/resources/creating_supporting_sustaining_trauma_informed_schools_a_systems_framework.pdf
National Child Traumatic Stress Network, "Trauma-Informed School Strategies During COVID-19," 2020, <https://www.nctsn.org/resources/trauma-informed-school-strategies-during-covid-19>

26. Emily Katz, Laura Schifter, and Alexandra La Pinta, "A State Policy Landscape: K12 Climate Action," The Aspen Institute, 2020, <https://www.k12climateaction.org/blog/statepolicy-landscape-2020>
27. Titilayo Tinubu Ali et al., "Looking Back, Looking Forward: What It Will Take to Permanently Close The K-12 Digital Divide," Common Sense Media, 2021, https://www.common Sense media.org/sites/default/files/uploads/kids_action/final_-_what_it_will_take_to_permanently_close_the_k-12_digital_divide_vjan26_1.pdf
28. Alex Trollip, Understanding the Urban Digital Divide, Bipartisan Policy Center, March 5, 2021, <https://bipartisanpolicy.org/blog/urban-broadband-blog/>
29. U.S. Department of Education, Office of Educational Technology, "Teacher Digital Learning Guide," accessed August 18, 2021, <https://tech.ed.gov/publications/digital-learning-guide/teacher/>;
U.S. Department of Education, Office of Educational Technology, "Parent and Family Digital Learning Guide," accessed August 18, 2021, <https://tech.ed.gov/publications/digital-learning-guide/parent-family/>
30. Andrea Thompson, "Wave of Climate Migration Looms, but It 'Doesn't Have to Be a Crisis'," Scientific American, March 23, 2018, <https://www.scientificamerican.com/article/wave-of-climate-migration-looms-but-it-doesnt-have-to-be-a-crisis/>
31. Carlos Martin, "Who Are America's 'Climate Migrants,' and Where Will They Go?" Urban Institute, October 22, 2019, <https://www.urban.org/urban-wire/who-are-americas-climate-migrants-and-where-will-they-go>
32. Sophie Kasakove, "When the waters rise, how will we keep schools open?" Hechinger Report, May 23, 2020, <https://hechingerreport.org/when-the-waters-rise-how-will-we-keep-schools-open/>
33. University of Central Florida, FSEC Energy Research Center, "SunSmart E-Shelter Schools," accessed August 18, 2021, <https://energyresearch.ucf.edu/education/sunsmart-e-shelter-schools/>
34. Generation180, "Santa Barbara, CA: Anchoring Schools as Heart of the Community with Energy Resilience," September 14, 2020, <https://generation180.org/santa-barbara-ca-anchoring-schools-as-heart-of-the-community-with-energy-resilience/>
35. 21st Century Schools Fund, State of Our Schools: America's K-12 Facilities, 2016, <https://kapost-files-prod.s3.amazonaws.com/published/56f02c3d626415b792000008/2016-state-of-our-schools-report.pdf?kui=wo7vkgV0wW0LGSJxek0N5A>
36. Julia Busiek, "Hot Spots: Want to Prepare Your City for Climate Change? Start Here," Trust for Public Land, accessed August 18, 2021, <https://www.tpl.org/land-and-people-magazine/2020-spring-summer/hot-spots>
37. Matthias Braubach et al., "Effects of Urban Green Space on Environmental Health, Equity and Resilience," Nature-Based Solutions to Climate Change Adaptation in Urban Areas (September 2, 2017), https://doi.org/10.1007/978-3-319-56091-5_11;
Lorien Nesbitt et al., "Who has access to urban vegetation? A spatial analysis of distributional green equity in 10 US cities," Landscape and Urban Planning 181 (January 2019): 51-79, <https://doi.org/10.1016/j.landurbplan.2018.08.007>
38. The Trust for Public Land, "The Heat Is On: With Temperatures Rising And Quality Parks Too Few And Far Between, Communities Of Color Face A Dangerous Disparity," accessed August 18, 2021, https://www.tpl.org/sites/default/files/The-Heat-is-on_A-Trust-for-Public-Land-special-report.pdf
39. Dongying Li and William C.Sullivan, "Impact of views to school landscapes on recovery from stress and mental fatigue," Landscape and Urban Planning 148 (April 2016): 149-158, <https://doi.org/10.1016/j.landurbplan.2015.12.015>
40. U.S. Environmental Protection Agency, "Storm Smart Schools: A Guide to Integrate Green Stormwater Infrastructure to Meet Regulatory Compliance and Promote Environmental Literacy," June 2017, https://www.epa.gov/sites/default/files/2017-10/documents/storm_smart_schools_print_final_071317.pdf



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.