



PUBLIC SCHOOLS of
BROOKLINE

Brookline Climate and Sustainability Task Force: **Recommendations**

Group 1: Education and Engagement

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The **Education and Engagement** group focused on curriculum development, outdoor learning, extracurricular experiences, pedagogy and empowering youth to participate in civic engagement.

Group participants and qualifications


- **Roger Grande**, BHS Social Studies; Brookline Farm-to-School; BHS garden leader; Teacher, Climate Science and Social Change
- **Min Song**, English Department Chair and Environmental Studies Program Steering Committee member, Boston College
- **Loren Stolow**, Ed.M, early childhood educator



Recommendations

1. Invest in student competencies
2. Invest in educators
3. Outdoor learning for all students, every year
4. Promote student engagement and empowerment



A group of diverse young people, including students of various ethnicities, are seated around a large table. They are all smiling and looking towards the camera, appearing to be in a collaborative learning or meeting environment. The background is slightly blurred, focusing attention on the group.

Climate change will increasingly challenge the integrity of our infrastructure, tax our natural resources and built environment, impact governance and our social fabric, and strain our mental and physical health and wellbeing.

Our recommendations aim to design a scope of essential learning to prepare young people to thrive in a climate disrupted world, engage civically and professionally to lead a sustainable transition, and to support educators to help their students meet these goals.



BHS Student Sustainability Survey

February-April, 2024

[Complete results are available here](#)



Background & Approach

BACKGROUND

The data presented in this deck is sourced from the 2024 BHS Student Sustainability Survey. This study was undertaken to support sustainability efforts and climate change initiatives at BHS.

The survey explored a number of areas including:

- Students’ global warming acumen and attitudes
- Global warming’s impact on their lives both in and out of school
- Their political views and demographic information

APPROACH

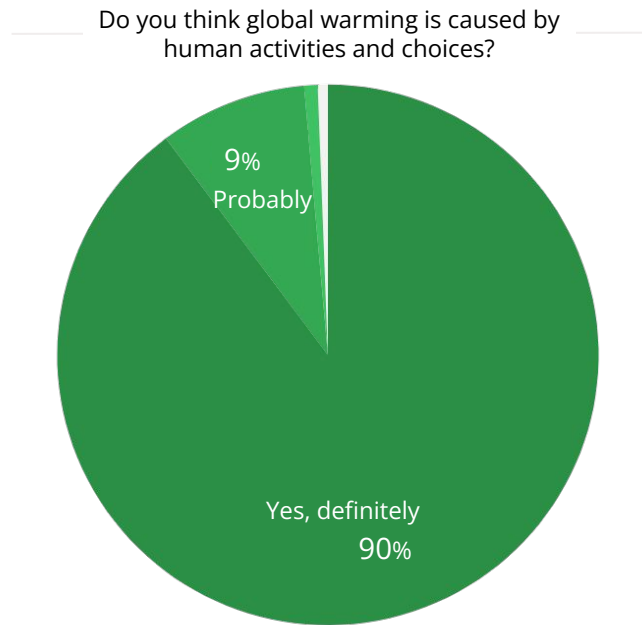
Data were collected via a 21-question online survey, which ran from February 28 to April 25, 2024.

A total of 475 BHS students participated in the study and all grades were represented as detailed in the table below.

	Sample size
9th Freshman	86
10th Sophomore	75
11th Junior	183
12th Senior	130

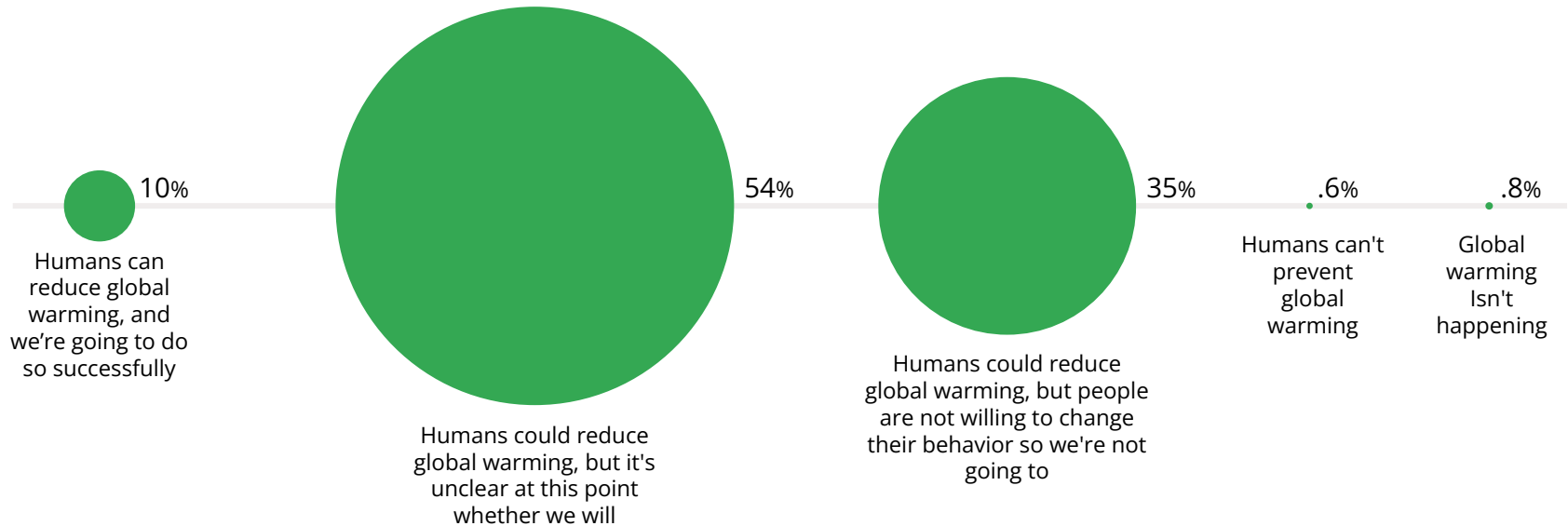
Nearly all BHS students are confident global warming is happening and 9 in 10 believe humans are responsible

CLIMATE CHANGE KNOWLEDGE



9 in 10 BHS students are not confident global warming will be stopped

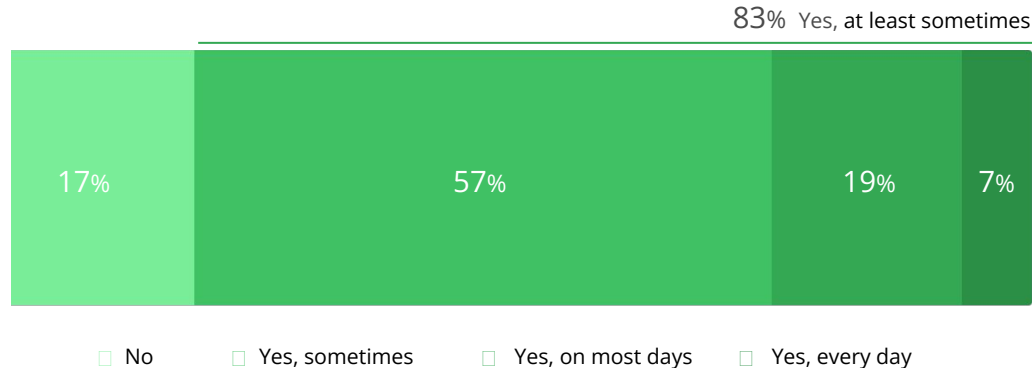
VIEWS ON CLIMATE CHANGE



Over 8 in 10 BHS students have thought about climate change and for 1 in 4, it's on their minds "most days"...

CLIMATE CHANGE'S PRIMACY

In the past month, have you thought about climate change?

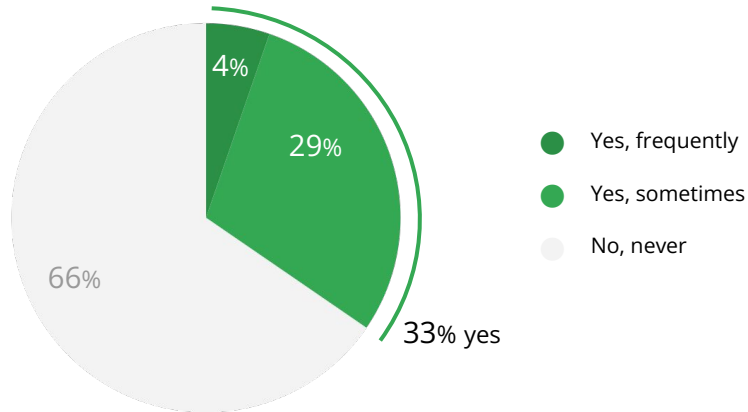


...and it's taking a toll

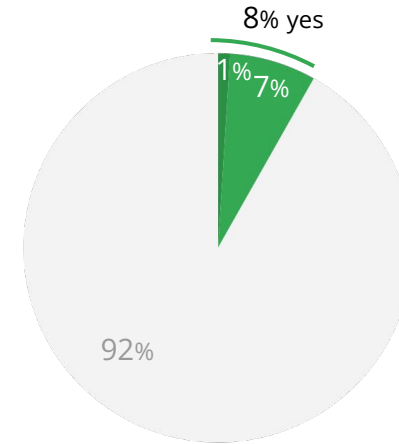
1 in 3 BHS students say climate change negatively impacts their mental health at least sometimes and nearly 1 in 10 report it inhibits their ability to perform normally in school.

CLIMATE CHANGE'S IMPACT ON MENTAL HEALTH & WELL BEING

In the past month, have you had thoughts or feelings about climate change that negatively impact your mental health or emotional well being, or cause you anxiety or depression?



In the past month, have you had thoughts or feelings about climate change that interfere with your ability to function normally in school?



Recommendation 1

Invest in student competencies

- A. Launch PSB Sustainability Education Team
- B. Identify sustainability learning outcomes
- C. Develop scope and sequence to achieve sustainability learning outcomes

Strategies and Sub-Strategies

- 1 **Integrate Environmental Literacy Into Existing and Future Education Initiatives.**
 - Integrate Environmental Literacy into Curricula and Instructional Materials.
 - Make Improved, Integrated, Relevant Professional Learning More Accessible to Educators.
 - Integrate Environmental Literacy in California's Existing and Future Accountability and Assessment Systems.
- 2 **Strengthen Partnership and Collaboration Amongst Key Stakeholders.**
 - Strengthen the California Regional Environmental Education Community (CREEC) Network.
 - Build Collaboration and Partnerships.
 - Build Internal Collaboration at the California Department of Education (CDE).

WISCONSIN STANDARDS FOR Environmental Literacy & Sustainability



Instruction's

Environmental Literacy.

Improvement.

Environmental Literacy.

Local Control Funding Accountability Plans.

Restoring Streams.

Local Development for Science Standards.



THE WHOLE-SCHOOL SUSTAINABILITY FRAMEWORK

Guiding Principles for Integrating Sustainability
Into All Aspects of a School Organization

Stephanie K. Barr, Jennifer E. Cross, & Brian H. Dunbar
Institute for the Built Environment • Colorado State University

THE CENTER
FOR GREEN SCHOOLS

1A. Launch PSB Sustainability Education Team

Create a team consisting of PSB educators at different levels and in different disciplines, Office of Teaching and Learning staff, and community members, to focus on sustainability and accomplishing the following goals outlined here.



1B. Learning outcomes

Sustainability Education Team will research and review existing environmental literacy learning outcomes and resources, and identify exemplary resources that include knowledge, citizenship, and resilience for a climate-disrupted world.

Cognitive

Adopt interdisciplinary approach to understanding how human activities contribute to—and can mitigate—the effects of climate change.

Behavioral

Develop curriculum to model informed decision making and consensus building. Empower students to practice advocacy and take action to protect the planet.

Socio-emotional

Provide opportunities (including learning in natural spaces) to build capacity for climate resilience, including physical health and social-emotional wellbeing.



1C. Scope and sequence

Integrate existing and new sustainability learning across all grade levels and disciplines so that it is sequenced developmentally to achieve learning outcomes by high school graduation.

> 100 PSB educators who responded to our survey reported that they already offer numerous opportunities for students to learn and think about climate and sustainability issues. However many of these opportunities are the result of voluntary, individual efforts. This places special demands on a handful of active teachers, and is inconsistent from year to year and across schools.



Recommendation 2

Invest in educators

- A. Identify district-wide leadership**
- B. Offer system-wide professional development**



2A. Identify district-wide leadership

- Hire Lead Sustainability Educator to provide ongoing support and coordination to Sustainability Education Team (OTL, Curriculum Coordinators, educators and community resources (ie. DPW, Town Sustainability Director)).
- Identify sustainability lead educators in each school. Provide stipend, modeled on school-based garden educators.

A group of people are seated around a table in a meeting room, engaged in discussion. The image is overlaid with a semi-transparent red and blue gradient. The text is white and positioned in the upper left quadrant.

2B. Offer system-wide professional development

- Learn fundamentals of climate change and sustainability education, including management of strong emotions.
- Meet by grade level and discipline to identify points of intersection between respective curriculum and Sustainability Learning Outcomes.
- Revise (or design) curriculum that cultivates citizenship and allows students to imagine constructive responses to the challenges that climate change presents.



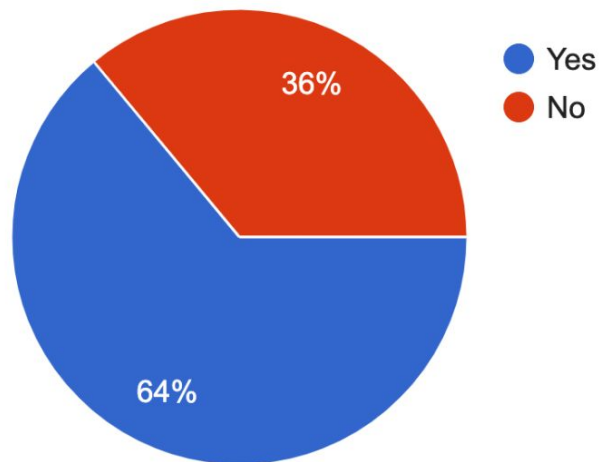
PSB Educator Sustainability Survey

January-March, 2024

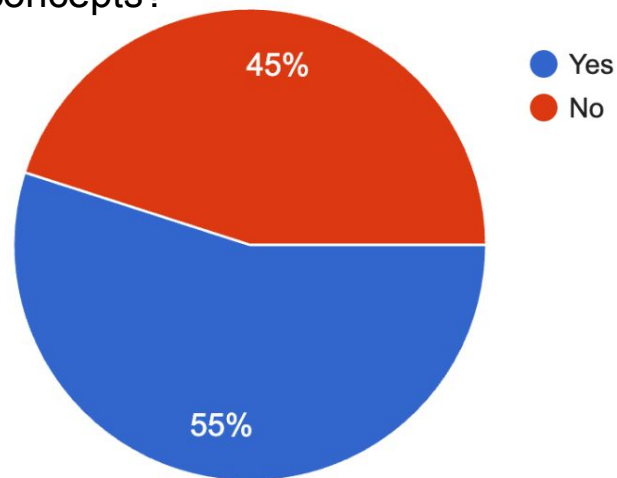
[Complete results are available here](#)

2023 PSB Educator Survey: 111 respondents

Is there curriculum you would like to add or professional development or other support for developing learning experience related to climate change and sustainability?



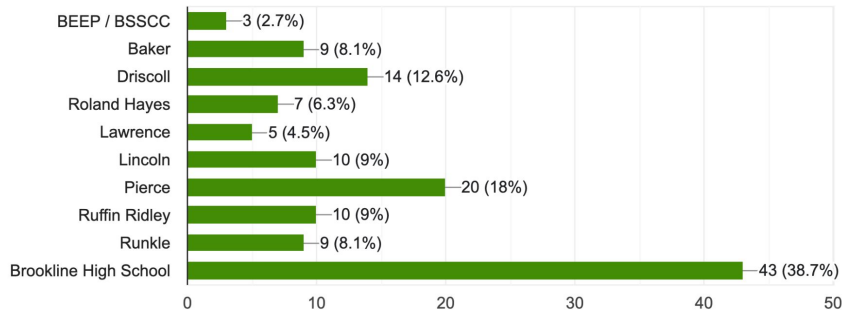
Do your students experience any of the following during the school year: Gardening, other outdoor learning, field trips, or experiential learning connected to climate change, sustainability or foundations to those concepts?



Survey respondents broadly represent PSB by school and grade

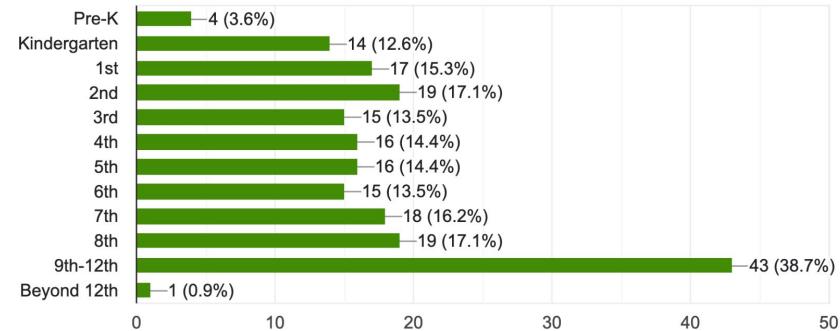
School(s) you work at

111 responses



Grades you teach or work with students

111 responses



Recommendation 3

Outdoor learning for all students, every year

Outdoor learning experiences, including school gardens, can enhance learning in all curricular areas and are an essential component of climate and sustainability education.

- Provide consistent and ongoing support of Gardens and Garden Coordinators at every K-8 school and BHS.
- Identify and disseminate educator resources to lead diverse, outdoor learning experiences.





Recommendation 4

Promote student engagement and empowerment

Sample service projects for select grade levels,:

- 1st grade: plant lettuce in school garden
- 3th grade: outdoor clean up
- 5th grade: food drive
- 7th grade: testing water and soil
- 8th grade: manage school-wide composting
- 10th grade: assist cafeteria composting
- 11th grade: Advisories, other manage indoor farm



Recommendations

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THANK YOU



PUBLIC SCHOOLS of
BROOKLINE

BHS STUDENT SUSTAINABILITY SURVEY 2024

Informed consent: This brief, anonymous survey seeks student input on attitudes and knowledge that relate to climate change, including how BHS may have an impact on climate change. Climate change is the idea that human activity increases the average temperature on earth. The survey is being administered this week and will only take about 4-8 minutes to complete. The survey is anonymous and voluntary. Every question is required, except the last question which is the only open response question. Your responses will help shape the development of sustainability practices at Brookline High School. Please answer the questions honestly, seriously and privately: the survey is important and your responses matter. Please read all potential responses before selecting your answer for each question. Your participation is appreciated—thank you. The survey was designed by Roger Grande, BHS Social Studies teacher.

roger_grande@psbma.org [Switch account](#)



Not shared

Your email and Google account are not part of your response

Next

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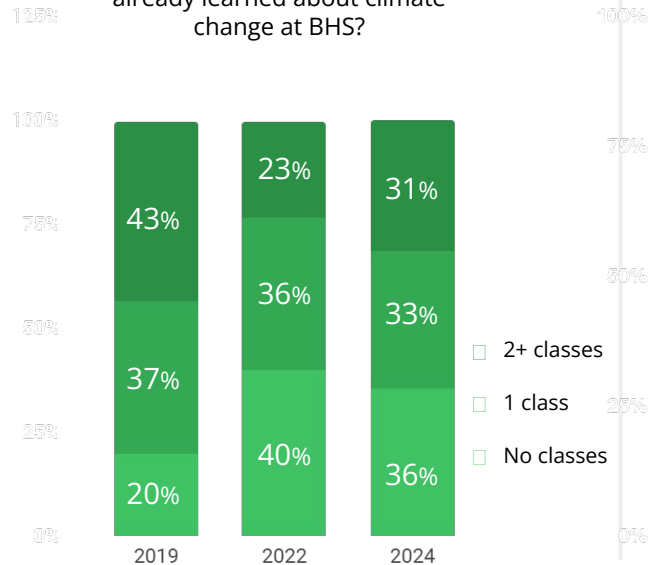
Clear form

The demand for climate change education is becoming less about coursework being offered at all grade levels...

...and more about equipping students with the skills necessary to mitigate climate change.

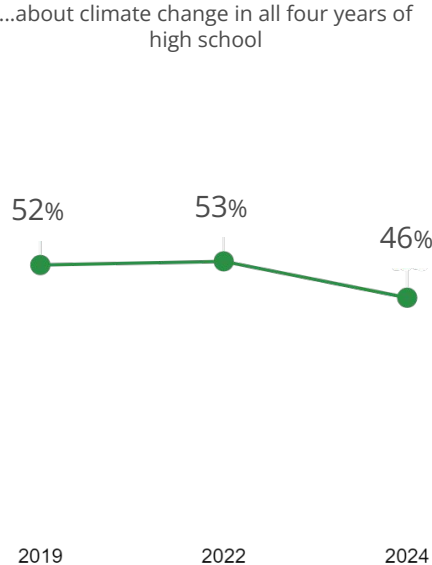
EXPERIENCE WITH + OPINIONS TOWARD CLIMATE CHANGE EDUCATION (2019-2024 trend)

Since you began as a student at BHS, in how many classes have you already learned about climate change at BHS?



Should BHS require that students learn...?

...about climate change in all four years of high school



...skills that prepare them to address & work against climate change & its impacts?

