



# Free Resources for Implementing Climate Change Education

# Presenters

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- **Rosalie Morillo**
  - Program Manager School Content and Special Projects
  - Sustainable Jersey for Schools
- **Dr. Lauren Madden**
  - Professor of Elementary Science Education at TCNJ
  - Coordinator of the Environmental Sustainability Education minor and graduate certificate
  - Authored the Report on K-12 Climate Change Education Needs in New Jersey

# Sustainability Framework: 100+ Actions for Sustainability



# Sustainable Jersey for Schools

A free, voluntary program that provides tools, training, and grants to New Jersey public schools to help them implement sustainability initiatives and achieve certification.



- Identifies **actions** to become more sustainable
- Provides **tools, resources, and guidance** to make progress
- Provides access to **grants** for schools and school districts
- Recognizes **accomplishments**
- Awards certification to individual schools but requires School Board and district level support





# 7,861

sustainability **actions completed**  
by both schools  
& districts



# \$2.8 MILLION



in small grants distributed to schools & districts

# 64%

OF NEW JERSEY  
PUBLIC SCHOOL  
DISTRICTS PARTICIPATING



# 1,057

PARTICIPATING  
SCHOOLS



# 354

SCHOOLS  
**CERTIFIED**

**48** SILVER  
CERTIFIED

**306** BRONZE  
CERTIFIED

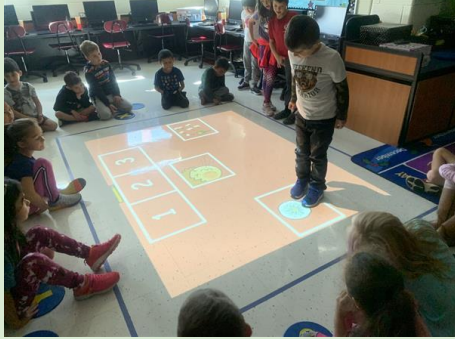
**43** DIGITAL  
SCHOOL  
STARS



# Sustainable Jersey for Schools



Howell Twp. School District



Long Branch School District



Hazlet School District





# Digital Schools Star



Digital Schools Star encourages schools personnel at all levels and in all departments to work together to improve:

- planning
- decision making
- curriculum
- pedagogy
- budgeting
- technology resources to help students become better prepared for the future





# **SUSTAINABLE JERSEY** **GRANTS PROGRAM**



**PSEG**  
*Foundation*

## **New Funding Cycle Announced!**

- \$100,000 is available to New Jersey public schools participating in the Sustainable Jersey for Schools programs
  - \$2k and \$10k grants to fund sustainability projects and support your green team

### **Informational Webinar**

3-4pm on  
Thursday,  
**December 15,  
2022**

### **Application Deadline**

By 11:59pm  
on Friday,  
**March 10,  
2023**

### **Award Notification**

By **early May  
2023** with an  
event in **early  
June 2023**

### **Performance Period**

**10k Grants:**  
18 months  
  
**2k Grants:**  
12 months

**Learn More &  
Apply**



# Learning Targets and Goals

We hope by the end of the session that you will:

- Understand the value of the Report on K-12 Climate Change Education Needs in NJ
- Utilize the report as a starting point for developing a plan to integrate Climate Change Education across grades and subjects areas
- Become familiar with a various **Free** resources that will support the integration climate change across the curriculum

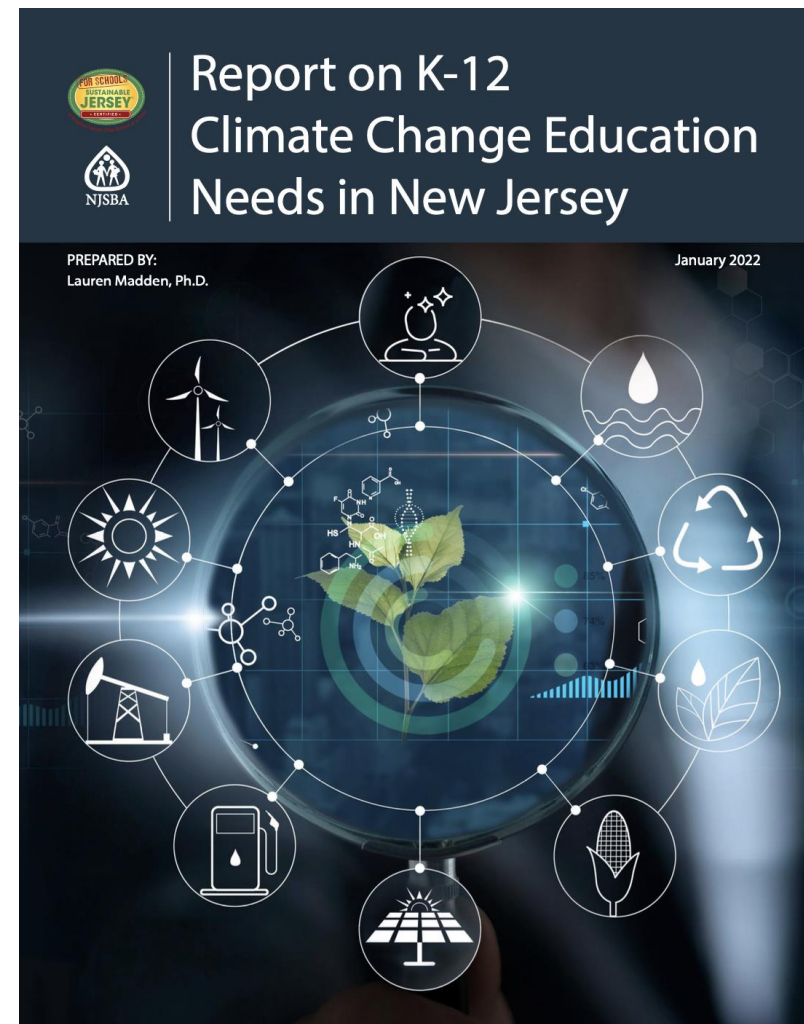
# Thought Leaders Committee

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- In partnership with NJ School Boards, Sustainable Jersey for Schools assembled a committee of “Thought Leaders” from across NJ to identify critical needs concerning implementing climate change education across grades and subject areas.
- Dr. Lauren Madden appointed to write a summary report.
- Many rounds of feedback and revision ensured that we were able to address needs in a comprehensive manner

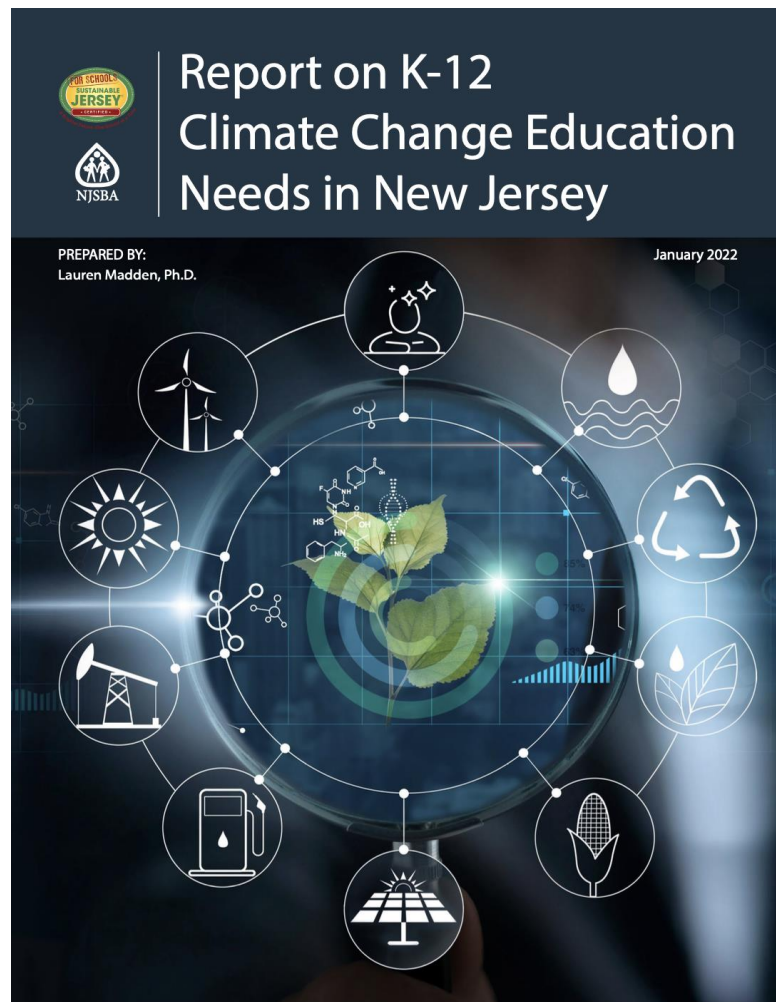
## Vision

Ensure that all teachers, students and educational leaders in New Jersey understand climate change and are empowered develop solutions to climate-related problems.



## Goals


1. Ensure that all New Jersey public school teachers are prepared to fully integrate climate change education across grade levels and content areas within five years of adoption of the 2020 New Jersey Student Learning Standards.
2. Educate all members of school communities, including families, students, teachers, school staff, administrators, school board members and community partners on scientifically accurate information regarding climate change to ensure that schools are designed to foster a sustainable future and economic prosperity.
3. Encourage community-focused collaboration among stakeholders including board members, students, families and teachers, facilities professionals and administrators to ensure that schools develop a comprehensive approach to climate change education.
4. Use an equity-focused approach to ensure that the neediest schools and districts receive the necessary financial and logistical support for climate change education implementation. Further, the disproportionate effects of climate change seen by communities of color, immigrant communities and low-income communities must be highlighted.
5. Center climate change education and experiences on what is happening locally. Place-based approaches to education that emphasize the New Jersey-specific effects of climate change, and the local actions that impact global trends are more likely to make a lasting impact with students and motivate communities to commit to solution-building.
6. Provide multiple entry points to allow for school- and teacher-autonomy in deciding how to integrate climate change content within each unique learning context.



# With more detail

We provide clear suggestions and guidelines around four key categories:

- a. Professional Learning**
- b. Curricular Resources**
- c. Community-based Climate Change Education
- d. Support from School Boards and Administrators



*Where  
we'll focus  
today.*

# Initial Steps

## **Time-Sensitive Recommendations: To Enact Before June 2022**

1. All K-12 public school educators, school staff and school board members must be introduced to the climate change standards at the various grade levels and content areas.
2. All K-12 public school teachers should be provided with the developmentally appropriate and content-specific explanations of climate change and its effects.
3. All K-12 public school teachers should have access to high-quality curricular materials beginning in September 2022.

It is our recommendation that school leaders support teachers in using a series of planning periods (grade level or content area team planning sessions) during the 2021-2022 academic year to begin the process of implementing K-12 climate change education. This time should include a minimum of four meetings and should allow teachers to:

# Current Resources

## **Climate Change Education Resources Available from the NJDOE**

The New Jersey Department of Education has developed a comprehensive website to assist school districts in planning for the implementation of climate change education.

### ***The NJDOE's Climate Change Education [website](#) provides:***

- Instructional resources, such as webinars, instructional strategies, literature and standards-based lessons — by grade level and by subject.
- Links, videos, highlights and news stories to innovative lessons on climate change occurring in New Jersey schools.
- Activities and projects for students in and out of the classroom.
- Opportunities for students to take part in community engagement.
- A portal for educators and other stakeholders to share their stories, feedback and resources.

# Understanding the Standards

## Climate Change Education by Grade Band

With the adoption of the [2020 New Jersey Student Learning Standards \(NJSLs\)](#), New Jersey became the first state in the nation to include climate change across content areas. These 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.

Districts are encouraged to utilize the NJSLs to develop interdisciplinary units focused on climate change that include authentic learning experiences, integrate a range of perspectives and are action oriented. While the [2016 NJSLs-English Language Arts \(ELA\) and Mathematics](#) do not have specific climate change standards, districts may want to consider how they can design [interdisciplinary climate change units](#) that incorporate relevant ELA and mathematics standards. Likewise, it may be helpful to review the [2020 NJSLs documents](#) to identify other relevant standards that might be incorporated as well as to understand the role of core ideas, performance expectations and practices in curriculum development and lesson planning.

Click on the desired grade band below to see the 2020 NJSLs that specifically reference climate change as well as those that might be incorporated in an interdisciplinary climate change unit. Within each grade band, the 2020 NJSLs appear in order of their standard number:

- |   |  |
|---|--|
| 1 – Visual and Performing Arts                  | 7 – World Languages                                  |
| 2 – Comprehensive Health and Physical Education | 8 – Computer Science & Design Thinking               |
| 5 – Science                                     | 9 – Career Readiness, Life Literacies and Key Skills |
| 6 – Social Studies                              |  |

Kindergarten through Grade 2



Grades 3 through 5



Grades 6 through 8



Grades 9 through 12



<https://www.nj.gov/education/standards/climate/learning/gradeband/>

## World Languages

Core Ideas	Performance Expectations
<ul style="list-style-type: none"><li>Learning a language involves interpreting meaning from listening, viewing, and reading culturally authentic materials in the target language.</li></ul>	<ul style="list-style-type: none"><li>7.1.NL.IPRET.4: Recognize a few memorized words related to weather and climate in the target culture(s) and in students' own cultures in highly contextualized oral texts.</li></ul>
<ul style="list-style-type: none"><li>Interpersonal communication is the exchange of information and the negotiation of meaning between and among individuals.</li></ul>	<ul style="list-style-type: none"><li>7.1.NL.IPERS.6: Share with others the names of a few memorized and practiced words and phrases related to climate change in the target culture(s) and in students' own cultures.</li></ul>
<ul style="list-style-type: none"><li>Presentational communication mode involves presenting information, concepts, and ideas to an audience of listeners or readers on a variety of topics.</li></ul>	<ul style="list-style-type: none"><li>7.1.NL.PRSNT.4: State the names of a few memorized and practiced words and phrases related to climate change in the target culture(s) and in students' own cultures.</li></ul>

## Computer Science and Design Thinking

Core Ideas	Performance Expectations
<ul style="list-style-type: none"><li>Individuals collect, use, and display data about individuals and the world around them.</li></ul>	<ul style="list-style-type: none"><li>8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.</li></ul>
<ul style="list-style-type: none"><li>Computers store data that can be retrieved later. Data can be copied, stored in multiple locations, and retrieved.</li></ul>	<ul style="list-style-type: none"><li>8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device.</li></ul>
<ul style="list-style-type: none"><li>Data can be used to make predictions about the world.</li></ul>	<ul style="list-style-type: none"><li>8.1.2.DA.3: Identify and describe patterns in data visualizations.</li><li>8.1.2.DA.4: Make predictions based on data using charts or graphs.</li></ul>

# Are we ready for this?

- We conducted a survey-based study in June 2022 (follow up scheduled for December 2022) to assess teachers' preparedness with respect to teaching about climate change
- 51 teachers responded representing all grade levels and content areas, and at least 23 school districts
- Mixed responses with regard to their familiarity with the standards
  - The majority of respondents (57%) cited that they needed more access to curricular materials
  - An even larger number (75%) noted that they needed more professional learning opportunities
  - *But the story on professional learning is a bit more complex than it might seem*

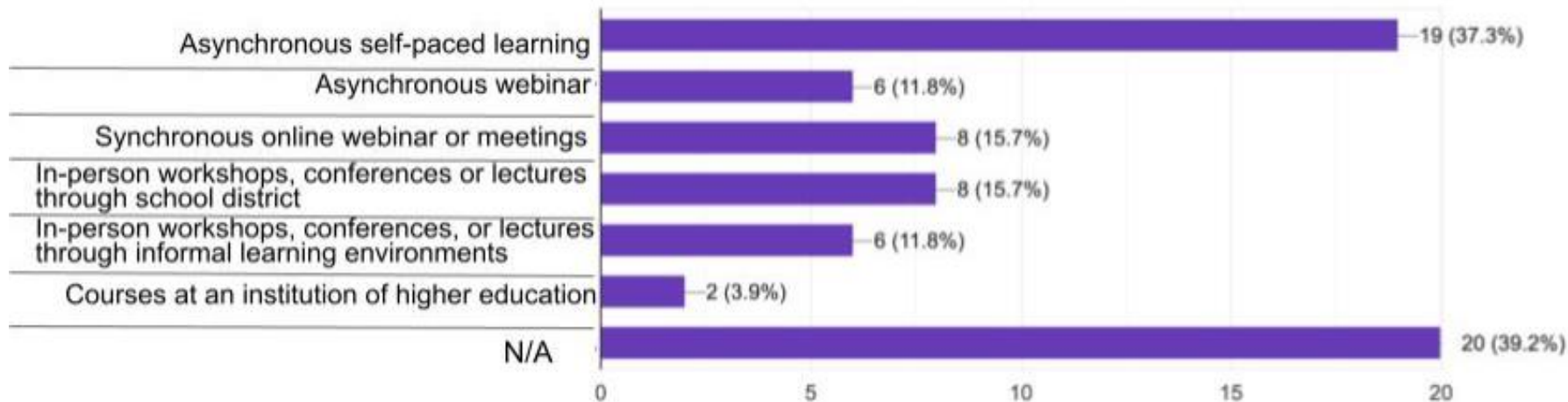
## How much (if any) professional learning have you pursued on teaching climate change?

51 responses



**But what do we mean when we say professional learning?**

If we consider what teachers are doing to prepare themselves, the picture is a bit more hopeful!

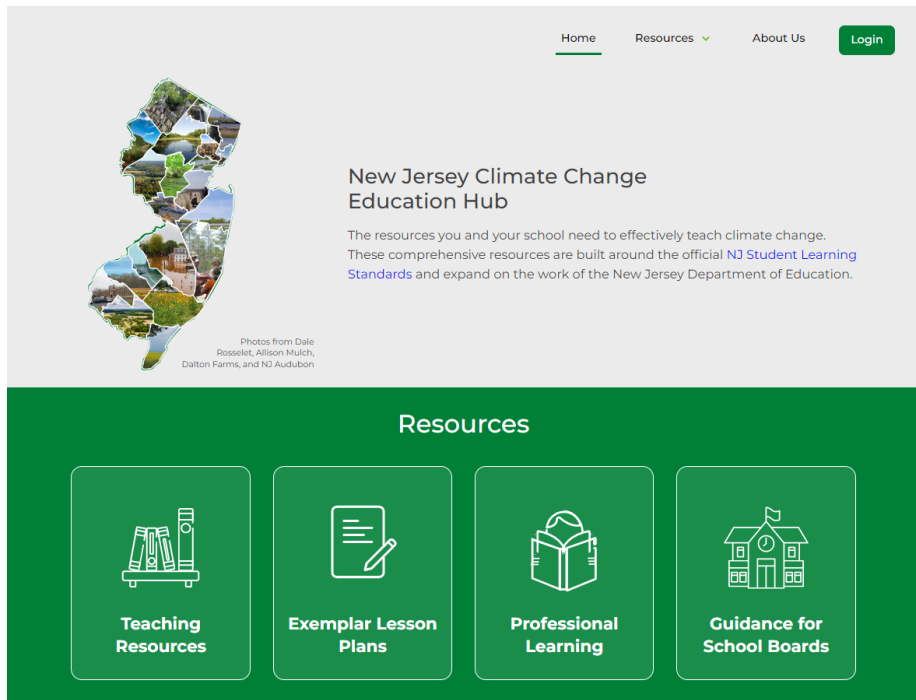


# How do we prepare for this initiative?



# The NJ Climate Change Education Hub

URL: [www.njclimateeducation.org](http://www.njclimateeducation.org)



The screenshot shows the homepage of the New Jersey Climate Change Education Hub. At the top, there is a navigation bar with links for Home, Resources, and About Us, along with a Login button. The main content area features a large graphic of the state of New Jersey composed of various nature and climate-related images. To the right of this graphic, the title "New Jersey Climate Change Education Hub" is displayed, followed by a paragraph explaining that the resources are built around the official NJ Student Learning Standards and expand on the work of the New Jersey Department of Education. Below this, a green section titled "Resources" contains four white icons and their corresponding labels: Teaching Resources (books), Exemplar Lesson Plans (notepad and pencil), Professional Learning (open book), and Guidance for School Boards (school building).

Home Resources About Us Login

**New Jersey Climate Change Education Hub**

The resources you and your school need to effectively teach climate change. These comprehensive resources are built around the official [NJ Student Learning Standards](#) and expand on the work of the New Jersey Department of Education.

Photos from Dale Rosselet, Allison Mulch, Dalton Farms, and NJ Audubon

### Resources

- Teaching Resources
- Exemplar Lesson Plans
- Professional Learning
- Guidance for School Boards



# STUDENT CLIMATE CHALLENGE



The Drumthwacket Foundation





## STUDENT CLIMATE CHALLENGE

- Students in grades 6 – 12
- Teams of 2 – 12 students
- Complete a School or Community Project Addressing the Human Causes or Environmental Impacts of Climate Change
- Produce a Digital Story Video



***School finalists awarded grants ranging from \$2,500 to \$500***



**STUDENT  
CLIMATE  
CHALLENGE**

# Timeline

- Teacher Registration Open Now
- March 31 –Submissions are Due
- Early May – Finalists Announced
- Early June – Awards Ceremony hosted by First Lady Tammy Murphy



The Drumthwacket Foundation



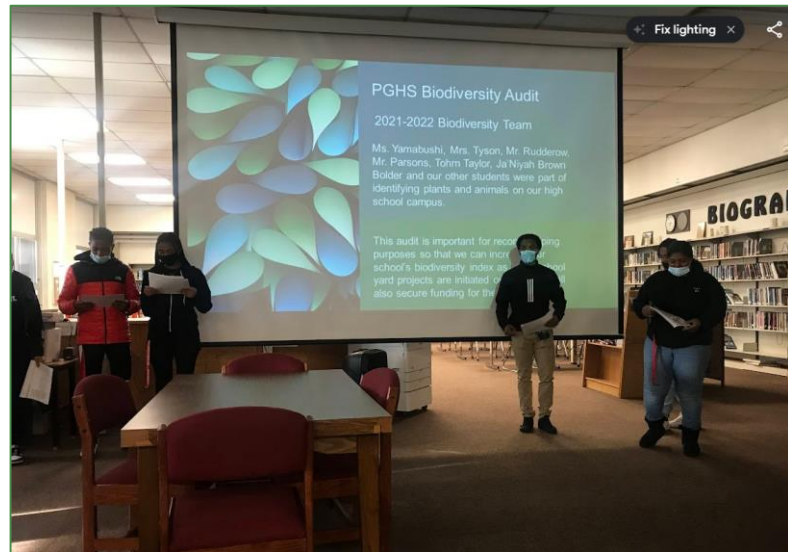


# Connecting Climate Change to Curriculum

## Professional Development Day

### January 18 at TCNJ

- Climate Change Primer
- Unpacking the Standards
- Integrating Climate Change Education into Existing Curriculum
- Empowering Students to Act
- Planning with Content Area Peers
- Free Resources



*Middle & High School Teachers, Supervisors & Administrators*

# Got Questions?

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Students, write your response!

# Sustainable Jersey for Schools Underwriters and Sponsors

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Foundation



## Grant Program Underwriters



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# Thank You

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For more updates on  
upcoming programs and  
grant opportunities!

