

# Creative Strategies to Incorporate Climate Change in Lesson Plans

*Ideas and Lessons Learned from the Maryland Climate Teach-In*

February 21, 2026



**MARYLAND  
CLIMATE  
TEACH-IN**



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EA Engineering, Science, and  
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Co-Chair, Education, Communications,  
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Maryland Commission on Climate  
Change



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## Jared Williams

Policy Analyst  
Climate Change Program  
Maryland Department of the  
Environment

# Presentation Goals

## **EDUCATOR EMPOWERMENT**

Provide educators with practical strategies to integrate climate change across all classroom subjects.

## **CROSS-DISCIPLINARY RELEVANCE**

Discuss relevance of climate education across subject matter

## **MARYLAND CLIMATE INITIATIVES**

Introduce to the Maryland Commission on Climate Change and the Climate Teach-In program's growth and impact.

## **RESOURCES AND NETWORK**

Offer access to resources, survey insights, and a statewide network of climate educators.



2025

# Annual Report

MARYLAND COMMISSION  
ON CLIMATE CHANGE

# Maryland Commission on Climate Change

# MCCC MARYLAND COMMISSION ON CLIMATE CHANGE

***Purpose:*** Advise the Governor and General Assembly on ways to mitigate the causes of, prepare for, and adapt to the consequences of climate change.



**Serena McIlwain**  
*Chair*



**Kim Coble**  
*Co-Chair*

The Commission is an independent, statutory body and all meetings are open to the public.

# Commission Working Groups



**ADAPTATION AND  
RESILIENCE**



**EDUCATION  
COMMUNICATION &  
OUTREACH**



**MITIGATION**



**SCIENTIFIC AND  
TECHNICAL**

# Education, Communication, and Outreach Working Group



**Mission:** ECO members work to educate Marylanders on climate change and to inform them about what the Commission is doing to address climate change's impacts on our state.

- Public relations (media, webinars, web)
- How to discuss climate change
- Climate education and literacy



ECO member representatives are appointed from government, academia, NGOs, and the private sector.

# Borrow this Approach



## The “One Data Point” Climate Warm Up

### DESCRIPTION:

A 5-minute opener using **one image, number, or graph.**

#### Grades 4-5:

What do you see? / What surprises you?

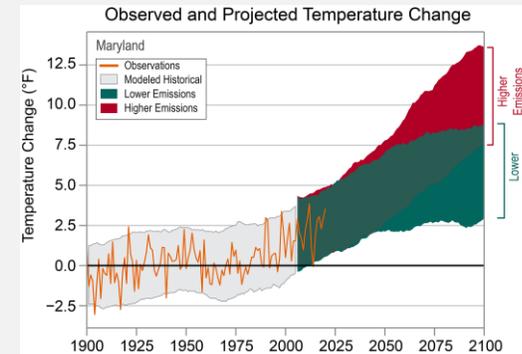
#### Middle School:

What do you notice and wonder?

#### High School:

What trend do you see? What questions does this raise?

**7 of the 10**  
warmest years have  
occurred since 2000



**Why this works across ages:**

Observation comes before explanation

No prior climate knowledge required

Easy entry point into evidence-based thinking

**Target subjects:**

Math, science, English, social studies





**MARYLAND  
CLIMATE  
TEACH-IN**

# What is the Maryland Climate Teach-In?

Maryland's Climate Teach-In encourages educators to adopt flexible and innovative approaches to engage around climate change. From 15-minute discussions to interactive modules and public events, the goal is to encourage Marylanders of all ages to explore climate solutions.

## WHO PARTICIPATES?

All kinds of educators, including:

- Classroom teachers (all ages & subjects)
- Environmental & outdoor educators
- After-school and youth program leaders
- Nature centers, nonprofits, and community groups
- Companies, organizations, and government agencies

## WHAT COUNTS AS A TEACH-IN?

It can be simple and aligned to what you already do:

- Exploring local weather, ecosystems, or environmental change
- Reading and writing about community impacts and solutions
- Using data, art, history, or civic engagement to understand climate
- Taking student-led action projects outdoors or in the community
- Big or small — it all matters.

## WHEN IS IT?

Teach-Ins can be held at anytime during the month of April

# Spokespeople over the Years



**Mary Kay Connerton**

Annapolis High School  
Wellness  
2024



**Brittany Rigdon**

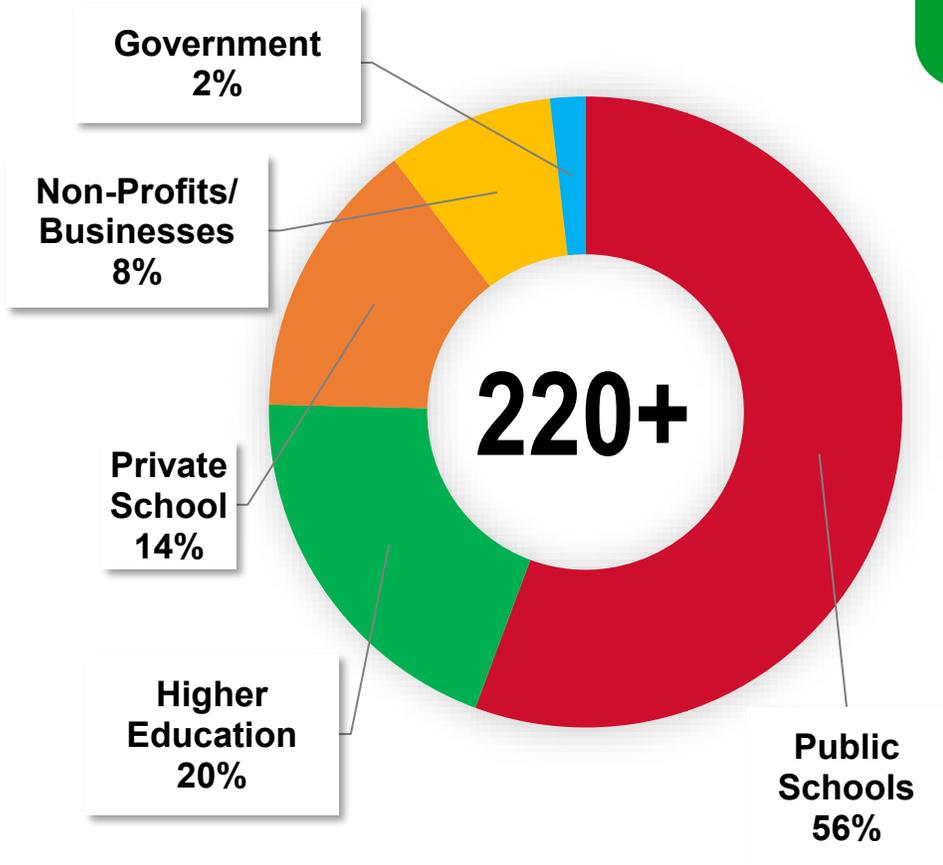
Cecil County School of Technology  
Landscaping and Horticulture Production  
2025



**Vicki Mathew**

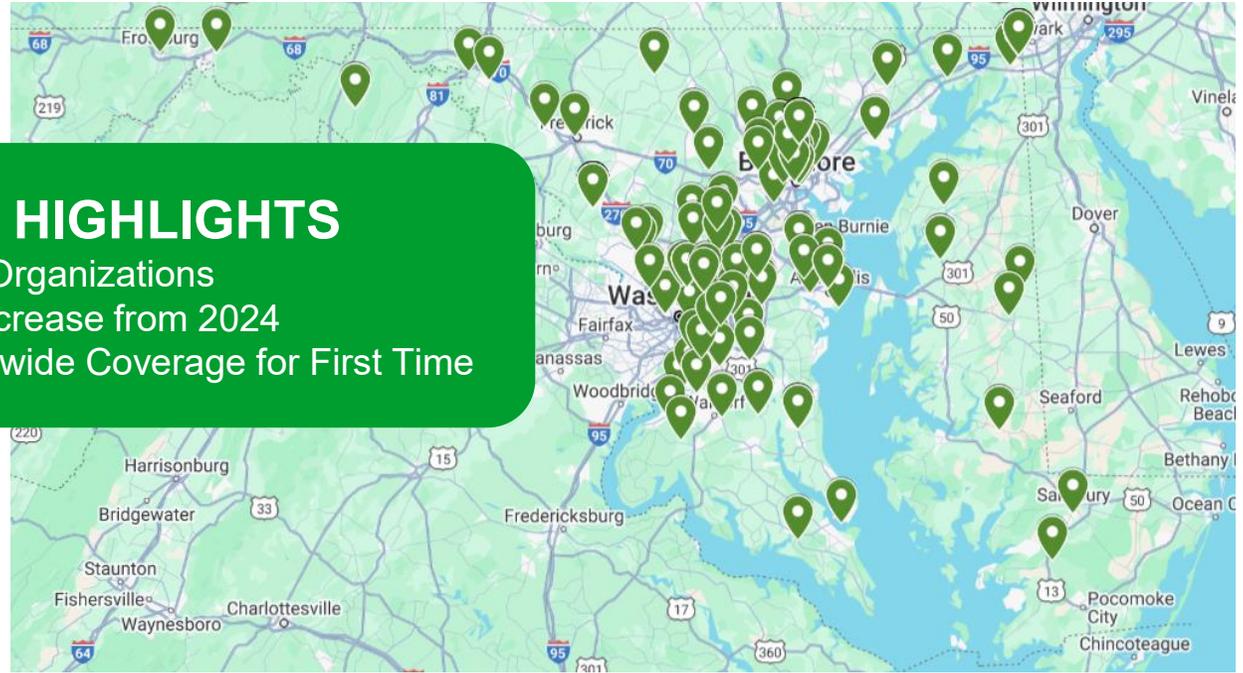
Baltimore Polytechnic Institute  
Biology  
2026

# 2025 Participation



## HIGHLIGHTS

- 65+ Organizations
- 3x Increase from 2024
- Statewide Coverage for First Time



YEAR	REGISTERED PARTICIPANTS	EDUCATION SETTINGS	GRADE LEVELS
2023	25	Public/Private Schools, College	Pre-K–12, College
2024	75	Expanded to more informal settings, Government, Private Organizations	Pre-K–Adult
2025	225	Expanded in all categories	Pre-K–Adult

# Who Participated in 2025

ROLE	PERCENTAGE	EXAMPLES
<b>K–12 Educator</b>	54.8%	Science, Math, English, Social Studies, Art, PE
<b>Administrator</b>	13.0%	School leaders, curriculum coordinators, department heads
<b>Group Leader</b>	18.7%	Clubs, environmental groups, community groups
<b>Other</b>	12.6%	Parks, nonprofits, informal educators

# Who Participated

NEARLY AS MANY ORGANIZATIONS AS PARTICIPANTS IN 2025

Alice Ferguson Foundation  
Allegany College of Maryland  
Alliance for the Bay  
American Conservation Coalition  
Anne Arundel County Public Schools (5  
*Educators*)  
**Baltimore City Public Schools (19  
*Educators*)**  
Baltimore County Public Schools (3  
*Educators*)  
Baltimore Lab School  
**Barnesville School (14 *Educators*)**  
Bowie State University (4 *Educators*)  
Caroline County Public Schools (2 *Educators*)  
Carroll County Public Schools (4 *Educators*)  
Cecil County Democrat Club  
Cecil County Public Schools (12 *Educators*)  
Charles County Public School  
Chesapeake Bay Foundation (4 *Educators*)  
Clean Air Partners  
Communicate For Health Justice (CFHJ) LLC  
Cool Green Schools  
DCPS  
Dorchester County Public Schools (4  
*Educators*)  
Elizabeth Seton High School (2 *Educators*)

Frederick County Public Schools (2  
*Educators*)  
Frostburg State University (2 *Educators*)  
Global Vision Initiative Inc  
Harford County Public Schools (3 *Educators*)  
Howard County Public Schools (3 *Educators*)  
Indian Creek School  
Johns Hopkins University (2 *Educators*)  
Maryland Department of Natural Resources  
Maryland Forest Service  
Maryland Health Department  
Maryland State Department of Education  
Mater Amoris Montessori School  
Montgomery College  
Montgomery County Public Schools (5  
*Educators*)  
Morgan State University  
Mother Seton Academy  
National Aquarium (2 *Educators*)  
**Prince George's County Public Schools (53  
*Educators*)**  
Prince George's County Young Democrats  
Radcliffe Creek School  
Saft  
Salisbury University  
SCAC

Sierra Club  
SOL Learning Center  
St. Mary's County Public Schools  
The Calverton School (4 *Educators*)  
The Community Ecology Institute  
The Community School  
The Gunston School (2 *Educators*)  
The Park School Of Baltimore (2 *Educators*)  
The Primary Day School  
The Seed School  
The Universities at Shady Grove  
**Towson University (21 *Educators*)**  
University of Maryland at Baltimore (2  
*Educators*)  
University of Maryland Center for  
Environmental Science  
University of Maryland College Park  
University of Maryland Eastern Shore  
University of Maryland Global Campus  
University System of Maryland  
Washington County Public Schools (2  
*Educators*)  
Wind Dance Farm & Earth Education Center  
(2 *Educators*)

# What Educators Told Us

<b>SURVEY FINDING</b>	<b>PERCENTAGE</b>	<b>EXAMPLE</b>
<b>Hands-on/outdoor learning most engaging</b>	78%	School gardens, weather stations, composting/recycling
<b>Local examples increased motivation</b>	65%	Maryland-specific climate impacts
<b>Action-oriented projects boosted participation</b>	72%	Community clean-ups, student-led initiatives
<b>Desire for ready-to-use resources</b>	84%	Lesson plans, activity guides

# Borrow this Approach

## Local Climate Lens

### Pre-K-2:

How could this change outside?

### Grades 4-5:

How might weather or seasons affect this?

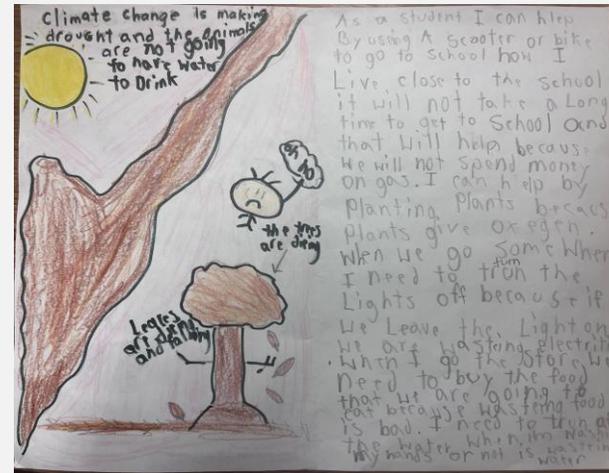
### Middle School:

How could climate change impact people or nature here?

### High School:

What systems or communities are affected?

**CORE QUESTION:**  
“How might climate change affect this [school/town/stream ...] — now or in the future?”



**Why this works across ages:**

Same question, different depth

Builds a habit of thinking

Avoids needing a full “climate lesson”

**Target subjects:**

Science, English, social studies, art





# Cross- Disciplinary Climate Change Integration

# Why Climate Change Belongs in Every Subject

## **CROSS-DISCIPLINARY RELEVANCE**

Climate change impacts multiple fields, making it relevant to science, math, English, social studies, art, and physical education.

## **EMPOWERS ACTIVE CITIZENSHIP**

Embedding climate education helps students become informed and active citizens addressing real-world issues.

## **SUPPORTS CRITICAL SKILLS**

Integrating climate change fosters critical thinking, civic engagement, and problem-solving among students.

## **ADDRESSES CLIMATE ANXIETY**

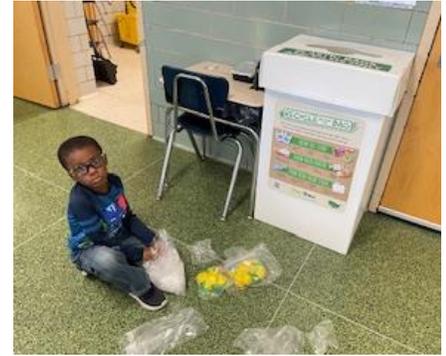
Focusing on solutions and hope reduces climate anxiety and encourages positive student engagement.

# Elementary School Ideas

- **Climate Change Integration**  
Teachers use plant growth projects, pollinator gardens, and weather tracking to teach climate change concepts.
- **Resource Conservation Activities**  
Recycling, composting, and waste audits engage students in learning environmental stewardship practically.
- **Creative Sustainability Projects**  
Art projects using recycled materials foster creativity and reinforce sustainability concepts in young learners.
- **Hands-On Learning Success**  
Hands-on activities like creating water cycle murals and Earth Day events help students connect science and social studies.



# Case Study: Hebbville Elementary



## HIGHLIGHTS

- Involved all 500 Students Pre-K – 5
- Combination of classroom-based lessons and outdoor experiential learning

# Middle School Ideas

- **Hands-On Environmental Activities**  
Students engage in carbon footprint calculations and water cycle experiments to learn practical environmental science.
- **Collaborative Projects and Debates**  
Group projects and debates on climate policy foster teamwork and critical thinking about environmental issues.
- **Interdisciplinary Climate Education**  
Integrating climate science with math, social studies, and art deepens students' understanding of environmental challenges.
- **Empowering Local Climate Action**  
Activities connect climate science to local issues, empowering students to take meaningful environmental action.



# Case Study: Mount View Middle School



## HIGHLIGHTS

- Involved 900 students engaged
- Hands-on activities focused on self-directed action

# Borrow this Approach

## “Design a Fix” Micro-Challenge

### Pre-K-3:

Draw or point

### Grades 4-5:

Sketch and label

### Middle School:

Explain how it helps

### High School:

Consider tradeoffs or feasibility

### PROMPT:

How could we make this space cooler, safer, or more sustainable?”



### Why this works across ages:

Solution oriented

Reduces climate anxiety

Encourages creativity and systems thinking

Ideas count – no building required

### Target subjects:

Science, engineering, art, math

# High School Ideas

- **Science Integration Activities**  
Science teachers use labs on ocean acidification, climate data analysis, and ecosystem field studies to engage students.
- **Math Application in Climate**  
Math educators emphasize graphing data, statistical trends, and energy efficiency calculations in climate studies.
- **Student Project Success**  
Students analyze real data, interpret graphs, and create prototypes focusing on sustainability solutions.
- **Educational Standards Alignment**  
These integrated activities support college and career readiness.



# Case Study: Baltimore Polytechnic Institute



# General Approaches

- Conduct a climate focused Q&A
- Make journal entries and organize community circles with prompts on climate change topics
- Invite guest speakers
- Explore the challenges of measuring the impacts of climate changes
- Create posters encouraging individual action
- Examine ways to reuse and repurpose things
- Investigate adaptation and mitigation measures
- Watch a climate related video
- Host a dialogue at an outdoor classroom
- Climate ribbon tree





# Earth Day Celebrations

# Supporting Green School Requirements

## **CURRICULUM INTEGRATION**

Stations connect science, ELA, math, social studies, art, and health to environmental themes.

## **SUSTAINABILITY ACTION**

Activities often include recycling education, composting, native plantings, air quality awareness, or energy conservation.

## **STUDENT LEADERSHIP**

Students design stations, lead demonstrations, present research, and teach peers or families.

## **COMMUNITY ENGAGEMENT**

Many schools invite parks staff, nonprofits, local agencies, or parent groups to participate.

An Earth Day Celebration or Fair isn't a one-day celebration—it's a way to *show* how curriculum, student action, and community partnerships come together, which is exactly what Maryland Green Schools is looking for.

# Case Study: Cross Country Elementary/Middle



THE CCEMS GREEN TEAM PRESENTS  
April 24<sup>th</sup> 2025  
4:30 - 6:30

Tea Party Station

Juicing Station

CCEMS AIR Quality Station

Many MORE GREEN Stations!

CELEBRATING EARTH DAY

Through  
**U.N.I.T.Y**  
Using Nature In Teaching The Youth

Green Team Members also made Jewelry from Natural Resources that will be on sale. All proceeds will go to Great Kids Farm and MAEOE.

# Case Study: Greensboro Elementary



# Borrow this Approach

## Climate + Careers Snapshot

### DESCRIPTION:

A quick connection between climate change and real jobs.

#### Grades 4-5:

How might this job change if it gets hotter or wetter?

#### Middle School:

What new skills might this job need?

#### High School:

How does climate shape this career path?



### Why this works across ages:

Makes climate relevant to students' futures

Strong engagement across grade levels

Especially effective for CTE and informal educators

### Target subjects:

CTE, science, social studies, career counseling, informal education

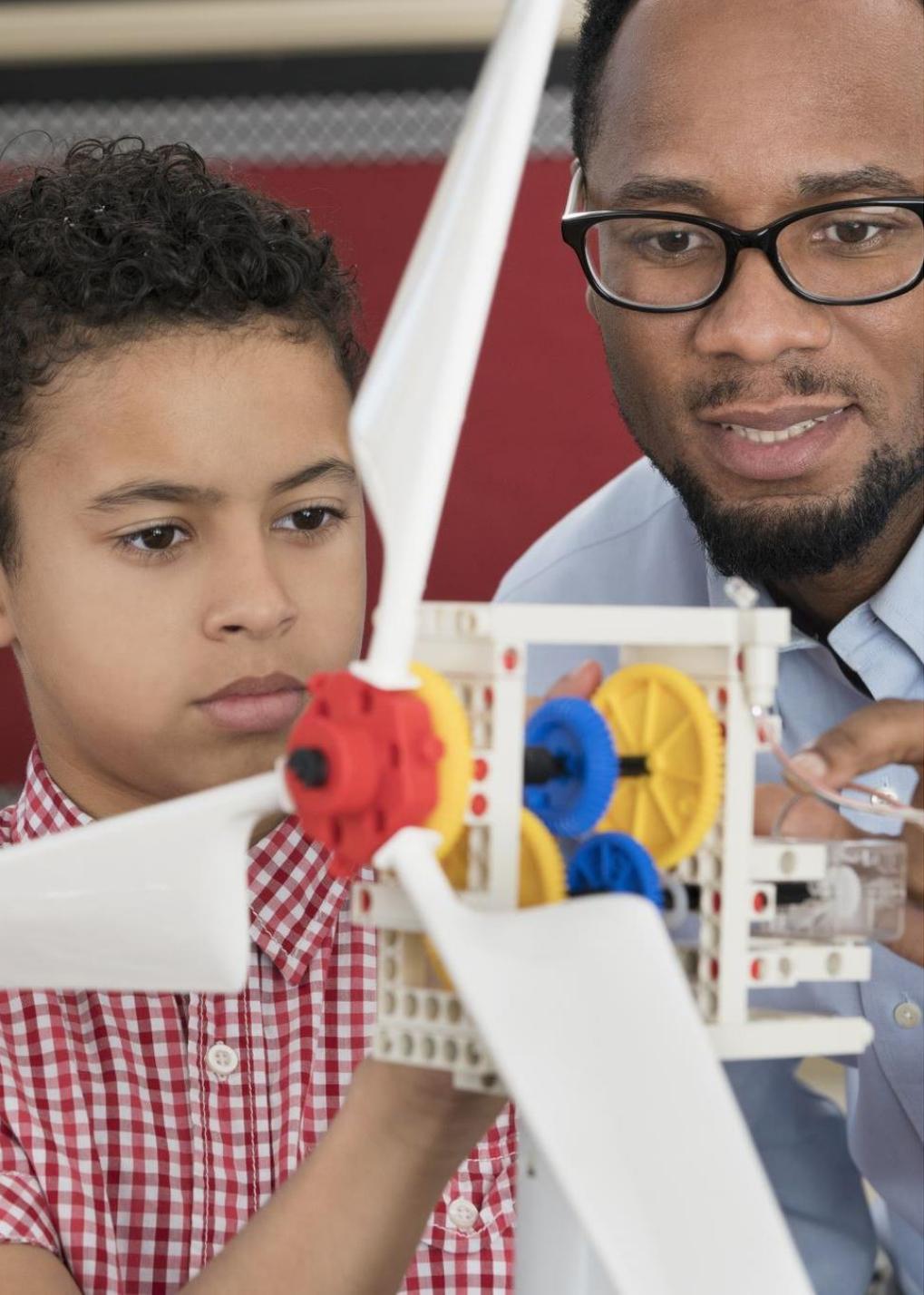
# Partnership and Resources

## Partners

- Educational Institutions
- Local Tree Companies
- Local Parks
- Environmental NGOs
  - Compostology
  - Living Classrooms Foundation
  - National Aquarium
- Environmental and Engineering Consultants/Architects
- Power Companies
- Department of Natural Resources (local and state)

## Resources

- Path to Positive Climate Ambassadors Training
- National Tree Benefit Calculator
- Seek App
- Carbon Footprint Calculator
- AIA Climate Action Design Challenge
- MCCC Teach-In Webpage
- National Energy Education Development program
- BGE Smart Energy Program
- Subject to Climate



# 90-Second Peer Share



# Join the 2026 Maryland Climate Teach-In

April 2026



MARYLAND  
CLIMATE  
TEACH-IN

# TOGETHER WE CAN!

When people understand the challenges and solutions of climate action, they're empowered to make a difference.

INITIATE CHANGE

Start meaningful conversations about climate change in your classroom or meeting.

**CALL FOR  
EDUCATORS**



## Month of April

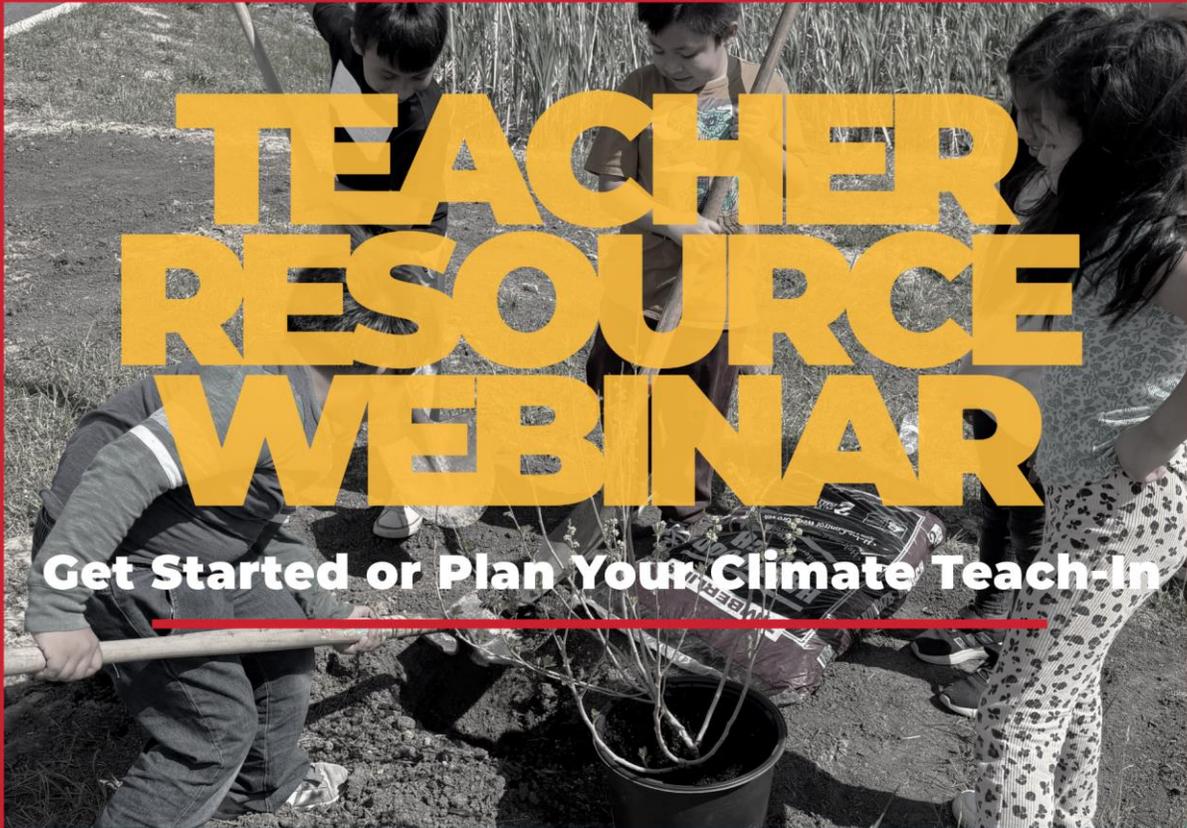
*Flexibility for Spring Breaks*

### WHY PARTICIPATE?

- Access a wealth of teaching resources.
- Be part of a statewide network of educators committed to sustainability and environmental stewardship.
- Inspire students to explore solutions to one of the most pressing issues of our time.
- Eligible for planned prizes

March 3, 2026

6:00-7:00 PM



# TEACHER RESOURCE WEBINAR

Get Started or Plan Your Climate Teach-In

## Register to Attend

Join local environmental education organizations and teachers as they share classroom-ready activities, instructional strategies, resources, and best practices you can take back to your students.



March 3, 2026

6:00-7:00 PM

Virtual

*Free webinar to help you get started or expand your Climate Teach-In*



**READY TO  
REGISTER??**





**Make the  
Commitment**

# For More Information



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[https://mde.maryland.gov/programs/air/ClimateChange/MCCC/  
Pages/ClimateTeachIn.aspx](https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Pages/ClimateTeachIn.aspx)

# Questions & Answers

