

Clean Air Partners Board of Directors Meeting

Education Program Updates

Elizabeth Spike

Education Program Manager

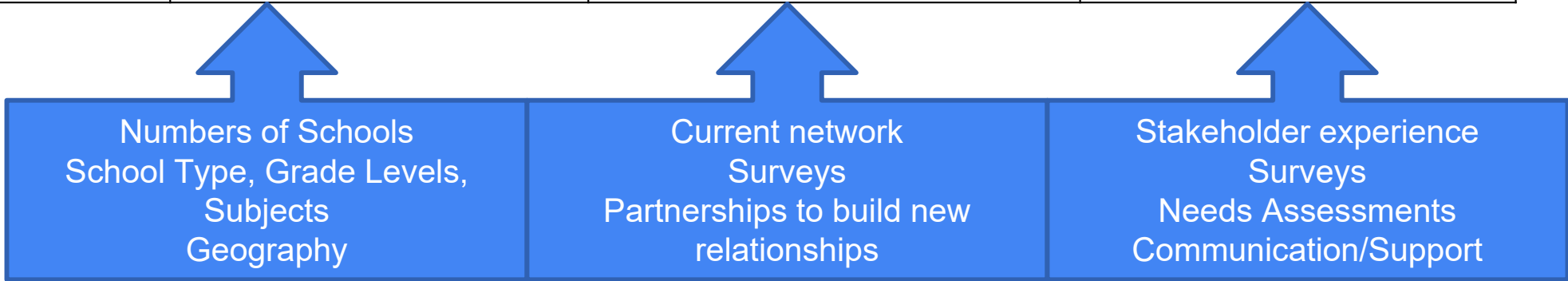
April 17, 2025



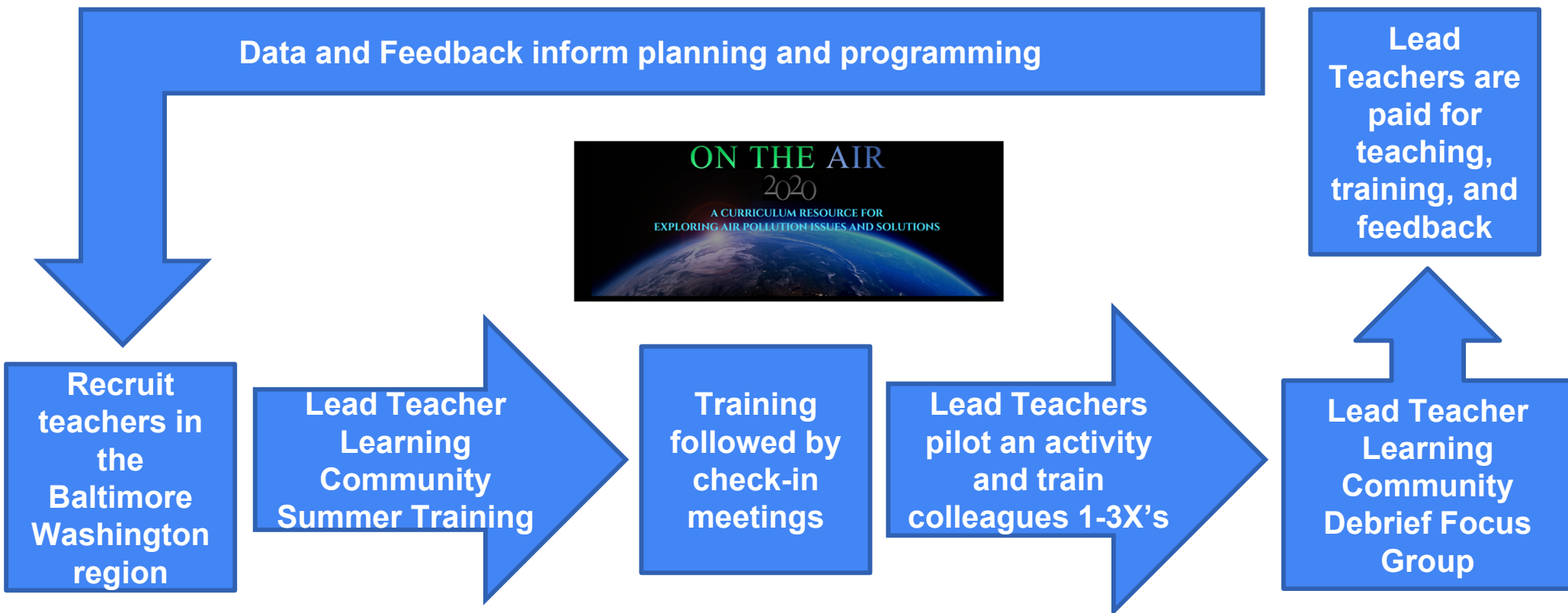
How can we educate students to transform awareness of air quality and climate change into personal actions that protect their communities in the Baltimore-Washington region?

Objective: Promote the use of <i>On the Air</i> curriculum. (FY 2023 Work Plan)			
Activity	Target CAP participating member school systems, charter, private, and independent schools in the District of Columbia, Maryland, and Northern Virginia.	Build relationships with stakeholders in public, charter, private and independent schools, school districts, and teachers of grades 5-12 across the BW region to create legacy and longevity for the CAP's Education Program.	Develop evaluation tools to conduct a needs assessment and gauge the extent of promoting the <i>On the Air</i> curriculum and Train-The-Trainer model in the BW region.

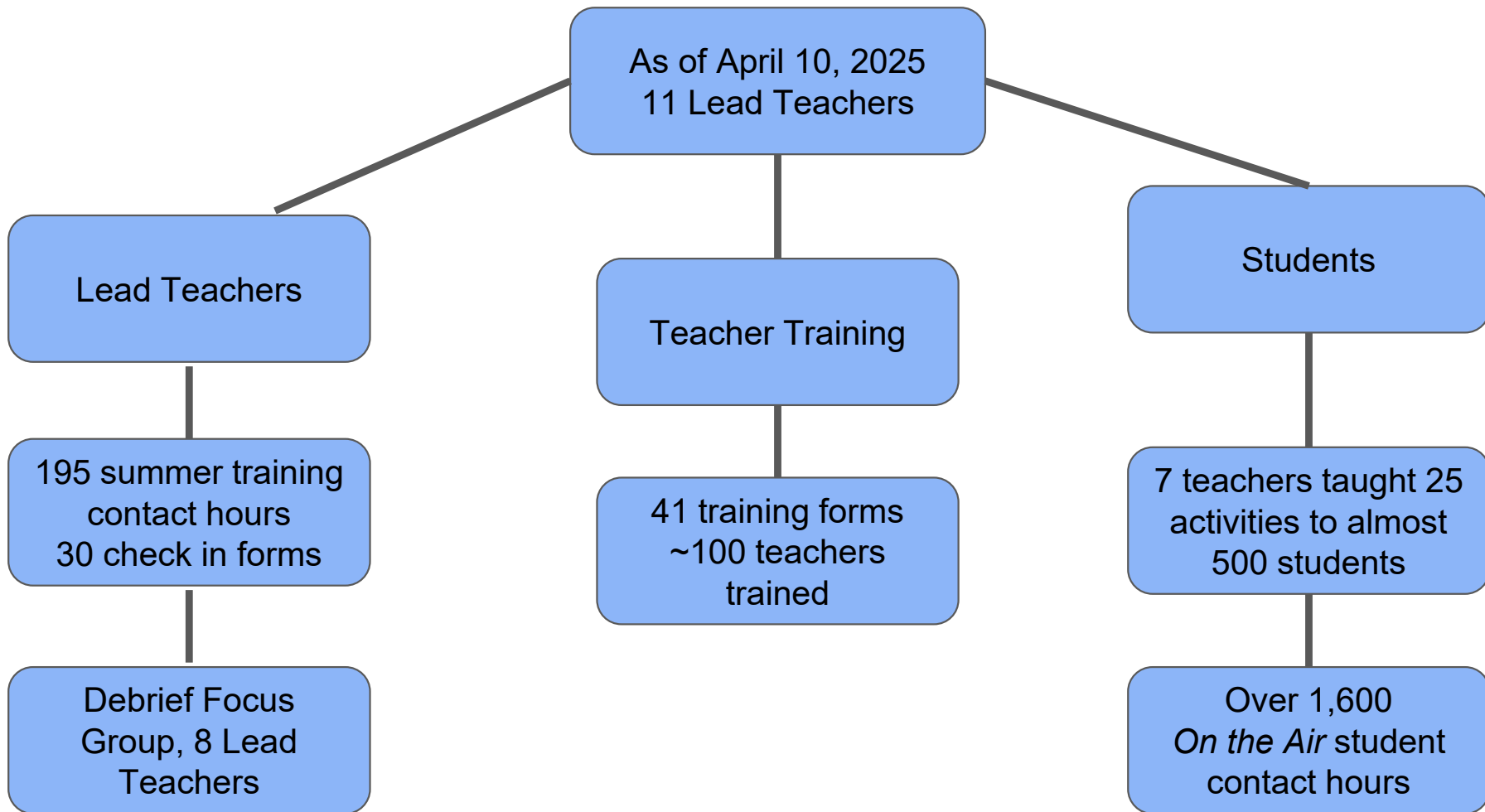
DATA / METRICS



On the Air Train-the-Trainer Model



2024-2025 Lead Teacher Learning Community



Lead Teachers

2024-2025 Lead Teacher Learning...

Pins represent school addresses of the Lead Teachers

1 view


Last edit was yesterday at 3:32 PM

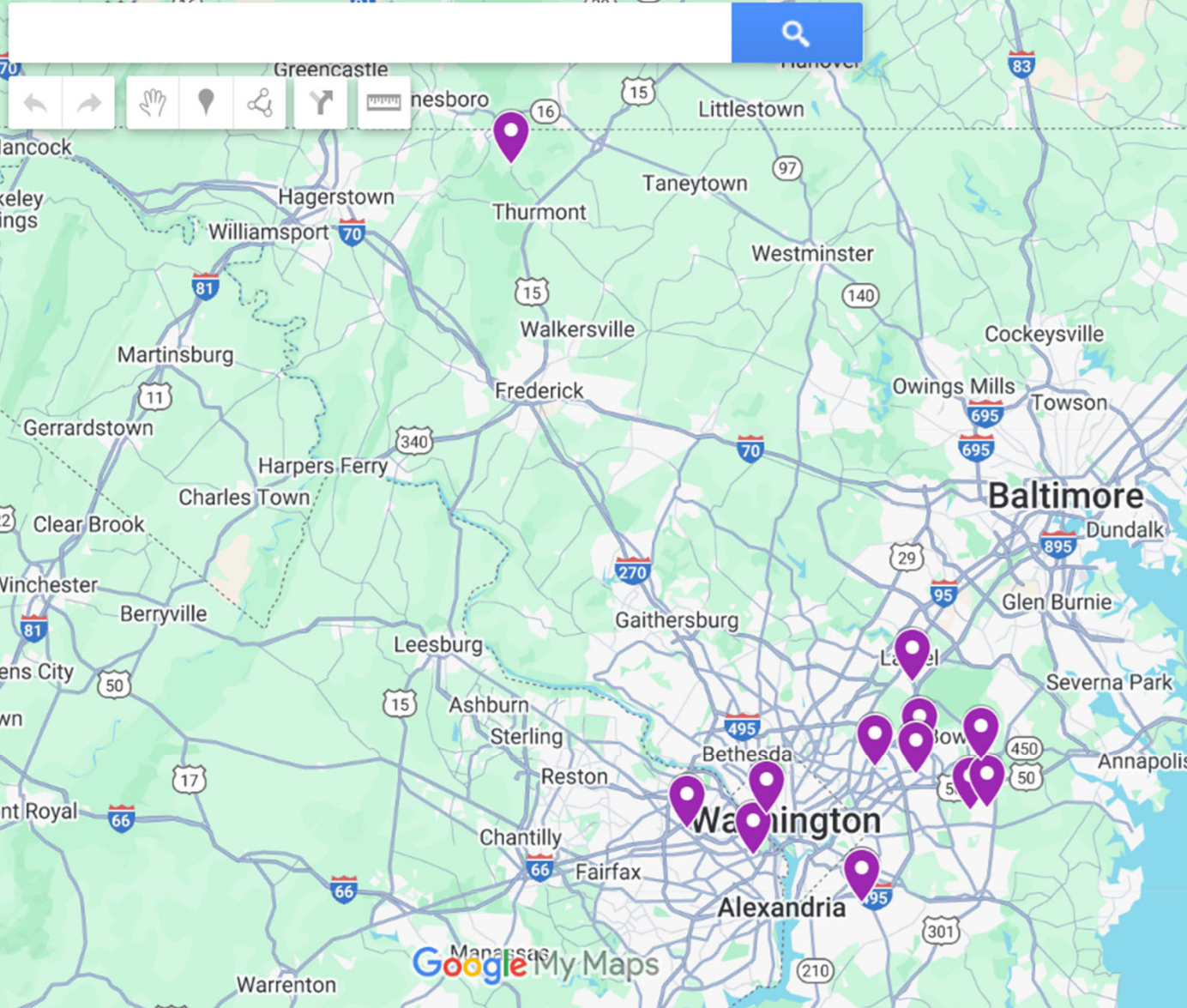
 Add layer  Share  Preview

Lead Teacher Learning Communit... 

  Uniform style

 All items (13)

 Base map



Teacher Feature

Welcome to our Teacher Feature

Clean Air Partners highlights a teacher involved in our Lead Teacher Learning Community or Teachers who implement *On the Air* in their classrooms. We dedicate this space to recognize teacher commitment to youth environmental literacy.

Stephanie Isenock
Middle School Science Teacher
Sabillasville Environmental School
Frederick, Maryland



1

Special Recognition of Tashna Morris-Daley

Clean Air Partners empowers teachers with the content and tools to make air quality real for their students. Our investment fosters change in classrooms, on school campuses and seeks to make a difference across school districts, and inspire action at the state level and nationwide.

Tashna Morris-Daley is a role model for our teachers. Her commitment to air quality education is transforming science education. As the PGCPS Air Quality Lead Teacher, she is empowering teachers and ensuring their students have the tools to analyze air quality and advocate for change, supporting both state environmental standards and the district's Climate Action Plan.

1

update this slide

Elizabeth Spike, 4/11/2025

Teacher Trainings

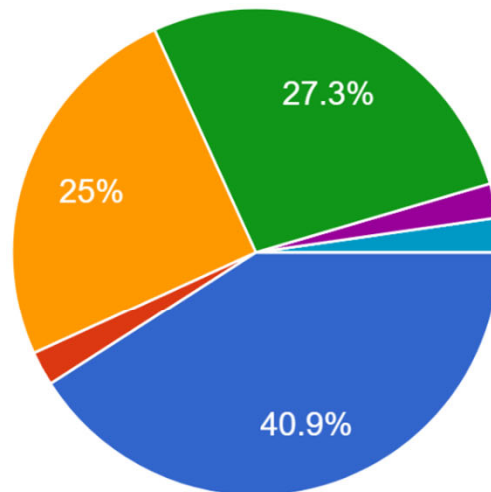
Teacher Trainings—Some highlights

- 32 out of 44 would like to receive updates from Clean Air Partners
- $\frac{2}{3}$ were high school teachers
- Top subjects taught: Biology, Environmental Science, Middle School
- Other subjects reported: physical education and world I history
- Most reported teaching more than 10 years
- 93% have never worked with Clean Air Partners

Teacher Trainings—Some highlights

Do you already teach air quality and/or climate change in your science classes?

44 responses

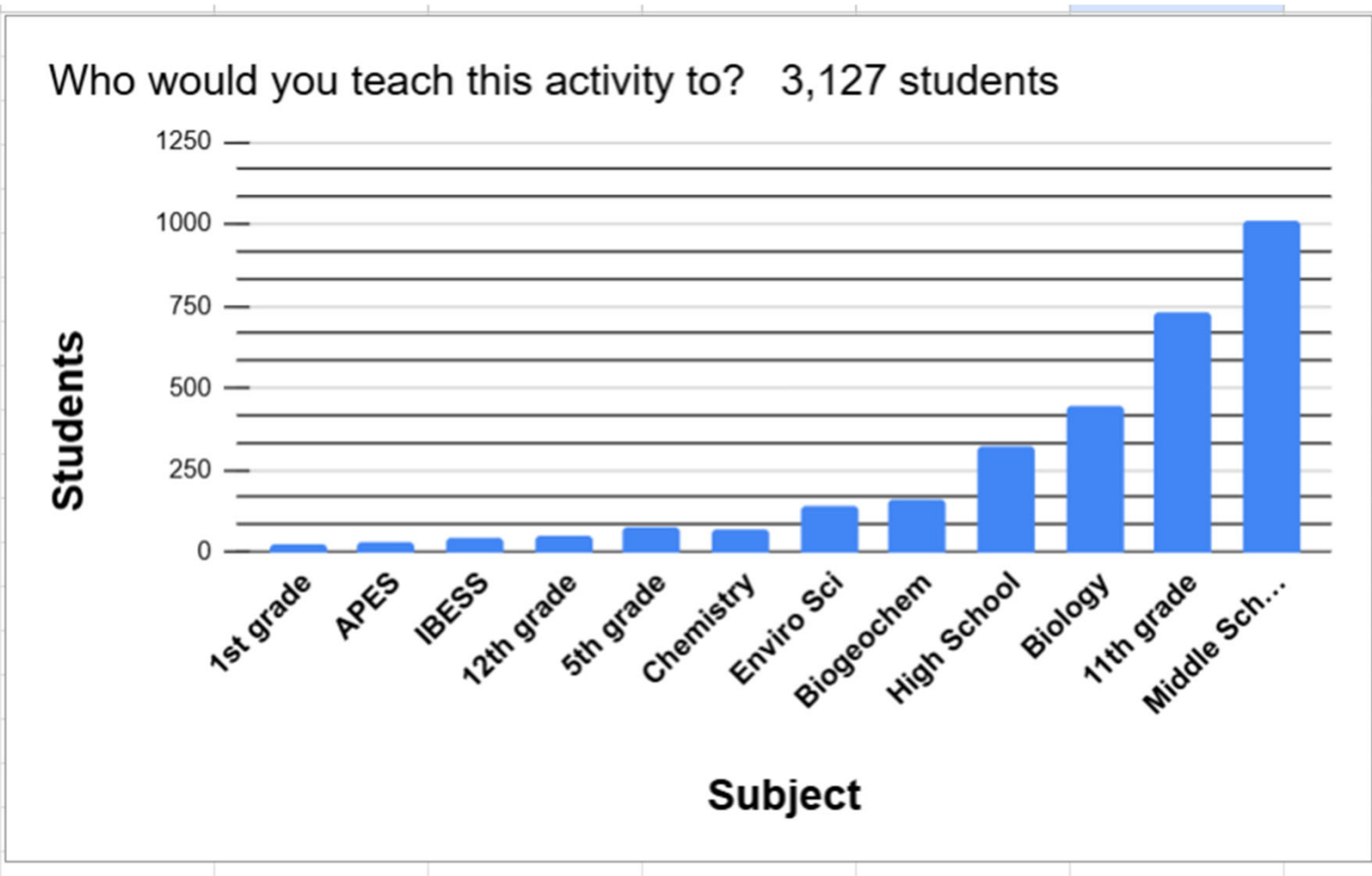


- Yes, both air quality and climate change
- Yes, air quality only
- Yes, climate change only
- No, neither
- Just started a new curriculum so not sure if it'll come up in one of the future lessons
- will be integrating both air quality and climate change in units 2 and 3

Teacher Trainings—Some highlights

- Top training topics: data literacy, human impact on dead zones, criteria air pollutants
- 80%+ satisfied with training and with the activity and 60%+ likely to teach the activity (scale 1-3; 1 dissatisfied, 2 neutral, 3 satisfied)
- If not likely to teach the lesson→ ‘does not apply to overloaded curriculum’, ‘harder to apply to chemistry’
- **Positive comments:**
 - Keep providing us with great lessons.
 - Ms. Solomon did an excellent presentation.
 - ...meaningful and relevant.
 - Great help to continue my professional development.
 - It was enlightening, Engaging, I learned a lot thank you!

Physics	24
1st grade	26
APES	30
IBESS	40
12th grade	50
5th grade	75
Chemistry	70
Enviro Sci	140
Biogeochem	160
High School	320
Biology	447
11th grade	734
Middle School	1011



School All	<p>The content was relevant to my work.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>3</td> </tr> <tr> <td>4 Agree</td> <td>3</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	3	4 Agree	3	<p>The facilitation was high quality.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>2</td> </tr> <tr> <td>4 Agree</td> <td>2</td> </tr> <tr> <td>3 Neutral</td> <td>2</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	2	4 Agree	2	3 Neutral	2	<p>I feel equipped to implement what I learned.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>3</td> </tr> <tr> <td>4 Agree</td> <td>2</td> </tr> <tr> <td>3 Neutral</td> <td>1</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	3	4 Agree	2	3 Neutral	1
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Role All	<p>Block 3 Session</p> <ul style="list-style-type: none"> <input type="checkbox"/> Empowering Educators with Lumio: Enhancing C... <input type="checkbox"/> Enhancing Self-Regulation in Deaf and Hard of H... <input type="checkbox"/> Executive Skills Across the Tiers: Embedding Crit... <input type="checkbox"/> ExploreLearning Gizmos: Expanding the Gizmos ... <input checked="" type="checkbox"/> Exploring Air Quality with 3rd-5th Graders Using... <input type="checkbox"/> Fe Exploring Air Quality with 3rd-5th Graders <input type="checkbox"/> Using Air Now Resources (Elem. Sci.) <input type="checkbox"/> Finding Social & Emotional Balance in PE (HPE) <input type="checkbox"/> Focused and Ready to Engage in the Afterschool ... <input type="checkbox"/> From Fluency to Understanding: Bridging the Ga... 																								
Cluster All	<p>Block 3 - Additional Feedback</p> <p>I can incorporate the learning with my unit lessons on weather</p> <p>It was great to focus on the environment.</p>																								
Ward All	<p>Number of Respondents</p> <h1 style="text-align: center;">6</h1>																								
Race All																									
Gender All																									
Years at DCPS All																									
Years in Ed All																									

School All	<p>The content was relevant to my work.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>9</td> </tr> <tr> <td>4 Agree</td> <td>5</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	9	4 Agree	5	<p>The facilitation was high quality.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>7</td> </tr> <tr> <td>4 Agree</td> <td>7</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	7	4 Agree	7	<p>I feel equipped to implement what I learned.</p> <table border="1"> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>5 Strongly Agree</td> <td>6</td> </tr> <tr> <td>4 Agree</td> <td>6</td> </tr> <tr> <td>3 Neutral</td> <td>2</td> </tr> </tbody> </table>	Response	Count	5 Strongly Agree	6	4 Agree	6	3 Neutral	2
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Role All	<div data-bbox="405 889 961 1308"> <p>Block 4 Session</p> <ul style="list-style-type: none"> <input type="checkbox"/> Empowering Your LEAP Team Through SchoolM... <input type="checkbox"/> Everything You Ever Wondered About Curriculu... <input type="checkbox"/> ExploreLearning Gizmos: Engaging in Argument... <input checked="" type="checkbox"/> Exploring Air Quality with 3rd-5th Graders Using... <input type="checkbox"/> Exploring Air Quality with 3rd-5th Graders Using Air Now Resources (Elem. Sci.) <input type="checkbox"/> Finding Social & Emotional Balance in PE (HPE) <input type="checkbox"/> From Surviving to Thriving: The Mental Health o... <input type="checkbox"/> Gearing Up for Transit: Options & Advocacy Skil... <input type="checkbox"/> Hats and Ladder: Empowering Career Explorers (...) </div> <div data-bbox="961 889 1902 1308"> <p>Block 4 - Additional Feedback</p> <p>I connected with the presenter. She is going to come to my class and present to my students.</p> <p>I look forward to using these resources in the near future. Thank you for providing a few new options for elementary science teachers this PD day. It often feels like we are an afterthought, so it was nice to have a couple of new choice sessions that we can use to enhance our courses.</p> <p>It helped me get ideas about the last unit in 5th grade and how humans impact the earth and its resources.</p> <p>Learning how to implement STEM to kindergarten</p> </div>																						
Cluster All																							
Ward All																							
Race All																							
Gender All																							
Years at DCPS All																							
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<p>Number of Respondents</p> <h1 style="text-align: center;">14</h1>																							



MAEOE Conference February 2025



Students

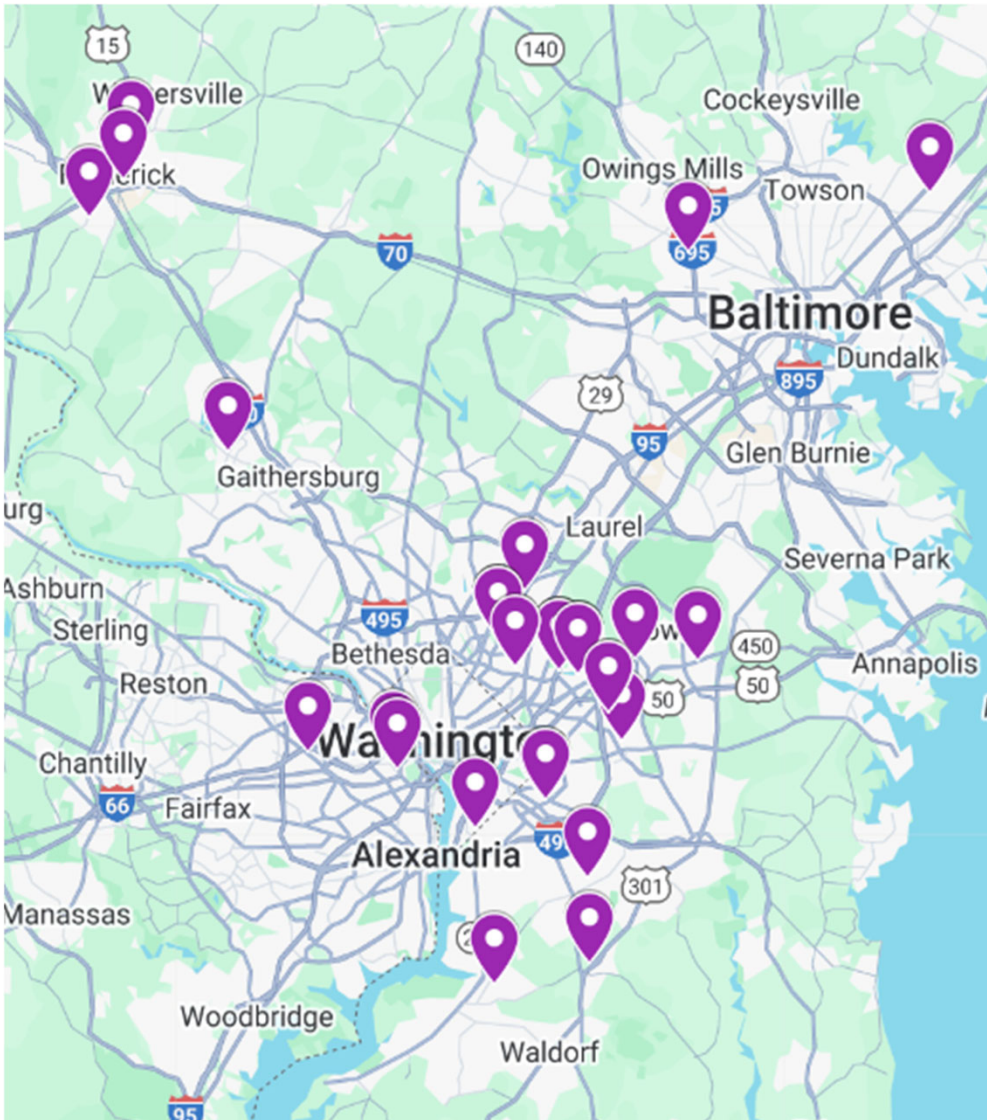
Students via feedback forms

- 100% of Lead Teachers reported they are learning more about AQ
- 100% reported their students are more interested in AQ
- 100% reported knowing the science content would NOT be a barrier to teaching the activities in non-science classes
 - **Some comments:** Fairly easy, require little or no experience, need some foundational knowledge, graph analysis, appropriate, scripted parts help new teachers, interdisciplinary theme

Students via email

- Number of activities taught: 25
- Number of students taught 481
- Number of On the Air student contact hours: 1,630
- Some highlights: 1 elementary school teacher, 1 sponsors Green Team and Youth Climate Institute, 1 activity co-taught, 1 teacher part of Purple Air LCS serving over 200 students, 1 teacher leading the AQ PLC this year and will continue next year

2025-2026 Lead Teacher Recruitment



32 Teachers have signed up for an LTLC Information Session

Upcoming information sessions:

- April 29, 2025
- May 20, 2025
- June 10, 2025

Application/MOU due June 13, 2025

9 Applicants

Summer Training Options:

- June 24-26, 2025
- August 5-7, 2025

2024-2025 Tabling, Workshops, Other Outreach

SY 2024-2025, as of April 10, 2025

Tabling

CLEW-Youth Outreach
Frederick County Green
Careers
VAST
BTT Betty Hyatt

Professional Development

FCPS ,VA
PGCPS AQ PCLC
ACPS
DCPS
MAEOE
NSTA

Other Outreach

CLEW
CEEJH Symposium
NAAEE
AGU
NoVA PTA's/PTO's

Conferences, Tabling, other Outreach

Spring 2025



**Betty Hyatt Park
Tree Planting
March 15, 2025**

Thank you to
Mike Taylor,
Anna Marshall, and
Brian O'Malley



**PGCPS AQ
Professional
Learning Community**

OTA activities
Jan, Feb, Mar 2025
Led by OTA Lead
Teacher,
Training feedback



**MAEOE three-hour
workshop and
tabling**

25 teachers participated,
all received free
resources, co-presented
with Attune, interest in
IAQ and LCS

Betty Hyatt BTT/CAP Tree Planting Event 3/15/25



Thank you Jami Hill!

Conferences, Tabling, other Outreach



**Letters of Support
for partnerships**

Three letters to support
Institute for Humane Education
to train VA teachers about
solutionary framework, OTA
module 4 MWEE



**DCEEC
Teacher Night
February 13, 2025**

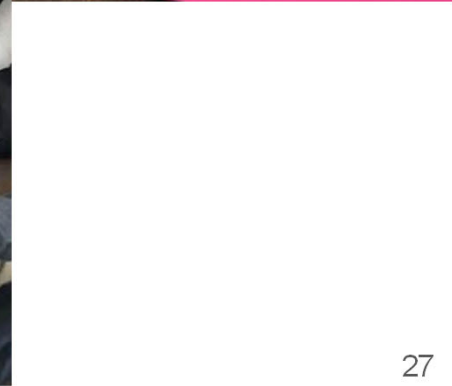
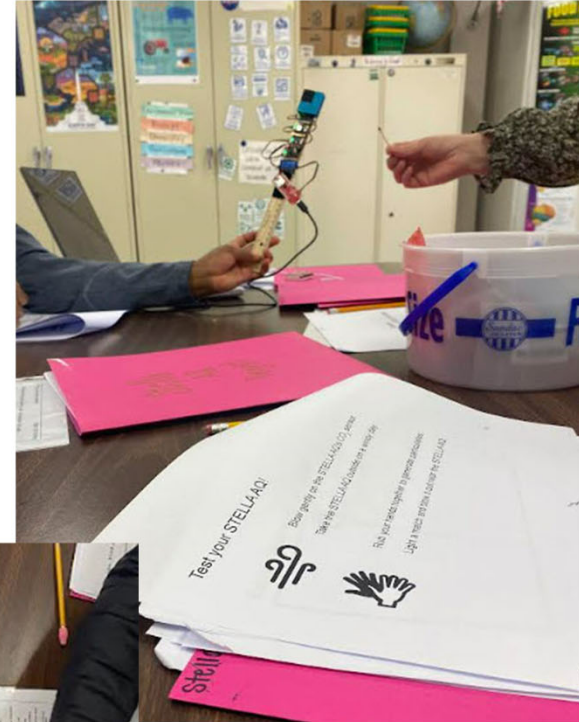
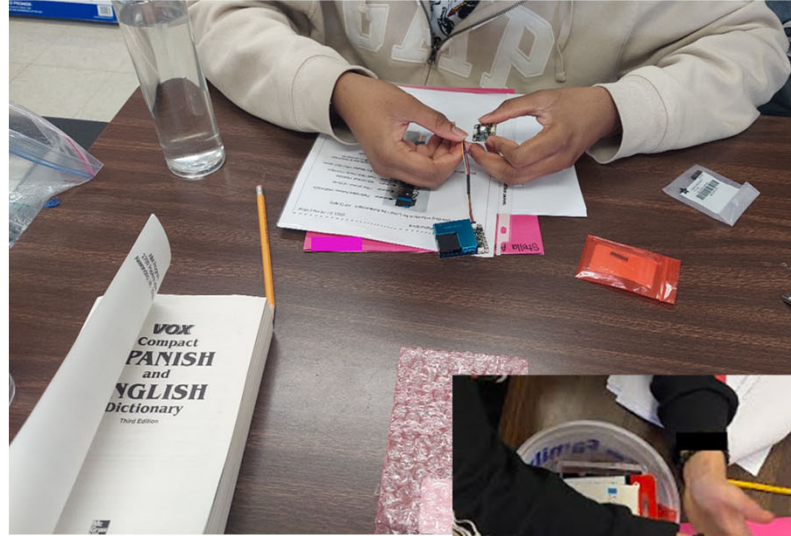
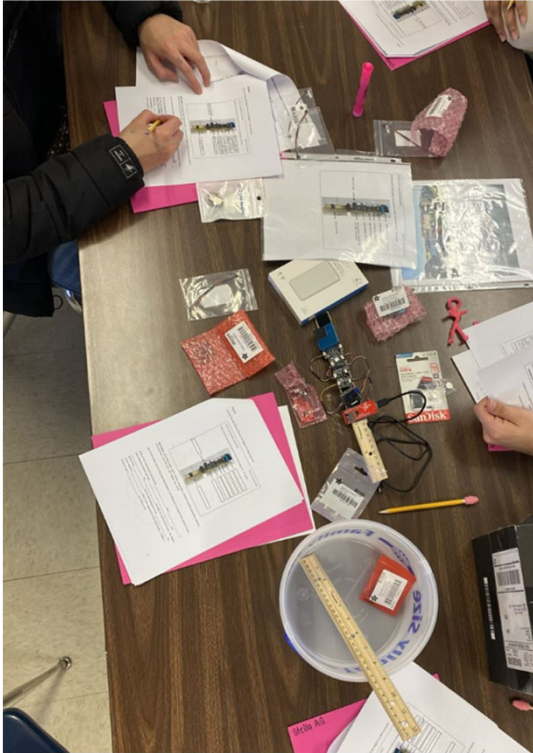
Networking
opportunity,
tabling in 2026



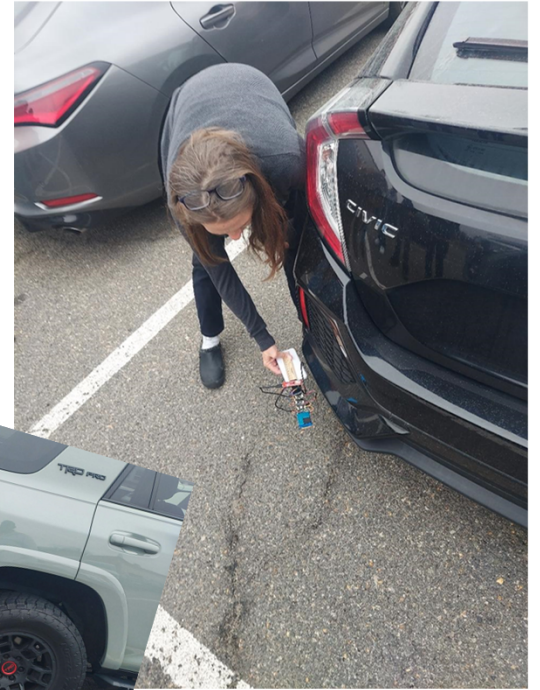
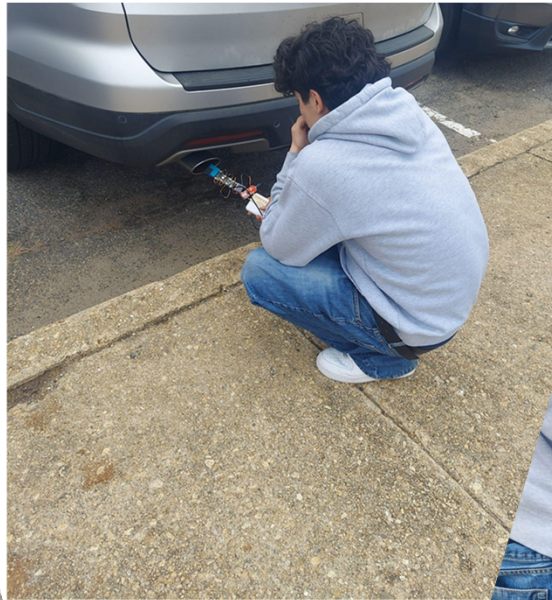
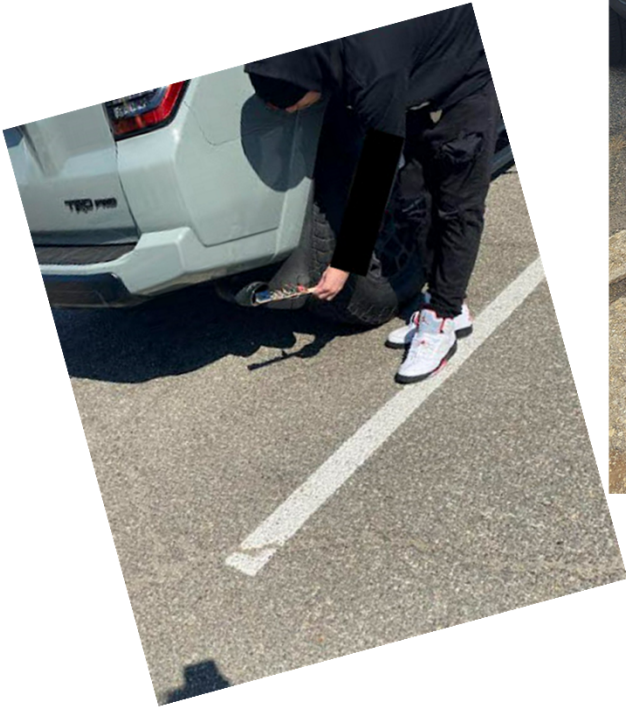
**NASA STELLA AQ
pilot STEM project**

Students
successfully built a
LCS to measure
CO2 and PM2.5

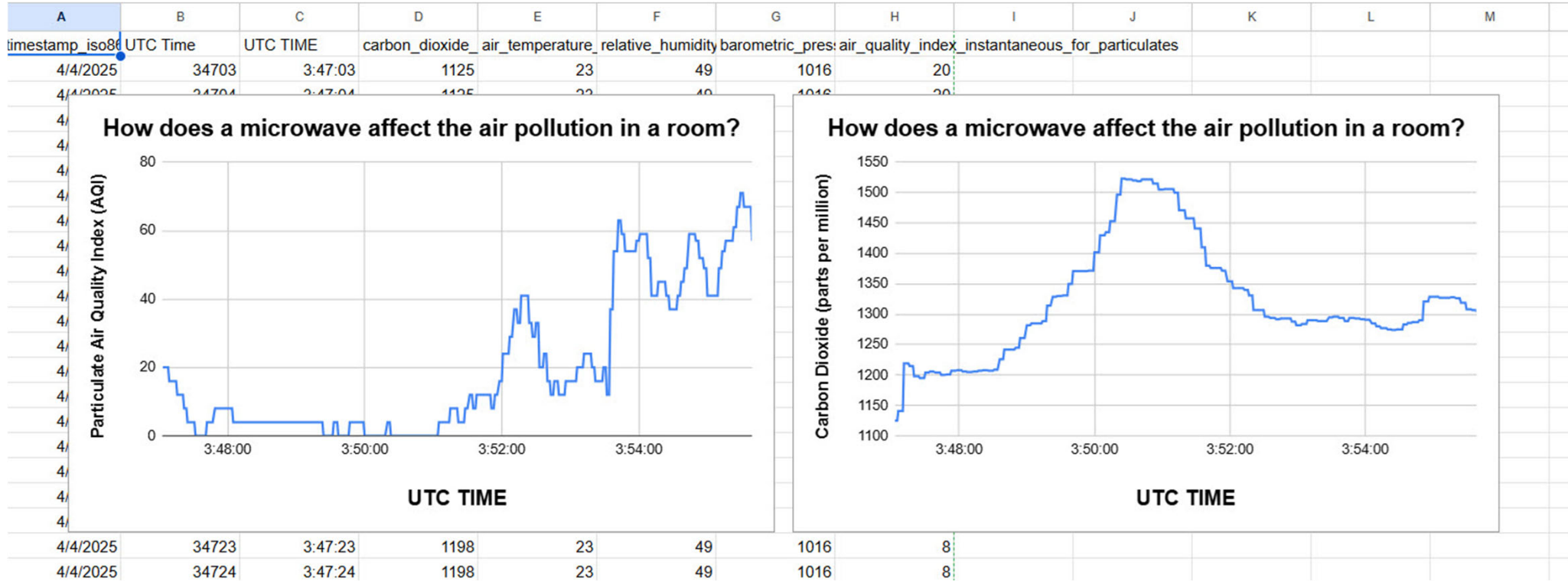
NASA STELLA AQ STEM PROJECT PILOT



NASA STELLA AQ STEM PROJECT PILOT



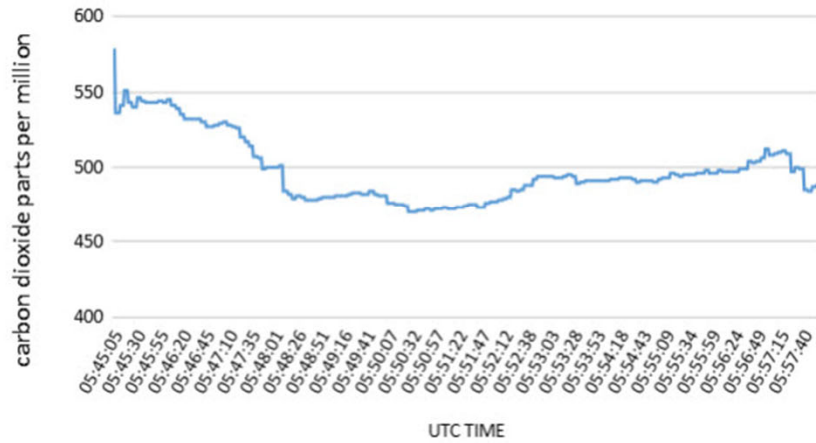
NASA STELLA AQ STEM PROJECT PILOT



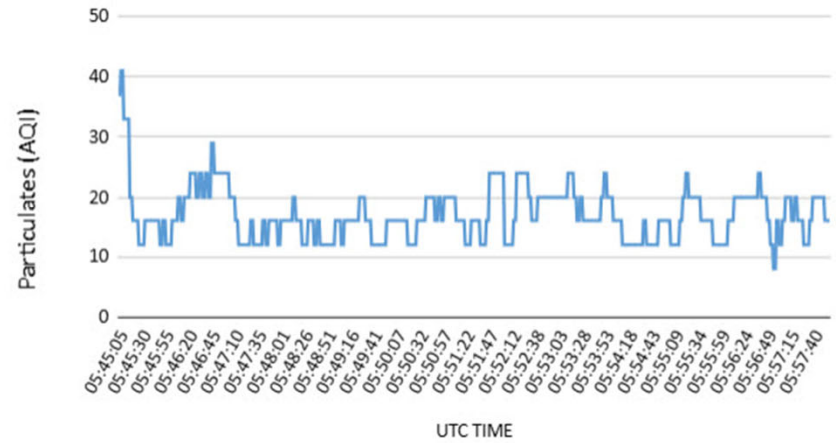
NASA STELLA AQ STEM PROJECT PILOT

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How do the school buses affect air quality at dismissal?



How do the school buses affect air quality at dismissal?



Conferences, Tabling, other Outreach



Student Intern Update

Generated reports,
email script, flyers,
and slide deck to
present at PTA/PTO,
Invitations sent



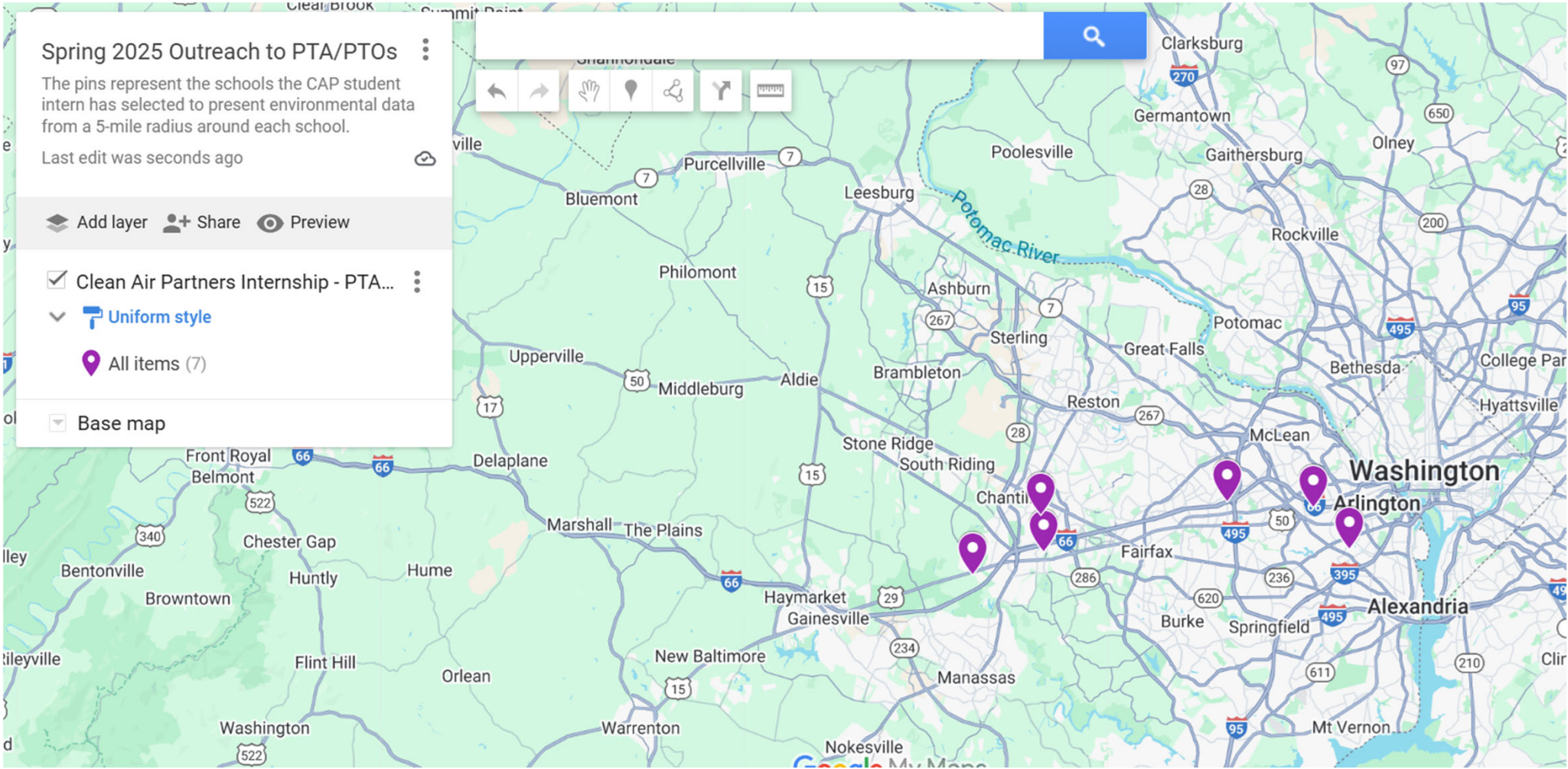
NSTA AQ Activities

Co-presented with
AWMA K12 ED
COMM and CDPHE



Science Fairs!

Thank you to Glenna Tinney
for judging FCPS, VA
ACPS 3/1, LCPS 3/19,
FCPS, VA 3/22,
FCPS, MD 3/22



National Science Teaching Association

March 26-29, 2025

Air & Waste Management Association's K12 Education Committee, Colorado Department of Public Health and Environment, and Clean Air Partners



Designing a Sustainable Data Center Model



Science Fair Awards to...

Arlington County Public Schools	The Effects of Architecture on Airflow
Loudoun County Public Schools	Designing a Sustainable Data Center Model
Fairfax County Public Schools	1st: Engineering Energy Efficiency: Cooling Through Trigonal Siding 2nd: Air Pollution and Population Density in the DMV Region 3rd: How Do Vehicle Emissions Affect the Troposphere at Justice High School?
Frederick County Public Schools	Can Green Zones Save Lives? Analyzing the Impact of Vegetation on PM2.5 and Cancer Rates

Upcoming and Ongoing Outreach and Networking

- Invited Leidos and Attune to continue to support LTLC
- Maryland Climate Teach In April 13-19, 2025
- AQ at Bruce Monroe ES Earth Day for K-5 graders April 23, 2025
- PGCPS Student Environmental Action Summit, Bowie State April 24, 2025
- Arbor Day BTT planting 45 trees at Patterson HS in Baltimore April 26, 2025
- Howard County Conservancy presentation on wildfires April 30, 2025
- DOEE LCS Open Data for Schools May TBD
- Ongoing PGCPS AQ Professional Learning Community May TBD
- Air Quality Education Work Group meeting May 5, 2025
- NASA GLOBE meeting May 7-9, 2025
- PGCPS Green Schools Event May 8, 2025
- MAEOE Youth Summit, Sandy Point SP May 29, 2025



Thank you to Jami Hill, Kristen Willard, Anna Marshall, Kelsey Sisko, and Mike Taylor for all the links, data files, etc to share with those who've reached out with a need for AQ, UHI, CC information!

Thank you.

Questions?

Contact me at espikes@cleanairpartners.net

Let's partner. Interest in...

- co-presenting
- joining a summer LTLC training—introduce yourself, your org, your commitment to AQ
- introducing me to your networks
- collaborating on grants and sponsorships
- introducing me to your organization