



AAPS Environmental Sustainability Framework Community Feedback

Report to the Board of Education
December 14, 2022

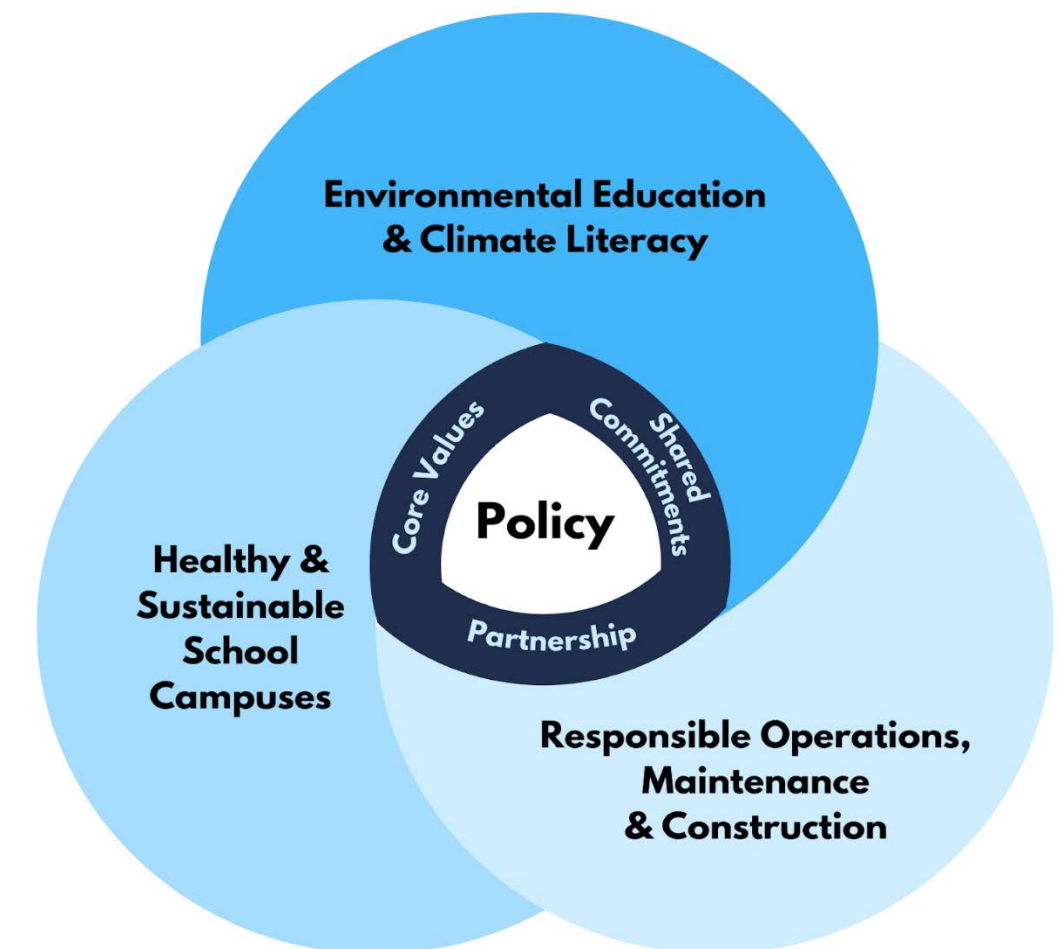
Emile Lauzzana
Executive Director, Environmental Sustainability



Presentation Summary

1. Environmental Sustainability Framework
 - Overview
2. Report - ThoughtExchange – Community Feedback
3. Environmental Sustainability Framework
 - Updates and Clarifications

Environmental Sustainability Framework



Mission and Vision – Environmental Sustainability

Mission:

The Ann Arbor Public Schools is committed to care for the environment, to model and achieve an environmentally sustainable existence. We demonstrate this commitment, both through our critical mission of educating generations of students as strong stewards of the environment, and also in living an environmental commitment with every decision across every area of the organization.

Vision:

In all decisions, we embody and live the deeply held value of caring for the earth and our environment. Individual, team and district decisions are consistent with care for the earth.

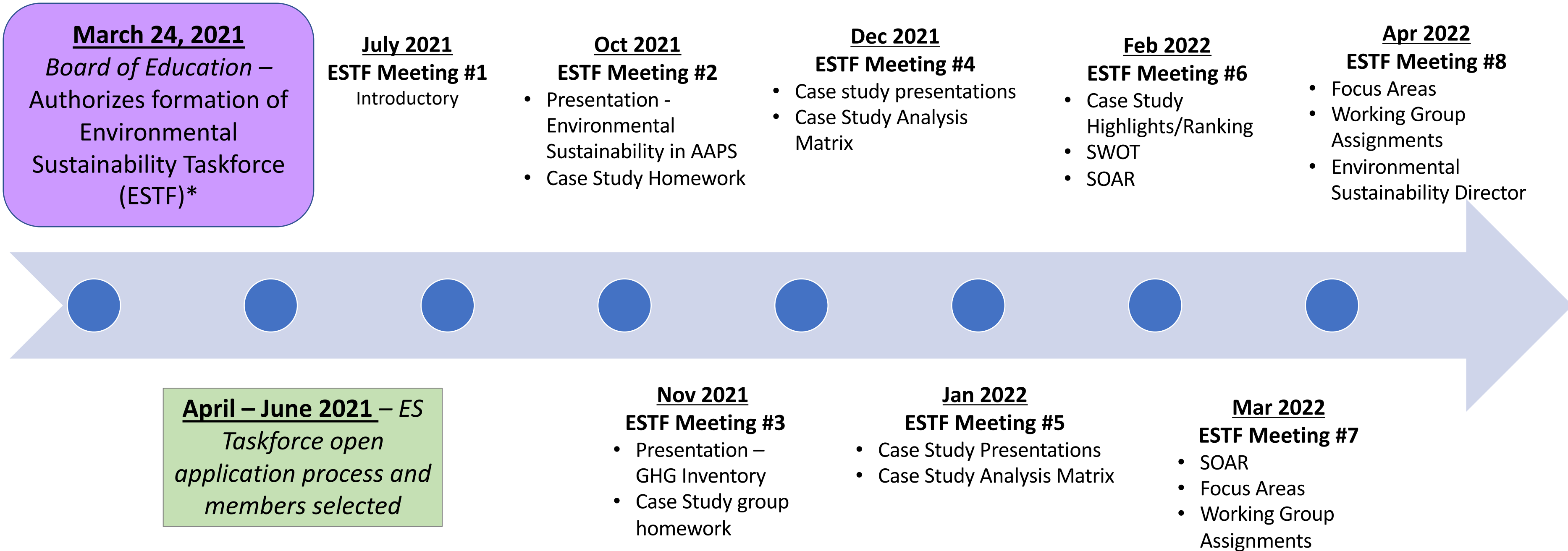


Background – Environmental Sustainability Framework

- *In December 2018, the AAPS recognized the urgency of the climate crisis and adopted **Policy 8000: Environmental Sustainability (Appendix A)**, with the intention of institutionalizing a commitment to environmental sustainability as a fundamental value in the AAPS. This policy directly supports many of the initiatives included in this framework document.*
- *In November 2019, the Ann Arbor Public Schools community passed a **historic bond referendum** that provides resources critical to implementing many of the elements of the AAPS ES Framework.*
- *In March 2021, the AAPS Board of Education formed the **Environmental Sustainability (ES) Taskforce (Appendix B)** composed of local environmental leaders, AAPS staff, students and others. The ES Taskforce was charged with advising the district administration in developing the ES Framework presented in this document.*
- *The Environmental Sustainability (ES) Framework is further informed by the work of **school districts around the country** that have made environmental sustainability commitments and the plans of our **local institutional partners**, including the University of Michigan, City of Ann Arbor and Washtenaw County (Appendix C).*

Environmental Sustainability Framework Development

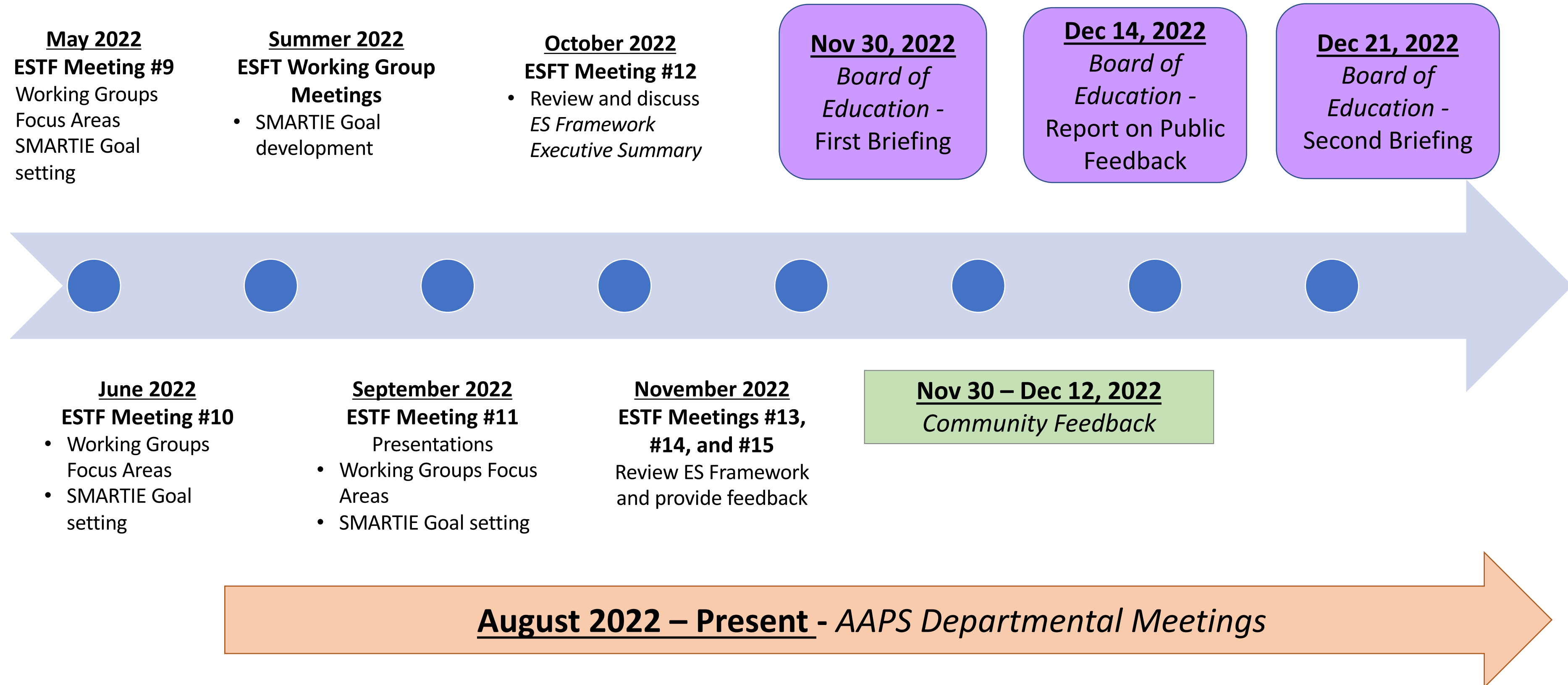
Timeline – Part 1



***Charge of the ES Taskforce:** *The focus of the AAPS Environmental Sustainability Taskforce is to advise the AAPS Board of Education on a formal sustainability plan that will support achieving the goal of environmental sustainability, guide adjustments in operations, and advise on AAPS capital improvement planning, and other district endeavors related to sustainability*

Environmental Sustainability Framework Development

Timeline – Part 2



Organizing Structure – Environmental Sustainability Framework

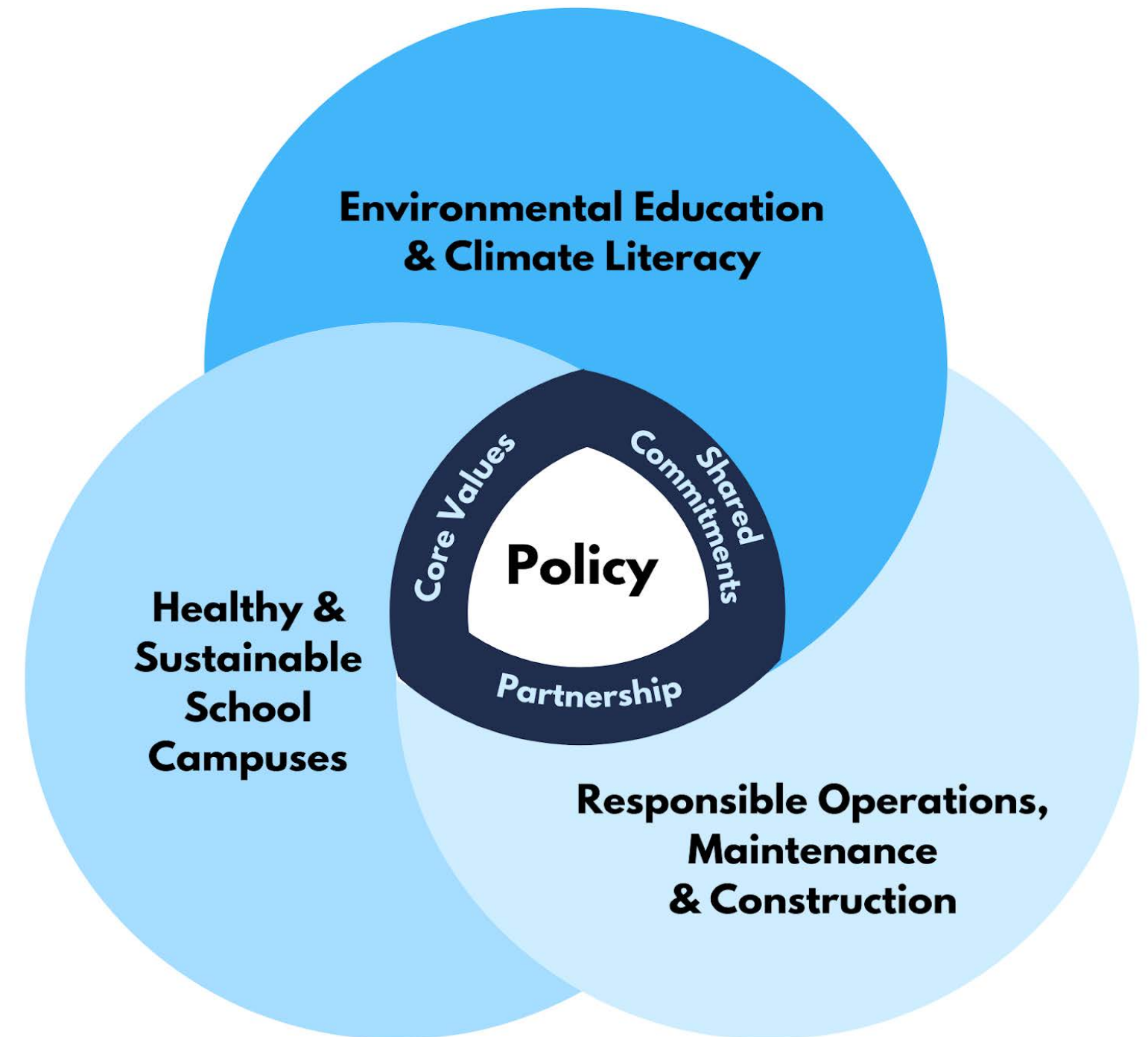
Environmental Sustainability Framework

The AAPS Environmental Sustainability Framework is organized in three sections:

- 1) **Responsible Operations, Maintenance and Construction**
- 2) **Environmental Education and Climate Literacy**
- 3) **Healthy School Campuses**

Guided by overarching policy, these three sections are connected by foundational understandings in the AAPS:

- **Core Values**
- **Shared Commitments**
- **Community Partnerships**



Environmental Sustainability Framework – Table of Contents

1) Responsible Operations, Maintenance and Construction

1.1 Energy

1.11 Energy Efficiency and Conservation

1.12 On-Site Renewable Electricity Generation

1.13 On-Site Natural Gas Combustion

1.14 Purchased Electricity

1.2 Water

1.21 Water Quality

1.22 Water Conservation

1.23 Stormwater Management

1.3 Waste Reduction, Reuse, Recycling, and Composting

1.4 Transportation

1.5 Scope 3 Emissions

1.6 New Construction and Renovation

2) Environmental Education and Climate Literacy

2.1 Core Academics

2.11 Environmental Sustainability Curriculum

2.12 Social and Environmental Justice

2.13 Career Technical Education

2.2 Enrichment Learning

2.21 Green Teams

2.22 School Gardens

3) Healthy & Sustainable School Campuses

3.1 Indoor Environment

3.2 Outdoor Environment

3.3 Food Systems

ANN ARBOR PUBLIC SCHOOLS
LEAD. CARE. INSPIRE.



Ann Arbor Public Schools Environmental Sustainability Framework

November 30, 2022





Exchange Summary

AAPS Environmental Sustainability Framework
November 30 - December 12, 2022

- 1- *What most excites you about the AAPS Environmental Sustainability Framework?*
- 2- *What strengths stand out to you?*
- 3- *What opportunities for improvement do you see?*



PARTICIPATION Breakdown of Participation



202
Participants



149
Thoughts



3,385
Ratings

View the full online report here:

<https://my.thoughtexchange.com/report/37ed0208c382dbc4610d2a84635365bc>



PARTICIPATION

Breakdown of Participation



I identify as a:



%		Answer <i>(Multi-select)</i>
50%	(94)	Parent
25%	(47)	Student
15%	(30)	Staff
18%	(34)	Community Member
5%	(10)	Other



PARTICIPATION

Breakdown of Participation



– What AAPS school(s) are you most closely associated with?



187
Responses

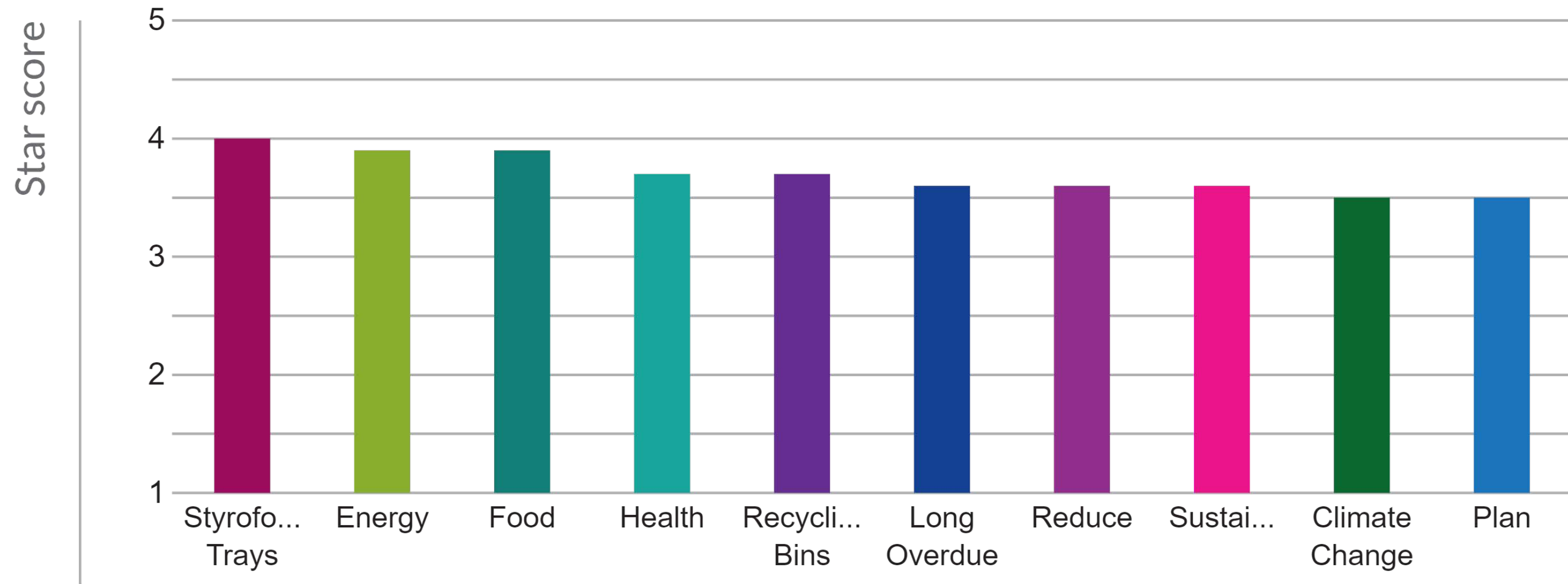
%		Answer (Multi-select)			
2%	(4)	Abbott Elementary	5%	(10)	Pattengill Elementary
3%	(6)	Allen Elementary	1%	(3)	Pittsfield Elementary
0%	(1)	Angell Elementary	3%	(6)	Thurston Elementary
7%	(14)	Ann Arbor Open Elementary	5%	(10)	Wines Elementary
3%	(6)	Ann Arbor STEAM @ Northside	7%	(14)	Clague Middle School
3%	(7)	Bach Elementary	4%	(9)	Forsythe Middle School
1%	(3)	Bryant Elementary	5%	(10)	Scarlett Middle School
6%	(12)	Burns Park Elementary	2%	(4)	Slauson Middle School
0%	(1)	Carpenter Elementary	9%	(17)	Tappan Middle School
4%	(8)	Dicken Elementary	3%	(7)	Community High School
0%	(1)	Freeman Elementary	4%	(9)	Huron High School
2%	(5)	Eberwhite Elementary	0%	(1)	Pathways to Success
2%	(4)	Haisley Elementary	32%	(61)	Pioneer High School
2%	(5)	King Elementary	11%	(22)	Skyline High School
0%	(1)	Lakewood Elementary	0%	(1)	Westerman Preschool
1%	(3)	Lawton Elementary	1%	(2)	Freeman Environmental Education Center
3%	(6)	Logan Elementary	3%	(6)	Central Office and Operations - Balas, Transportation, etc.
2%	(4)	Mitchell Elementary	6%	(13)	None





KEYWORD THEMES

Top Themes by star score





Top Rated:

[illegible]


















THOUGHTS

Top 20 Thoughts



Overall Star Rating

Number of Ratings

Eliminate single use plastics The biggest non biodegradable pollutant to our air, food, soil, lungs, blood, planet.	4.2  (22 ) Ranked #1 of 149	
Prepare a renewable energy curriculum path with introductions to concepts in the early grades and special electives available in high school. Renewable energy is the fastest growing career in the US and extremely important to understand and combat climate change.	4.2  (19 ) Ranked #2 of 149	
Work on healthy meal options along with food waste. Please take a cue from other countries and be a leader in health and environmental care. With AA being such a health conscious community, it's astounding to me that our food service isn't healthier for all our children.	4.2  (13 ) Ranked #3 of 149	
As part of getting rid of Styrofoam in cafeterias, I hope plastic in general can be avoided. Disables should be paper/cardboard and/or compostable https://www.npr.org/2022/10/24/1131131088/recycling-plastic-is-practically-impossible-and-the-problem-is-getting-worse	4.1  (32 ) Ranked #4 of 149	
There are is a shocking amount of single use plastics at lunch. In addition to the flatware, many of the fruits and vegetables are packaged in plastic It is disheartening to see large trash bags filled with smaller plastic bags, when there doesn't seem to be a need to individually package those items	4.1  (30 ) Ranked #5 of 149	

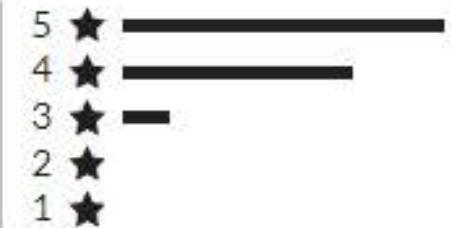


THOUGHTS Top 20 Thoughts



Only 4.6 % of plastics taken to recycle facility this year were actually recycled. The rest went into the landfill. Recycling is not a solution. Reduce ALL single use plastic consumption in our schools. Commit with waste management to a composting program like U of M has.

4.1  (13 )
Ranked #6 of 149



Work to eliminate not just reduce single use items. Bring back dishwashers and encourage everyone to help keep things tidy and clean. It's imperative that AAPS be a leader in being good stewards of natural and fiscal resources.

4.1  (13 )
Ranked #7 of 149



I'm excited to see an effort to reduce single use materials in the cafeteria. It's so important to reduce and reuse rather than focusing on compostables and recyclables

4.0  (36 )
Ranked #8 of 149



Why do we outsource our student's nutrition to Chartwells? The food is cheap and disgusting. Every school needs a full time AAPS chef and nutritionist We've pinched every penny out of our kids' lunches to save a few bucks. It's the same reason why we don't do dishes at school.

4.0  (28 )
Ranked #9 of 149



Get rid of the Styrofoam trays

4.0  (25 )
Ranked #10 of 149



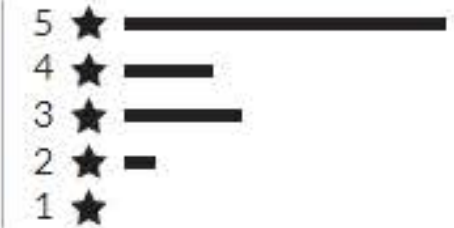


THOUGHTS Top 20 Thoughts



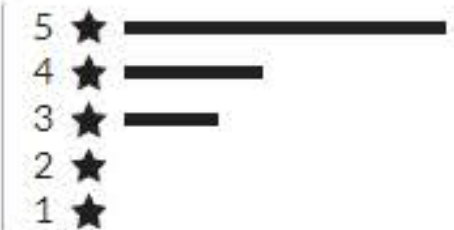
Getting rid of styrofoam and looking to implement composting. My elementary kids have asked for a couple years why their school doesn't do this. It's something kids will see daily that shows our commitment.

4.0  (19 )
Ranked #11 of 149



Rain gardens It helps the environment and the earth hhave better places for animals

4.0  (12 )
Ranked #12 of 149



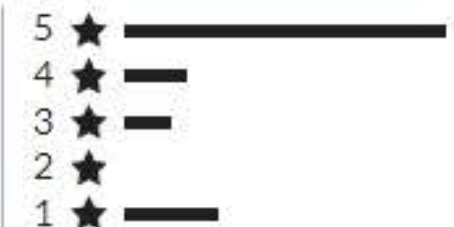
AAPS's commitment to reducing energy emissions. This is important because energy emissions play a big role in our local atmosphere.

4.0  (5 )
Ranked #13 of 149



Composting we have a huge amount of food waste

3.9  (34 )
Ranked #14 of 149



All cafeteria serving plates and utensils should be reusable do you throw away your plate after every meal at home? Why do we do it at school?





























































3.9  (31 )
Ranked #15 of 149





THOUGHTS Top 20 Thoughts

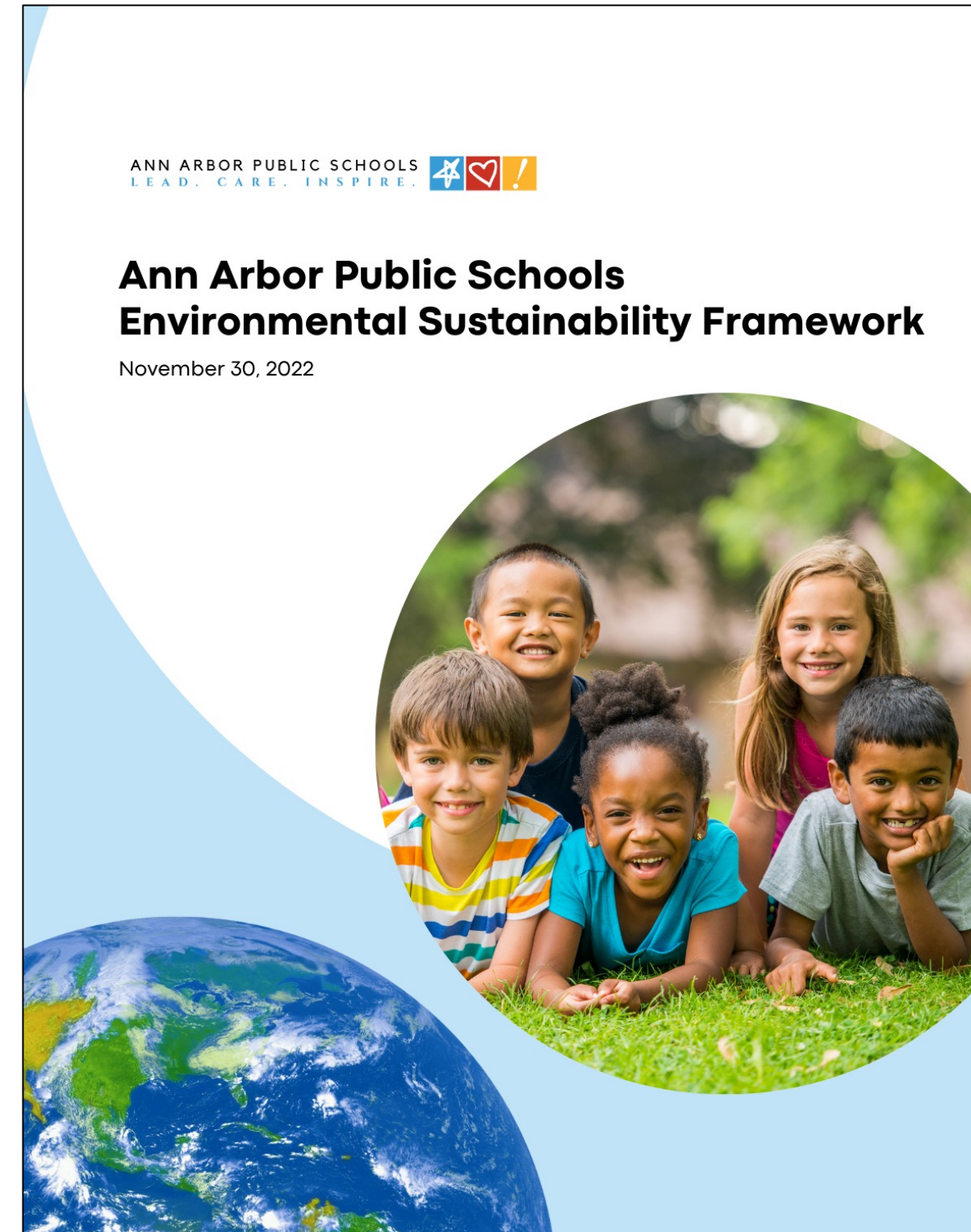


<p>I've been bothered for some time about the styrofoam trays and the huge amount of waste they produce. I'm glad to see action finally taken on this Better example to students and elimination of waste</p>	<p>3.9  (31 )</p> <p>Ranked #16 of 149</p>	<p>5  </p> <p>4  </p> <p>3  </p> <p>2  </p> <p>1  </p>
<p>No more styrofoam trays and plastic utensils = great! Could single-use be omitted all together? Could schools use reusable options? The amount of waste created at each school meal is amazing.</p>	<p>3.9  (29 )</p> <p>Ranked #17 of 149</p>	<p>5  </p> <p>4  </p> <p>3  </p> <p>2  </p> <p>1  </p>
<p>I love that we're no longer going to use styrofoam trays at lunch. There is so much waste during school lunch. And the students see this every day.</p>	<p>3.9  (28 )</p> <p>Ranked #18 of 149</p>	<p>5  </p> <p>4  </p> <p>3  </p> <p>2  </p> <p>1  </p>
<p>Include local and student climate groups and when considering who comes in our students classrooms to educate on climate and sustainability. Uplift local nonprofit and student climate advocates in all aspects of the sustainability framework. Trust our local experts to support AAPS</p>	<p>3.9  (25 )</p> <p>Ranked #19 of 149</p>	<p>5  </p> <p>4  </p> <p>3  </p> <p>2  </p> <p>1  </p>
<p>Glad to see that they're going to eliminate styrofoam in the cafeterias so that we aren't contributing to the garbage problem.</p>	<p>3.9  (21 )</p> <p>Ranked #20 of 149</p>	<p>5  </p> <p>4  </p> <p>3  </p> <p>2  </p> <p>1  </p>

Environmental Sustainability Framework

Updates to the Plan

- Added language regarding working to reduce indirect Scope 3 emissions by enhancing our Safe Routes to School program and increasing the use of busing and reducing personal vehicle driving of students to and from schools – *See Section 1.4 Transportation*
- Added the full job description of the Executive Director, Environmental Sustainability – *See Appendix D*
- Added AAPS to the Survey of Other School Districts' and Local Institutions Sustainability Plans – *See Appendix C*



Environmental Sustainability Framework

Clarifications – Scope 1 Emissions

1.13 On-Site Natural Gas Combustion

GOAL: Reduce then eliminate the burning of natural gas at AAPS sites by 2035

Progress	<p>Geothermal - AAPS is currently installing electric geothermal heating and cooling systems at Forsythe Middle School and Clague Middle School. These systems will greatly reduce the amount of natural gas combustion at these two locations. When operational, these will be the largest geothermal systems in Washtenaw County and will reduce on-site natural gas consumption by approximately 80% by eliminating the burning of 145,000 CCF of natural gas annually that would have produced 900 tons of CO2 emissions each year</p> <p>New Construction - All Electric replacement buildings are being designed for Pathways and Mitchell with no natural gas combustion on site</p>
Opportunities and Challenges	<p>Opportunities:</p> <ul style="list-style-type: none"> •Inflation Reduction Act contains financial incentives that are potentially available to support this work <p>Challenges:</p> <ul style="list-style-type: none"> •Currently, per unit of energy, electricity is more expensive than natural gas for heating and cooling, and careful planning will be needed to manage cost increases •COVID enhance ventilation strategies increase natural gas use •The capacity of the DTE electric grid may be an issue as buildings convert to all-electric operations
Next Steps	<ul style="list-style-type: none"> •Develop a phased plan with interim targets to eliminate on-site Scope 1 emissions from natural gas combustion by 2035. •Develop standards for the end-of-useful life equipment replacement to minimize or eliminate the use of natural gas.
Reporting and Metrics	Report annually to the community regarding the district's development of a plan to eliminate on-site natural gas combustion, immediate near-term projects and projects under development
Responsible Department(s)	Responsible: Physical Properties and Capital Programs Supporting: Environmental Sustainability, Finance and Operations
Collaborators	Engineers, architects, contractors, DTE Energy, Constellation

Environmental Sustainability Framework

Clarifications – Scope 1 Emissions

1.4 Transportation

GOAL: Decarbonize buses and fleet vehicles by 2035, increase the use of non-motorized transportation, and support the use of public transportation

Progress	<p>Fuel Use – Not including the dramatic reduction of fuel usage during the COVID pandemic, since 2006, AAPS has reduced the amount of bus diesel used annually per student by 63% and the total annual purchase of diesel by 66%.</p> <p>Electric Buses - AAPS has four electric buses in operation, subsidized by a grant from the State of Michigan and supported by DTE Energy. The pilot program has had some issues with bus performance, charging infrastructure and a delay in the implementation of Vehicle to Grid (VtG) technology.</p> <p>Non-Motorized Transportation - AAPS has for many years participated in the Safe Routes to Schools (SRTS) program at most of the AAPS schools. Over ten SRTS mini-grants have been awarded to AAPS schools to help organize and promote walkers and bikers to and from school and funded roadway and sidewalk improvements. The City of Ann Arbor Traffic Engineers and local law enforcement are members of the SRTS teams.</p> <p>Public Transportation - Many high school students are provided free passes for public transportation</p>
Opportunities and Challenges	<p>Opportunities:</p> <ul style="list-style-type: none"> •Federal, state and/or utility incentive funding may be available to help subsidize the increased first cost of bus and fleet vehicle electrification •Federal and/or state funding may be available to help subsidize the increased first cost of non-motorized transportation improvements •The City, County and University are electrifying buses, and there are opportunities for collaboration to ensure adequate charging capacities and electrical upgrades <p>Challenges:</p> <ul style="list-style-type: none"> •Electric buses are a new technology, and AAPS has had issues with the four-bus pilot program •Electric buses and the associated charging infrastructure have a first cost of approximately 4x more than conventional diesel buses. •Electrical infrastructure will need significant upgrades to accommodate heavy fleet electric vehicles
Next Steps	<ul style="list-style-type: none"> •Develop a written plan with intermediate targets to: <ul style="list-style-type: none"> • Develop a plan to encourage busing and reduce personal car driving to and from school in coordination with AAPS's Safe Routes to School program • Transition to electric buses and fleet vehicles, with the goal of eliminating Scope 1 emissions from the district's buses and fleet vehicles. • Study and report on existing non-motorized transportation systems at AAPS campuses and develop a multi-year improvement plan •Continue to work with electric bus and charging infrastructure vendors to resolve issues with the district's 4 electric buses •Continue evaluating and improving non-motorized transportation options when major parking lot construction and new construction is planned and implemented
Reporting and Metrics	Report annually to the community regarding transportation associated carbon emissions and improvements in the use of non-motorized transportation alternatives at AAPS campuses
Responsible Department(s)	Responsible: Finance and Operations Supporting: Physical Properties and Capital Programs, Legal, Environmental Sustainability
Collaborators	Federal government, State of Michigan, Washtenaw County, City of Ann Arbor, Townships, DTE Energy, bus manufacturers, changing manufacturers, electrical engineers, electrical contractors

Environmental Sustainability Framework

Clarifications – Metrics

AAPS recognizes the importance of establishing and maintaining metrics to track progress in meeting the goals outlined in the AAPS Environmental Sustainability Framework.

Enhance current metrics and develop new metrics regarding all environmental sustainability initiatives, including:

- Energy (Section 1.1)
- Water (Section 1.2)
- Waste Reduction, Reuse, Recycling, and Composting (Section 1.3)
- Transportation (Section 1.4)
- Scope 3 Emissions (Section 1.5)
- New Construction and Renovation (Section 1.6)
- Core Academics (Section 2.1)
- Enrichment Learning (Section 2.2)
- Indoor Environmental Quality (Section 3.1)
- Outdoor Environmental Quality (Section 3.2)
- Food Systems (Section 3.3)

Environmental Sustainability Framework

Clarifications – Reporting

Develop systems to report the AAPS carbon footprint in a Greenhouse Gas Inventory, including:

Scope 1 Emissions:

- Natural gas consumption, district-wide and by school
- Bus fuel consumption
- Fleet vehicle fuel consumption
- Carbon sequestration from the district's greenspaces

Scope 2 Emissions:

- Purchased electricity, district-wide and by school
- On-site renewable energy generation, district-wide and by school
- Municipal water usage, district-wide and by school

Scope 3 Emissions:

- Waste, re-use, recycling and composting
- Contracted services, including: food service, custodial services, lawn care, snow removal and others
- Purchasing
- Employee commuting
- Business travel
- Investments
- Other areas

The district will continue to provide an annual environmental sustainability update and include reporting on as many metrics as possible, while also celebrating the achievements of the district, staff and students in supporting environmental sustainability at the Ann Arbor Public Schools. The first GHG report will be presented to the Board of Education at the end of calendar year 2023.



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