



# Ann Arbor Public Schools Environmental Education Program Board of Education Update

April 19, 2023

# Purpose & Background

Since 1960, the AAPS EE Program has been educating and inspiring students through meaningful learning experiences in the natural environment.

Lessons are designed to support and enhance classroom curriculum, most often with specific connections to grade-level science units. We aim to help students become responsible environmental stewards, with the attitudes, understandings and skills to protect our one and only Earth now and in the future.

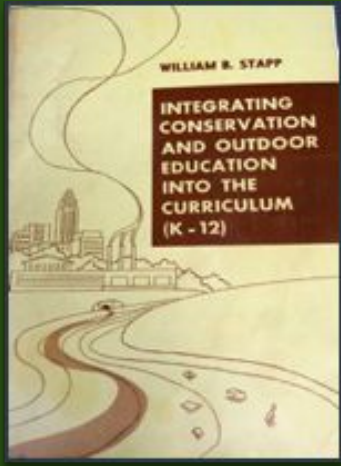
By planning and facilitating high-interest field trips and campus activities for AAPS classes, we help ensure that students across the school district are provided a robust set of inspiring, experiential learning opportunities throughout their academic careers.



# What is Environmental Education?

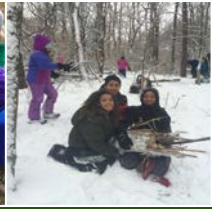
Environmental Education is an interdisciplinary field that focuses on the nexus of natural and human systems. By increasing awareness and knowledge about environmental issues or problems, EE provides the public with the necessary skills to make informed decisions and take responsible action.

AAPS EE Program founder Bill Stapp played an integral role in the first [Intergovernmental Conference on Environmental Education](#) in Tbilisi, Georgia in 1977, during which a foundational definition of EE and guiding principles were created:



- **Awareness** and sensitivity to the environment and environmental challenges
- **Knowledge** and understanding of the environment and environmental challenges
- **Attitudes** of concern for the environment and motivation to improve or maintain environmental quality
- **Skills** to identify and help resolve environmental challenges
- **Participation** in activities that lead to the resolution of environmental challenges

# By the Numbers



- Approximately **450** classes and **9,500** students served in 22-23
- **2** certified teachers
- **2,000+** volunteer naturalist hours each year
- **2** current Environmental Specialists who serve as substitute trip leaders
- **40** acres - size of the Freeman Environmental Education Center property
- **18** current students serving on the Freeman Environmental Youth Council
- **400** native plant seedlings and **80** tree saplings propagated & planted last year

# Community Collaboration

- Our varied programming and district-wide reach allow us to **engage a diverse range of AAPS stakeholders**: students, classroom teachers, science curriculum coordinators, central administration, Physical Properties staff, Transportation, parents, and community volunteers.
- We maintain [a public-facing website](#) to help keep teachers and community members up-to-date on EE Program curriculum and current projects.
- **Local partnerships** that enable us to provide unique learning experiences for AAPS students include: University of Michigan, City of Ann Arbor, Ecology Center, Local park systems (Scio Township, Washtenaw County, Metroparks, UM), Michigan DNR, Michigan Alliance for Environmental and Outdoor Education, and more.





# Current Offerings

**Young Fives** **Schoolyard Habitats:** Learn about the four elements of animal habitat and identify examples of each on your school grounds.

**Kindergarten** **Explorations through the Seasons:** Interact with physical artifacts and visual representations from nature to learn about Michigan wildlife throughout the year.

**First Grade** **Winter Animals:** Feed and study winter birds. Observe animal tracks and signs, and discuss physical and behavioral adaptations of various species.

**Second Grade** **Plant Communities/Zero Waste**

New in  
22-23

\*Partnership with Ecology Center\*

Observe plant growth, reproduction, habitat, survival needs, and changes in plant communities. Learn about different types of waste and how they are managed in our community.



# Current Offerings

**Third Grade Pond Habitat or Habitat Walk:** Collect, identify, observe and release aquatic organisms. Observe how needs are met in a variety of terrestrial habitats. Study relationships and shared resources.



**Fourth Grade Geology Study:** Study rock formation and glacial topography. Collect and identify rock samples.



**Fifth Grade Winter Survival:** Work in small teams to build a cooking fire and learn outdoor safety and stewardship etiquette.



# Current Offerings

**Sixth Grade Weather and Water Walk:** Participate in interactive activities around your school campus to explore connections between precipitation events, stormwater management and green infrastructure, and the local watershed.



**Seventh Grade Tour of the Resource Recovery Center:**

*New in  
22-23*

\*Partnership with Ecology Center\*

Visit our local municipal facility to study various waste management processes (e.g. recycling, composting, landfilling). Consider impacts on climate and local natural resources (air, soil, water), and implications for personal waste management decisions.



**High School Environmental Science Plant Surveys and Invasive Species Management:**

Use a dichotomous key to practice tree identification in the woodlot quadrat grid system. Flag invasive shrub species for subsequent removal.

*New in  
22-23*





# Freeman Environmental Education Center

- Longtime AAPS site, rededicated in 2018
- Located in Dixboro (NE Ann Arbor)
- 40 acres of woodland, shrubland, and grassland
- A hub for Environmental Education and sustainability happenings in the AAPS!



# FEEC Advisory Committee Recommendations

## STUDENT ACHIEVEMENT, EMPOWERMENT, ACTION, LEADERSHIP

### Short term (0-24 months)

1. Establish a **Youth Council** that is representative of the AAPS high school population to assist with planning & implementation of site work & learning opportunities.
2. Facilitate new learning opportunities for MS and HS students at Freeman that **tie environmental education to existing AAPS curricula**.
3. Develop a Rec & Ed **place-based stewardship education summer camp experience** to take place at Freeman.

### Medium term (12-36 months)

1. Develop **environmental justice** and **climate change** programming, including engaging students in service learning and civic action on these topics.
2. Implement instructional models such as **place-based stewardship education, service-learning, and community science** to involve students in on-site research, data analysis, and other skill-building that can be leveraged for action at their home school and community.
3. Support student projects that involve **demonstration gardening** such as rain, pollinator, and vegetable/herb, and hydroponic gardening.

### Long term (48-60 months)

1. Explore feasibility of new **skill-based certification and career pathways** focused on environmental sustainability and climate change, such as environmentally-focused CTE.
2. Expand offerings for students and teachers by creating a formal **environmental education resource hub**, providing referrals to local experts and formalizing a check out system for equipment and supplies.

## COMMUNITY AND NEIGHBORHOOD INVOLVEMENT

### Short term (0-24 months)

1. Foster relationships with neighbors, community groups, and local institutions. In particular, engage with communities historically left out of environmental, sustainability and climate conversations.
2. Explore local, state, and national funding resources.

### Long term (48-60 months)

3. Use Freeman site to host environmentally-themed community events and district staff professional development.

## BUILDING AND GROUNDS

### Short term (0-24 months)

1. Make **cosmetic and functional upgrades to lobby/open area, 3 classrooms, and office**.
2. Develop and install **EE displays** for school and community education in lobby.
3. Develop and install **materials and tools that complement the EE program**.

### Medium term (12-36 months)

1. Facilities department: conduct **engineering and structural assessment** to determine long term use of existing structure.
2. Develop and install water management systems, gardens, and other **grounds projects** that tie to EE programming in Student Achievement, Empowerment, Action, and Leadership.

\*Link to recommendation document [here](#)

# Progress at Freeman - New 2nd Grade & HS Field Trips





# Progress at Freeman



## Native Plant Propagation & Gardening Projects Compost & Vermiculture Infrastructure

# Progress at Freeman

## New Outdoor Seating

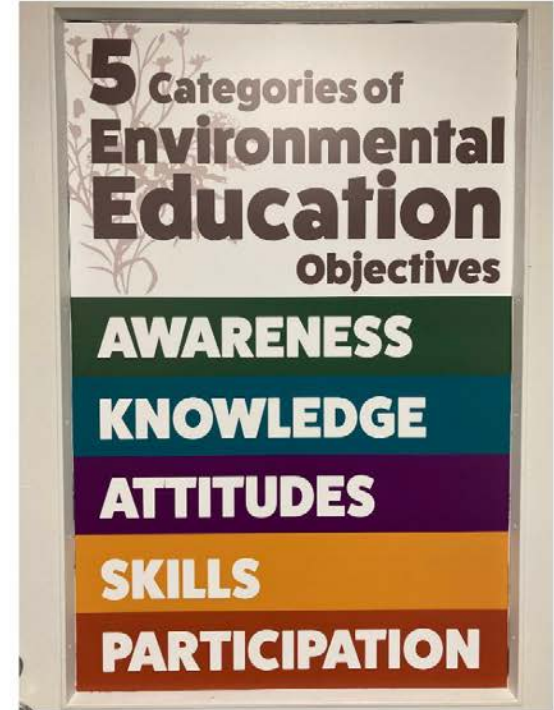


## “Deeply Rooted” Temporary Art Installation

(led by UM SEAS Master’s  
Student Esha Biswas)



# Progress at Freeman - Centrum Refresh



# Progress at Freeman - Historical Photos





# Utilizing Freeman Beyond EE Field Trips

Freeman Environmental Youth Council



A2 Nature Guardians Rec & Ed Summer Day Camp



# Utilizing Freeman Beyond EE Field Trips

Professional Development sessions  
for AAPS teachers



Service Events (Youth Council, NHS, IB)



Group 4 Research Project  
Collaboration with Huron High School IB Program



# AAPS Science & Environmental Education Endowment Fund

- Established in 2001 by interested teachers, administrators and parents, the ['AAPS Science & Environmental Education Endowment Fund'](#) (A2SEEE) extends the capacity of the Ann Arbor Public Schools to offer students experiential learning opportunities that are connected to the school district's hands-on, inquiry-based science program.
- EE Program staff help spearhead an annual giving campaign and serve on the A2SEEE Committee.
- Annual disbursements provide funding for program equipment and supplies, professional development, and access to field trip sites. The A2SEEE committee also allocates “runway funding” to support new offerings and pilot projects, as is currently the case for the Freeman Environmental Youth Council.



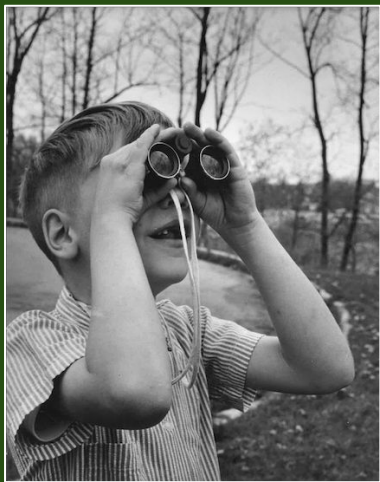


# Goals for 23-24

- Continue to provide all 22-23 EE Program offerings to AAPS classes
- Pursue expansion of the 'Resource Recovery' Field Trip to more 7th Grade science classes, in partnership with Ecology Center
- Research and develop an 8th Grade pilot field trip focusing on Climate Change dynamics, mitigation, and adaptation strategies in Michigan
- Propagate ~700 native plant seedlings and ~125 native tree saplings for habitat enhancement projects at Freeman and other AAPS campuses



# Vision for the Future



- Given the urgency of the climate crisis and the stated goals of the [Freeman Advisory Committee](#) and the [AAPS Environmental Sustainability Framework](#), we will continue to work hard to expand environmental learning opportunities across the district with the resources at our disposal.
- Goals include expanding grade level offerings, supporting environmental action and place-based stewardship projects in outdoor learning environments, and assisting in the implementation of new district sustainability curriculum. Continued growth and expansion will require additional resources and staffing, professional development for teachers, and strategic curriculum planning to identify how and where new curricula can be integrated.
- We're excited to continue to involve students and staff in the enhancement of natural areas and outdoor learning environments at the Freeman EE Center to research and share best practices.

[www.a2schools.org/ee](http://www.a2schools.org/ee)