School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity(DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2015-2018

X Public ☐ Charter ☐ Title I ☐ Magnet ☐ Private ☐ Independent ☐ Rural

Name of Principal: Mr. Robert Sinclair, Jr.

Official School Name: **John Poole Middle School**

(As it should appear on an award)

Official School Name Mailing Address: **17014 Tom Fox Avenue, Poolesville, Maryland 20837**

County: **Montgomery** State School Code Number *: **150247**

Telephone: **301-972-7979** Fax: **301-972-7982**
Web site/URL: **www.montgomeryschools.org/schools/poolems** E-mail: **Robert_Sinclair@mcpsmd.org**
**Private Schools: If the information requested is not applicable, write N/A in the space*

I have reviewed the information in this application and certify that to the best of my knowledge all information is

Robert Sinclair Jr. Date: 1/27/17
(Principal's Signature)

Name of Superintendent: **Jack R. Smith, Ph.D.**

District Name: **Montgomery County Public Schools**

I have reviewed the information in this application and certify that to the best of my knowledge all information i

John A. Date: 1·30. 2017
(Superintendent's Signature)

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: **Maryland State Department of Education**

Name of Nominating Authority: **Carol A. Williamson, Ed.D.**
I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

provisions above.
Carol A. Williamson Date: 1-30-17
(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509
Expiration Date: March 31, 2018

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

Lead Applicant Name (if different):	Ms. Laurie Jenkins
Lead Applicant Email:	Laurie_C_Jenkins@mcpsmd.org
Phone Number:	301-924-3123

Does your school serve 40% or more students from disadvantaged households? No
Percent receiving FARMS: 11.1 percent
Percent Limited English Proficient: Less than 5 percent
Overall annual student attendance rate: 94.9 percent
Public School 6-digit Code: 150247

School District Name: Montgomery County Public Schools (MCPS)
Is your school district one of the largest 50 in the nation? YES
What is the total student enrollment? 159,242

Summary **Narrative**

John Poole Middle School (JPMS) is located in Upper Montgomery County, in the Agricultural Reserve, a land area of 93,000 acres of preserved farmland and rural space in this DC suburb of more than a million people. We are a feeder school for Poolesville High School (PHS), where the highly regarded magnet program in Global Ecology holds great appeal for our students. We at JPMS have fostered environmental awareness since our doors opened in 1997.

JPMS has a tradition of completing environmental stewardship projects every year with students taking an active role in problem solving and suggesting solutions for issues in our schoolyard. For example, many grade levels and subject areas worked together to research, design, select a site and complete the construction of an outdoor classroom. This inquiry-based project put students from every grade level at the helm to determine our needs, research materials and communicate results to teachers. Our team of teachers took the information collected and analyzed by students and submitted grant proposals to Lowe's and the Chesapeake Bay Trust. When our school won the Project Lead by Example through the school system's SERT program, we were able to complete the nearly $8,000 outdoor classroom.

At JPMS an environmental science elective is offered to all seventh and eighth graders which results in over 60 percent of our student body immersed in meaningful outdoor learning experiences during middle school. From this class students design projects that can positively impact our ecosystem. The environmental science class collaborates with the high school's Global Ecology program on projects such as hydroponics systems, native gardens, and composting in our cafeteria; thus, communication and relationship building between these two age groups occurs benefiting both. JPMS students in the environmental elective know that they will have an opportunity to give back to the school as they plan and implement their projects.

We offer an annual Green School trip to all interested students that engages the students in environmental learning in a part of the watershed that is less familiar to them. The students who take part in our Green School trips become Green School leaders who return from the trips with plans to improve our school. The location changes every year with trips to the Potomac River, Merrill Center, Meredith Creek, and Smith Island. Our Green School leaders also travel to the Maryland Green School Annual Youth Summit at Sandy Point State Park for the Green School awards and interactive stations. Smith Island was the highlight of these trips with students using their time to learn about the culture and science of Smith Island. While studying at Smith Island, students brainstormed projects for our school to implement upon their return. Projects included daily morning announcements, the addition of a no mow zone, native plantings and erosion prevention. Green School leaders completed a mural project that includes animals native to our Chesapeake Bay watershed. Students researched, designed and painted the four large columns in our library to depict underwater scenes found in our local area. The work was completed under the guidance of art teacher, Jon Gemmell, with a generous grant from the Chesapeake Bay Trust.

Sixth graders earned 10 Student Service Learning (SSL) hours through annual spring clean-up and plantings and trail maintenance. Sixth graders completed a series of trans-disciplinary activities that incorporated Science, Technology, Engineering and Mathematics (STEM) objectives, culminating in a final presentation during outdoor education. Seventh and eighth graders complete a variety of SSL projects including Girl Scout Silver Award winners, recycling books by donating them to Title 1 schools and collecting unused school supplies. Students also wrote persuasive letters related to environmental concerns to inspire change in our ecosystem. Students completed a fundraising mailing for Stargazing Farm a safe haven for abused, neglected and stray barn animals.

We have developed valuable community relationships over our last four years. New collaborations include partnerships with Snitzer Landscaping, Lowe's, Chesapeake Bay Trust and the Chesapeake Bay Foundation (CBF) to complete a series of erosion prevention gardens and the creation of an outdoor classroom. Our students have come to expect regular outdoor learning with opportunities to grow our schoolyard and building into an ever-changing Green School.

From water conservation to energy reduction, JPMS students are involved in stewardship. For example, students have painted signs over four storm drains on school property to remind community members that what goes into the stream goes into the Bay, while others created designs that surround light switches to remind staff and students to turn the lights off.

From our curriculum to school operations, with the help of our partners at the high school Global Program, local businesses, and non-profits, JPMS continues to grow its culture of environmental awareness and sustainability.

Green School Participation

JPMS is the first middle school in MCPS to earn the Green School Sustainable Award. We have completed more than 13 years of environmental projects that have been supported by several organizations. JPMS has a long term relationship with the CBF integrating environmental field experiences. During the past 6 years, the students have completed over 20 trips to CBF study centers initiating Green School projects. Shari Yesnick, the environmental science teacher, has training in Living Classrooms, and

serves as a Chesapeake Bay Foundation mentor teacher for teachers in MCPS.

JPMS has partnerships with many organizations such as Clean Air Partners, Snitzer Landscaping, Audubon Society, and our School Energy and Recycling Team (SERT) program. After researching global warming, our students created videos and slide shows explaining the human impacts on climate. One of our seventh grade teams was a winner in the 2016 Weather and Climate contest.

Our environmental science elective was developed to provide middle school students an introductory experience with environmental studies that could lead to participation in the Global program in PHS. Global students work with JPMS students to complete many of our Green School projects including: the creation of an outdoor classroom, the addition of a composter for our cafeteria, interactive environmental lessons, and the creation of a student-designed recycled hydroponics window wall, the research for our conservation garden and the design and implementation of a habitat garden.

- 2003 Maryland Green School Certification
- 2008 & 2012 Maryland Green School Re-Certifications
- 2016 Maryland Green School Sustained

List awards and/or grants, and the years in which they were received, your school, staff, or student body received for environmental or sustainability stewardship/action

- CBT grants 2012, 2014, 2016
- Piedmont grants 2011, 2012, 2014, 2016
- Lowe's Toolbox for Education 2014
- Clean Air Partners' Poster finalist 2012
- Weather and Climate Day winner 2016
- Environmental Science Award winner in MCPS science fair 2014
- 2011-12: Q1 Energy Savings & Q4 PLM Energy Savings Award
- 2012-13: Q1, Q2, Q3 Energy Savings & Q4 PLM Energy Savings Award
- 2013-14: Q1, Q2, Q3 Energy Savings Awards, & Lead by Example Contest Award
- 2014-15: Q1, Q2, Q3 Energy Savings & Q4 PLM Energy Savings Awards
- 2015-16: Q1, Q2, Q3 Energy Savings Awards

Pillar I: Reduce environmental impact and costs

Can your school demonstrate a reduction in Greenhouse Gas emissions?

YES
Percentage reduction: **18 percent**
Over **(FY05 – FY16)**
Initial GHG emissions rate (MT eCO2/person) **2.4**
Final GHG emissions rate (MT eCO2/person) **1.8**
Offsets **None**
How did you calculate the reduction? **Using utility database records**

Note: At Poole MS, for the years FY16/FY15, MCPS records show a 16 percent reduction in GHG emissions per person and an increase in enrollment of 8 percent at Poole MS.

Do you track resource use in EPA ENERGY STAR Portfolio Manager?

YES
If yes, what is your score? **83**
If your score is greater than 75, have you applied for and received ENERGY STAR certification? **No**

Has your school reduced its total non-transportation energy use from an initial baseline?

YES
Current energy use (kBTU/student/year) **12,295**
Current energy usage (kBTU/sq. ft./year) **52**
Percentage reduction**: 18 percent (kBTU/student) and 29 percent (kBTU/sq. ft.)**

Over time period **(FY05 – FY16)**
How did you document this reduction? **Using utility database records.**

Note: At Poole MS, for the years FY16/FY15, MCPS records show a 16 percent reduction in kBTU/student/year and a 9 percent reduction in kBTU/sq. ft./year with an increase in enrollment of 8 percent.

What percentage of your school's energy is obtained from:

On-site renewable energy generation: **NO**
Type generated
Purchased renewable energy
Type purchased = **Wind Energy 33 percent**
Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal/state school energy program

In what year was your school originally constructed?

Year: 1997
What is the total building area of your school? 85,669 sq. ft.

Has your school constructed or renovated buildings in the past ten years?

This school was not built or renovated in the past ten years.

YES/NO For new buildings: Percentage of building area that meets green building standards
Certification and year received
For renovated building(s): Percentage of the building area that meets green building standards
Certification and year received
Total renovated area

Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

No**,** at Poole MS, for the years FY16/FY15, MCPS records show an increase due to a cooling tower water leak. Necessary repairs were completed expediently to minimize water loss. However, MCPS shows a 4 percent decrease in consumption per student for the years FY15/FY14.

Average baseline water use (gallons/occupant**) 1.2**
Current water use (gallons/occupant) **3.7**
Percentage reduction in domestic water use **N/A**
Percentage reduction in irrigation water use **N/A**
Time period measured **(FY05 – FY16)**
How did you document this reduction (e.g., ENERGY STAR Portfolio Manager, utility bills, school district reports)? **Using utility database records.**

Describe the practices your school employs to increase water efficiency and reduce the amount of potable water used for irrigation.

All staff and students are aware of the need to report leaky faucets and other water leaks to minimize water waste. When water leaks are detected, the in-school building service staff coordinate with the Division of Maintenance to make expedient repairs.

Describe how your school uses water-efficient native plants in landscaping.

In 2010, students completed the CBF schoolyard report card and determined that native gardens should be added. An overgrown garden was redesigned by the students to contain native plants that would attract pollinators to our schoolyard. With support from a local landscaper, LAND, and grant money from Piedmont, the pollinator garden was planted in the spring of 2011. Each year, students work to maintain the garden.

In 2011 after students completed the schoolyard report card they determined that the erosion problems in the back of our school

could be alleviated with the addition of a conservation garden. With the help of a local landscaper, John Snitzer, the plans for the garden were developed. The following year we were funded by a grant from Chesapeake Bay Trust to complete the conservation garden in the spring of 2014. Students created brochures to educate the community about rain gardens and conservation gardens using the plans for our conservation garden as an example.

When we created the outdoor classroom we again looked for support from Snitzer Landscaping to plant sweet gum trees at the perimeter. Students learned about erosion and runoff during a CBF field trip in 2015 that inspired the addition of a no mow zone at the bottom of our back field. Native trees and shrubs were added to mark the no mow area. Our partnership with Snitzer Landscaping helped prevent erosion in an area that was draining onto the path to the back field. Snitzer Landscaping re-graded the area and added large stones around the area for better erosion prevention.

In the spring of 2016, students made seed balls to plant native wildflowers in the no mow zone and the town of Poolesville celebrated Arbor Day with a native tree planting at each of its schools. In addition, invasive plants were removed near the outdoor classroom by a Boy Scout troop.

We have a pending grant to Lowe's Toolbox for Education that includes plans to add native plants as part of a new National Wildlife Federation habitat garden.

Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces.

John Poole MS is built adjacent to the Koteen Regional SWM pond. As was permitted at the time of construction quantity mitigation of storm water was built into the adjacent facility. Quality measures were employed on the site in the form of surface sand filters and afforestation planting. Over five acres of planting were accomplished across the school property and the adjacent regional pond site.

Describe the source of your school's drinking water and what measures are in place to protect it from potential contaminants and lead.

The source of drinking water at John Poole Middle School is municipal. In 2004, MCPS implemented a comprehensive testing program to detect elevated levels of lead in drinking water at schools. At that time, a remediation plan was instituted for those facilities where elevated lead levels were found. Currently, MCPS assesses water quality at locations with potential sources of drinking water not previously included in the program e.g., additions, modernizations, and new construction. Additionally, MCPS continues to institute the Environmental Protection Agency's (EPA) recommendations regarding the routine flushing of all drinking water outlets in order to reduce occupants' exposure to contaminants in drinking water. MCPS has environmental staff that will evaluate water quality at facilities upon request.

What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling, and/or composting?

31 percent

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected)

MCPS does not use dumpsters to collect garbage from schools. Daily garbage in placed in bags and stored in the schools trash room. The monthly total tonnage of garbage disposed for MCPS is distributed to each school based on number of building occupants (staff & Students). Total tons of garbage distributed to Poole MS ES for school year 2015-2016 is 20.17 tons

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected)

MCPS requires the recycling hauling contractor to have "On-board Weighing Scale" on the trucks that service all MCPS sites. The weight of each dumpster is weighed before and after servicing to capture the actual amount of material recycled from each MCPS site.

Total paper/cardboard collected for school year 2015-2016 = 6.15 tons

Total commingle recyclables collected for schools year 2015-2016 = 1.90 tons

One eight yard dumpster for paper/cardboard recycling with one time per week service.

One two yard dumpster for commingled recyclables with two times per week service.

Similar to the garbage, MCPS does not use dumpsters to collect yard waste recycling. MCPS trucks collect yard waste recycling from designated area at school sites. The monthly total tonnage of yard waste recycling taken to the county transfer station is distributed to each school based on number of building occupants (staff & Students). Total tons of yard waste recycling distributed to Page ES for school year 2015-2016 is 1.07 tons

C - Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected)

None

Recycling Rate = ((B + C) ÷ (A + B + C) x 100)

((1.90+6.15+1.07) / (20.17 + 1.90+6.15+1.07) x 100) = 31 %

Monthly waste generated per person = (A/number of students and staff)

(20.17/372) = 0.054 tons per person

POOLE MS														
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total Tons
A	Trash (tons)	1.73	1.86	1.71	1.75	1.10	1.64	1.73	1.74	1.81	2.26	0.97	1.86	20.17
B	Commingle (tons)	0.09	0.20	0.20	0.22	0.16	0.22	0.24	0.12	0.28	0.18	0.02	0.00	1.90
B	Paper/Cardboard (ton	0.56	0.50	0.34	0.40	0.32	0.89	0.52	0.39	0.61	1.33	0.08	0.21	6.15
B	Yard Waste (tons)	0.07	0.11	0.06	0.07	0.03	0.03	0.13	0.12	0.08	0.14	0.11	0.13	1.07
Recycling Rate:		31	Percent											

What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed, and/or chlorine-free?

Ninety-nine percent of the paper stock used by Poole MS is 30 percent post-consumer waste and/or certified by the Sustainable Forestry Initiative (SFI). All copier paper distributed to the schools by the MCPS central warehouse carries the SFI label. The largest publications produced centrally for system-wide distribution, such as student daily planners, math worksheets and assessments, are printed exclusively on 30 percent post-consumer waste paper.

Provide information on the amounts, monitoring, and disposal method for each of the materials below.

Flammable liquids, Corrosive liquids, Toxics, Mercury and/or mercury compounds

Poole MS is classified as a “general use facility” under Montgomery County regulations. The school’s current chemical inventory indicates at least 55 gallons, but less than 220 gallons, aggregate quantity of hazardous chemicals. The school disposes of hazardous chemicals by either submitting a work order to MCPS’ Division of Maintenance or contacting the MCPS Science, Technology, Engineering, Art, and Mathematics (STEAM) Supervisor. The chemicals are picked up by a licensed hazardous waste contractor for disposal in accordance with applicable regulations. School staff is required to properly store and use hazardous chemicals and to notify MCPS’ Systemwide Safety Programs Unit of changes in the school’s chemical inventory. The school is also required to maintain a chemical information list and material safety data sheets for all hazardous chemicals onsite. Employees potentially exposed to hazardous chemicals are required to receive appropriate training.

Describe other measures taken to reduce solid waste and eliminate hazardous waste.

Strategic placement of recycling and solid waste collection bins in the interior and exterior of school. Signage and visuals above

each collection station; collection bins are labeled to clearly identify items that can be recycled and items that cannot be recycled to reduce cross contamination.

Systemwide reducing, reusing, and recycling is promoted and practiced with over 20 items being recycled to reduce the amount of solid waste.

Monthly individual school recycling data and solid waste reduction data is published by the School Energy and Recycling Team (SERT) to increase awareness among students, staff, and community user to increase recycling and reducing solid waste.

Comprehensive communications inform all principals how to handle potential hazardous waste through a handbook that is updated annually from the Office of Chief Operating Officer of MCPS. Building services staff receive training on response and proper protocols for solid and hazardous waste.

Division of Maintenance (DOM) has contractors available for special hazardous waste pick up and spill response.

Describe the green cleaning supplies used in your school.

Which green cleaning custodial standard is used?

Poole MS uses the Division of School Plant Operations' Healthy, High Performance, Green Cleaning Program which incorporates Green Seal GS-39 Criteria for Green Facilities Operations and Maintenance.

What percentage of all products is certified? 75 percent

What specific third party certified green cleaning product standard does your school use?
Green Seal

Describe alternative transportation at your school

What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school? (Note if your school does not use school buses) How is this data calculated?

Walk: 11 percent
Bus: 75 percent
Car Pool: 11 percent
Bike: 3 percent

By dividing the number of students in each category over the school's total student enrollment.

Which policies and practices has your school implemented?

As a Montgomery County Public School, several practices have been implemented at JPMS:

- Designated carpool parking areas
- Bike rack is used daily
- Over 25 percent of our staff carpool to work
- A well-publicized no-idle policy that applies to all vehicles including school buses
- Vehicle loading/unloading areas at least 25 feet from school building air intakes, doors, and windows
- Safe Pedestrian Routes to School or Safe Routes to School

Describe activities in your "safe routes" program.

Montgomery County government oversees the safe routes program. The MCPS Department of Transportation (DOT) works with Montgomery County government in order to ensure their recommendations are implemented in the design phases for school renovations and/or construction. The safe routes program operates directly with the school administration in order to design and operate the routes efficiently.

In addition, MCPS and Montgomery County government collaborate, evaluate, and implement safe traffic patterns and solutions at all school. Montgomery County Department of Transportation (MCDOT) has a policy of doing traffic studies at about 30 percent of our schools every year. These are regularly scheduled observations and recommendations on how the traffic situation can be improved at each of MCPS schools. In 2002 and 2010, the MCDOT conducted a comprehensive school zone traffic safety

assessment where entrances were adjusted, an island was constructed, a traffic signal was installed with pedestrian response, and another entrance is now an “exit only” driveway for improved safety. The next comprehensive school zone traffic safety assessment will be done in the 2017–2018 time frame During the school year, there are also other observations done at the request of the school, parents, students or the community at large. These none-scheduled observations are done year-around and are usually based on the identification of a hazardous conditions that could have developed as a result of changing traffic patterns.

Describe how your school transportation program is efficient and has reduced its environmental impact.

The MCPS Department of Transportation (DOT) is required by law to rotate its buses out every 12 years. DOT has been renovating about 12 percent of its fleet every year; as of 2015, 80 percent of the bus fleet meets or exceeds EPA 2008 Emission mandates.

DOT has a yearly review program of all bus routes. During the review program, every single route is analyzed to identify opportunities to improve efficiency, to avoid having several buses serving the same area. These review processes have allowed DOT to absorb the annual growth in student population while reducing the amount of buses. This results in lower operating cost, reduced environmental impacts, and benefits to the health and well-being of our local and global community.

Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships.

The following is a list of some other efforts we have implemented to reduce environmental impact:

In 2014, SERT program staff presented our school’s recycling data to our entire sixth grade class. The sixth graders developed a schedule of student directed recycling completed over several months and managed by our security guard. When the program was completed, the data was used as part of our application for the Lead by Example contest.

In 2015, art students designed templates to wrap around light switches reminding staff and students to turn off the lights. The winning designs were funded by a Piedmont grant.

Every year students conduct an energy audit following a presentation by SERT facilitator. In 2016 students analyzed JPMS electricity usage and images taken from an thermal imaging camera of heating and cooling units, copiers, computers and other appliances in the school that use electricity.

Printers are automatically set to print double-sided copies.

Scrap bins next to printers encourage using both sides of paper before recycling.

The weekly bulletin from the principal is electronic.

All staff are always encouraged to use natural lighting and turn off overhead lights whenever possible.

Increased Chromebook usage continues to decrease the number of paper copies

Teachers use CopyPlus service for large copy needs—a service offered by MCPS to reduce the energy use and wear/tear of copy machines at the school.

School staff circulates shutdown information to school staff and submits SERT Energy shutdown forms on long weekends to reduce energy use and greenhouse gas emissions.

<u>Pillar II:</u> Improve the health and wellness of students and staff

Describe your school’s Integrated Pest Management efforts, including IPM/green certifications earned, routine inspections, pest identification, monitoring, record-keeping, etc.

The Integrated Pest Management (IPM) program employs Maryland Department of Agriculture certified pesticide applicators to conduct regular inspections to prevent pest damage. IPM staff identifies and corrects conditions that encourage pests by reducing

food, water and shelter for pests, and by eliminating unnecessary pesticide applications. This integrated approach results in the most economical long term solution with the least possible hazard to people, property and the environment. An IPM logbook of all IPM activities is kept in the main office of the school.

What is the volume of your annual pesticide use (gal/student/yr)? Describe efforts to reduce the use of pesticides inside the school and on school grounds.

The Integrated Pest Management (IPM) program uses regular inspections to prevent pest damage. IPM staff identifies, corrects, or generates work orders to correct conditions that encourage pests by determining when to control pests, identify conditions contributing to pest problems through the use of monitoring and thorough inspections conducted at regular intervals. With the assistance of staff, students, and administrators one or more pest control methods including sanitation, structural repair, cultural practices, mechanical control, biological, other non-chemical methods and pesticides will be utilized. This integrated approach results in the most economical long term solution with the least possible hazard to people, property and the environment.

The annual pesticide use at John Poole Middle School was 0.0 gal/student.

Which of the following practices does your school employ to minimize exposure to hazardous contaminants?

- Prohibit smoking
- Removed elemental mercury and prohibit purchase
- Reduced exposure to carbon monoxide from fuel-burning appliances
- Conducted radon testing
- Removed playground structures containing chromate copper arsenate
- Conducted lead in water sampling

Describe how your school manages and controls student and staff exposure to chemicals (including pesticides) routinely used in the school.

At least 24 hours before any pesticide is applied in a school building or on school grounds, the IPM supervisor will provide written information to the school principal who in turn will provide written notification to each parent/guardian and staff member.

Describe actions your school takes to prevent exposure to asthma triggers in and around the school.

At Poole MS, the school has implemented a number of asthma trigger control measures. Through the implementation of an Integrated Pest Management (IPM) program, exposure to asthma triggers from cockroaches and other pests are reduced. Throughout the school, building service personnel routinely perform housekeeping and HVAC maintenance activities to reduce the exposure to dust mites, pollen and mold. To prevent allergic reactions to dust mites, MCPS replaces carpet with floor tile in classroom and common areas whenever possible.

In addition, there are formalized indoor air quality (IAQ) investigation protocols to address IAQ complaints in an efficient and effective manner. Enforcement of No-Idling and No-Smoking Policies are also in place to minimize exposure to diesel fumes and tobacco smoke. Like other schools in MCPS, there is an environmentally preferred purchasing policy that is followed to ensure that only approved products are used. To minimize dust emissions, there is an IAQ in Construction Guideline. Lastly, there is a proactive program to inspect and maintain relocatable buildings on an annual basis.

Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup mold or removes moldy materials when it is found.

Built in 1997, Poole MS is designed, operated and maintained to control moisture from leaks, condensation and humidity. The building's HVAC systems are remotely monitored by an energy management system that alerts staff to correct any problematic conditions. The proper HVAC system and building envelope features were selected and installed to control potential moisture sources. As part of the proactive mold prevention program at MCPS, staff at Poole MS have been trained to recognize the causes and early signs of mold development. In addition, Wi-Fi monitors that measure temperature and humidity are available as conditions warrant. In order to maintain humidity levels below 60% during the cooling season, portable dehumidifiers are placed where needed.

MCPS follows EPA guidelines in removing mold and moldy materials arising from various sources of moisture. When indoor visible mold is discovered, professionally-trained personnel use the appropriate personal protective equipment and containment methods

to remove the mold in a safe manner. After the mold has been removed, the source of the moisture is eliminated. This past year, the IAQ Special Projects Team was formed to conduct remediation activities as soon as mold is discovered.

Describe your school's practices for inspecting and maintaining the building's ventilation system and all unit ventilators to ensure they are clean and operating properly.

Formal building inspections, including inspection of ventilation systems are performed biannually by off-site Division of School Plant Operations (DSPO) building service supervisors. This includes inspection of filters, belts, lubrication, overall cleanliness of units, indoor air quality and temperature, record keeping, etc. The on-site school building service manager conducts daily inspections, maintains schedules and logs, performs cleaning and monitors operations of ventilation systems.

Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards.

Classrooms are served by dedicated outdoor air equipment that provides direct ventilation to spaces when occupied. Common spaces receive ventilation through air-handling equipment with demand control sequence of operations.

Describe other steps your school takes to protect indoor environmental quality, such as implementing EPA IAQ Tools for Schools and/or conducting other periodic, comprehensive inspections of the school facility to identify environmental health and safety issues and take corrective action.

Through the implementation of an environmentally preferred purchasing policy, MCPS screens products for use in the school system to ensure safety and health. Using standards established by the Green Seal Organization and Leadership in Energy and Environmental Design (LEED), MCPS reviews product safety literature and makes a determination based on associated health and safety and environmental hazards.

To assist in ensuring acceptable indoor environmental conditions, MCPS has developed HVAC equipment maintenance schedules for school building service staff. The school's plant operations supervisor periodically visits the school to inspect HVAC equipment and check maintenance records.

While Poole MS does not currently have relocatable classrooms, MCPS has a program in place to inspect all units on an annual basis. This program ensures that all relocatable buildings are in "good" condition according to various criteria (i.e., air quality, moisture conditions, building envelope assessment, site drainage. In 2016, Building Service personnel began weekly inspections of relocatable units to identify and report any mold and/or moisture issues in a timely manner.

Describe how your school promotes healthy nutrition among students and staff. Include participation in programs such as the USDA HealthierUS School Challenge, Farm To School, Edible School Yard, or similar programs.

JPMS teaches nutrition through health and science classes. In the first unit of seventh grade science, students grow basil hydroponically. During the seventh grade science unit Matter and Energy Flow in Organisms, students obtain information on food and nutrition services in Montgomery County and identify the overarching problem. All students maintain a food diary for a week to analyze the nutritional value of a typical week of meals. Some students set goals as a result of their diary to eat a more balanced and nutritional diet. After completing several labs and class periods of research, students work in teams to design a healthy and affordable school lunch menu.

In environmental science classes, students learn about their global footprint as it relates to their food choices. Students study the effects of bioaccumulation in the food chain and use the Monterey Bay Seafood Watch program to determine the health of their seafood choices.

Students worked with two PHS Global seniors to plan a hydroponics window wall using recycled bottles to grow herbs. The herbs will be grown in the spring semester of 2017. Two other PHS Global seniors worked with the entire school to implement a new composter in our cafeteria.

JPMS staff attended training on the use of raised garden beds to grow lettuce in the spring 2017 semester.

Vending machines are set on a timer to remain off during school hours.

JPMS participates in the Maryland Farm to School program. The purpose is to maximize the number of Maryland grown foods in school lunches while educating the students on why a healthy diet is beneficial. Students were served local produce in September including corn and plums.

Describe the types of outdoor exercise opportunities and nature-based recreation for students. Include how frequently students participate in programs such as Presidential Youth Fitness (FitnessGram), The First Lady's Let's Move, EPA's Sunwise Program, Maryland Children's Outdoor Bill of Rights, etc.

At JPMS, students are provided curriculum-related and unstructured outdoor exercise opportunities. The school is equipped with outdoor athletics facilities (basketball courts, tennis courts, soccer, and baseball/softball fields) to promote cardiovascular exercise, strength and athletic skills development, agility, self-confidence, and social development.

MCPS' middle school curriculum also includes numerous physical education requirements. Students receive instruction related to exercise physiology, biomechanical principles, social psychological principles, and motor learning principles.

Our school also uses the outdoor classroom and the adjacent woods every week for environmental art and habitat simulations from Project Wild.

JPMS has participated in the Girls on the Run program that met after school for several weeks. Our nurse and nurse technician were the sponsors of this program which taught the girls healthy mind-set strategies, physical activity, and connection to the environment as they prepared for a 5k Fun run. Involvement in this program promotes healthy physical fitness, decision-making, and goal setting.

A similar program was offered to all middle school runners the following spring that encouraged group runs after school. Interested runners joined the running club for after school workouts.

What percentage (by cost) of food purchased by your school is certified as "environmentally preferable" (e.g., Organic, FairTrade, Food Alliance, Rainforest Alliance, etc.)?

Not measured at this time.

Does your school use a Coordinated School Health approach or other health-related initiative to address overall school health issues?

Yes, all MCPS schools use a coordinated-school health approach to address school health issues and to improve the health of students and staff. MCPS works closely with the Montgomery County Department of Health and Human Services (DHHS) to develop and implement health-related initiatives. These include incorporating health education into MCPS' curriculum requirements for elementary school students. Subject areas include: mental and emotional health; fitness and nutrition education; alcohol, tobacco, and drug education; health-enhancing behavior; Family life and human sexuality; illnesses and disease prevention, and safety and injury prevention

Poole MS is equipped with a health office, which is staffed by a nurse and a health technician. Health office staff provide guidance and training to school employees, provide health services for students, coordinate school health-related activities with DHHS, and monitor student injuries and illnesses for patterns. The school also has a counseling office that provides assistance and referrals related to mental health and drug intervention.

MCPS has implemented systemwide programs designed to assist students experiencing anaphylaxis and sudden cardiac arrest. All schools are provided epinephrine auto-injectors and all staff members receive annual anaphylactic awareness training, with at least three staff members at each school receiving hands-on training in administering epinephrine. All high schools and middle schools are provided automated external defibrillators (AEDs) and all high school and middle school security and athletics staff receive cardiopulmonary resuscitation (CPR) and AED training.

<u>Pillar III</u>: Provide effective environmental and sustainability education, incorporating STEM, civic skills, and green career pathways.

Describe how environmental and sustainability literacy concepts are integrated within multiple disciplines and grade levels.

The MCPS K-12 Environmental Literacy Plan ensures that environmental and sustainability education occurs as a series of learning progressions from Kindergarten through Grade 12 and involves several content areas. All of the Maryland Environmental Literacy Curriculum standards are addressed with a grade-level appropriate content and experiences as students advance in knowledge and skill level. Graduation in the state of Maryland requires that students successfully complete a high school program that teaches all eight environmental education standards. The foundation for these MCPS high school courses is set through the elementary and middle school environmental education curriculum.

In Grade 6, students investigate ecological and sustainability concepts in their project based units on Habitats, Going Green, and Alternative Energy. In the first, students learn foundational ecology they investigate a local organism and design a habitat that it can survive in. In the second, students create an environmentally friendly design that improves natural resource use in a MCPS facility. In the third, students design and build a solar collector. Also, in Grade 6, students participate in three days of an Outdoor Environmental Education at a residential site. There they investigate the answer to the question: How do humans impact the environment? The curriculum includes lessons on predator/prey interactions and water quality monitoring. During the past two years, our students have conducted environmental service learning projects to remove invasive plants and collect native seeds for tree restoration programs.

In Grade 7, students research a process for growing plants without the use of soil in unit that involves hands on experiences with hydroponics. Sustainable farming is a major agricultural topic which received much attention in this unit as students investigate a variety of different systems and growing mediums for raising plants and analyze such variables as growth rate and food production. Adaptation, natural selection and environmental changes are major topics explored in the second semester of Grade 7.

In Grade 8, students gain a better understanding of systems that underlie the interdependence of the living and non-living environment in a unit on earth materials and processes. Students learn about geographical influences on climate, the water cycle, oceanic and atmospheric circulation, and climate change, and apply their understanding of these concepts to design and create “Green Homes” for different locations around the globe. Students also learn about Earth’s structure, continental drift, plate tectonics, minerals, types of rocks, weathering and erosion, and apply their understanding of these concepts to design and create Earthquake resistant structures.

Social Studies curriculum also has a big hand in helping students understand the importance to the environment. In Grade 6 social studies, students connect environmental factors to where people live and how their cultures evolve. In Grade 7, students conduct research into the effects of modification of the environment in Latin America.

JPMS extends the curriculum to deepen the environmental learning in a number of ways. Here are some examples:

With grant money from the Chesapeake Bay Trust (CBT) students in the environmental science elective take an extended day trip to the CBF Arthur Sherwood study center. Over 60 students a year take this trip which serves as a springboard into the service project students design and complete upon their return. The trip is a school favorite and students look forward to their time exploring the waters by canoe and research boat. The data collected on the trip is compared to the data the class collects in our schoolyard. Students are expected to give a grade to our schoolyard and the watershed based on the data they collect.

In art, students research an endangered species looking at the primary as well as contributory causes of the threatened or endangered status of each species. They then create mono-prints of these endangered animals to raise awareness. Art students also looked at the interaction between light and atmospheric particles (moisture, pollen, pollution, etc.). Using this knowledge they create scenes demonstrating the effect it has on the color, detail, and contrast of a scene. Finally, the art teacher also has had students create posters for SERT Watt’s Up? Poster contest.

Students in the environmental science class collect garbage and recyclables during their week long study of garbage. They complete a trash timeline and draw connections to their impact on the watershed. Erosion is also explored in the elective with labs and simulations completed to demonstrate the impact of adding trees and/or impervious surfaces.

In the spring of 6th grade English classes read a story called "The Sand Castle" by Alma Luz Villanueva, which discusses the impact of global warming, and then they write an essay about how the author uses the fictional story to draw attention to the issue. In quarter three of sixth grade we also discuss environmental science with the short story "All Summer in a Day" by Ray Bradbury, which takes place on acid-rain-ridden Venus.

In 7th grade this fall, we read a short story called "Zebra" in which the main characters use garbage to create artistic sculptures--recycling angle? And in 8th grade, we have talked a lot about the importance of setting/environment for creating

meaning in stories and motivating both characters and authors.

In Grade 6 social studies, students participated in a hunter gather simulation out on the tennis courts. Students simulated what life would be like if they were hunter gathers. In groups of 4 they needed to make sure that the essential tasks for survival was completed. The purpose was to show the constant struggle to gather enough food and water to survive. In addition, it was to show students the benefits of living near sources of water and food. In 6th grade students also investigated the Indus River Valley civilization. One possible theory of why the Indus River Valley failed is the over farming of the land lead the deterioration of the fertile soil.

Describe how environmental and sustainability concepts are integrated into classroom-based and/or school-wide assessments.

Mastery of environmental and sustainability concepts are assessed regularly in a variety of ways formally and informally. Teachers regularly use exit cards, written explanations, models, oral presentations, Google Slides, Google Forms, brochures and tests.

MCPS science curriculum includes 12 Common Task assessments that schools implement so that teachers and administrators can observe student progress on learning mastery. Some of those tasks are: Assessing the Health of Ecosystems, Plant parts and Reproduction in which students use evidence to support a claim of what environmental factors affect plants growth, and Selection Technologies in which students determine the role of artificial selection in giving some individuals an advantage in surviving and reproducing.

Examples of some specific performance assessments at JPMS include:

Every year all Grade 6 students assess the health of the North Branch of Rock Creek by analyzing water testing done at the Lathrop E. Smith Outdoor Education facility. Students measure nitrates, phosphates, dissolved oxygen, pH temperature, turbidity and complete a thorough macro invertebrate identification.

Over 60 percent of our seventh and eighth graders complete the schoolyard report card for JPMS. In this assessment students gather data on impervious surfaces, habitat, native species, erosion and biodiversity. Students use their results to persuade the principal to support an environmental project they design.

For every Green School field trip, all students complete a species log to evaluate the health of the environment. The Green School trip also gives students time to complete a pre and post trip survey.

Each year, Grade 7 students collect data of hydroponically grown basil over a two month period. The data is graphed and conclusions are drawn through a comparison to the control plant grown in soil. Students write conclusion statements with supporting data that support or do not support the use of hydroponics as a solution to feeding a growing population.

Seventh graders research genetically modified plants and animals to determine their position on the procedure. Students justify their positions in a class debate.

Our media center showcases environmental sustainability books and novels in a prominent location in the library, in order to encourage students to read about sustainability practices.

Describe professional development opportunities available in environmental and sustainability standards. Include the number of teachers and administrators who participated in these opportunities over the past 2 years. Also provide the total number of teachers and administrators in the school.

JPMS has a staff of 25 teachers. All participated in the Green School training in August 2015 and 2016. All participated in the Green Ribbon training in early December 2016.

Seven of the teachers (28 percent) completed additional professional development.

Training	Date	Attended By:
Green Ribbon Process	12/2016	ENTIRE STAFF
CBF Mentor training	4/2016	Shari Yesnick

Training	Date	Attended By:
Outdoor Education, Basics of Container Gardening	3/2016	Shari Yesnick
2016 Green School Application Workshop	2/2016	Shari Yesnick, Joy McIntyre
MD Green School re-certification process	8/2015	ENTIRE STAFF
SERT Recycling and Saving Energy	8/2015	ENTIRE STAFF
Criterion Wind Project	2014-15	Jane Lindsay
Outdoor Education, Confidence Course	9/2013	Linda Petak
Environmental Leadership	8/2012	Donna Lemon, Shari Yesnick, Joy McIntyre

Describe how your school uses the environment as a context for exploring and addressing STEM topics that require students to ask questions, develop and use models, plan and carry out investigations, analyze and interpret data, use mathematics and computational thinking, construct explanations, and engage in argument from evidence.

At our annual Science Night, students designed, built and tested:

- foil boats
- hovercrafts
- egg capsules
- catapults
- electrical circuits

Two guest speakers were featured at our STEM night. Our keynote speaker, Joe Dorr, spoke about his adventure of circumventing the world in a sailboat. He focused on the math and technology involved in his voyage. He touched on topics that included using a sextant, temperature changes, latitude and longitude, map reading and using a GPS. The other STEM night speaker demonstrated the effects of liquid nitrogen on everyday items.

Our technology teacher teaches a class called SeaPerch. The Seaperch program is an innovative underwater robotics program that equips teachers and students with the resources they need to build an underwater Remotely Operated Vehicle (ROV) in an in-school or out-of-school setting. Students build the ROV from a kit comprised of low-cost, easily accessible parts, following a curriculum that teaches basic engineering and science concepts with a marine engineering theme. The SeaPerch Program provides students with the opportunity to learn about robotics, engineering, science, and mathematics (STEM) while building an underwater ROV as part of a science and engineering technology curriculum. Throughout the project, students learn engineering concepts, problem solving, teamwork, and technical applications. At the end of the program students take a field trip to test their creations.

Every year students in English, Math, Art and Science use the school set of 32 Home Depot buckets as portable outdoor seats. The buckets were funded by a 2012 Piedmont Grant. Last year 29 students used the buckets to move a pile of mulch from the side of the school to the rear gardens in a true bucket brigade. Every student in Geometry uses the buckets to transport their materials: a clipboard, pencil, tape measure, and handout to complete a Pythagorean Theorem Investigation on the blacktop using the buckets for seating.

At outdoor education, our sixth graders use STEM to create a model of the ideal settlement. Students use the data from their patterns of settlement activities to collaborate and create the settlement using newspaper and masking tape.

After completing a series of outdoor simulations studying deer populations, environmental science students analyze the collected data and work in collaborative teams to present a solution to the growing deer population in our county. The students complete a debate and evaluate each solution. Students in the class also work together to design a filter system that cleans polluted water most effectively.

Four Girl Scouts invited the school to an after school hands-on bay education session. The girls spent hours researching, planning and educating other students about human impacts on the Chesapeake Bay. All participants completed several interactive stations to understand the human impacts on the watershed.

JPMS provides students with the opportunity to complete several student driven environmental projects. Students complete research to determine what is needed, select sites, submit requests, and implement their plan. Over the last six years we completed the following projects through student inquiry–an outdoor classroom, conservation garden, no mow zone, pollinator garden, storm drain painting, murals in library, light switch art, added composting in our cafeteria, created a hydroponics window

wall of herbs and completed an air cast of our school grounds. Students have submitted plans and we have grants pending for a NWF habitat garden and storm drain murals.

Describe how your school curriculum makes connections to college and career readiness, and/or provides students with opportunities to learn about careers in fields related to the environment and sustainability.

All MCPS courses for middle schools have the goal of making each student be college and career ready. Integrated into the curriculum are peeks into careers in the sciences - from hydroponics to environmental engineering. In addition, community members with professional science careers present information about their jobs at our annual Science (STEM) Night. We ensure representation in the following fields: Environmental Science, Technology, Engineering, and Mathematics.

Every April our school conducts a career day for the eighth grade. The counseling department works with the community to invite professionals who present to our students. The students then select from the list of presenters to determine their schedule for the day. Many of the professionals relate to the environment and sustainability. For example we have had service dog trainers, firefighters, farmers, geneticists, dog breeders, city planners all present to our students. Each year the list of professionals varies with the eighth graders since invitations go out through their families.

Guest speakers in the environmental science class give students an opportunity to ask questions and find out more from experts at Clean Air Partners, Snitzer Landscaping and the school system's SERT program. The Green School trips give students a chance to work with CBF educators, boat captains and other local professionals--like fishermen and crab pickers on Smith Island.

All science students are supported by a retired PhD scientist who volunteers at our school. He is part of a County program to assist teachers and students as they build models and set-up for experiments.

Describe how students conduct age-appropriate civic/community engagement projects integrating environmental and sustainability topics.

Several civic engagement projects have been completed completely through the school, but we also have many that are partnerships with other organizations in the community.

For example, in 2012-13 students in our technology class split into teams to walk our school grounds looking for the best site for an outdoor classroom. Each group selected a spot and presented their ideas to the class. A best site was selected after the presentations and the site was approved by the principal and the school system.

Students in the environmental science class researched materials for the classroom--mulch, surrounding borders, picnic tables and native trees to plant on the perimeter. The environmental science teacher used the student research to write a grant proposal to Lowe's Toolbox for Education. A local landscaper volunteered to prepare the area for planting three sweet gum trees at the perimeter of the classroom.

The entire sixth grade worked on increasing our recycling after hearing a presentation from our school system's SERT program about our school data. Sixth graders volunteered during their lunch to collect the recycling from each class. Sixth graders made whole school announcements encouraging teachers and students to be aware of their recycling efforts to try to improve our numbers.

The environmental science teacher worked with the school security guard to gather data on our recycling volunteer hours. The data was compiled into an entry for the Lead by Example contest. The school won the Lead by Example contest and was funded by the Lowe's grant allowing the school to create the student designed and researched outdoor classroom.

A local Boy Scout completed his Eagle Scout project at the same time by building an outdoor whiteboard for the classroom. He and his troops also cleared invasives from the area and added a small path into the woods.

Every year JPMS has a similar project that is completed with as many students and community members as possible to create a lasting environmental feature. The other projects include: a pollinator garden, a conservation garden, tree plantings, a no-mow zone, composting in the cafeteria, window hydroponics, storm drain painting and watershed murals.

Describe students' meaningful outdoor learning experiences that engage students in critical

thinking, problem solving, and decision making at every grade level.

JPMS has a student designed outdoor classroom that is used regularly by students and teachers for classes as well as stewardship activities. It includes a pond, no mow zone, conservation garden, five large picnic tables, an outdoor presentation board and trails leading into the woods. This area was a result of meaningful outdoor learning experiences over several years, building on the work of the previous year.

Seventh and eighth graders in the environmental science class learn outside at least once a week as they complete simulation and outdoor lab activities. For example, students complete a photo hike at the beginning of the semester to document organisms in our school yard. The photos are used by students as they complete a Google Slide to create a species log that identifies each organism.

Seventh and eighth graders simulate food webs, erosion prevention, bird habitats, musk oxen behavioral adaptations and many other environmental concepts based on the Project Wild and Project Wet programs. Students use their outdoor experiences to draw conclusions about the health of their ecosystem and design solutions to any issues presented.

In art, students looked at the work of other environmental artists as inspiration for building environmental structures. They then went out into our local environment searching for natural materials and locations to create a transitory sculpture using archetypal symbols.

Eighth grade students researched adding a National Wildlife Federation Habitat garden to the area to increase the biodiversity of our native organisms. Students also have planned to add educational environmental murals over each of our storm drains.

Our school also offers Green School field trips to sixth, seventh and eighth grade environmental leaders. The trip destinations change each year alternating different CBF study centers. We have taken trips to Claggett Farm, Arthur Sherwood, Philip Merrill, Smith Island and the Potomac River centers. Students on the trip serve as Green School leaders using their experience to give back to the school after they return.

The inspiration for many of our projects came from one of our Green School trips. For example, during the trip to Smith Island students wrote environmental announcements to be read to the school over a two week period. Some announcements included facts about the watershed and others were tips for reducing our global footprint.

Sixth grade students participate in three days of an Outdoor Education residential program each school year. Throughout their three days and two nights at the center, students use the driving question: How do humans impact the environment?

Our sixth graders also complete a service project every spring to weed, mulch and maintain all of the landscaping in the front of our school. Landscapers from LAND donate their time for an entire day to teach students the proper way to care for our front gardens including the underlying science behind the care instructions. Then students, with the help of experts, discuss the work that needs to be done, select a job, and complete it.

Describe your partnerships with the local community

Poolesville is a small community that thrives on the support of its community members and local businesses.

Snitzer Landscaping has donated hours of service and materials to John Poole Middle school during the past six years. John Snitzer has provided lectures to students on hydrology, invasive species and erosion prevention. John has worked to help write multiple grant proposals and lead plantings on school grounds. His crew has prepared beds in our rocky soil and delivered mulch, compost and plants to our school. He and his team re-graded a section of our back school yard to allow the walkway to drain more effectively and improve the appearance of our grounds.

LAND is a local organization that has supported our school for over six years. They donate time, supplies and educate students every spring during our sixth grade cleanup. They provided native plants to create a pollinator garden on the side of our school. Our school has well-maintained grounds thanks to their tireless support.

Four Streams Golf Course groundskeeper invited JPMS students to monitor the bluebird box every fall and spring. A guest speaker from Audubon Naturalist Society presented background information on bluebirds and the importance of monitoring the boxes on the trail. Four Streams completes water monitoring with groups of students, as well.

We earn supplies for our school through Office Depot's Recycling Rules program. Students donate used consumer electronics and the proceeds are given back for the school to use in its PBIS program.

Our local scouting programs have completed many environmental projects that benefit our school and students. We have received a Silver Award earning mural made entirely of plastic caps, a Silver Award after school Chesapeake Bay watershed workshop and an Eagle Scout Award for the outdoor white board, invasives removal and added trails at the outdoor classroom.

The town of Poolesville gave us a mature Sweet Gum tree on Arbor Day.

Many organizations have supported our environmental projects. If they are not mentioned above you will find the organizations previously in our application. We have received support from: Snitzer Landscaping, LAND, Piedmont grant, CBT, Lowe's Toolbox for Education Grant, SERT, Boy Scouts, Girl Scouts, Smith Center, Four Streams Golf Course, Audubon Naturalists, Home Depot, CBF, Clean Air Partners and Office Depot. And our parents! Our parents have served as chaperones on each of our many Green School trips, volunteered to speak at career days, and supported all our environmental initiatives.

Describe any other ways that your school integrates core environment, sustainability, STEM, green technology, and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships.

JPMS operates with the environment as the core of its culture. We provide environmental education in all subjects and at every grade level so that we can be sure that our students have a solid foundation in environmental literacy. Being a Green School is not something we have done as a collection of activities, but as a daily quest to incorporate the environment in all we do. There is a ribbon of green that runs through our plans, our community, our lessons and our actions.

We have highlighted the green plans throughout this application as opportunities for students to research issues and design solutions. Every year students complete the CBF Schoolyard report card to determine areas of strengths and weaknesses at our school. Based on the results, students plan solutions they can implement. Every year a team of Green School leaders travels to a CBF study center to collaborate for our school. Upon their return the leaders implement their plan. Some years they plan gardens, some years they plan no mow zones, some years they plan murals, some years they write announcements and next year they may plan something entirely different.

Our community shares our green passion through the many partnerships established with JPMS. The town of Poolesville supports us with native plantings on Arbor Day. LAND landscaping supports JPMS every spring as the sixth graders work to weed, mulch and plant the front of our school. Snitzer Landscaping supports us through repeated native garden projects. Clean Air Partners supports us through air quality lessons and the opportunity to participate in their slogan and poster contests. Weather and Climate day supports us with research tools and the opportunity to compete in their spring contest. Lowe's supports us with the Toolbox for Education Grant--supplying us with five outdoor picnic tables for the classroom that they assembled and delivered. Piedmont Grant for supporting a variety of projects including worm composting, watershed murals, light switch cover plates and native plantings. PHS Global students who work with our students to implement composting and hydroponics. Area professionals who present many green careers at our annual career day. Boy Scout and Girl Scout troops that support us when they complete -Eagle Scout, Silver and Gold Projects.

The lessons teachers lead that use ecology and environmental science are the base for learning. The interactive lessons are also taught by PHS Global seniors. SERT teaches lessons on recycling, electricity use and energy sources. The MCPS curriculum includes lessons on nutrition, physical fitness, culture, physics, and using environmental data to draw conclusions from investigations. CBF educators teach lessons in the field while canoeing, conducting biological surveys aboard a research boat, stomping through marshland, fishing for native species or exploring the culture of Smith Island.

Our actions include murals, gardens, habitats, hydroponics, an outdoor classroom, no mow zone, re-graded drainage area and multiple native plantings. We have instilled in our students the belief that they can use what they have learned to design and implement powerful positive changes in their environment.

JPMS students have seen what has been accomplished by those who came before them and confidently pursue green projects that will leave a lasting environmental legacy. Our legacy is that these students will continue to act on their learning to become good environmental stewards of their world.