



2015-2016 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 2015-2016

Public Charter Title I Magnet Private Independent Rural

Name of Principal: Ms. Lisa Lalama

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: Wilmington Montessori School

(As it should appear on an award)

Official School Name Mailing Address: Wilmington Montessori School 1400 Harvey Road Wilmington DE 19810

(If address is P.O. Box, also include street address.)

County: NCCO State School Code Number*: 5816

Telephone: 302-475-0555 Fax: 302-529-7004

Web site/URL: <http://www.wmsde.org/> E-mail: laurie_orsic@wmsde.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 accurate.

Date: January 14, 2016

(Principal's Signature)

Name of Superintendent: NA

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)



District Name: NA

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

Date: 1/14/16 (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: Delaware Department of Education

Name of Nominating Authority: Mrs. Tonyea Mead, Science Education Associate
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

___ Dme:

(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 _____ 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.



Wilmington Montessori School

Wilmington Montessori School is a collaborative learning community rooted in Montessori principles, inspiring the joyful discovery of self and a passion for learning and independent thinking. We empower children to be knowledgeable and responsible contributors to the global community. Wilmington Montessori School has been teaching students in mixed-age classrooms in the Montessori Method for over 50 years. WMS has grown from a small preschool to a school community for 1 to 12 year olds, and includes before and after care, childcare and camps for area students up to 8th grade.

Wilmington Montessori School is accredited by the American Montessori Society; Delaware Stars for Early Success - 5-Star Designation; Middle States Association of Colleges and Schools; National Association for the Education of Young Children; and National Council for Private School Accreditation. Wilmington Montessori is affiliated with the Delaware Association of Independent Schools and Montessori Teachers Association of Delaware.

The WMS community makes a great effort to uphold green practices and whenever possible, utilize materials and systems that will minimize both the school's costs, as well as its collective environmental impact. The WMS Facilities staff is committed to creating a safe, healthy and sustainable campus.

The WMS teachers and staff are dedicated to teaching their students to be good stewards of the Earth. It is a fundamental Montessori value. They strive each day to inspire their students to care for the world around them, while teaching them to think critically about complex issues, decisions and choices related to sustainability and green practices. The staff is proud of all that the school has accomplished and continually seeks the best ways to support the students and community as they work towards creating a "greener school."

Today's Learners; Tomorrow's Leaders.

1400 Harvey Road, Wilmington, DE 19810 www.wmsde.org PH: 302.475.0555 FX: 302.529.7004

Accredited by the American Montessori Society, NAEYC and Middle States Association of Colleges and Schools



ED-GRS Delaware Application for Schools

School Contact Information

School Name: Wilmington Montessori School

Street Address: 1400 Harvey Road

City: Wilmington State: DE Zip: 19810

Website: wmsde.org

Facebook page: <https://www.facebook.com/WilmingtonMontessoriDE>

Principal Name: Lisa Lalama

Principal Email Address: lisa_lalama@wmsde.org Phone Number: 302-475-0555

Lead Applicant Name (if different): Laura Z. Orsic, Assistant Head of School

Lead Applicant Email: laurie_orsic@wmsde.org Phone Number: 302-475-0555



Level <input checked="" type="checkbox"/> Early Learning Center <input checked="" type="checkbox"/> Elementary (PK-5 or 6) <input type="checkbox"/> K - 8 <input type="checkbox"/> Middle (6 - 8 or 9) <input type="checkbox"/> High (9 or 10 - 12)	School Type () Public <input checked="" type="checkbox"/> Private/Independent <input type="checkbox"/> Charter <input type="checkbox"/> Magnet	How would you describe your school? <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban <input type="checkbox"/> Rural	District Name Brandywine School District Is your school in one of the largest 50 districts in the nation? Total Enrolled: 192 students
Does your school serve 40% or more students from disadvantaged households? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	% receiving FRPL NA % limited English proficient: _____ Other measures _____	Graduation rate: 100% Attendance rate: 95%	

1. Is your school participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars? [State may wish to add other program names to this list]

Yes No Program(s) and level(s) achieved:

[Pathways to Green Schools \(DVGBC\) and EcoSchools](#)

2. Has your school, staff or student body received any awards for facilities, health or environment?

Yes No Award(s) and year(s) _____

Pillar I: Reduced Environmental Impact and Costs

Energy

1. Can your school demonstrate a reduction in Greenhouse Gas emissions?

Yes No Percentage reduction: _____ Over (m/yy - m/yy): [10/11 to 10/12](#)

Initial GHG emissions rate (MT eCO2/person): [1.35 MT eCO2/ Person](#)



Final GHG emissions rate (MT eCO₂/person): 1.47 MT eCO₂/ Person (10/14-10/15)
Offsets: _____ How did you calculate the reduction? This information was based on gas and electric charges. Unfortunately, there was no reduction. The winter of 2015 was a significantly cold one (16 snow/ice events) and the summer of 2015 was the hottest on record. We have been able to lower gas bills and replace 3 HVAC units with a SEER rating of 13.

2. Do you track resource use in EPA ENERGY STAR Portfolio Manager? () Yes (x) No

If yes, what is your score? _____ If score is above a 75, have you applied for and received ENERGY STAR certification? () Yes () No Year: _____

3. Has your school reduced its total non-transportation energy use from an initial baseline? () Yes () No
Current energy usage (kBTU/student/year): WMS does not provide transportation to and from its programs.

Current energy usage (kBTU/sq. ft./year): _____

Percentage reduction: _____ over (m/yy - mm/yy): _____

How did you document this reduction? _____

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

On-site renewable energy generation: 0% Type _____

Purchased renewable energy: 0% Type _____

Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program: No

5. In what year was your school originally constructed? 1962, additions in 1983, 1992, and 2000

What is the total building area of your school? 75,000 Sq. Ft.

6. Has your school constructed or renovated building(s) in the past ten years? (X) Yes () No See Addendum

For new building(s): Percentage building area that meets green building standards: _____

Certification and year received: _____ Total constructed area: _____

For renovated building(s): Percentage of the building area that meets green building standards: _____

Certification and year: _____ Total renovated area: _____

Water and Grounds

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



Average Baseline water use (gallons per occupant): 2,300

Current water use (gallons per occupant): 2,042

Percentage reduction in domestic water use: 11.22%

Percentage reduction in irrigation water use: Approx.10%

Time period measured (mm/yyyy - mm/yyyy): 01/2014 – 01/2015

How did you document this reduction (i.e. ENERGY STAR Portfolio Manager, utility bills, school district reports)? Through utility bills and monitoring.

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate?: 95% Types of plants used and location: All species are native or regionally specific to the area

9. Describe alternate water sources used for irrigation. (50 words max or whatever word max you indicate to your applicants)

No other water sources are used for irrigation.

10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces. (50 words max)

The site employs a natural extended detention basin providing filtration for frequent low-flow storm events and peak controls for larger infrequent events. Downspouts outlet on grade directing flow across lawns. The majority of the pavement drains via sheet flow across lawns. A portion of overflow parking is maintained as gravel.

11. Our school's drinking water comes from: (X) Municipal water source () Well on school property () Other: United Water Delaware.

12. Describe how the water source is protected from potential contaminants. (50 words max)

United Water Delaware treats the source water (from White Clay and Red Clay Creeks) at their Stanton Water Treatment Plant before the treated potable water goes to the consumer.

13. Describe the program you have in place to control lead in drinking water. (50 words max)

We rely on the utility company's standards, and preventative plumbing maintenance. All solders, fixtures, and piping are lead free.

14. What percentage of the school grounds is devoted to ecologically beneficial uses?

Because we have over 20 acres of "natural area," we consider over 80% of our grounds to be ecologically beneficial. (50 word max)



Waste

15. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or composting? Complete all the calculations below to receive points.

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected): Approximately 32 yards

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): Approximately 16 yards

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):
Approximately 2 yards

Recycling Rate = $((B + C) \div (A + B + C) \times 100)$: 36

Monthly waste generated per person = $(A/\text{number of students and staff})$: 0.123 cy/person

16. 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? 85% of all paper is 100% recycled content

17. List the types and amounts of hazardous waste generated at your school:

Flammable liquids	Corrosive liquids	Toxics	Mercury Fluorescent light tube disposal	Other: Computers and electronics
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How is this measured? Per light tube

How is hazardous waste disposal tracked? Waste material is stored in a locked holding area in a utility shed and taken to the recycling center as needed.

Describe other measures taken to reduce solid waste and eliminate hazardous waste. (100 word max)

When a substantial number of fluorescent tubes and/or electronic and computer recycling waste is generated, we dispose of it at the consumer recycling center provided by DNREC. We also have implemented a strong recycling program throughout our building. All refuse is separated into recyclable and non-recyclable materials and put into its proper receptacle.



18. Which green cleaning custodial standard is used? LEED cleaning standards are used as a guideline. We follow all EPA guidelines and manufacturer's guidelines in terms of usage and try to use as many green products as possible. We use HEPA filters in all of our vacuums and routinely change our HVAC filters via a service contract.

19. What percentage of all products is certified? Approximately 50% of cleaning products are certified and/or hypo allergenic.

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

None, but the school bases its choices on the students, staff, school, and building needs while using the LEED cleaning policies as a guideline.

Alternative Transportation

20. 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) WMS does not use school buses for student transportation to and from school. Approximately 80% of our students are driven to and from school (Weather is a big factor in the school's walking and biking numbers.)

How is this data calculated? (50 word max)

This data is calculated using the list of parent cars and from previous year data. Many families have more than one student at the school; therefore, 2+ students in a car occur in approximately 25% of the vehicles.

21. Has your school implemented?

designated carpool parking stalls.

a well-publicized no idling policy that applies to all vehicles (including school buses).

Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.

Safe Pedestrian Routes to school or Safe Routes to School

Describe activities in your safe routes program: We have recently re-lined and striped all of our crosswalks and parking areas including our speed deterrents. The community surrounding the school has decreased their speed limit and has installed high visibility crosswalks and speed deterrents. New traffic signage and parking signage has also been installed. (50 word max)

22. Describe how your school transportation use is efficient and has reduced its environmental impact. (50 word max) We encourage carpooling and have taken steps to reduce our environmental impact in the transportation department. All of our aftercare students arrive via b u s e s.

23. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. (100 word max)

During the 2015-16 school year, WMS has participated in the Delaware Valley Green Building Council Pathways to Green Schools (DVGBC) program and EcoSchools. As a part of the DVGBC Pathways program, the University of Delaware energy audit team conducted a comprehensive daylong audit in cooperation with the WMS Facilities crew.



Pillar 2: Improve the health and wellness of students and staff

Environmental Health

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

At WMS, we strive to keep on top of our pest management by keeping the building clean and identifying potential insect problem areas (both inside and outside) before they become an issue. Western Pest Management is our primary contractor for pest control. They adhere to IPM standards, and use eco-friendly, prevention based procedures on a monthly basis, as well as on call, as needed for specific issues. They are up to date on all state and federal regulations and certifications.

2. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use:

Less than 1 gallon of "environmentally neutral" pesticides is used for the entire building (both inside and out) per year. (This includes and is mostly of a preventative nature and used almost exclusively outside)

3. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? Provide specific examples of actions taken for each checked practice.

Our school prohibits smoking on campus and in public school buses. Smoking is prohibited on or near the school campus or on any forms of transportation such as buses for field trips.

Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school. No "old style mercury" thermometers are present at the school, and all of the thermostats have been replaced with modern versions.

Our school uses fuel-burning appliances and has taken steps to protect occupants from carbon monoxide (CO) WMS routinely has the water heaters and HVAC rooftop units inspected and serviced and have CO2 detectors in the areas of concern.

Our school does not have any fuel burning combustion appliances

Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L OR our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L. No testing has been performed as of this date, but if required could be obtained.

Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure. We have eliminated any playground structures that contained chromate copper and have switched to a more natural type of playground equipment currently and for all future installations.

4. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure. (100 word max) We keep all chemicals locked up and refrain from using stripper or anything with any type of VOC smell when people are in the building.



5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. (100 word max)

To reduce exposure to asthma triggers (including common colds/viruses; dust mites and animal dander; saliva; and urine), WMS reduction measures include: frequent, effective hand washing; excluding ill children from school; on-site flu clinic for staff, students, and families; frequent vacuuming, dusting, and damp mopping; maintenance schedules any dust heavy work, painting, servicing of HVAC during off-peak hours or when building is closed; limited or no outdoor exposure on high pollen count days, poor air quality days, especially for at-risk children; smoke-free campus; indoor humidity management; low VOC paint; management of food allergies; and pre-medication for children with exercise induced asthma.

6. 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. (100 word max)

We do routine roof inspections, have set very high standards for our building envelope and promptly address leaks and/or moisture problems when found or at the time of occurrence.

7. Our school has installed local exhaust systems for major airborne contaminant sources. (X)Yes ()No

We have active exhaust fans in all of our bathroom and kitchen locations, as well as vent systems for our kiln (kiln is not currently in use).

8 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. (100 word max)

We have a service contract with BSS (Building System Services) who performs routine PM inspections and maintenance such as filter changes and tune ups. Our in house maintenance crew frequently inspects both rooftop HVAC units and roofing materials/substrate.

9. 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. (100 word max)

In addition to our vent fan systems, all of our HVAC systems are on a BAS (building automation system) and provide ventilation consistent with local and national codes to all areas in the building.

10. 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. (200 word max)

Routine HVAC maintenance (at least every quarter, as well as inspected routinely) and return/supply cleaning in each room are just a couple of the steps that we take to protect indoor air quality. High quality air filters on all HVAC units are used as well as HEPA filters on all vacuums and cleaning implements.

Nutrition and Fitness

11. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships. (100 word max each or whatever you choose to make them!)

[] Our school participates in the USDA's Healthier US School Challenge. Level and year:

_____.



Our school participates in a Farm to School program to use local, fresh food.

Our school has an on-site food garden. Students in the 9-12 classroom cultivate an on-site food garden.

Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community. The garden has supplied food for students for classroom cooking and also the Delaware Food Bank.

Our students spent at least 120 minutes per week over the past year in school supervised physical education. WMS kindergarten and elementary students participate in PE two times each week for a total of 100 minutes and WMS preschool students participate in PE for 30 minutes each week. In addition, elementary students have recess for approximately 30 minutes each day and preschool students typically have approximately 60 minutes of recess each day.

At least 50% of our students' annual physical education takes place outdoors. 25%

Health measures are integrated into assessments. _____

At least 50% of our students have participated in the EPA's Sunwise (or equivalent program).

Food purchased by our school is certified as "environmentally preferable"
Percentage: _____ Type: Teachers and parents purchase snacks and
whenever possible choose organically or pesticide-free. Students bring their
lunches.

12. Describe the type of outdoor education, exercise and recreation available. (100 word max)

Wilmington Montessori students have recess outside each day, save for on those days when temperatures and conditions are prohibitive. For example, during the winter months, elementary students spend recess outside, and have access to sledding whenever possible. The preschool students have two recesses each day. Elementary students have PE two times each week (90 minutes total) and the preschool students have PE once/week (30 minutes total). During the summer, camp participants swim three times/week and also may participate in archery, environmental education programs and integrated arts programs with time spent outdoors.

13. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships. (100 word max)

2nd-6th graders have health class once a week to address topics such as nutrition, fitness and healthy lifestyle choices. The school facility is located on a 25-acre lot with access to wooded areas and a stream. The students regularly utilize the outdoors as a part of their science, writing and art lessons as well as a part of PE classes. Responsive Classroom principles are utilized in classes with a focus on students learning: care of self, care of others and care of the environment both inside and outside of the school building.

Coordinated School Health, Mental Health, School Climate, and Safety



14. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? (X) Yes () No

If yes, describe the health-related initiatives or approaches used by the school:

The CDC’s Coordinated School Health program expanded in 2014, into the Whole School, Whole Community, Whole Child (WSCC) program. This program encompasses the following areas, listed with examples of how Wilmington Montessori School incorporates them:

Health Education

2nd-6th graders have health class once a week to address topics such as nutrition, fitness and healthy lifestyle choices using **The Great Body Shop** (GBS) curriculum as the basis for lessons and activities. This is a comprehensive health education curriculum that covers age-appropriate health topics while promoting critical thinking.

Nutrition Environment and Services

Written school policy that encourages healthy food choices

Employee Wellness

Health insurance benefits

Help line

Yoga

Flu vaccinations on site

Social and Emotional Climate

Montessori “Peace Table” for practicing problem-solving skills and conflict resolution

Respect for others modeled

Physical Environment

25-acre campus

Full-time maintenance and cleaning staff

Health Services

Full-time RN coverage

Counseling, Psychological, and Social Services

School safety and crisis response planning

Referrals for school and community support,

Psychological, psycho-educational, and psychosocial evaluation

Community Involvement

Family Engagement

Parent Volunteer Co-operative program

Physical Education and Physical Activity

PE classes – once or twice per week

After school intermural and interscholastic sports

15. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? () Yes (X) No

If yes, describe these partnerships:

16. Does your school have a school nurse and/or a school-based health center? (X) Yes () No

17. Describe your school’s efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.) WMS teachers are trained in Responsive Classroom techniques and principles, which foster classroom community building and provide conflict-resolution guidelines.



Pillar 3: Effective Environmental and Sustainability Education

1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships.

[X] Our school has an environmental or sustainability literacy requirement. (200 word max)

Wilmington Montessori School's curriculum includes many objectives related to the issues and concepts of sustainability.

Here is a sample of the curricular goals for the 4, 5 and 6th graders with a direct connection to sustainability literacy:

Research various science and social studies topics.

Learn about the world, its people and its patterns throughout history.

Develop stewardship of the Earth and its people.

Science projects and experiments

Outdoor classroom that demonstrates the connection of our natural world to all learning

Discussion of current events

Here is a sample of the curricular goals for the 1, 2 and 3rd grade with a direct connection to sustainability:

Observe that there are many different kinds of plants and animals living throughout the world and learn about their similarities and differences.

Identify the living and non-living parts of a given environment and observe how plants and animals can physically change the environment in which they live.

Explore basic life cycles of plants and animals including birth, growth, development, reproduction, and death.

Examine the structure and function of living things by making generalized observations of plants and animals.

Explore the interdependence of animals on plants and other animals as a source of food.

[X] Environmental and sustainability concepts are integrated throughout the curriculum. (200 word max) The

Wilmington Montessori School community has sponsored several ongoing sustainability projects. Students, families and staff support Shoebox Recycling, paper recycling and ink cartridge recycling. The sixth graders have joined efforts to raise funds and awareness for the following organizations: Save the Rain, 350.org and the UNICEF TAP project. The primary students installed a certified Monarch Butterfly Way Station garden. The lower elementary students have done extensive study of wind power, water filtering, oil spills, river preservation and attended programs at the Delaware AeroSpace Education Foundation (DASEF) to learn about solar power and renewable energy.

In the current school year, students at all levels participated in the Bash the Trash artist-in-residency program, with workshops in which students learned the physics of sound, orchestral instruments and ways to use recyclables to create instruments. The lower elementary students conducted a study of trees and seeds in which they created a Field Guide of Trees and grew plants from seed. The upper elementary curriculum includes work with square foot gardening, composting, the design of "land art" projects inspired by Andy



Goldsworthy's artwork, an investigation of watersheds, estuaries and oyster restoration through Project PORTS: an outreach initiative of the Haskin Shellfish Research Laboratory, Rutgers University.

[X] Environmental and sustainability concepts are integrated into assessments. (200 word max)

Generally speaking, Wilmington Montessori School students are evaluated by way of formative assessments, as opposed to summative assessments. "In process" feedback, rubrics and regular student-teacher conferencing are relied upon for assessment of the students' work. When a teacher assigns a project such as the Biome or Tree Guide project, the student works closely with the teachers to ensure the work meets the standard. The teacher is able to determine, based on these regular conferences, the skills and information the student needs to learn, develop or has already mastered. Students are also regularly involved in the self-assessment process, reflecting on their work as it compares to the goals and objectives of the assignment.

3rd-6th graders take the Educational Records Bureau Comprehensive Testing Program standardized assessments to assess a wide-range of reading, writing and math skills. This standardized test does not have a sustainability component.

[X] Students evidence high levels of proficiency in these assessments. (100 word max)

The formative assessments indicate that students are successfully retaining the information and ideas as intended. Frequently, student assignments involve making presentations for parents, staff and other students. The presentations and final projects consistently show a wide-range of proficiency and understanding.

[X] Professional development in environmental and sustainability education is provided to all teachers. (200 word max)

Examples of environmental and sustainability education programs in which Wilmington Montessori School staff have participated (from 2010-2015):

Cultivating Little Naturalists – Professional Development workshop, February 23, 2015

Naturalists' Training – Ashland Nature Center

Green Your School Workshop: Sustainable Schools - Delaware Valley Green Building Council, October 23, 2015

Mysterious, Magical, Monarchs, Delaware Teacher Center, Summer 2015

Schoolyard Gardens 101 and 102, The Longwood Gardens, Summer 2014

Partnership for the Delaware Estuary, Summer 2015

Delaware AeroSpace Education Foundation (DASEF) – All-Staff Professional Development, Day-long Seminar, March 10, 2014

Moving Toward NGSS: Visualizing K-6 Engineering Education, Webinar Series, 2013-14 - All Elementary Lead Teachers

Preparing Students for a World of STEM, Professional Development Workshop, November 21, 2013

Nature in the Classroom – Professional Development Workshop, March 7, 2012

Birding for Toddlers and Preschoolers – Professional Development Workshop, April 25, 2012

2. For schools serving grades 9-12, provide:



Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career: NA Percentage scoring a 3 or higher: NA

3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge? (200 word max)

In 2014-15, Wilmington Montessori opened three Maker Studios - for the Toddler, Preschooler, Kindergarten and Elementary level students to explore science, technology, engineering, art and mathematics. In the general classrooms and the Maker Studios, students practice the skills of experimentation, testing, redesigning and retesting. Some examples of the topics students have explored: creating water filtration systems, building hydroponic planting systems, dying fabric with natural dyes from foods, and creating code for computers. Recently, the 4-6th grade students and Facilities staff, in Maker Studio classes, built a small "library" out of recycled materials in which donated, used books will be placed. The library will be installed on the school grounds and be accessible to all WMS students, so they may exchange books, reinforcing the concepts of "reduce, reuse and recycle." The upper elementary students have also participated in a study of the Delaware estuary, with a specific focus on the reestablishment of the oyster population. Students have also planted seeds in a variety of conditions while taking note of the fundamental needs of plants and conducted an intensive study of the world's biomes, as well as the creation of a life-sized model of an Australian rainforest and its animals.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? (200 word max)

Examples of the students learning about green technologies are seen at all grade levels. For instance, upper elementary students have done extensive work on behalf of the non-profit "Save the Rain," an organization that utilizes green technologies to harvest water for communities in Tanzania. In the process, they learned about rain catchment systems – how they are constructed and utilized.

Lower elementary students learned about renewable resources and the technologies to harvest wind, water and solar energy. Students learned about the atmosphere of earth and its weather patterns and participated in the Franklin Institute's Weather Show. They investigated how to combine observation and technology to predict the weather. They completed several STEM challenges and designed tools that would capture wind, considering the properties of material composition, size, shape, and flexibility. Next, they designed an effective sail and then a working windmill. Students attended a special presentation to learn about electric cars sponsored by the University of Delaware, which was followed up by a field trip to the Delaware Aerospace Outpost to explore the potential of wind, water, and solar energy as nature's own power plant.

5. Describe students' civic/community engagement projects integrating environment and sustainability topics. (200 word max)

The WMS community participated in the Green Apple Day of Service in 2013 and is currently a part of the Pathways to Green Schools (Delaware Valley Green Building Council) and EcoSchools programs.



Since 2013, WMS has collected 2400 lbs. of shoes for reuse and recycling around the world through ShoeBox Recycling and collected pop-tabs for the Ronald McDonald House.

In 2014-15, the school aligned with two WMS alumni at the Program for Rigor and Innovation in Education (PRIED), an independent school, to collect clothing to raise funds for the Philadelphia Zoo's UNLESS Project. Their project was called "Recycle What You Used to Wear to Help Save Animals in Despair."

As a part of the Global Citizen Action Project (GCAP), the upper elementary students have worked on behalf of Save the Rain, 350.org and the UNICEF Tap Project. Their work focused on raising community awareness and funds for all three organizations, as selected by the GCAP students from around the country.

The square foot gardening project has been integrated into the daily work of the 4, 5, and 6th graders and extra vegetables have been passed on to the Food Bank of Delaware.

6. Describe students' meaningful outdoor learning experiences at every grade level. (200 word max)

Toddler students play in a specially-designed playground area that allows them to play with natural elements such as dirt, seed pods and water. The teachers provide the appropriate language related to these experiences, mirroring delight. For example, the students observe and learn to identify various birds.

Preschoolers are drawn to caring for their environment – both indoors and outdoors. Preschool students appreciate opportunities to make feeders for the birds, care for plants and name the stages of the butterfly's life cycle. The Monarch Butterfly Way Station allows them to observe the natural world in an up close way.

The lower elementary students learn about the fundamental needs of plants and animals and the underlying processes of the larger natural world. They like hands-on experiences and applying their reading and writing skills. The Trees of Wilmington Montessori is an example of a project for the lower elementary students.

The upper elementary students are keen to conduct research and find ways to solve problems they identify. Their work growing vegetables for the Food Bank, their activities raising awareness and funds for Project Tap and Save the Rain, satisfies their desire to contribute and see the results of their hard work.

7. Describe how outdoor learning is used to teach an array of subjects in context, engage the broader community, and develop civic skills. (200 word max)

Students regularly go on woods and stream walks on the school grounds. The lower elementary students utilize such experiences for academic learning. For example, they spent time sketching and studying the trees near the stream, turning their observations into the Trees of Wilmington Montessori guide. The elementary students go to the nearby stream to test the water, discover the animals and plants along its edge and for art projects such as the "land art" project.



These hands-on activities give the students an appreciation for the natural world immediately around them and develop their “sense of place.” At the same time, the students learn about the world’s countries, regions and biomes and the fundamental needs of plants and animals. These experiences allow them both to value their school environment and extend their appreciation to the habitats and environments that are not immediately nearby. In their earliest lessons, the teachers reinforce and model the importance of respect for the environment. As they grow, the students come to understand the importance of preserving the natural world. They learn about the complexity of the problems humans face through debates and discussions related to topics, such as bee colony collapse, pesticide use and allocation of natural resources.

8. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships. (Maximum 200 words)

Wilmington Montessori is currently participating in the Delaware Valley Green Building Council’s (DVGBC) program Pathways to Green Schools and the Eco Schools program. As a part of the DVGBC program, a team from the University of Delaware conducted a daylong energy audit to assist the school staff in understanding ways to conserve energy and resources throughout the school. The 4-page report outlines a variety of cost-cutting suggestions that could, if implemented, offer an estimated savings of \$36,090/year. The DVGBC has provided workshops for school staff and WMS community members, as well as expertise as needed.

The Eco Schools and Pathways to Green Schools programs have required a more conscious effort to engage the parents and families within the school’s community, as we have had to form an official Eco-Team. This has led interested stakeholders –students, staff, parents and community members - to join together in a regular way, meeting to discuss and extend the school’s sustainability activities. There has been a greater sense of the “big picture” of the school’s sustainability efforts. The creation of the Eco-team has facilitated conversations between the Facilities team, teaching staff across all levels and interested parents – groups who previously might have worked in isolation.

9. 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. (Maximum 200 words)

The Montessori curriculum encompasses many of the key principles of sustainability and preservation of the environment. Dr. Montessori included activities and lessons expressly to address the student’s innate interest in the environment and the higher-level thinking needed to navigate environmentally-sound decision-making. She urged teachers to create beautiful indoor classrooms while also using the “outdoor classroom,” because children feel deeply their connection to the natural world. In her book The Secret of Childhood, Dr. Montessori wrote:

There must be provision for the child to have contact with nature, to understand and appreciate the order, the harmony and the beauty in nature... so that the child may better understand and participate in the marvelous things which civilization creates.