



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 early learning to 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 and sustainability 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

Public Charter Title I Magnet Private Independent Rural

Name of Principal: Dr. Jamee Lynch

Official School Name: Millbrook Environmental Connections Magnet Elementary

Official School Name Mailing Address: 1520 East Millbrook Road, Raleigh, NC, 27609

County: Wake

State School Code Number: 496

Telephone: 919.850.9700 Fax: 919.704.2106

Web site/URL: <https://www.wcpss.net/millbrookes> E-mail: jlynch2@wcpss.net

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

Date: 2-10-2020

(Principal's Signature)

Name of Superintendent: Cathy Q. Moore
District Name: Wake County Public School System

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



Date: 2-12-2020

(Superintendent's Signature)

Nominating Authority's Certifications

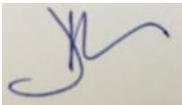
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

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: North Carolina Department of Public Instruction

Name of Nominating Authority: Mr. Jon Long, Architect, School Planning

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



Date: 2-12-2020

(Nominating Authority's Signature)

SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2021

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.



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School Contact Information:

School Name: Millbrook Environmental Connections Magnet Elementary School (MECME)
District Name: Wake County Public School System (WCPSS)
School Address: 1520 E. Millbrook Rd.
City: Raleigh
State: North Carolina
Zip: 27609

School Website: <https://www.wcpss.net/millbrookes>

Facebook Page: <https://www.facebook.com/MillbrookEnvironmentalConnectionsMagnetElementarySchool>

Principal Name: Dr. Jamee Lynch
Principal Email: jlynch2@wcpss.net
School Phone Number: 919-850-8700
Lead Applicant Name: Jill McGowan/Randi Jones
Lead Applicant Email: jmcgowan@wcpss.net/rjones@wcpss.net
Phone Number: 919-850-8700

School Information:

School Type: Public
Grades Served: PreK-5
District Type: Urban
Current Enrollment: 531
Attendance Rate: 95%
Graduation Rate: n/a

Does your school serve 40% or more students from disadvantaged households? Yes

% Receiving FRPL: 76%

% Limited English Proficient: 23%

Other Measures:

Is your school in one of the largest 50 districts in the nation? Yes

Summary Narrative:

Provide a 2 – 3 page summary narrative describing your school's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

Opening Statement: The mission of Millbrook Environmental Connections Magnet Elementary is to develop environmentally-minded citizens who will change the world. We facilitate this vision by building a community of learners who care for and are willing to stand up for nature, people and places. Students are immersed in nature-



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based learning, with daily instruction delivered through the lens of Environmental Science and Sustainability education. Millbrook's program offers authentic, hands-on opportunities to investigate and connect with local and global issues outside the school's walls.

Pillar I: MECME became an Environmental Connections school in the 2017-2018 school year. This magnet theme has given our school the ability to connect students daily and authentically to sustainability, environmental issues, and being active stakeholders in reducing our environmental impact in the school and community.

In 2019, gardens (rain, pollinator and edible) were installed on campus as part of an outdoor learning lab. Students use this engaging space to learn about irrigation, food gardening, stormwater runoff, reducing impermeable surfaces and their ecologically beneficial uses. Over 95% of MECME's total landscaping was designed to feature native plants and other vegetation adapted to our climate and annual rainfall, reducing the need for an external irrigation system. Our school grounds have been certified by the National Wildlife Federation as a Wildlife Habitat. To be recognized, MECME demonstrated that our campus has food and water availability, wildlife cover, places to raise young, and sustainable practices.

MECME's waste and consumption reduction efforts are led by our student team, the Green Bees. They conducted trash audit of waste materials within a given day at MECME. Students weighed the categories of glass, metal, plastics, paper, cardboard, food and other. This data was then compiled and shared with the student body and staff, as a means to make change within the building. As a result, the Bees run and facilitate a weekly school-wide recycling program and educate all students about why recycling and composting is important and how to properly recycle throughout the day and compost at breakfast and lunch in the cafeteria. In addition, their "Every Sheet Counts" initiative has reduced white paper waste by 31 pounds per month.

This year Green Bees and faculty Eco-Action Team members are working to reduce the school's carbon footprint through energy conservation. Students will conduct a school-wide energy audit in February and will design an action plan to reduce MECME's energy consumption. By implementing energy conservation measures and using energy efficient technologies, MECME will work to significantly cut energy use resulting in financial savings and reduced environmental impact.

Pillar II: Our entire school community is dedicated to the health and wellness of our students and staff. Our school has a full-time custodian, a night cleaning crew to ensure our school is clean, and a schedule that is followed for the cleaning of all surfaces which reduces allergens that could impact the health of our students. Strict rules and regulations are implemented with WCPSS regarding the usage of pesticides reducing any potential student exposure. WCPSS believes in Integrated Pest Management and therefore has significantly reduced the usage of pesticides around campus.

Outdoor food gardens and indoor tower gardening provides daily opportunities for students to engage in conversations regarding healthy food choices and gardening. Many of these lessons, conversations, and experiences lead to outdoor learning on our campus. Our PE teacher designs and implements outdoor field opportunities for all students. Fourth and fifth grade students are assessed in a variety of physical challenges in preparation to complete at the county level First in Fitness competition.

The School Health Program supports MECME through case management, health education, and consultation in order to remove health related barriers to learning. Our nurse promotes health, safety, and educational success



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using evidence-based practice and professional standards of care. MECME partners with numerous outside organizations in order to support students and families.

At MECME, there are student and family needs that exceed what educators can provide within the school day. Student Services team members often interact with and screen students for mental health needs. Sometimes, they become aware of greater family circumstances (such as financial hardship, addiction, domestic violence, trauma) that impact students' learning and counsel them accordingly. Our counseling services at MECME include individual counseling, group counseling, classroom guidance lessons and crisis assessments. Individual counseling services are available to serve the needs of students who have both momentary issues and long-term needs. MECME student's emotional health is critical to foster growth and learning. Our students participate daily in "Morning meetings" allowing students to form emotional connections to each other. Our school has also adopted the practice of Responsive Classroom, a student-centered, social and emotional learning approach. Additionally, our students participate in yoga/meditation classes during the year. The students are led through mindfulness activities and yoga routines, by a teacher trained in yoga and trauma informed outreach, to promote students' mental and physical health.

Pillar III: Through our Environmental Connections theme, students become critical thinkers, problem solvers and stewards of the environment, both social and natural, to help make change in our community and be advocates for our future. Our school promotes a love of nature and empowers our students to stand up for it.

Sustainability and environmental connections are apparent in the classroom, our Environmental Inquiry Science Lab, and through partnerships with local green businesses and organizations. Sustainability starts with our school wide recycling and reusing program, in the cafeteria through our food waste diversion program with the student-led Green Bees Team, and our edible food gardens with a harvest that is shared with local food banks. Staff and students are reminded to use paper wisely as each copy machine and paper towel dispenser features an "Every Sheet Counts" sticker as part of our paper waste elimination effort.

Within the classroom, sustainability and environmental cross curricular connections abound. MECME has implemented Expeditionary Learning (EL) Education's curriculum in grades K-5. EL is a comprehensive, standards-based core literacy program that engages teachers and students through compelling, real world content. This curriculum connects literacy standards with real life environmental issues, where students and teachers are engaged in work that is challenging and meaningful, and students are encouraged to become active participants in bettering their world. Environmental and sustainability concepts are integrated throughout the curriculum at MECME, as our magnet theme promotes the integration of these concepts throughout the fabric of our daily work. Concepts are integrated seamlessly through the delivery of core, elective and special courses (Environmental Inquiry, Art, Music and Physical Education) content. During a core instruction module on trees, for example, Kindergartners are encouraged to work and communicate like arborists and conservationists by adopting trees on campus, caring for them, collecting data in science journals, observing patterns of change over time and sharing it with others. Students at MECME participate in math activities connected to the garden space, such as measuring for area and perimeter, as well as working to find patterns in nature, such as 1st graders tallying and estimating how many leaves are on a plant. Through electives, students are encouraged to think, work and communicate like botanists, geologists, chemists, physicists, marine biologists, engineers and much more. During Environmental Inquiry, a special course to explore the environmental sciences, learning is centered on Problem-Based Learning units directly related to environmental and sustainability concepts.



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Students at our school are a part of the Eco-Schools initiative through the National Wildlife Federation and Eco-Schools USA. As part of this initiative, last year, as a school, we worked to reduce our waste and consumption. Led by a student Green Club, teachers and students conducted two audits of the school’s waste six months apart and determined that 93 lbs of white paper had been diverted from our school waste as a result of this initiative. Students have used sustainability and the environment as a context for learning about science and mathematics through this Eco-Schools work. Through this work, MECME is currently recognized as a Bronze Level School by Eco-Schools USA.

At MECME, we believe that learning happens in a variety of environments. For this reason, our students experience learning at school, in their community and throughout North Carolina. Students travel to local nature/science museums, nature parks, bird sanctuaries, the mountains of Western NC and the NC coast throughout their time at MECME. When travel is not a viable option, we bring the experience to our students at school. Guest speakers and experts have joined us at MECME from all over the state.

Through education within the classrooms and community MECME is providing authentic environmental, sustainability, and student health understanding while significantly reducing our human impact to the environment.

Participation and Awards:

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

<i>Year</i>	<i>Award Received</i>
2017-2022	Magnet Schools Assistance Program Grant
2018	North Carolina Museum of Natural Sciences Project Based Learning Fellowship (3 teachers)
2018	North Carolina Science Olympiad Fossil Frenzy: 1st Place (2 students)
	North Carolina Science Olympiad What’s the Matter: 3rd Place (2 students)
	North Carolina Science Olympiad The Heat is On: 3rd Place (2 students)
	North Carolina Science Olympiad STEM Design: 3rd Place (2 students)
2019	Eco-Schools Bronze Award
2019	Whole Kids Foundation/Bee Cause Grant (2 teachers)
2019	National Wildlife Federation Schoolyard Habitat Certification
2019	North Carolina Science Olympiad Weather Permitting: 3rd Place (2 students)



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Pillar I: Reduced Environmental Impact and Costs

Energy:

1. Can your school demonstrate a reduction in Greenhouse Gas emissions? No

- Percentage reduction: NA
- Initial GHG emissions rate (MT eCO₂/person): NA
- Final GHG emissions rate (MT eCO₂/person): NA

How did you calculate the reduction? NA

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

- If yes, what is your score? 29
 - If score is above a 75, have you applied for and received ENERGY STAR certification? N/A
3. Has your school reduced its total non-transportation energy use from an initial baseline? No

- Current energy usage (kBTU/student/year): 12,155.6 kBTU/Student/Year
- Current energy usage (kBTU/sq. ft./year): 67.8 kBTU/sq.ft./year
- Percentage reduction: -11.3%
- Time period: 06/2018-06/2019
- How did you document this reduction? Energy Star

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

- On-site renewable energy generation: n/a Type: N/A
- Purchased renewable energy: n/a Type: N/A
- Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program: n/a

5. In what year was your school originally constructed? 1954

- What is the total building area of your school? 100,400 square feet

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

For new building(s):

- Percentage building area that meets green building standards: N/A
- Total constructed area: N/A
- Certification and year received: N/A

For renovated buildings:

- Percentage of the building area that meets green building standards: N/A
- Total constructed area: N/A
- Certification and year received: N/A

Water and Grounds:

7. Can you demonstrate a reduction in your school's total water consumption from an initial baseline? No

- Average Baseline water use (gallons per occupant): 1167.9 gal/student/year baseline
- Current water use (gallons per occupant): 1560.7 gal/student/year current
- Percentage reduction in domestic water use: 34% increase; In the summer of 2018, MECME's HVAC system was replaced, therefore we believe the increase occurred due to the increase in building use over the summer months when school was not in session.



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- Percentage reduction in irrigation water use: n/a
- Time period measured: 06/2018--06/2019
- How did you document this reduction? (ie. ENERGY STAR Portfolio Manager, utility bills, school district reports): n/a

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? over 95% water efficient and/or regionally appropriate

- Types of plants used and location: All plants in the newly installed (August 2019) outdoor learning spaces and pollinator gardens are water efficient and regionally appropriate.

9. Describe alternate water sources used for irrigation: Due to extreme weather conditions in the months of September and October, a sprinkler was used to water garden spaces. The sprinkler was used 3x per week and rotated every 20 minutes for the 8-hour school day. Otherwise, the plants in the outdoor learning spaces are adapted to our North Carolina climate and are water efficient. Currently, we are in the process of acquiring a rain cistern to assist irrigation during more extreme weather times. This should be in place by late spring/summer 2020.

10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces: During the summer of 2019, a rain garden was installed near our pollinator and vegetable gardens to help reduce the stormwater runoff that was flooding the areas outside of our music and art classrooms. The beautiful chestnut tree outside of these classrooms had exposed roots from all the water run-off. The rain garden has not only helped with the flooding outside of these classrooms, but also with curbing erosion around the tree's roots. Furthermore, in 2005, a 0.375-acre watershed was constructed. This wetland drains 14 acres of the 16 acre site, reducing annual Neuse River nitrogen load 85% below the existing site. The athletic field and forested areas surrounding the building and perimeter serve to reduce stormwater runoff as well.

11. Our school's drinking water comes from: Municipal water source

12. Describe how the water source is protected from potential contaminants: The City of Raleigh Public Utilities Department provides customers with water that meets and or exceeds all Federal and State drinking water regulations. Primary reservoirs for Raleigh have a "Study Plan for the Ongoing Assessment of Water Quality".

13. Describe the program you have in place to control lead in drinking water: The Wake County Public School System has a Water Quality Management team that monitors school water quality, manages wastewater collection, treatment, and disposal from individual schools.

14. What percentage of the school grounds are devoted to ecologically beneficial uses? MECME's school grounds have been certified by the National Wildlife Federation as a Schoolyard Wildlife Habitat. To be recognized as a certified Schoolyard Habitat, schools must meet guidelines for food availability, water availability, wildlife cover, places to raise young, and sustainable practices. Therefore, our entire school grounds are devoted to ecologically beneficial uses.



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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): The monthly garbage service in cubic yards for MECME is 57.6 cubic yards. This number was calculated using the following data: one-eight cubic yard dumpster x twelve collections per month x 60% full when collected.

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): At MECME, bottles and cans are recycled under the Child Nutrition Services contract. Currently, the data for the cubic yard volume of these recyclables is not available. Our cardboard and paper is picked up weekly by Wake County Waste Management (GFL) and Sonoco Recycling. Cardboard is recycled at MECME at a rate of 22.4 cubic yards per month and Paper is estimated at 3.8 cubic yards per month.

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): The Composting Program at MECME is funded through a grant provided by Compost Now, which will be sustained in the future by our magnet grant. According to their data, monthly compostable materials volume in cubic yards is estimated to be 4.1 cubic yards. This was generated using the following specific data: five-0.316 cubic yard bins x 4 collections per month x 65% full when collected.

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

$$((26.2 \text{ CY} + 4.1 \text{ CY}) \div (57.6 \text{ CY} + 26.2 \text{ CY} + 4.1 \text{ CY}) \times 100) = 34.5\%$$

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

$$71 + 531 \text{ Students} = 608 \text{ people: } 57.6 \text{ CY} \div 608 = 0.09 \text{ CY/Month}$$

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? WCPSS orders most of the paper for all the county schools under multiple contracts and distributes it to the schools as requested. Only a small portion is purchased by and sent directly to MECME, therefore a percentage of paper content cannot be computed.

17. List the types and amounts of hazardous waste generated at your school: No hazardous wastes are generated at MECME.

- Describe other measures taken to reduce solid waste and eliminate hazardous waste: Our Green Bees Recycling team collects and deposits recycling waste once a week. The students collect cans, plastic, cardboard and paper. Additionally, we have a school-wide composting program in the cafeteria where students compost food scraps and these compost bins are collected 3x per week and taken to the CompostNow facility. A percentage of the compost we help create is returned to our school for use in our gardens. In order to reduce our need for the county provided white paper, we are a 1:1 technology school



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and use virtual documents whenever possible. In addition, every classroom participates in a schoolwide paper reusing program, so every paper is saved until it has been completely used. It then gets recycled through our school-wide recycling program.

18. Which green cleaning custodial standard is used? Cleaning products are peroxide based (Green). The primary cleaner used in WCPSS is ECOLAB Peroxide Glass and Surface Cleaner, it is used for all general cleaning. WCPSS is analyzing other green cleaning products, that may be introduced later this year.

- What percentage of all products is certified? EcoLab products are used for 90% of the cleaning at MECME.
- What specific third party certified green cleaning product standard does your school use? ECOLAB is Green Seal certified. All bathroom paper supplies are certified by EcoLogo.

Alternative Transportation:

19. 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): 54%

- How is this data calculated? Walkers--135 documented with rosters; Van Riders--27 documented with roster; Bus--75 documented with tags; Carpool (2 + students in the car)--49 documented during carpool pick-up

20. Has your school implemented?

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: Students walk to and from MECME via two access points. The students that walk to the Windsor Falls Apartments walk with three teachers in the afternoons across a school field to the access point at the fence. Students are met by their parents at that location. The second set of walkers cross MECME Road at a designated crosswalk light with a crosswalk guard. Students are also accompanied by 2-3 teachers to maintain safety at this busy street crossing.

21. Describe how your school transportation use is efficient and has reduced its environmental impact: MECME has separate bus, carpool, and walker locations, reducing wait time and idling. To significantly reduce wait time and idling in the carpool lanes, online technology is utilized to queue up students when their carpool number is called, and at least 4 cars are loaded at one time. Further, there are "NO idling" signs hung up in the carpool lanes to remind parents to not idle while waiting to pick up their children.

22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships: Each year, our students in 5th grade complete a Problem Based Learning (PBL) unit focused on air quality at our school. Air quality monitors are placed at various locations around the school campus, including at the carpool lane. Students monitor the air quality throughout the day for several weeks and analyze the data to determine where the air quality is at its worst. NC Department of Environmental Quality representatives present at our school to talk with the 5th graders about air quality. Then, students use their research to create public service announcements, brochures, and posters to present to parents to educate them on the air quality,



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particularly in the carpool lane. As more research is conducted over the course of the next few years in this PBL unit, data can be used to compare if their efforts to educate parents has helped to reduce the negative air quality in the carpool lane.

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.: The Wake County Public School System has adopted an Integrated Pest Management (IPM) Policy for managing insect and rodent intruders at our schools. IPM is a holistic, preventive approach to managing such pests. IPM minimizes pesticide use in our schools and on school grounds. For the last ten years, WCPSS has concentrated on removing pest habitats from schools rather than using pesticides for pest management. For the purpose of this notification, pesticides fall into (2) categories; The first is "exempt" pesticides that are relatively low risk/non-toxic. The second is "non-exempt" pesticides having relatively higher risk/toxicity. As of July 1, 2007, "non-exempt" pesticides are NOT used inside any WCPSS building. We are the first school system in North Carolina to achieve this level of "green" pest management. WCPSS is required under the "School Children's Health Act" [(NCGS 115C - 47 (45) (a)] to notify all students' parents, guardians, and custodians as well as school staff of the schedule of "non-exempt" pesticide use in and on WCPSS property. Further, the statute requires WCPSS make available any updates to the schedule upon request.

2. What is the volume of your annual pesticide use (gal/student/year)? negligible Describe efforts to reduce use: For the last ten years WCPSS has concentrated on removing pest habitats from schools rather than using pesticides for pest management making the amount negligible per gallon/student/year.

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.
- Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school.
- Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO).
- Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure.

4. Describe how your school manages and controls student and staff exposure to chemicals (including pesticides) routinely used in the school: Integrated Pest Management is utilized in place of using pesticides. Green cleaning products (peroxide based) are used. WCPSS is also reviewing additional green cleaning supplies. No chemicals are used in science classes in our elementary school.

5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school: To prevent exposure to asthma triggers, our school does not allow smoking on campus. We also have reduced the amount of idling in the carpool lines (see #s 21 and 22 above). The WCPSS custodial policy calls for bi-weekly dusting, mopping and sweeping tile floors; Weekly low dusting of all horizontal surfaces to a height of 84", damp



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mopping of hallway tile floors, mopping tile floors in classrooms, and vacuuming carpets; and Monthly high dusting of areas accessible with a 6 foot ladder to include horizontal surfaces.

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: Water leaks are reported to the WCPSS Facilities Emergency Hotline. A contractor is dispatched to evaluate the problem. Potential mold problems are also reported to the Hotline. WCPSS Facilities has a staff member specifically assigned to respond to reports of potential mold.

7. Our school has installed local exhaust systems for major airborne contaminant sources: Bathrooms have separate exhaust vents to the outside. The mechanical room is directly vented to the outside.

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: All HVAC filters are changed every 3 months along with a check of belts and cleaning if necessary. Inspections and preventative maintenance is performed annually on all HVAC equipment, and coils are cleaned at least every 2 years.

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: Energy efficient 4 pipe HVAC and VAVs were installed in each room with economizers at the time of renovation. All ductwork runs in conditioned or semi-conditioned spaces.

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: The full-time custodian of MECME performs building checks daily. He is the "first responder" to any potential building and facilities issues. If a potential issue is found, such as a water leak, facility malfunction, fire hazard, or any other safety issue, he immediately contacts our administration and WCPSS facilities management.

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:

Our school has an on-site food garden. Our school has partnered with the Raleigh InterFaith Food Shuttle this school year to assist us in utilizing our food garden space in the most efficient and integrative way possible. The InterFaith Food Shuttle has placed a Food Corps volunteer at our school as well, and the volunteer is on campus two full days per week, co-teaching garden curriculum, maintaining garden space with student help, and monitoring the cafeteria and composting. Furthermore, we currently harvest three indoor tower gardens throughout the school year, with the hope to attain more in the coming year. Two Environmental Inquiry classes have the tower gardens and integrate growing and nutrition into their curriculum. The third tower garden is maintained in a well-used hallway space for all students to observe. Additionally, students have the opportunity to participate in several elective courses about gardening, beginning with basic plant anatomy through planting and caring for their own garden.



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Health measures are integrated into assessments. Students in grades 2nd-5th are assessed on health-related fitness measures.

12. Describe the type of outdoor education, exercise and recreation available: Outdoor education takes place frequently with numerous teachers taking classes outside to utilize our campus for learning. Our magnet theme invites all teachers to engage in nature-based learning, therefore classes are often held outdoors for various lessons. Furthermore, our two Environmental Inquiry (E-Inquiry) classes use the outdoors for educative purposes, frequenting the outdoors several times a week, to utilize our school pond for ecosystem studies, the pollinator garden for connections to literacy, bluebird nest boxes for in-depth study, and for hikes around our campus. In addition, the PE teacher takes his classes outside roughly 30% of the time and students also spend 30 minutes daily outside for recess with teachers encouraging physical activity. Our school has two playgrounds with climbing and balance equipment, as well as a large field and dirt track.

13. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships: Each spring our PE Teacher designs and implements an outdoor Field Day for our students, with 10-15 different outdoor fitness activities. The 3rd-5th grade students in PE also participate in Fitnessgram Testing, with a modified version implemented for K-2 students. The Fitnessgram Test includes a variety of health-related physical fitness tests designed to assess cardiovascular fitness, muscle strength, muscular endurance, flexibility and body composition. Lastly, our 4th-5th grade students compete in the First in Fitness Challenge against several other Wake County Schools each spring. Students compete in a variety of fitness challenges including jump rope, mile run, long jump, pull-ups, triathlon, and more.

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? If yes, describe the health-related initiatives or approaches used by the school: Yes, the School Health Program supports MECME through case management, health education, and consultation in order to remove health related barriers to learning. Our school nurse promotes health, safety, and educational success by serving students, families, and school staff through partnerships, evidence-based practice, and professional standards of care. Our school nurse is on campus 2-3 times per week, provides training to all staff on medical diagnoses and procedures, and is a case manager for more than 25 students at our school. Additionally, our students participate in yoga/meditation classes one time per week for a 9-week quarter. The students are led through mindfulness activities and yoga routines, by a teacher trained in yoga and trauma informed outreach, to promote student mental and physical health.

15. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? If yes, describe these partnerships: Yes

- Triangle Family Services: Triangle Family Services is a community agency that provides mental health, financial assistance, and promotes family safety through education, intervention, supervised visits, and crisis support. Triangle Family Services works in partnership with MECME to support our students in these ways.
- Holly Hill Hospital: Holly Hill Hospital is a behavioral health hospital that has provided treatment for psychiatric conditions and substance abuse for strategic children at our school. They have also provided crisis intervention, inpatient, outpatient, and day treatment programs depending on the needs of the child.



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- Alliance Behavioral Health: Alliance Behavioral Health coordinates mental health services for our students provided outside of school. They have a network of providers that offers treatment and support for mental illness, substance use disorders, and intellectual/developmental disabilities.
- Strategic Behavioral Health: Strategic Behavioral health provides compassionate and highly effective mental health treatment options, utilizing a collaborative team approach to care in the most appropriate setting to meet the diverse behavioral health needs of the communities they serve. These services are provided outside of school. Services offered to our students and families include, but are not limited to, 24/7 free assessments, therapy, inpatient programs, partial hospitalization, and psychiatric residential treatment.
- Safechild: Safechild is an agency that provides parent education around issues of child safety and parenting skills. The agency also has a facility where they conduct evaluations of children who have reported abuse, and the agency collaborates with law enforcement, mental health treatment, and social services to develop an intervention plan for the child's safety and support.
- Salvation Army: The Salvation Army has provided assistance with a variety of basic needs for our students and families, such as assistance with referrals for homeless families, food assistance, seasonal coat giveaways, and seasonal holiday assistance programs. They also operate a temporary shelter for women and children, and several of our families have lived there, sometimes for months.
- Note in the Pocket: A Note in the Pocket helps with our students' health and safety by providing free, gently used clothing and coats, so students are adequately dressed for the weather. This in turn helps with attendance and school success, since lack of clothing sometimes prevents students from attending school.

16. Does your school have a school nurse and/or a school-based health center? Yes

17. Describe your school's efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.): MECME strives to provide numerous programs to support student mental health and a positive school climate. Our students and staff follow a school-wide behavior support system titled C.A.R.E.S. (C-Cooperation, A-Assertiveness, R-Responsibility, E-Empathy, and S-Self-Control). These are observable behaviors that all teachers look for to notice, name, and celebrate daily. Furthermore, our teachers have been trained, and utilize daily, the social and emotional learning approach to teaching and discipline called *Responsive Classroom*. This is a student-centered, social and emotional learning approach comprised of a set of research, and evidence-based practices designed to create safe, joyful, and engaging classroom and school communities for both students and teachers. Each day MECME learners begin their day by gathering in a circle that proceeds through four sequential components: greeting, sharing, a group activity, and morning message. For example, classes may hold morning meetings outdoors then learners share about natural experiences. Students learn that caring about nature is as important as caring for each other.

At MECME, there are student and family needs that exceed what educators can provide within the school day. Student Services team members often interact with and screen students for mental health needs. Sometimes, they become aware of greater family circumstances (such as financial hardship, addiction, domestic violence, trauma) that impact students' learning and counsel them accordingly.

Students at MECME also have the opportunity to participate in small group counseling sessions with school counselors (focusing on emotional regulation, friendship skills, and relationship dynamics); Responsive Road (conflict resolution between students); circle process with student small groups; 4th grade girls group with the



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school psychologist using the Strong Kids social-emotional curriculum; Funny Tummy Feelings presentations to all 1st graders (which discusses safety awareness and abuse prevention); classroom guidance lessons facilitated by the school counselors focusing on our CARES system for K, 1st, and 2nd grades and focusing on coping skills for 3rd, 4th and 5th graders; backpack buddies program to provide meals for students during the weekend; community lunch with teachers to build community among all school adults and students; and a Bee Buddies mentoring program for at-risk students to be partnered with an adult in the school for daily check-ins.

In late October each year, the whole school participates in a "BEE KIND" spirit week for bullying prevention, with designated days such as: "Let's Black Out Bullying" - wear all black and "Let's Team Up Against Bullying" - wear your favorite sports team apparel.

The school counselors, school psychologist, school nurse, and social worker all provide safety awareness presentations for all staff early in the school year to review signs of student distress, suicide prevention, and self-harm prevention.

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:

- Our school has an environmental or sustainability literacy requirement. WCPSS has implemented EL Education's curriculum in elementary schools across the district in grades 2-5. At MECME, we have implemented the curriculum in grades K-1 as well. EL is a comprehensive, standards-based core literacy program that engages teachers and students through compelling, real world content. In multiple modules, the environment and sustainability are the focus. For example, in a third-grade module, students learn about water scarcity/abundance around the world and the impact it has socially and environmentally. Fifth grade students have a module that focuses on natural disasters: what they are, how they happen, and the local and global impacts from them. First graders spend two quarters learning all about birds--special features, local birds, and developing ideas for how they can act upon saving our birds. These modules connect literacy standards with real life environmental issues, where students and teachers are engaged in work that is challenging and meaningful, and students are encouraged to become active participants in bettering their world.
- Environmental and sustainability concepts are integrated throughout the curriculum. Environmental and sustainability concepts are integrated throughout the curriculum at MECME, as our magnet theme promotes the integration of these concepts throughout the fabric of daily work at MECME. Concepts are integrated seamlessly through the delivery of core content. Kindergartners are encouraged to work and communicate like arborists and conservationists by adopting trees on campus, caring for them, collecting data in science journals, observing patterns of change over time and sharing it with others. Third graders are encouraged to think like entomologists, preservationists and topographers as they observe the Monarch butterfly's life cycle and study and map its migration pattern across North America. In addition to core classes, MECME offers environmental and sustainable theme-related elective courses. Electives are a way for MECME students to connect to Environmental Science with choice in mind. Through electives, students are encouraged to think, work and communicate like botanists, geologists, chemists, physicists, marine biologists, engineers and much more. In



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In addition to electives and integration into core, learners experience environmental education through specials. Students attend E-Inquiry classes two times per week throughout the school year, where learning is centered on Problem Based Learning (PBL) units directly related to environmental and sustainability concepts. First graders in E-Inquiry completed a PBL unit all about Recycling, Reducing, Reusing and Composting where they created videos to share with the new Kindergarteners at our school. They taught the Kindergarteners about the importance of the 3Rs and Composting. Third graders explored making healthy food choices, by growing their own food, learning ways to prepare it and sharing it with families. They learned the value of farm to table, eating local and making their learning public. Furthermore, the Environmental Connections Integration Specialist (ECIS) meets regularly with different grade levels to assist with planning using an “environmental lens.” For example, the ECIS helped a 5th grade teacher develop a math unit using the garden beds to compute area, perimeter and volume, as well as planned with 4th grade teachers to have their students write poems all about nature.

- Environmental and sustainability concepts are integrated into assessments. As guided by the North Carolina Essential Standards and Common Core Standards, environmental and sustainability concepts are integrated into both formative and summative assessments. Project Based Learning is implemented to showcase critical thinking, creativity, and real-world relevance. For example, as a culminating activity and assessment, students in 5th grade math upcycled rectangular prisms collected by the greater school community. Students computed the volume of these prisms and then used them to create a composite figure that would become something ‘new’ to use in their classroom. They designed planters, pencil caddies, and book holders, while re-purposing the rectangular prisms. During a first-grade unit on the Sun, Moon and Stars, teachers use a rubric to assess student understanding of Earth patterns and features, as they discover them in their EL journals.
- Professional development in environmental and sustainability education are provided to all teachers. Staff at MECME are provided a variety of local, national and international professional development opportunities. All licensed staff received training from Project Learning Tree, Project Outdoors Wonder and Learning (OWL), Growing Gardens, and Critical Friends. Teams of teachers have attended trainings from Project WET, the North Carolina Museum of Natural Sciences Using the Outdoors to Teach Experiential Sciences (UTOTES), and PBLWorks (for Project Based Learning). Each time that teachers attend trainings, they bring back resources, ideas and practices to share with others at the school. These opportunities not only support science curriculum standards and instructional design concepts, but they also assist our teachers in implementing strategies to enhance the integration of environmental and sustainability concepts throughout core instruction. MECME teachers receive encouragement to pursue Environmental Education certification through North Carolina State University. Faculty are provided regular on-site professional development from our ECIS through their PLC to update their understanding and integration of environmental concepts, vision, and objectives. Our schedule provides staff with regular common planning to facilitate collaboration through PLCs. Additional professional development designed to support our work around environmental education and sustainability is conducted for the entire faculty during in-service days within the school calendar.

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: N/A
- Percentage scoring a 3 or higher: N/A



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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? Mathematics thinking skills and content knowledge integrate seamlessly with sustainability and the environment. Students at MECME participate in math activities connected to the garden space, such as measuring for area and perimeter, as well as working to find patterns in nature, such as 1st graders tallying and estimating how many leaves are on a plant. During E-Inquiry classes, students are grappling with ideas such as how to create less plastic waste, where to plant more natural plants on our school grounds and measuring the air quality around our campus. Additionally, students at our school are a part of the Eco-Schools initiative. Last year, as a school, we worked to reduce our waste and consumption. Led by a student Green Club, teachers and students audited our initial waste measurements, and through their calculations realized as a school we wasted a lot of white paper. An "Every Sheet Counts" initiative was established, where students and teachers worked hard to reuse and reduce white paper daily. The subsequent audit conducted three months later, determined that 93 lbs. of white paper was then diverted from our school waste as a result of this initiative. Staff and students are reminded to continue to use paper wisely as every room has an "Every Sheet Counts" collection tray where staff and students collect paper for reuse. Students used sustainability and the environment as a context for learning about science and mathematics through this Eco-Schools work.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? Students at MECME participate in Field-In (experts, organizations, and guest speakers) and Field-Out (off-campus field experiences and visits) lessons throughout the school year. On average, students at each grade level experience eight or more field lessons (a combination of field-in and field-out experiences) per year. Kindergarteners recently had a field-in lesson with Elizabeth Gardner, a well-known meteorologist from a local TV station. They learned about weather, but also about being a meteorologist. Students in a 5th Grade Environmental News expedition participated in a Field-Out lesson at a local TV station where they learned about producing a TV news show. Other Field-In lessons include: Air Quality experts, Skyping with NASA scientists, Wake County Feed The Bin Race to Recycle program, American Wildlife Refuge raptor rescuers, National Children's Theater Energy performances, and Project Wet demonstrations and activities on water use and conservation. Other annual Field-Out lessons include trips to a local state park and the local wetlands and trips to NC State's Farm Animal Days. Through all these experiences, our students are introduced to a variety of green technologies and career pathways centered on sustainability and the environment.

5. Describe students' civic/community engagement projects integrating environment and sustainability topics: Our school participates in the EPA's air quality flag program. A color flag, corresponding to the quality of air that day, is hung on our flagpole to alert students, staff and community members of the air quality each day. Students in 5th grade participated in a PBL unit centered on the air quality of our school and their culminating projects were brochures that were handed out to parents in carpool lane highlighting the effects of idling in the carpool lane, as well as posters to be hung at various community locations describing the effects of poor air quality on the larger community. Students in 1st grade participate in an expedition titled, "Give Bees a Chance" where they learn all about bees; types of bees, why they are important, and how to protect them. One option for their culminating action piece is to create posters and brochures to distribute to the local community to advocate for saving the bees by not using pesticides on their lawns.

6. Describe students' meaningful outdoor learning experiences at every grade level: Meaningful outdoor learning experiences occur often at MECME through expeditions, E-Inquiry classes, and during core classroom instruction.



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For example, in Kindergarten, the core teachers have taken a picture of their class outside by an adopted tree during each season. At the end of the year, the teachers will review with the students the patterns of change they notice about themselves, the tree, and the seasons. Also, in Kindergarten, the students have been outside studying the weather in E-Inquiry class. They went outside to use their senses to experience the weather by “seeing” their breath, “feeling” the cold air on their skin, “hearing” the crunch of the frost on the ground, and “smelling” the dampness in the air. In 1st grade, when studying birds in E-Inquiry, students become “bird sleuths” and go out in search of evidence of birds on our campus. In second grade, the students are experiencing expeditions titled “Blooming Botany,” where they are learning all about plants and how they grow and “Pondering Life” where they use our school pond to study life in a pond. They also utilize the Pollinator Garden for observation and experiential learning during the 3rd and 4th quarter EL module focused on Pollinators. In 3rd grade, students and teachers are working with our Food Corps volunteer, through our partnership with the Raleigh Interfaith Food Shuttle, utilizing the vegetable garden beds for meaningful learning connected to science, math, and social studies standards. In 4th grade, students utilized the outdoors for inspiration for writing poetry in their 1st quarter EL module. In 5th grade, math students used the garden beds to calculate area, perimeter, and volume of the garden beds to discover how much soil was needed in each bed. In E-Inquiry, 5th graders monitored the air quality sensors and calculated data from the sensors on the air quality at various locations around our campus.

7. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills: Students at MECME also experience outdoor learning in Art class, where they are often found outside using natural materials to create artwork pieces. For example, in the beginning of the year, students used natural materials to create their own “dot” to tie in Peter Reynolds book, “The Dot.” In the fall, students collected leaves from outside and made leaf prints and leaf creatures.

Third, Fourth, and Fifth grade students are given the opportunity to apply each year to be a “Green Bee” for MECME. Green bees are the student portion of our EcoAction team directly correlated to our EcoSchools work. This school year, 46 students have been chosen to be Green Bees, in comparison to 16 students on the team last year. The Green Bees are the leaders of environmental action in our school. Green Bees run the recycling program, where they collect the classroom recycling once per week. They also attend classroom morning meetings to educate the rest of the students at MECME about our environmental initiatives. The Green Bees have designed signs to display around our school building to promote a clean school environment, recycling, composting, and more. The Green Bees participated in a Field Trip to our local landfill to learn about where all of our garbage and recycling goes, to understand why we work so hard at MECME to help our environment. This year, the Green Bees will begin work on our action plans for our new eco-pathways, Schoolyard Habitats and Energy.

In several expeditions, students complete a 9-week course, culminating in an advocacy or action piece. For example, in one expedition titled, “Whistle While You Work” students learn about the types of tools we use, how we use them, and then using these tools, decide together on a way to beautify our school or community.

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: Our work is strengthened by partnerships with North Carolina State University’s Department of Science Education (Environmental Education graduate students collaborate on lesson planning with MECME teachers (Pillar III)), The Raleigh Interfaith Food Shuttle (works with the school’s garden committee



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to create meaningful connections from our garden to the community and student learning, as well as helping our students plant, harvest, and donate food to local food banks (Pillars I & II), FoodCorps (works directly with students to promote a school-wide culture around using outdoor spaces as another outlet for teaching and learning (Pillars I & II)) and North Carolina Museum of Natural Sciences (providing professional development for specialists on how to integrate the outdoors into their lessons for meaningful standards-aligned instruction (Pillar III)).

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: In the spring of 2018, two teachers at MECME were awarded a grant through the Whole Kids Foundation and The Bee Cause to install an indoor observation beehive at our school. The hive was installed in the media center where all students and staff can experience the wonder of life within the hive. The teachers that were awarded the grant attended a bee school to become certified beekeepers and partner with two North Carolina Master beekeepers to maintain and educate the greater school community about the indoor hive.

MECME teachers participate in differentiated professional development opportunities once a month, and one of these courses is titled, "Outdoors at the 'Brook.'" Currently, 11 teachers have chosen to participate in this course. The purpose of the course is to build an understanding of how to use the outdoors as an accessible and purposeful learning space and to provide teachers with a toolbox of lessons and ideas to use MECME's outside campus for teaching and learning.

Further, each year E-Inquiry teachers partner with the North Carolina Cooperative Extension in their Embryology project to hatch chicks in the classroom. Students study the life cycle of the chicks and care for them for a full week after they hatch. This year, we have also established a partnership with the 4-H program through the Cooperative Extension to further enhance the engagement with our outdoor learning spaces. This relationship has just begun but will include teacher professional development and implementation of 4-H curriculum centered on the environment, sustainability, and outdoor learning.

All elective courses are designed around twelve Eco Pathways (adapted from Eco Schools USA and NC Green Schools): Land, Air and the Natural World; Biodiversity and Nature; Healthy Schools and Communities; Healthy Living; School Habitats; Atmosphere and Climate; Waste and Consumption; Outdoor Learning and Exploration; Water; Energy; Transportation; Sustainable Food and Agriculture. Electives are an innovative way to help students understand a topic, conduct research, and act based on their learning.

Lastly, our Environmental Inquiry students are participating in several citizen science projects this year. Students will be utilizing trail cameras to monitor wildlife on our campus. Students will record their observations in iNaturalist/SEEK and design creative habitat spaces for the wildlife they observe, such as a "No-Mow Zone." Students in first grade will learn about various native ladybug species and will collect citizen science data for Lost Ladybug.