



School and District Name: **Ursuline Academy, Private Catholic**

Category of Nomination (School or District): **School**

Address: **1106 Pennsylvania Avenue**

City: **Wilmington** State: **DE** Zip: **19806**

Twitter: **<https://twitter.com/UAwilmington>**

Facebook: **<https://www.facebook.com/UrsulineAcademy>**

Top Official: Title: **Dr.** First Name: **Trisha** Last Name: **Medeiros**

Position/Role: **President**

Email: **tmediros@ursuline.org** Phone: **302-658-7158**

Lead Application- Title: **Ms.** First Name: **Meg** Last Name: **Kane-Smith**

Position/Role: **Teacher**

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**Check all that Apply:**

Early Learning <b>XX</b>	Charter	Elementary <b>XX</b>
Magnet	Career and Technical	Middle <b>XX</b>
Non-Public <b>XX</b>	Urban <b>XX</b>	High <b>XX</b>
Public	Rural	

Provide percentages, if any are relevant to your school or district

Pell Recipients:

Special Education:

Fee and Reduced Price Lunch

Graduation Rate: **100%**

Minority: **20%**

Attendance Rate: **Very high**

Limited English Proficient:

## **Summary Narrative: An Overview of Your Work Encompassing All Three Pillars**

Ursuline Academy is an independent, Catholic school community focusing on developing our 400+ students for leadership in our global society. It serves students from Pre-K to grade 12 and is located in an urban setting in Wilmington, Delaware. The school is coed from the Montessori program (ages 3-5) to grade 5 and all-girls from grades 6-12. Following in the footsteps of our 16<sup>th</sup> century patron, St. Angela Merici, the values of service, living simply and helping those in need are emphasized.

Energy and water conservation is a priority at Ursuline Academy. Ursuline's Upper and Middle School (grades 6-12) building scored an Energy Star rating of 79 through an energy audit performed in 2017 by Practical Energy Solutions of Philadelphia and a rating of 69 in the Lower School (Montessori-grade 5) building. Beginning in 2018, most of the school buildings have been retrofitted and upgraded with motion sensor lighting and the newly created Student Life Center has all LED lighting. This new building houses the cafeteria, library, chapel, classrooms, administrative offices and a large two-story atrium lounge allowing much natural sunlight.

In 2020, Ursuline will be further extending our commitment and leadership around sustainability by embarking on a comprehensive set of energy conservation and renewable energy measures through a project with Seiberlich Trane Energy Services, funded by the Delaware Sustainable Energy Utility with some grants from Delaware Department of Natural Resources and Environmental Control (DNREC). The project will replace our aging HVAC systems in our Lower School and Lower School Annex buildings with a state-of-the-art Variable Refrigerant Volume HVAC system. There will also be a small photovoltaic solar array installed on the Lower School roof that will include real-time monitoring and measurement for display to students, faculty, and visitors. The entire campus will be retrofit with the latest in LED lighting (except for any lights that are LED already). There will also be a comprehensive building envelope and weatherization retrofit to reduce draftiness and improve the buildings' insulation performance. Finally, any higher-flow water fixtures will be retrofit to modern, low-flow fixtures. This project represents an exciting next chapter for Ursuline beyond the great initiatives our faculty, students, and community have done to date. We intend to bring lessons and experiences from this project into the classroom to bring environmental education to life based on practical experiences right in our own buildings.

A survey of the school community demonstrated that more than 75% of students use reusable water bottles regularly. This is encouraged through the placement of nine water bottle refilling stations located throughout the school campus, three of which were purchased through grants from Green Building United and the Great Schools Clean Streams campaign. Faucets in much of the campus have automatic on/off settings. Drought-resistant native plants are used throughout the campus. The playing fields use Bermuda grass instead of turf.

Students have made a commitment to recycle. There are recycling bins in every classroom of the school as well as the cafeteria, counseling center, library and offices. Grant money from Wrigley's Litter Less Campaign has allowed for the purchase of many recycling bins. Students empty the recycling bins weekly resulting in a waste reduction of approximately 25% for the school in 2018-2019. Ursuline has contracted with Roadrunner Recycling to collect all of our cardboard and to reduce our waste overall. The paper used in the school is 35% recycled with

all printers set to double-sided printing. Students in grades 6 - 12 have laptops and the use of Google Classroom for schoolwork has resulted in a significant reduction in paper usage. Ursuline has received the National Wildlife Federation's Eco-Schools Bronze and Silver awards for the Waste and Consumption and the Energy pathways.

More than 3 years ago the cafeteria changed from Styrofoam to compostable bowls and plates. Single use dispensers are used for the silverware and napkins. There are no trays or straws. The cafeteria is focused on healthy choices and removed all sodas more than 4 years ago. Only healthy drinks are sold, all food is baked and not fried, and there is a good variety of salads and fruits available for purchase.

Students at Ursuline are very active. Students from age 3 through grade 8 go out for recess 1 to 2 times a day. There is a spacious, new playground behind the Lower School and a large grassy field in the middle of the campus. Many students are involved in extracurricular sports with the school providing 12 sports, 8 of which are outdoors. Approximately 82% of students in the Upper School do at least one sport annually. Physical education is provided for all students with about 30% of it being outdoors.

The mental health of students is highlighted at Ursuline. There are four counselors available for the 410 students. They maintain partnerships with local organizations who also do presentations on cyberbullying and internet safety. Clubs such as Mental Health Advocacy, Spectrum for LGBTQ+ students, Undefined for students of color and SADD (Students Against Destructive Decisions) help students to maintain a healthy outlook. The Undefined Club in the Upper School also works with children in the Lower School through activities related to self-esteem, concepts of beauty, and historical and cultural knowledge focusing on African-Americans.

Ursuline is fortunate to have a full-time nurse who provides training and education for staff in the use of the Epipen, AED defibrillators and asthma and allergy education as well as a full-time Campus Safety Coordinator. Safety is very important at Ursuline. The Safety Committee established a keycard system for getting into the school as well as gates throughout the campus. Ursuline annually receives a 16% reduction in insurance rates for the safety measures it takes.

Environmental education is taken very seriously at Ursuline. Students in the Lower School have benefitted from an outdoor classroom in which students use raised beds for vegetables and herbs, design and build birdhouses, compost with worms, graph rainfall, maintain a wildlife edible Christmas tree, and much more. The outdoor classroom was certified as a Schoolyard Habitat by the National Wildlife Federation in 2019.

Students in grades K-5 have taken part in the "Wander and Wonder" program, an innovation program for our Lower School in which students are encouraged to wander outside, learn about a certain topic and then wonder about future questions. For example, students in grade 4 created and tested weather vanes at the nearby reservoir area to see the difference between local, global and prevailing winds. Then they "wondered" about wind turbines and their negative effect on birds and worked together for ideas that could maybe help solve this problem. Each grade has a different topic to "wander and wonder" about. Students in grades 3-6 participated in an "energy expo" in the spring of 2019 where they were able to see how energy works, experience alternative forms of energy and learn about energy conservation. This program will be repeated,

using high school students to educate the younger grades as they go from station to station during the expo.

Students study ecosystems, climate change and sustainability in their science classes, including Honors and AP environmental classes at the high school level, but this is also a focus in many other classes. Students in all of the Upper School world language classes study environmental concerns and good nutritional practices using the native languages. The Global Challenges class studies climate change and the effect from corporations and from political decisions looking at the effect of rising sea levels and tainted drinking water issues in various locations in the U.S. Theology classes have studied Pope Francis' document *Laudato Si*, a letter on "Care for Our Common Home" about the importance of ecology and the negative effects of climate change, especially on the poor. In the popular Advanced Placement Human Geography class students look at the Green Revolution, the global system of agriculture and the consequences of agricultural practices as well as the challenge of contemporary agriculture and urban sustainability. Ursuline also has a strong photography program and eight students have taken first or second place in the National Association of Conservation Districts photography contest in the past three years.

Field trips to outdoor sites, such as zoos, orchards, farms, team building camps and gardens, take place at all educational levels. Students in grade 2 and the Upper School environmental club visit the recycling plant run by the Delaware Solid Waste Authority. Ursuline also is part of Delaware's Adopt-a-Wetland program and has adopted the Cool Spring reservoir adjacent to the school where cleanups are done 5 to 6 times a year.

The school is also fortunate to have speakers come to speak on environmental issues, such as Plastic Free Delaware, who presented the film *STRAWS* in 2019 and will present *Bag It* in February 2020 in anticipation of the ban on plastic bags in large stores beginning Jan. 1, 2021 in Delaware.

Ursuline Academy is committed to educating our students from an early age about the importance of environmental sustainability. Our focus on energy and waste reduction, recycling, outdoor play and exercise, healthy nutritional choices, and environmental literacy all help to lead our school into a more informed and "greener" future.

## **Narrative for Pillar 1: Your Efforts to Reduce Environmental Impact and Costs**

Ursuline Academy has made significant efforts to reduce our environmental impact through increased energy efficiency, waste reduction and water conservation. An energy audit done by Practical Energy Solutions of Philadelphia in 2016 benchmarked the Upper School and Middle School building with an Energy Star rating of 79 and the Lower School building with a rating of 69 in 2016.

The reduction in **greenhouse gas emissions** has been seen in the electric and heating bills since 2016. Since the energy audit was completed, Ursuline Academy has completed construction of a new building called the Student Life Center. This building is equipped with motion sensors in every room. In addition, motion sensors have been installed in the hallways and stairways of the Middle School as well as the entire third and basement floors, and gym of the Upper School. This has resulted in a reduction of greenhouse gas emissions from the school. The Lower School is planning an upgrade for lighting with motion sensors for both classrooms and hallways. LED lighting is used throughout the Student Life Center, which houses the cafeteria, library, chapel, classrooms, atrium and offices.

In 2020, Ursuline will be further extending our commitment and leadership around sustainability by embarking on a comprehensive set of energy conservation and renewable energy measures through a project with Seiberlich Trane Energy Services, funded by the Delaware Sustainable Energy Utility with some grants from Delaware Department of Natural Resources and Environmental Control (DNREC). The project will replace our aging HVAC systems in our Lower School and Lower School Annex buildings with a state-of-the-art Variable Refrigerant Volume HVAC system. There will also be a small photovoltaic solar array installed on the Lower School roof that will include real-time monitoring and measurement for display to students, faculty, and visitors. The entire campus will be retrofit with the latest in LED lighting (except for any lights that are LED already). There will also be a comprehensive building envelope and weatherization retrofit to reduce draftiness and improve the buildings' insulation performance. Finally, any higher-flow water fixtures will be retrofit to modern, low-flow fixtures. This project represents an exciting next chapter for Ursuline beyond the great initiatives our faculty, students, and community have done to date. We intend to bring lessons and experiences from this project into the classroom to bring environmental education to life based on practical experiences right in our own buildings.

As part of new security measures, the school also installed new gates throughout the campus. This limits vehicles from being driven on campus during the school day, thereby reducing emissions from potential vehicles as well as providing a safer, walkable campus.

**Water conservation** is also very important at Ursuline. Water has been conserved at Ursuline through automatic on/off water faucets in the Student Life Center and the Upper School. Toilets in the new Student Life Center are low flush toilets.

A survey has shown that 75% of the Upper School students use reusable water bottles regularly, and 63% of students in the Middle School (grades 6-8) use reusable water bottles all the time. There are two water bottle refilling stations in the Lower School; three stations in the

Middle/Upper School and four stations in the Student Life Center. These stations have saved using thousands of plastic water bottles.

Ursuline uses landscaping with native plants that are low-maintenance using mainly drought-tolerant trees, shrubs and flowers. The trees and shrubs also provide shade and the annuals and some shrubs are pollinators. There is an outdoor classroom behind the Lower School. Ursuline has a sports playing field that uses only Bermuda grass instead of turf.

The Ursuline community also cares about the quality of our local waterways, which is demonstrated by our participation in the Great Schools, Clean Streams campaign of New Castle County. This campaign is done to keep grease out of our sewer systems so they will not get clogged and possibly overflow into our streams. Ursuline has participated in this pledge campaign for the last 4 years, earning second place one year for a grant of \$1,250. This money, in addition to grant money from a Green Building United mini-grant, has enabled the school to purchase three water bottle refilling stations.

**Waste reduction** is an important principle practiced at our school. Several years ago Ursuline committed to having recycling bins in every classroom. Students who are “professional recyclers” empty these recycling bins in the Upper School and it is assigned as one of the duties in the Lower School. Students have gotten very used to putting paper, cans, plastic and cardboard in the recycling bins, which are placed next to the trash cans. In addition to classrooms, recycling bins are in the cafeteria, the counseling center, the library and offices. Grant money from the Wrigley’s Litter Less Campaign made possible the purchase of many of these recycling bins.

Roadrunner Recycling picks up all our cardboard boxes in a special bin they supply. They work with our garbage collector, Waste Management, to help reduce our trash. The monthly trash bill went from \$736 in the spring of 2019 to \$627 in the fall of 2019, a savings of \$110. Recycling removes approximately 25% of materials from the trash collection.

Disposal of expired and old hazardous wastes in the chemistry lab was conducted by a licensed company in 2017. The chemistry lab is current with state regulations about the storage and use of chemicals. The maintenance department uses green chemicals in its cleaning, which are also stored securely.

The school uses 35% recycled paper. This was a decision made three years ago that increased a box of paper (ten reams) from \$29.99 to \$34.99 that we thought was a good environmental choice. There is no color ink printing, unless specially requested. All printers are set to double sided printing. There has been a great reduction in the students use of paper due to use of Google Classroom, a site where students submit their work, rather than creating hard copies. Teachers are also posting their assignments, worksheets and forms on Google Classroom with some teachers also using it for tests and quizzes. A survey showed that 85% of the teachers use Google Classroom with their students on a regular basis.

The two cafeterias at Ursuline, using a shared a kitchen, have made great strides in waste reduction. More than three years ago they switched from Styrofoam to compostable bowls and

plates. All silverware and napkins are from a single use dispenser. Trays and straws are not used. The new kitchen (opened January 2019) features energy efficient appliances.

Ursuline collaborates with a local Catholic school to bus children from outlying areas to our school. Students are encouraged to carpool as on-campus parking is reserved for teachers and staff. The campus is closed to vehicles during school hours by electronic gates.

Ursuline has a bus and a passenger van that we use to transport students to after school sport practices, so that they do not have to drive separately.

## **PILLAR 2: EFFORTS TO IMPROVE THE HEALTH AND WELLNESS OF STUDENTS AND STAFF**

Ursuline Academy has a strong emphasis on promoting the health and wellness of students and staff by integrating an environmental health program and promoting sound health and wellness practices.

Ursuline Academy has made a concerted effort in the area of **nutrition**. More than 4 years ago it removed all soda machines from the campus and only water, juices and healthy drinks such as Kombucha may be purchased from the cafeterias. Cafeteria offerings include a salad bar, fruits, protein packs, special order forms for sandwiches (e.g. no mayo or oil), hummus, yogurts, hard boiled eggs, a variety of soups and more. All food served in the cafeterias is baked, none is fried and the chicken is not pressed meat, but is gluten-free, all white meat.

The cafeteria staff must take an online “Food Safety and Kitchen Sanitation” program every year.

Our school has been very fortunate to get two new cafeterias - one for grades Pre-K to grade 5 and one for grades 6-12 in the newly renovated Student Life Center building. This has added a state of the art kitchen and an open, airy setting in which to eat.

Ursuline provides many opportunities for outdoor **physical activity**. Children in the Montessori pre-k and kindergarten programs go outside twice a day for 25 minutes each time. There is a brand new playground and a large grassy area for both recess and physical education classes. Recess is required for grades 1-8 once a day with no possibility of taking recess away as a disciplinary measure. It is outside barring inclement weather or extreme cold. There is a clear recognition of the importance of being outside. Teachers do online training for playground safety and first aid.

Physical education is provided for all students. Students in the Montessori program (ages 3-5) and grades 4-8 receive physical education classes once a week while students in grades kindergarten – 3<sup>rd</sup> grade receive it twice a week. The gym teacher for students up through grade 5 states that class is held outside about 30% of the time. This depends not only on the weather, but on the activity being done. We do have a large indoor gym that is better suited for some activities.

In addition, there is an extended day program where children go outside after school every day, weather permitting, and spend more time outside during the summer programs. As part of the summer camp program, there are a number of field trips planned, many of which are outside. Summer camp also spends time at an outdoor pool on a weekly basis.

The school also has many opportunities to participate in sports. From a survey done, 82% of students in grades 9-12 participate in at least one sport annually. Ursuline offers 12 extracurricular sports at the high school level, 8 of which take place outside. Soccer is available

for all students starting at age 3. Students in grades 4 - 8 may participate in cross country, track, volleyball and basketball. Students in grade 8 may also play on the high school teams. Our teams with the largest numbers include running, swimming, basketball and volleyball. Ursuline has won the cross country State championship for Division II (smaller schools) for the last 2 years.

The school takes pride in its facilities and maintenance department to provide a **safe environment** for all. All **pest control** is done by Ehrlich Pest Control who complete routine inspections in addition to coming if a problem arises. Pesticides are handled by the Ehrlich company; we do not store them on campus. Pest control is conducted during non-school hours. There are regular **mold inspections** to control for moisture, which have found no mold. Ceiling tiles are inspected on a regular basis and changed immediately if there is a concern. In the Student Life Center there is a whole building dehumidifier in use. The other buildings on campus use recycled air ventilation.

The school is highly attentive to students with **asthma and allergies**. The full-time nurse maintains all health records and teachers are given a list of all students with any allergies or asthma. This is strictly adhered to with no nuts (or other allergen) allowed in the classrooms. Teachers are given training on the use of the Epi-Pen. All physical education teachers are aware of any child with asthma. They are also all CPR certified with AED defibrillators placed throughout the school. No smoking is allowed anywhere on campus.

All old and expired **chemicals** from the chemistry lab were removed in the summer of 2017 by a licensed company. The chemistry lab is current with state regulations about the storage and use of chemicals. All science teachers take an online "Science Lab Safety" course. The maintenance department uses green chemicals in its cleaning, which are also stored securely.

The **thermal comfort** of the school is optimal in the new Student Life Center with full temperature control. We are currently working on updating the HVAC systems in the other two buildings.

Ursuline Academy provides excellent **counseling services** to its students. There is an elementary school counselor for the 138 students in grades Pre-K to 5, a middle school counselor for the 68 students in grades 6-8 and two high school counselors for 202 students. The Lower School counselor reports that the Undefined club in the Upper School does a wonderful "buddy" group with the Lower School students. This is a large group of students of color in grades 9-12 who go over to the Lower School and read children's books with their students of color about issues such as hair, self-esteem, African-American traditions and history and more to ensure cultural knowledge and confidence in all of our students. The Lower School also works with Prevent Child Abuse Delaware who does personal safety programs for the Early Childhood through 3<sup>rd</sup> grade students. They have also done parent workshops in the past.

The counselors in the Upper School (gr. 9-12) report that there are a number of clubs available for students to join, such as SADD (Students Against Destructive Decisions), Spectrum for our LGBTQ+ students and allies, Undefined for all of our students of color and the Mental Health Advocacy club who put up inspiring posters and run an anti-bullying/be kind day.

The Upper School also maintains partnerships with the University of Delaware Office of Student Affairs (Senior Transition Workshop), the Mental Health Association in Delaware, which did a presentation on “resilient parenting” for all divisions and the Beau Biden Foundation, which has done cyberbullying and internet safety presentations for students.

Ursuline Academy is fortunate to have had a full-time nurse for 30+ years. In addition to the regular **health services**, our nurse provides flu shots in the fall for interested staff and students with their parents. She also provides the online “Safe Schools” training for all staff members, which includes blood-borne pathogens, first aid and many more programs. Teachers have been trained by her to use the EpiPen and the AED defibrillators. She does cardiac abnormalities check and a blood pressure check for some staff and students. She keeps herself updated on the latest practices and attended a conference in May 2019 at Princeton University on health and school safety sponsored by the Mid-Atlantic College Health Nurses Association. The nurse has a “Sun Safety” bulletin board and the Lower School Extended Day Director places sunscreen on all students during our summer camps.

**Health education** is taught in grades 4-9. Health and wellness teachers instruct students about good nutritional practices, including the food pyramid, refined versus whole wheat, sugar and salt intake as well as eating disorders. Other teachers also noted they do instruction in health education. For example, the High School Spanish III/IV classes do a unit on health and wellness that in which students discuss the components of a balanced diet, the impact of a sedentary lifestyle, and common illnesses and their causes/effects/strategies for prevention.

**School safety** is also a priority at Ursuline Academy. Five years ago the school hired a full-time Campus Safety Coordinator. In 2018 a former police officer was hired and has since upgraded the school safety procedures. We have always had monthly fire drills and lockdown drills twice a year. We now have a keycard system that allows us to get into the buildings as opposed to a key code system. Gates have been installed around the campus. The retired police officer does safety presentations with students and staff at the beginning of the year and meets with the safety committee once a month. She sends out numerous emails about school safety. Once a year the staff will have a speaker, such as last year we had a retired FBI agent who spoke about active shooters. Our Campus Safety Coordinator attends numerous workshops to keep updated, such as “Accidents don’t just happen” on safety and risk management and the “Student Safety & Security Conference and Workshop” in April 2019. There is a security guard on duty from 4-9pm on weekdays.

The school is also connected with the Wilmington Police Department and there is a police officer on campus every morning from 7-9am and a crossing guard at the traffic light every morning from 7-8am and every afternoon from 2:30-3pm. Students at a local public elementary use our campus as their emergency evacuation location.

### **Narrative for Pillar 3: Your Efforts to Ensure Effective Environmental and Sustainability Education**

Ursuline Academy teachers have a strong emphasis on environmental and sustainability issues in their curriculum as this is clearly so important for the future of our students. The school weaves environmental education throughout many of its courses, not just the science courses. Examples of the environmental components of some of the curriculum of different teachers in grades Pre-K-12 is offered here:

- The **Lower School** developed an outdoor classroom last year. The teacher provided environmental lessons for grades Pre-K to grade 3. She added tree stumps for sitting, grew plants and vegetables in five raised beds, and added a mud kitchen, rain barrel and worm composting bin to the outdoor classroom. Her curriculum includes outdoor observations, such as a color scavenger hunt and a nature object collection; a fall seeds table, pumpkin investigation center, and the study of trees and leaves with bark rubbing and classification activities; a wildlife edible Christmas tree; ice experiments, animal footprints and clay prints; pin wheels, wind socks and wind chimes to study the wind and designing and building birdhouses; raising butterflies and studying pollinators and native plants; graphing rainfall, composting and recycling and observing light and shadows. At the end of the year (May 2019) she applied and received certification as a “Schoolyard Habitat” by the National Wildlife Foundation.
- Students in grades K-5 have taken part in the “Wander and Wonder” program, an innovation program for our Lower School in which students are encouraged to wander outside, learn about a certain topic and then wonder about future questions. For example, students in grade 4 created and tested weather vanes at the nearby reservoir area to see the difference between local, global and prevailing winds. Then they “wondered” about wind turbines and their negative effect on birds and worked together for ideas that could maybe help solve this problem. Each grade has a different topic to “wander and wonder” about.
- The Lower School has plans to install an indoor garden designed and maintained by students.
- Students in grades 3-6 participated in an “Energy Expo” in May 2019. Experts from Practical Energy Solutions in Philadelphia set up 8 stations about our use of energy including how energy works, alternative forms of energy and energy conservation. They brought in many interesting items, such as solar powered car models, energy circuit sticks, heat transfer beakers and more. Upper School students helped to run the stations, and plan to continue the “Energy Expo” concept for grades 3-6.
- The **Middle School** (grades 6-8) has a program of “minimesters” in May. This includes outdoor programs, such as photography where students observe nature to photograph. There is also a food science program, which has a trip to a farm where they learn about the things that are grown and how to make ice cream.
- Students in grades 6-8 study ecosystems and climate in their science classes. They focus on several factors that impact the environment such as invasive species, biodiversity, air

quality, climate change due to fossil fuels, water quality, and the environmental impact on oceans. The 7<sup>th</sup> grade also maintains the spring gardens with the 1<sup>st</sup> grade.

- The Middle School has plans for a garden wall in their building.
- In the **Upper School** many students in grade 9 take Advanced Placement Human Geography in which students have a unit on Agriculture and Rural Land-Use Patterns and Processes. Students look at the Green Revolution, the global system of agriculture and the consequences of agricultural practices as well as the challenge of contemporary agriculture. Additional units address urban sustainability and sustainable development.
- Students in junior and senior Spanish do a unit every year where students discuss problems in the environment on a large scale and also how individuals and societies can make changes in their lives to lessen their environmental impact. The unit includes vocabulary about different habitats, natural disasters, the results of human impact, and conservation efforts. Students must make the connection between causes and effects of environmental issues and make recommendations on how to improve problems.
- The Global Challenges class in the high school does a unit on climate change and the effect from corporations and from political decisions. It looks at the effect of rising sea levels and tainted drinking water issues in various locations in the U.S.
- The Leadership class in grade 10 does a Global Leadership project in which students investigate the United Nations global issues and make presentations of solutions. Climate change is one of the choices.
- AP French students do a unit on food and nutrition. They also do an oral presentation on a particular environmental problem.
- Spanish students in grades 9 and 10 do a unit on animal habitats in Spanish-speaking countries.
- The chemistry teacher is very focused on sustainability issues. Students study the impact of carbon dioxide levels on the oceans and how it affects sea life, including barrier reefs. Students also learn about how the changing pH levels of the ocean are having a profound impact on aquatic wildlife. They perform experiments looking at how CO<sub>2</sub> produced from cellular respirations (breathing) can cause a solution (water) to become more acidic. This furthered their discussion by speculating on why the Amazon Rainforest is called the “lungs of the earth” and how the current fires within the rainforest could further impact our acidifying oceans.
- Theology classes have studied Pope Francis’ document Laudato Si, a letter on “Care for Our Common Home” about the importance of ecology and the negative effects of climate change, especially on the poor.
- We also have students taking AP Environmental and Honors Environmental Science. Last year we had 6 students take Honors Environmental and 10 students take AP Environmental. This year we have 6 students taking the AP environmental class.
- Ursuline has participated in the National Association of Conservation Districts photography and poster contests. We have had more than 5 winners in our local poster contest over the past 4 years and in the national photography contest we had 2 winners in 2017, 4 winners in 2018, 2 winners in 2019.

All of this is supplemented by **various field trips and study abroad opportunities**, including a school global trip to Ecuador in 2018. Student Grace Smith reported that students on the trip learned about native plants and how they are used by the local community for food and

medicinal purposes. They spent time in the garden and observed how community members cared for the plants and benefitted from their natural properties. A septic tank was built for the local community to help reduce contamination and improve hygiene.

Field trips in the Lower School included grade 2 visiting the Delaware Solid Waste Authority to observe recycling efforts; various orchards and zoos are visited by the Pre-K Montessori program and kindergarten; grade 5 does a fossil dig at a place in Pennsylvania; and an outdoor Field Day is held for the whole Lower School.

The entire Middle School (grades 6-8) visits a farm in October where they do a high ropes course, goat yoga, an obstacle course, a corn maze, a hay ride, and play human foosball. They also do separate trips with Grade 6 visiting Camp Tockwogh every year for 3 days with the majority of the day being outside for nature walks and hikes, team building, kayaking, boat tour of the area, and cleaning up their beach area. Grade 7 visits Philadelphia annually, which includes some time outside walking and exploring. And the 8<sup>th</sup> grade visits Colonial Williamsburg for a few days with a lot of walking and outdoor exploration.

Environmental field trips in the Upper School include many annual visits to the National Aquarium in Baltimore. This year the trip will be to the Philadelphia Zoo and the Shofuso Japanese Gardens in April 2020.

The **environmental club** has been active at Ursuline. Ursuline is part of the Delaware Adopt-a-Wetland program (Site #106) for the Cool Springs Reservoir area and the club does cleanups 5-6 times a year. They do recycling throughout the school with a group of “professional recyclers” who empty classroom and specialty room bins weekly to the large outdoor bins.

They have also done presentations to students in the Lower School about what goes in recycling and the importance of turning off lights and vampire energy loss. In addition, they have visited the water pumping station which powers the adjacent reservoir, the Delaware Solid Waste Authority to observe how recycling is processed and to local gardens to study biomes.

**Professional development** is an important part of ensuring greater understanding of environmental issues and being able to transmit that to our students. The principal of the Upper School attended the National STEM Forum in Philadelphia and went to the workshop on Environmental Science and Clean Water. The Middle School science teacher took the Delaware Estuary Teachers Workshop sponsored by the Partnership for the Delaware Estuary in the summer of 2019. The Upper School theology teacher and faculty facilitator of the environmental club attended the Delaware Pathways to Green Schools Fall Workshop for the last 4 years.

Ursuline Academy has invited **speakers** to come to the school to heighten our awareness of environmental issues. The organizational leader of Plastic-Free Delaware presented the documentary *STRAWS* to an Upper School assembly and did a Q&A about the film in February 2019. This created great interest about the unnecessary use of straws. This year she will be returning in February 2020 to show the documentary *Bag It* about the use of reusable bags. Delaware has passed a law for no plastic bags in large stores effective Jan. 1, 2021. The Delaware Nature Society came to our school for multiple units of study for the Pre-K Montessori students.

