

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. Laura Hickman

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

Official School Name: Duchesne Academy of the Sacred Heart

(As it should appear on an award)

Official School Name Mailing Address: 3601 Burt St., Omaha, NE 68131

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

County: Douglas State School Code Number *: 28-0716-001

Telephone: 402-558-3800 Fax: 402-558-0051

Web site/URL: www.duchesneacademy.org E-mail: lhickman@duchesneacademy.org

*Private Schools: If the information requested is not applicable, write N/A in the space

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



Date: February 11, 2020

(Principal's Signature)

Name of Superintendent: Dr. Michael Ashton

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

**2019-2020 Green Ribbon Schools
Nebraska School Application: School Data**

School Information

School Name: Duchesne Academy of the Sacred Heart
Street Address: 3601 Burt St.
City: Omaha
State: Nebraska
Zip: 68131

Website: www.duchesneacademy.org
Facebook page: Duchesne Academy of the Sacred Heart, Omaha;
<http://tiny.cc/3mechz>
Social Media Hashtag: @duchesneacademy, #DiscoverDuchesne, #LoveIsOurMission

Principal Name: Dr. Laura Hickman
Principal Email Address: lhickman@duchesneacademy.org
Principal Phone: 402-558-3800

Lead Applicant Name: Eric Krakowski
Lead Applicant Email: ekrakowski@duchesneacademy.org
Lead Applicant Phone: 402-558-3800

Contact Person for State and National Notification

Name: Sara Cooper, Ed.D.
Email: cooper.sara77@gmail.com
Phone Number: 402-440-6269

School Demographics/Other

Level: Early Learning Center and High (9-12)
School Type: Private/Independent
How would you describe your school: Urban
District Name: Archdiocese of Omaha Catholic Schools
Total Enrolled: 338 in High School; 67 in Preschool
40%+ from disadvantaged households?: No
% receiving FRPL: 4%
% limited English proficient: 0%
Graduation rate: 100%
Attendance rate: 97%

Cross Cutting Question: Participation in Green School Program

1. Duchesne participates in EPA Energy Star Portfolio Manager and most recently received an Energy Star rating for 2019 with a score of 92. The school enjoys a current Energy Star rating of 91.

Duchesne received a grant from the Nebraska Environmental Trust in 2017 to cover the cost of all new and uniform recycling bins throughout the building with labels from “Recycle Across America.”

2. Duchesne was awarded “EPA Energy Star Certification” in 2016, 2018, and 2019.

Duchesne received a “Green Star Award” from the Ignatian Solidarity Network in 2017.

Duchesne was one of three organizations nationally to win the 2019 “G7 Eco-Citizen Contest” sponsored by the French Embassy in the US.

Summary Narrative

Duchesne Academy of the Sacred Heart was founded in 1881 in Omaha, Nebraska. Duchesne is an all-girls, independent, Catholic high school with an enrollment of 338 students. Located in historic Midtown, the campus is also home to a co-educational Preschool. Duchesne Academy is a member of the Network of Sacred Heart Schools in the United States and Canada.

In August 2016, generous donors responded to Pope Francis’ environmental encyclical, *Laudato Si’*, by offering to underwrite the cost of partnering with the Verdis Group, an Omaha-based sustainability consulting firm. A survey conducted by Verdis revealed that 94% of the school community agreed that Duchesne should adopt more sustainable practices. Through site visits, a waste audit, the establishment of a Sustainability Committee, and guidance at a faculty/staff retreat, Verdis helped the Duchesne community name four sustainability goals:

1. Net Positive Building Emissions by 2030
2. Zero Waste by 2030
3. A Sustainable Food System
4. Sustainability Curriculum Integration

Students, faculty, and staff embrace sustainability as an integral part of the school’s culture and Duchesne has become a model for private and public schools in the Omaha area seeking to implement sustainability initiatives.

Duchesne has reduced environmental impact in numerous ways and has made significant strides in **Pillar I**. In August 2017, the school became the first in Omaha to implement composting. Prior to composting, Duchesne diverted 14% of waste away from the landfill and sent approximately 15 cubic yards of waste to the landfill each week. As a result of composting and improved recycling procedures, the school now sends an average of 6 cubic yards of waste to the

landfill weekly and has a diversion rate of 77%. In the summer of 2017, the school replaced its 1960s era boiler and radiated heat system with high-efficiency heat pumps. In the summer of 2019, the school replaced 178 windows with double-pane, high-efficiency windows and installed LED lighting in many classrooms and offices. In August of 2019 the school received a grant to upgrade 150 T8 fluorescent bulbs to LED. It is estimated that 35-40% percent of lighting across campus is LED and this number increases each year. In September of 2019, Duchesne installed a 12-kW solar array, becoming the first high school in Omaha to produce renewable energy on campus. On average, the solar array should produce enough energy each day to power the school's STEM Lab, Library, and neighboring classrooms. Duchesne also has a current score of 91 through Energy Star Portfolio Manager and received Energy Star Certification in 2016, 2018, and 2019.

Coinciding with Duchesne's commitment to sustainability is an important initiative to improve the overall health and wellness of students and staff in accordance with **Pillar II**. By gathering data through student and parent surveys and consulting extensive educational research on the impact of sleep on brain development for teenagers, Duchesne made significant changes to its daily schedule beginning in August 2019. In an effort to encourage more sleep, the start time for the school day was pushed from 7:55am to 8:45am and block scheduling was adopted four days a week. Preliminary data gathered from subsequent surveys indicates that student sleep has indeed increased. The school remains hopeful that this will improve student performance and lead to a reduction in stress and anxiety.

Duchesne Academy's sustainability initiative has also led to substantial changes in the school lunch program. School lunches feature a healthy, vegetarian menu which utilizes locally sourced vegetables from an area food hub and eggs from a neighborhood urban garden. Lunches also incorporate produce from the school garden, including tomatoes, squash, asparagus, strawberries, blueberries, and herbs. In November 2019, the school planted twelve fruit trees on campus and the kitchen staff looks forward to including apples, pears, and peaches from these trees in future lunches. The lunch program serves all meals on reusable or compostable items and structures the menu so that leftovers from one day can be prepared as part of meals in following days.

In the Fall of 2016, the school launched a STEM program with the opening of the Duchesne Research Engineering Art Media (DREAM) Lab. The area is open to all students and is designed to encourage creativity. Courses are offered to align with **Pillar III** and include computer science, robotics, computer programming, and Design Academy courses which guide students to explore imaginative solutions to complex problems. The Design Academy course was instrumental in conducting analysis on the benefits of solar energy and laid the groundwork for the installation of the aforementioned solar array. The school's STEM efforts have also led to a partnership with the University of Nebraska Medical Center (UNMC). In January 2020, students in Duchesne's research methodology class began participation in the collection and analysis of ongoing research on water quality for the Nebraska Department of Public Health through UNMC.

PILLAR I: REDUCE ENVIRONMENTAL IMPACT AND COSTS

Element 1A: Energy Savings

- In the summer of 2017, Duchesne conducted a substantial overhaul of its heating system. Much of the older portion of the building and the College Wing had been heated through radiated heat provided by 1960s era boilers that were in need of replacement. The boilers were replaced with 45 heat pumps connected via a California loop system. The new system reduces natural gas consumption and heat is generated through 95% efficient condensing boilers and distributed through water-to-water heat transfer.
- Since 2018 the school committed itself to maintaining its Energy Star Portfolio Manager and has received Energy Star Certification for 2018 and 2019. The portfolio is managed by Assistant Principal and Sustainability Coordinator, Eric Krakowski. He is becoming better acquainted with the benefits of the Portfolio Manager and regularly participates in webinars to learn how to maximize the potential offered by the Energy Star program.
- With the installation of the new HVAC system in 2017, the school has seen a slight increase in energy use and greenhouse gas emissions due largely to the fact that the new heat pumps provide cooling in areas of the building which previously had not been cooled. The total GHG Emissions Intensity has increased from 3.8 kgCO₂e/ft² to 4.7 kgCO₂e/ft² from its baseline in December 2011. Despite this increase, the campus does still boast of a current 91 Energy Star Rating. The school is hopeful that as it learns to more effectively regulate the HVAC system in concert with the addition of solar panels, new windows, and additional LED lighting, that greenhouse gas emissions will level off and eventually decrease. Duchesne is committed to the reduction of greenhouse gases and will continue to take measures to diminish our carbon footprint.
- In September 2019 Duchesne installed a 30 panel, 12 kW solar array on the roof above the library. Because the array has only been in operation during the autumn and winter months as daylight hours wane, data is largely insufficient. At the time of this writing, the school has thus far generated 1.49 megawatts of power with peak days nearing the 40 kWh range. According to solar panel interface, carbon emissions that have been saved so far would be the equivalent of planting 20 trees or driving 3,263 miles in a car. Duchesne looks forward to gathering solar data in the coming year, especially in the summer months, and hopes to soon add an additional 10-12 panels to maximize the capacity of the system's power inverter.
- In the summer of 2019, the school replaced 178 windows throughout the building. The new windows are double-pane, high efficiency, well insulated windows and replace older single pane windows which did not seal well. The school has plans to replace an additional 70-80 windows but must first receive approval from the Nebraska State Historical Society.
- Approximately 35-40% of all lighting throughout the building has been transitioned to LED lighting. The installation of new ductwork with the 2017 HVAC project

necessitated the lowering of ceilings in the hallways and classrooms in the College Wing. New LED lighting was installed as part of this project, replacing old incandescent and fluorescent lighting. Additionally, in fall of 2019 the school received a rebate grant from the Omaha Public Power District to replace 120 old T8 fluorescent bulbs with LED bulbs. This rebate grant is available annually and the school intends to utilize the program again in 2020 to replace additional bulbs.

- In order to meet its sustainability goal of achieving “net positive building emissions by 2030,” Duchesne is actively engaged in exploring the possibility of expanding solar panels on campus. By the fall of 2020 the school will have gathered a year’s worth of reliable solar data and intends to approach donors to underwrite the additional 10-12 panels needed to maximize the utilization of the current solar power inverter. The school enjoys a significant amount of flat roof space and is consulting with engineers in the summer of 2020 to assess the possibility of expanding the installation of solar panels to other roof areas. The school’s new master plan includes the addition of solar panels to any new construction and the school has a goal of producing at least 10% of its electrical needs on campus via solar energy. With the announcement of the Omaha Public Power District’s (OPPD) intent to increase its investment in wind power, its announced construction of a 600 megawatt solar farm, and the decommissioning of two coal burning power plants, it is hoped that in the near future the bulk of Duchesne’s electricity needs will be met either by harnessing solar power on campus or through the purchase of clean energy through OPPD.

Element 1B: Improved Water Quality, Efficiency, and Conservation

- Since Duchesne began collecting water data on the Energy Star Portfolio Manager in November 2015, the school’s Water Use Intensity has dropped from a baseline of 12.7 gal/ft² to a current rate of 10.7 gal/ft².
- In an effort to reduce water consumption, the school has made a concerted decision to use its lawn sprinkler system less. Rain sensors have been added to the system so that sprinklers do not run unnecessarily when ample rain has fallen.
- Existing toilet tanks are gradually being replaced with 1.6 gallon tanks on an as needed basis.
- In 2014, a significant drainage project addressed rainwater runoff issues from the soccer field and courtyard by installing infrastructure to divert rainwater runoff to a water retention basin in an effort to alleviate the surge of rainwater runoff into the city sewage system.
- The school’s primary water source is city water provided through the Omaha Metropolitan Utilities District and water quality is monitored and maintained by MUD.

- One rain barrel has been added to the area near the courtyard gardens and it is hoped that additional rain barrels can be added near the southeast gardens.
- Since the fall of 2016 the school has retro-fitted six traditional water fountains with Elkay “EZ H2O” water bottle fillers. As of this application submission, the use of the water bottle filling stations has resulted in saving the equivalent of over 61,000 single-use plastic water bottles.

Element 1C: Reduced Waste Production

- Duchesne conducted its first waste audit in February 2017. Data revealed that 14% of all waste was being diverted away from the landfill due to recycling. The data furthered revealed that at least an additional 35% of waste was organics and could have been diverted from the landfill through composting. In September 2017, Duchesne partnered with Hillside Solutions, a local commercial composting provider, to become the first school in the city of Omaha to implement a composting program. The most recent waste audit data from September 2019 revealed that through recycling and composting Duchesne was able to divert 77% of its waste away from the landfill. The school has a goal of becoming “zero waste by 2030” and is proud to be so close to the 90% threshold which is required for such designation.
- Prior to composting, Duchesne had a 4 cubic yard dumpster for all non-recyclable waste. The dumpster was emptied five days a week by Waste Management. It is estimated that, on average, the school was sending approximately 15-20 cubic yards of waste to the landfill on a weekly basis. When the school began its composting program, it replaced its 4 cubic yard dumpster with an 8 cubic yard dumpster that was emptied only one day per week. Currently, on average, Duchesne now sends approximately 6-8 cubic yards of waste to the landfill on a weekly basis, this is a 60-70% reduction of waste being sent to the landfill each week.
- Prior to composting, the school cafeteria exclusively utilized Styrofoam plates and bowls, plastic cutlery, and plastic cups for school lunches. Along with composting, the cafeteria purchased a new dishwasher and transitioned to the use of ceramic plates, metal cutlery, and compostable cups and bowls. The use of Styrofoam and plastics has been completely eliminated in the lunch program and has played a key factor in the school’s overall diversion rate.
- Duchesne requires all students to use iPads at school and, therefore, has a 1:1 ratio of student to iPad use. With the implementation of the Canvas Learning Management System, more teachers have moved their classes to paperless where course materials are available online and assignments are submitted electronically. From 2018 to 2019 the school reduced its overall paper usage from 105 purchased units of paper to 82 units purchased units. As more teachers learn to harness the potential of Canvas, it is hoped that paper use can be reduced even further.

- Duchesne has five Konica Minolta Bizhub copier/printers located across campus. Each Bizhub uses Simitri toner which is made with plant-based “biomass” materials which reduces toner consumption by 30+%. The school also participates in Konica Minolta’s reusable toner cartridge program in which used toner cartridges are returned to Konica Minolta and refilled instead of being recycled or sent to the landfill. Each machine also allows a scan function that creates a “pdf” that is sent to the email account of the user. This feature allows teachers to post assigned readings for students on the school’s learning management system, thus reducing the need for paper copies and allowing for increased paperless functionality in offices.
- The Advancement Department recently initiated several environmentally friendly endeavors including: no longer sending out annual statements at the end of the year which saved the sending of over 1600 letters and statements; conducting financial appeal follow-ups via email or phone calls instead of by letter; and, sending the semi-annual “Duchesne Today” alumnae magazine to households instead of individuals, thus decreasing the number of magazines by 1500 copies.
- In April 2018, Duchesne partnered with Goodwill Industries to sponsor an electronics drive at the school. Over the years the school had accumulated a large amount of outdated laptop and desktop computers, printers, and monitors. School families and neighbors of the school were invited to participate in the recycling event. Over 4,900 pounds of electronics were collected as a result of the drive.
- In 2018 and 2019, Duchesne participated in a “Holiday Light Recycling Drive” around the Christmas season. Broken and unused light strands were collected and delivered to a local scrap metal company which harvested the copper and other metals from the wires and donated the proceeds to the Lincoln Fire Department’s “Project Warm” to help cover heating costs for low-income families. Duchesne collected 625 pounds of lights in 2018 and 501 pounds of lights in 2019.
- In the 2018-2019 school year, Duchesne collected plastic film for the Trex recycling program. The school collected a total of 757 pounds of plastic film that was used by Trex to produce composite decking.
- For the 2019-2020 school year, Duchesne received a \$700 grant from the Archdiocese of Omaha’s Catholic Schools Office to be used for sustainability purposes. The grant money was used to purchase Hefty Energy Bags for the collection of plastic film and other plastics that cannot be recycled. Energy Bag stations can be found in the cafeteria, faculty lounge, and other locations across campus and has led to the further reduction of plastics being sent to the landfill.
- In April of 2018 and 2019, students from the Sustainability Club have organized a “clothing swap.” In an effort to raise awareness of the problems inherent to “fast fashion,” students were encouraged to bring in unwanted clothing. The clothing was organized and sold at affordable prices by students in a sort of “thrift shop” environment. All unsold clothing was donated to the Yates Refugee Center located in the Duchesne

neighborhood. Proceeds from the clothing swap were used to purchase a reusable bamboo straw for every student and faculty member. Club members used the gift as a vehicle to further educate the community about the dangers of plastics straws in landfills and waterways.

Element 1D: Use of Alternative Transportation

- A schoolwide transportation survey was taken of students, faculty, and staff in Fall 2016. That survey revealed that 41% drive alone, 53% carpool or get a ride, 4% walk, 1% bike, and 1% ride the bus. In response to the question: “if Duchesne were to initiate a program to encourage active commuting and incentivized biking, taking public transportation, and carpooling,” 35% said they would drive alone, 53% would carpool or get a ride, 4% would walk, 4% would bike, and 4% would take the bus.
- In the summer of 2020, Omaha Metro Area Transit will launch a new high-speed, express bus service called ORBT along Dodge Street, the city’s main artery. The bus will route is about a ten-minute walk from Duchesne. The school has recently been in conversation with Omaha Metro Area Transit regarding discounted bus fares for students and Duchesne hopes to offer these discounts beginning in the Fall of 2020 when the new, high-speed bus line begins operation. To coordinate this effort, the school will be providing an information campaign to create awareness and encourage use of the new ORBT service as well as multi-modal transportation, including visits from representatives from Metro Transit and B-Cycle, the local bike sharing system.
- In February 2019, Duchesne was invited to participate in a transportation survey commissioned by the Verdis Group to study trends in how employees and residents of the Downtown and Midtown areas of Omaha move about the city. Data gathered by the survey will be used by city leaders to explore future transportation options for the city of Omaha.

PILLAR II: IMPROVE THE HEALTH AND WELLNESS OF STUDENTS AND STAFF

Element 2A: Integrated School Environmental Health Program

- Duchesne Academy is committed to maintaining a clean, healthy environment for its students, faculty, and staff. The school contracts with Vanguard Cleaning Systems of Nebraska for its cleaning needs. Each evening a cleaning crew from Vanguard cleans all restrooms, vacuums or mops hallways and stairwells, vacuums class rooms, empties trash bins, dusts as needed, cleans faculty and student lounge areas, and performs other routine cleaning tasks. Vanguard also provides a day porter to complete cleaning tasks such as vacuuming, dusting, and laundry throughout the day.
- In a facility whose original structure dates back to 1881, routine maintenance is essential to the health of the structure. Duchesne employs a full-time maintenance staff of four

men who are present throughout the day to handle maintenance needs, make repairs, and coordinate contractors on campus. Maintenance staff promptly addresses cleanup, plumbing, HVAC, electrical, and other repair needs. The head of buildings and grounds works directly to hire contractors who are able to provide services beyond the scope of the maintenance staff's ability and expertise. Some examples of recent contractor maintenance work include the installation of 178 new windows on the east side of the building, the completion of tuck point work on the brick in the service courtyard, the installation of new roofing to replace areas damaged by hail, and the pouring of concrete to replace damaged sidewalk areas. The annual budget for maintenance is supported by the Buildings and Grounds Committee from the Board of Trustees who recently participated in the completion of a campus-wide master plan which addresses current and future deferred maintenance needs.

- Because of the great care and commitment of the maintenance staff and the Board of Trustees to maintaining Duchesne's historic structure, mold and moisture control has not posed any ongoing problems on campus. The new HVAC system monitors and maintains acceptable humidity levels throughout the building and adjustments are made as necessary. On the occasion that moisture is discovered due to a leak in a window, roof, or plumbing, immediate action is taken to address the issue. Leaks are immediately identified and repaired, any wet areas are dried within 24-48 hours, carpets are cleaned, and ceiling tiles are replaced. Exterior drainage matters are also addressed as quickly as possible. For example, in the spring of 2014 heavy rains revealed that storm drains in the courtyard area were not able to handle excess water from the soccer field. The issue was resolved in the summer of 2014 with the installation of a new storm drain system to divert this runoff. There have been no subsequent rain events that have led to standing water or obstructed drains since this 2014 upgrade.
- The school is visited once a month by a licensed pest management contractor to spray insecticide in the ground floor area. Spraying does not routinely take place outside of the ground floor area unless absolutely necessary. All pesticide treatments are conducted outside of school hours. When mice are found to be active in the building, desiccant bait blocks are placed in the affected areas of the building on an as needed basis. These bait blocks are always placed in hidden areas (e.g., behind filing cabinets, bookshelves, or in locked closets) that are inaccessible to students. All insecticides and bait blocks are federally approved and provided by the pest management contractor. The school has made an effort, in consultation with the contractor, to minimize chemical use as much as possible.
- The school is monitored twice annually for asbestos by an independent contractor. Asbestos piping insulation has been removed in all occupied spaces in the building and asbestos abatement is completed as needed prior to any construction or remodeling projects. Duchesne Academy is a smoke-free campus and the use of tobacco products, e-cigarettes, and vaping devices is prohibited. Education on the dangers of these products is built into a comprehensive wellness curriculum which is updated annually. No risks to the school population have been revealed through radon testing. All drinking water is city water provided and tested by the Metropolitan Utilities Districts and meets

acceptable health and safety standards. In 2007, under guidance from Alvine Engineering, rooftop ventilation units were added to assist in the exchange of air throughout the building. In 2017, two additional units were added to monitor CO₂ and toxin levels and to inject fresh air through the HVAC system. These levels are monitored on a daily basis through the computer control system that monitors and operates the buildings HVAC units. Air filters are changed twice a year throughout the building. The addition of the new HVAC system provides air conditioning in all classrooms and offices for the first time in the school's history.

- All paint gasoline, and cleaning supplies are stored in areas which are off limits to students. Hazardous chemicals are clearly identified and are stored behind a locked door in the maintenance area immediately adjacent to the boiler room. These items are only accessible to the maintenance staff and select members of the administrative team. All chemicals used by students in chemistry classes are kept in a locked room connected to the chemistry lab. Students are only permitted access to these chemicals under the direct supervision of the chemistry teacher. An MSDS binder with a list of all chemicals and cleaning materials used by the cleaning crews is kept and maintained in the office of the Director of Buildings and Grounds.

Element 2B: Health and Wellness

- The school cafeteria offers “farm to table” lunches through a partnership with Lone Tree Foods, a local food hub that connects local farmers to wholesale buyers in the restaurant industry, to purchase fresh, seasonal produce from farmers in Nebraska and Iowa. A salad bar is offered each day which features local vegetables provided through Lone Tree. Duchesne also serves as a pick-up location for employees and school families who purchase produce boxes through Lone Tree. The cafeteria sources its eggs from an urban garden located in the neighborhood.
- In the fall of 2016, the school installed a small garden which included two espalier fruit trees and two small raised beds on the southeast corner of campus. The following year, a small in-ground garden expansion was made to the area and three raised beds were added in the courtyard to grow corn, squash, and beans. In the fall of 2019, the garden received a larger in-ground expansion along the east side of the building, nearly doubling the size of the school's garden space. Additionally, eight fruit trees, including four apple trees, two pear trees, two Asian pear trees, and two peach trees, were planted on the northwest corner of campus. The gardens are planted and maintained by the gardening club and the “Finding God in All Foods” course. Produce from the gardens is used in the school lunch program.
- All students in the Academy are required to take 1 semester of physical education classes each year for four years. This equates to 200 minutes of PE per week each semester and a total of 10,400 minutes of PE during their four years at Duchesne Academy. PE classes include CPR certification for all 9th graders. In the summer of 2019 both PE teachers

were certified in the Rape Aggress Defense (RAD) System and beginning in January 2020, all junior and senior PE classes will include self-defense training as a requirement.

- Outdoor activities are highly weather-dependent but the PE department estimates that students spend an average of 30% of their PE activities outside in the fall and 20% outside in the spring. These outdoor activities include tennis, soccer, flag football, ultimate frisbee, urban hikes, and lacrosse. Beyond physical education, 60% of the student body participates in school-sponsored athletic programs over the course of the school year.
- The PE department exists to help students develop the mental, emotional, physical, and social realms of wellness necessary to promote lifelong healthy and active living. Department objectives include requiring students to display they know how to use the school weight room as well how to develop good exercise habits at home, setting personal goals for personal exercise, and encouraging the playing of a variety of games that encourage lifelong activity.
- All sophomores are required to take a one semester health class taught by the guidance counselor. Topics include sections on nutrition, mental health, social media use, drugs and alcohol, sleep, and healthy relationships.
- Beginning in 2019, the school's new athletic director began instituting fitness challenges for all faculty and staff members. These voluntary challenges ask participants to set personal goals for physical, mental, social, and spiritual fitness goals. If goals are attained, then participants receive a reward. So far, the challenges have been: "99 Days from Memorial Day to Labor Day," in which participants received a t-shirt; "100 Days to Finals," in which participants received a scarf or stocking cap, and "100 Days of Resolutions," in which participants are invited to attend a social event with each other. On average, 38 faculty and staff members have participated in each of the challenges.
- Duchesne Academy takes great effort to make student health and wellness a priority. The school employs three full-time counselors who are available to students at all times, thus exceeding the recommendation of both the American Psychological Association and the State of Nebraska of one counselor for every 250 students. The academic counselor assists students with their learning needs, a college counselor guides students through the college search and application process, and a guidance counselor who is available to help students with their emotional and personal counseling needs. Additionally, Duchesne partners with Catholic Charities who provides a certified therapist on site one day per week to be available to students for more intensive counseling needs. Every other year the school participates in the Student Health and Risk Protection (SHARP) Survey sponsored by the Nebraska Department of Health and Human Services to gather data on adolescent behavior and trends.
- A school nurse is available on campus each Tuesday. The nurse organizes and updates student medical information, communicates student health needs as appropriate, and conducts CPR and first aid training for faculty and staff. Duchesne also contracts with

Catholic Health Initiatives to provide an athletic trainer who is present for all home athletic practices and events.

- During the 2017-2018 school year a committee composed of the administrative team, the counseling department, and faculty was formed to explore ways to improve student wellness through the reduction of student stress and anxiety. A “health and wellness” survey was opened to students, faculty, and parents to identify possible solutions. One of the most striking data points revealed by the survey was that most students were receiving insufficient sleep. Based on this knowledge and the committee’s research on teenage brain development, it was determined to pilot a “late start” during the month of February 2019 and to alter our daily schedule to include block scheduling four days a week. The start of school day was pushed back from 7:55 to 8:45 and dismissal was delayed until 3:30. Feedback from the pilot month was positive and, at the beginning of the 2019-2020 academic year, Duchesne made this change permanent. Subsequent surveys have revealed that students are, on average, going to bed earlier and getting more sleep on a regular basis. Between October 2018 and October 2019, students sleeping 7-9 hours a night in the last seven days increased from 3.97 days to 4.9 days. The average hours of sleep in that same time period increased from 6.53 hours to 7.47 hours. Student satisfaction with the new late start schedule is very high with a 99% approval rating.
- Duchesne has also been proactive in addressing student health and well-being through a variety of different programs. All freshmen gather in small groups once a month to engage in conversations lead by upper-class students through “peer facilitating.” The Student Against Destructive Decisions (SADD) group has organized annual campaigns to bring awareness to issues such as body image, social media, and suicide prevention. The guidance counselor recently developed “harassment report forms” to help empower students to identify and report incidents of bullying. In the spring of 2020 the school will pilot a risk aversion curriculum in all Health classes to address drugs, alcohol, vaping, and tobacco use. In an effort to help students achieve greater balance in their lives, Duchesne has also adopted a policy limiting the number of Honors and Advanced Placement (AP) courses a student may take. Juniors and seniors must receive administrative approval to enroll in more than four AP/Honors classes.

PILLAR III: PROVIDE EFFECTIVE ENVIRONMENTAL AND SUSTAINABILITY EDUCATION, INCORPORATING STEM, CIVIC SKILLS AND GREEN CAREER PATHWAYS

Element 3A: Interdisciplinary Learning about the Key Relationships between Dynamic Environmental, Energy and Human Systems

- In February of 2017 all Duchesne faculty and staff participated in a day of retreat led by the Verdis Group at Fontenelle Forest Nature Center. The purpose of the day was to discuss sustainability and determine the direction of the future of sustainability at Duchesne. As a result of this day-long meeting, Duchesne articulated its current four sustainability goals and began the process of developing a sustainability curriculum. The

school's Assistant Principal/Sustainability Coordinator continues to seek continuing education opportunities by attending seminars provided by the school's compost provider, Hillside Solutions, and also attended the 2019 Green Schools National Network Conference in St. Paul, Minnesota, and the annual Nebraska Wind and Solar Conference in November 2019 in Lincoln, Nebraska.

- In response to Duchesne's sustainability goal of "sustainability curriculum integration," during the 2017-2018 school year Principal Laura Hickman worked closely with all department chairs and faculty to develop and implement cross-curricular "Sustainability Standards." The standards also include a "scope and sequence" which address how these topics will be included in courses across the curriculum. For example, a freshman should expect to find Standard 1 in her art, Theology, World Literature, Foreign Language, and Biology courses. The standards are as follows:
 - **Vision Statement:** Duchesne graduates will be able to articulate the social, economic, and moral implications of environmental sustainability, and identify tools to take action as stewards of creation to protect the earth's resources.
 - **Standard 1:** Students will encounter writings of Catholic and other religious leaders that address issues of environmental stewardship and care of creation and apply these values to their own lives.
 - **Standard 2:** Students will experience and demonstrate an understanding of the intrinsic value of and interconnectivity of all living organisms and the ecosystems upon which they depend.
 - **Standard 3:** Students will build a social awareness of the unequal impact of environmental degradation on the poor and developing world that impels them to reverse the damage and protect human dignity.
 - **Standard 4:** Students will explore the global cultural history of human relationships with creation.
 - **Standard 5:** Students will become mindful consumers and citizens who understand the true costs of environmental degradation.

- Each May, graduating seniors are invited to participate in "Exit Interviews" where they are asked a series of questions pertaining to their time at Duchesne. One of the six questions asked of the 75 seniors in the Class of 2019 was, "How have you become a good steward of the earth's resources and how will you make this part of your life?" Every single student response was positive and revealed that the school's composting program has especially had a profound effect on students. Twelve students indicated that they were inspired to begin composting at home. Six students indicated that they have spoken to their employers of the benefits of adding composting. Two students specifically indicated that Duchesne has inspired them to seek careers in sustainability. Several students commented that a commitment to sustainability played a key factor in their college decision-making process.

- "Topics in Earth and Environmental Science" is an elective offered to seniors. The course begins with learning foundational concepts about the earth's processes such as food webs, tectonics, and climate. As the course progresses it addresses topics such as water issues, energy, and climate change. Each topic delves into both the science behind

how the earth works as well as the impact that human behavior has on these natural processes. For example, when covering water issues students learn about the tides and currents but they also learn about ocean acidification and the effect that plastics have on the ocean. Students also read the book “The Sixth Extinction” by Elizabeth Kolbert and discuss the consequences of human behavior on the environment. Each week students must identify and discuss an environmental issue drawn from current events. Lastly, the course concludes with a “climate change scrapbook” project in which students identify the various problems associated with climate change and also research and report on the current state of science and technology in response to these growing needs.

- On April 1, 2019, in an effort to share the school’s passion for sustainability and to help encourage other schools to embrace sustainability, Duchesne created and hosted the “Caring for Creation in Catholic Schools Conference.” The conference was attended by nearly sixty students, faculty, and administrators from four Omaha area Catholic high schools and five Catholic elementary schools. Duchesne faculty, staff, and students presented on sustainability topics, offering practical “how to” advice on recycling, composting, school lunches, school gardens, and careers focused on environmental studies. In addition, twelve vendors attended the conference and met with attendees. Vendors included a solar panel installer, a CSA, a restaurant supply company, two community gardens, FirstStar Fiber recycling, and others. Since the conference, two of the high schools have begun composting and at least one of the grade schools has significantly expanded their recycling efforts.
- In the 2019-2020 school year Duchesne began partnering with the University of Nebraska Medical Center (UNMC) School of Public Health to offer research opportunities to students. The senior-level Research Methodology class is open to students who wish to learn foundational terms, principles, and concepts necessary to conduct advanced research. In the second semester, students work under the direction of representatives from the UNMC School of Public Health to assist in gathering and analyzing data for an ongoing, longitudinal study on water quality in the State of Nebraska.
- In both 2018 and 2019 Duchesne sponsored a school-wide “Earth Month” during the month of April to raise awareness for sustainability issues. Earth Month brings the student-led Sustainability Club and the adult-led Sustainability Committee together to plan events for the month. Many of the events have been mentioned throughout this application, including waste audits, the 2018 electronics drive, the annual “clothing swaps,” and the “Caring for Creation in Catholic Schools” conference. Each year the Sustainability Club also creates an all-school prayer service focusing on “Care for Creation.” During Earth Month 2019, Duchesne also sponsored a table staffed by students at “Earth Day Omaha,” the premier Earth Day event in the region.
- As a member of the Network of Sacred Heart Schools, Duchesne has the opportunity to send students each summer on “Network Service Projects” across the country. In the summer of 2019, Duchesne developed its own Summer Service Project called “Sustainability and Service.” Eight students and two adults from other Sacred Heart schools in the United States spent a week at Duchesne learning about steps they can take

to make more sustainable choices and the effects that those choices have on the world. Participants learned about “small-scale sustainability” by visiting a community garden, a local zero-waste retailer, and a Duchesne alumna who lives a zero-waste lifestyle. Participants learned about “medium-scale sustainability” by visiting a farm and learning about ongoing sustainability projects at Duchesne. Finally, participants learned about “large-scale sustainability” by visiting Offutt Air Force Base in Bellevue, Nebraska to learn about how they manage sustainability. The week was an enormous success and Duchesne will host another “Sustainability and Service” project in June 2020.

Element 3B: Use of the Environment and Sustainability to Develop STEM Content Knowledge and Thinking Skills

- Beginning in the 2018-2019, Duchesne began partnering with the Omaha Henry Doorly Zoo “Zoo Academy” program. The mission of Zoo Academy is to provide students with knowledge and career explorations relating to life sciences through authentic STEM experiences at Omaha’s Henry Doorly Zoo and Aquarium. Zoo Academy prides itself in being an excellent model of forming successful collaborations between an informal science education organization and school districts. Each high school in Omaha is invited to have students apply to this highly selective program. Students study courses in research and science in the mornings at the zoo and return to their high schools in the afternoons to continue their studies. Duchesne currently has two students enrolled in Zoo Academy and will have a third student enrolled in the 2020-2021 school year.
- The Design Academy course based out of the school’s DREAM Lab annually provides hands-on opportunities for students to learn about STEM-related topics. In 2017-2018, students in the course sought to find ways to make the DREAM Lab more energy efficient. Students developed a power plan and programmed computers to set a schedule to turn off and on, put meters on various devices to track their power use, and developed a plan to offset power use in the lab. Ultimately, the class determined that solar panels provided the most efficient and cost-effective means to offset energy use in the DREAM Lab. Students created a business proposal and a “pitch” which they delivered to administrators and potential donors. This student-led effort was instrumental in starting Duchesne along the path of its September 2019 solar panel installation. In 2018-2019, the Design Academy class installed a “vertical garden” in the DREAM Lab in an effort to research methods of gardening in urban areas where space is limited. Students in the class partnered with other students from the Garden Club and “Finding God in All Foods” class to plant and maintain the garden. In 2019-2020, the Design Academy class received 200 rainbow trout eggs through the Nebraska Games and Parks Department. Students will raise the trout from eggs to fingerlings and return them to Nebraska Games and Parks in the spring. Throughout the process, students will gather data and monitor the growth and development of the fish.
- Science and math courses address sustainability within the curriculum in numerous ways. All chemistry classes use non-toxic substances as much as possible and students learn proper procedures to dispose of chemicals and materials from lab experiments. Items are

composted, recycled, or disposed of in special waste containers collected by a chemical company. All chemistry students study climate change, the effect of greenhouse gasses on the environment, and ways to reduce greenhouse gas emissions. Biology students participate in an annual field trip to view the Sandhill crane migration in central Nebraska, learn about the impact of the loss of biodiversity, study the importance of clean water to sustaining life, and study and apply an understanding of the effects of climate change on biological systems. Earth science students study climate change, sustainable energy, waste management and pollution, ozone depletion, carbon emissions, and the science behind composting. Higher level math classes apply mathematical and statistical analysis to calculate and predict population growth rates as well as energy consumption rates. The financial literacy class, which teaches introductory business principles, operates a coffee shop on campus, serves all items in compostable cups and containers, and offers a discount to those using a reusable cup purchased through the coffee shop.

- The Duchesne Preschool has successfully engaged its students and families in implementing sustainability into its curriculum in an age-appropriate fashion. Preschoolers are taught to reduce water and paper towel use and to turn off lights when leaving the classroom. Preschool teachers find creative ways to reuse a wide array of items for craft projects. Recycling and composting are taught and reinforced to all preschoolers, especially during snack and lunch times. The preschool hosts an indoor “tower garden” and harvests lettuce and tomatoes for lunches and a number of units are focused around nature lessons such as the life cycle of plants, bees, and butterflies. The preschool also hosts a week-long “Little Sprouts and Earth Tenders” summer camp in which participants receive first-hand gardening experience in the school garden, learn about bees and earthworms, and discover fun ways to reduce, reuse, and recycle.

Element 3C: Civic Skills and Green Career Pathways

- Many students at Duchesne are committed to addressing sustainability through civic engagement and political involvement. Several students are active members of “Students for Sustainability,” a student-led organization consisting of students from Omaha area high schools committed to raising awareness regarding climate change. One Duchesne student serves on the “Students for Sustainability” core team and acts as the social media coordinator for the group’s over 570 followers on various social media platforms where she shares details on upcoming events, information on political candidates, and vegan recipes. “Students for Sustainability” members have helped organize area climate strikes and host various speakers on sustainability related topics. Additionally, about a dozen Duchesne students have attended recent Omaha City Council meetings regarding the city’s new recycling contract and proposed city ordinance banning the use of plastic bags. One student courageously addressed the City Council with her argument in support of the plastic bag ordinance. In the senior-level Catholic Social Teaching class, students are encouraged to write letters to their congressional representatives on a topic of their choice. This past year at least ten seniors chose to write their representatives regarding their support for legislation addressing climate change.

- A number of Duchesne students have committed to volunteering for non-profit organizations that promote sustainability or include sustainable practices at their events. One student spent the summer of 2019 volunteering at Fontenelle Forest Nature Center where she worked in the education department and helped run a station on pollinators and also worked on summer camps teaching sustainable practices to elementary school students. Several Duchesne students volunteered in August 2019 to help educate others on zero-waste by monitoring composting stations for “Dundee Days,” a local neighborhood celebration featuring a pancake breakfast, parade, and outdoor concert. In April 2019, approximately a dozen Duchesne students volunteered to host a booth showcasing the school’s sustainability efforts at Omaha’s annual Earth Day event. The school’s assistant principal/sustainability coordinator currently serves on the Board of Directors for “Earth Day Omaha” and is gathering student volunteers from Duchesne to help in various capacities at this year’s event.
- Students are exposed to green career pathways in a number of ways. Students enrolled in the Design Academy participate in a class project which involves experiential work to problem-solve some need. As mentioned above, in the first three years of the class the project themes have each been sustainability related. Students in the Design Academy course are students who have a desire to pursue a career in engineering, computer science, or technology. Most students who have taken the course in the past are currently studying engineering in college. Students who have participated in the Zoo Academy program are preparing for a future in fields related to conservation.
- Students play an integral role in the ongoing maintenance of the school’s ever-increasing vegetable and fruit garden space. During the summer students in the Garden Club are responsible for weeding, watering, and harvesting from the gardens. During the school year, the “Finding God in All Foods” class maintains the gardens and uses their produce for class projects. Students also learn how understanding where food comes from and how it gets to the table involves a relationship with nature and a connectedness to the earth.
- A senior who graduated in 2019 aspires to be a clothing designer and utilized the sewing machines in the DREAM Lab to produce a line of clothing which won her a placement in the annual “Omaha Fashion Week.” All clothing designed by the student utilized repurposed materials she had purchased at thrift and consignment shops. This student is currently studying international fashion and design in Florence, Italy.
- The Duchesne community prides itself in its commitment to sustainability and Duchesne students are dedicated to waste reduction while at school and also share this news with others outside the community. In the past school year Student Ambassadors visited 26 Catholic elementary schools on recruitment visits and incorporated the school’s sustainability plan into their presentation. Within the Class of 2023 at least three families have identified Duchesne’s sustainability plan as an important reason why they chose Duchesne.

Photographs

- Photographs may be accessed by [clicking this link](#).
- **Photo 1:** Students, faculty, and staff participate in Duchesne Academy's first-ever waste audit in February 2017. The results of the waste audit were instrumental in establishing the school-wide goal of achieving "zero-waste by 2030." Similar waste audits are conducted twice each year to track progress.
- **Photo 2:** Duchesne students lead the "Student to Student Sustainability Discussion" breakout session at the "Caring for Creation in Catholic Schools Conference" hosted at Duchesne Academy on April 1, 2019. Over 30 students from five Catholic elementary schools and four Catholic high schools attended the conference to learn what they can do at school and at home to be better caretakers of the earth's resources.
- **Photo 3:** Duchesne hosted an electronics recycling drive in April 2018 as part of its annual "Earth Month" celebration. Students, their families, and neighbors of the school were invited to drop off old cell phones, computers, and other electronic devices. Over 4900 pounds of electronics were gathered and donated to Goodwill Industries to be either refurbished or recycled.
- **Photo 4:** Students in the "Topics in Earth and Environmental Science" course took a field trip to the Hillside Solutions compost farm in September 2018 to learn about large-scale, commercial composting. Duchesne Academy has partnered with Hillside Solutions for its composting needs since September 2017. The field trip provided students with a first-hand glimpse of what happens to the organics collected at Duchesne.
- **Photo 5:** In September 2017, Duchesne became the first school in the city of Omaha to initiate a composting program. In this photo, students place food scraps from lunch in one of the compost bins collected weekly by Hillside Solutions. Since beginning composting, the school has also expanded its work towards zero-waste through restructuring its recycling efforts and by collecting plastic film in the cafeteria for recycling through the Hefty Energy Bag program. These actions have helped Duchesne achieve a current diversion rate of directing 78% of its waste away from the landfill.