



## Iowa Department of Education School Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

#### School and District's Certifications

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

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

### U.S. Department of Education Green Ribbon Schools 2018

Public  Charter  Title I  Magnet  Private  Independent  Rural

Name of Principal: Mrs. Barbara Roling

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

Official School Name: St. Columbkille Elementary School

(As it should appear on an award)

Official School Name Mailing Address: 1198 Rush Street, Dubuque, IA 52001

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

County: Dubuque

State School Code Number \*: 8122

Telephone: (563) 582-3532

Fax: (563) 583-4884

Web site/URL: <https://www.holyfamilydbq.org/st-columbkille-elementary>

E-mail: [BRoling@holyfamilydbq.org](mailto:BRoling@holyfamilydbq.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.

*Barbara J. Roling*

Date: 2/28/2018

(Principal's Signature)

Name of Superintendent: Mrs. Carol Trueg

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

District Name: Holy Family Catholic Schools

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

*Carol Trueg*

Date: 2/28/2018

(Superintendent's Signature)

### **Nominating Authority's Certifications**

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

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

Name of Nominating Agency: **Iowa Department of Education**

Name of Nominating Authority: Mr. Thomas Cooley

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

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

*[Signature]*

Date: March 31, 2018

(Nominating Authority's Signature)

### **SUBMISSION**

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

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

### **Public Burden Statement**

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



## Highlights Report

**Provide a narrative describing your institution's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative, yet replicable, practices and partnerships. Be sure to cover every ED-GRS Pillar and Element.**

### **Reaching Goals, Setting Standards, and Living the Mindset**

St. Columbkille Elementary (SCE) is one of seven PreK to 12 schools within the Holy Family Catholic School Systems in Dubuque, IA. With an urban population of approximately 300 PreK-5 students, the administration and staff has made a commitment to not only educating the students on environmental topics, but maintaining an atmosphere that encourages respect and knowledge of the Earth. For over 10 years, the staff has implemented programs and lessons not limited to: recycling, composting, native and prairie plants, and the general reduction of waste. This long term commitment has created an atmosphere of respect for the environment and instilled the mindset that the small things they do, can make a difference in their world.

### **Pillar 1: Reduced Environmental Impact and Costs**

The greatest example of SCE dedication to environmental education is the extensive use of their property as a learning tool. The interest and care for the environment can be seen even before you walk in the school's front doors! A rain garden was constructed in 2013 with students and community members identifying what plants would be best for the purpose of the garden and how to design it effectively, all while learning the function and importance of a rain garden. It is appropriately placed at the end of the gym's rain spout system, and at the bottom of two small hills, which provides plenty of water for the rain garden plants to enjoy.

A short walk around the building will bring you to another prime example of using the land directly for environmental education. In 2009, a 50' x 80' section of land was planted as a native prairie plot. This area has a plethora of native prairie plants that are not only helpful to the land itself, but is also utilized as a versatile educational tool. Students learn how to identify native plants, about invasive species, biodiversity, habitats, ecosystems, prairie plants, insects, food webs, etc. while visiting the prairie plot. Students are reminded of these lessons when they go outside for their recess throughout their day. In addition to the educational tool this provides, it is also ecologically beneficial as the plants soak up water run-off, and provide ample habitat for many small rodents, birds, and insects.

The dedication to respecting the health of the land can be seen when you look around the classroom. Each room has a recycling bin which is collected and emptied weekly into the city's recycling dumpsters by the 4<sup>th</sup> grade class. The amount of waste that reaches the recycling bin is reduced at the source simply by reusing paper, utilizing small whiteboards, and providing computers and online programs for school work and to communicate with members of the school community. The entire school also helps reduce the amount of waste entering the landfill by composting in the lunchroom. Each grade is educated on what can be composted and place their food scraps in separate bins at lunch. As the students learn about the proper utilization of these services, they take this knowledge and practice to their households.

### **Pillar 2: Improve the Health and Wellness of Students and Staff**

The physical well-being of SCE students are just as important to the staff as academics. Upon arrival, students walk around the gym area awaiting the morning announcements. Throughout the day, the students enjoy 20-30 minutes of recess outdoors on the football sized yard, which includes a variety of play equipment, as well as a softball diamond and open areas to run. The students go outside for a variety of lessons when the weather permits.



In addition to physical well-being, SCE is also concerned for the mental and emotional well-being of the students and staff. The school is a “Leader in Me” school, which promotes leadership and forward thinking in the students from the beginning of their education. This is implemented through direct lessons, as well as activities that guide students to become leaders of their peers and leaders in their own personal and academic goals.

The care for the students overall well-being is also shown through the opportunity for spiritual connection. As a Catholic school, we believe and instill in the students that they are caretakers of our world. An outdoor space in front of the school is dedicated to spiritual growth. SCE recently freshened up a 20’x40’ prayer garden in which students, staff, and community members can sit outside, reflect, and take a moment of peace amongst a busy school day.

### **Pillar 3: Effective Environmental and Sustainability Education**

Caring for and respecting the environment begins at PreK here at SCE! Each grade has an environmental theme and focus that are encouraged throughout the school year. PreK starts its practices with a small outdoor classroom that they play in and maintain. Kindergarten learns about composting, then moves on to learning about animals and their needs in first grade. Second grade studies plants and then energy conservation in third grade. Fourth grade tackles recycling and evolves that knowledge to determining environmental solutions in fifth grade. All of these focuses involve interactive classroom lessons, as well as field trips to community locations related to the subject.

The school is dedicated to making students aware of how the knowledge and behaviors done within the walls of the school can be expanded to the world around us. SCE uses community connections through the city of Dubuque and surrounding areas to increased knowledge, as well as to encourage the community mindset that student’s behaviors in the classroom affect the community they live in, and therefore, the world. Through the years, SCE has earned many ‘patches’ through the Dubuque Metropolitan Area Solid Waste Agency (DMASWA) Green Vision Education Program. These measureable growth patches or badges show SCE dedication to a variety of environmental practices and include subjects ranging from a litter free campus, to eco literacy and energy efficiency.

SCE is growing in their commitment to the environment. Within the next calendar year, they are revitalizing a backyard program involving the kindergarteners, creating a small garden for the early childhood center, improving accessibility of the prairie plot, incorporating more community connections to encourage a larger diversity of incoming knowledge, and increasing the sustainability of environmental education lessons in the classrooms.

SCE is truly looked at as a gold star example within the Dubuque community for carrying out holistic environmental awareness so extensively that the awareness turns into a mindset and culture. Members of the SCE community have created an atmosphere of dedication to Mother Earth in their behaviors, while increasing the knowledge of the environment by using the outdoor spaces on the campus. All of these efforts are to instill a love and respect for the one world that we’ve been given, so that we may enjoy it now, and in the future.

## Scoring Rubric

| <b>ED-GRS Pillars and Elements</b>                                                                                                                                                                                                    | <i>Points</i>     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>HIGHLIGHTS REPORT: Summary of participation in green school programs – 10%</b>                                                                                                                                                     | 10 points         |
| <b>Pillar I: Reduce environmental impact and costs: 30%</b>                                                                                                                                                                           |                   |
| Element 1A: Reduced or eliminated greenhouse gas (GHG) emissions,<br>a) Energy<br>b) Buildings                                                                                                                                        | 15 points         |
| Element 1B: Improved water quality, efficiency, and conservation<br>a) Water<br>b) Grounds                                                                                                                                            | 5 points          |
| Element 1C: Reduced waste production<br>a) Waste<br>b) Hazardous waste                                                                                                                                                                | 5 points          |
| Element 1D: Use of alternative transportation                                                                                                                                                                                         | 5 points          |
| <b>Pillar II: Improve the health and wellness of students and staff: 30%</b>                                                                                                                                                          |                   |
| Element 2A: Integrated campus environmental health program<br>a) Integrated Pest Management<br>b) Contaminant controls and Ventilation<br>c) Asthma control<br>d) Indoor air quality<br>e) Moisture control<br>f) Chemical management | 15 points         |
| Element 2B: Health and Wellness<br>a) Coordinated Campus Health<br>b) Fitness and outdoor time<br>c) Food and Nutrition                                                                                                               | 15 points         |
| <b>Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways: 30%</b>                                                                                      |                   |
| Element 3A: Interdisciplinary learning about the key relationships between dynamic environmental, energy and human systems                                                                                                            | 20 points         |
| Element 3B: Use of the environment and sustainability to develop STEM content, knowledge, and thinking skills                                                                                                                         | 5 points          |
| Element 3C: Development and application of civic knowledge and skills                                                                                                                                                                 | 5 points          |
| <b>Total</b>                                                                                                                                                                                                                          | <b>100 points</b> |



## FY18 Iowa Green Ribbon Schools - School Application

### St. Columbille Green Ribbon Application

#### School Contact Information

|                                                                            |                                                                                                           |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| School Name:                                                               | St. Columbille Elementary                                                                                 |
| Street Address                                                             | 1198 Rush Street                                                                                          |
| City                                                                       | Dubuque                                                                                                   |
| State                                                                      | Iowa                                                                                                      |
| Zip Code                                                                   | 52011                                                                                                     |
| Principal Name:                                                            | Barbara Roling                                                                                            |
| Principal E-mail Address:                                                  | BRoling@holymfamilydbq.org                                                                                |
| Telephone Number:                                                          | 563-583-9117                                                                                              |
| Facebook:                                                                  | <a href="https://www.facebook.com/StColumbilleDubuque/">https://www.facebook.com/StColumbilleDubuque/</a> |
| Twitter:                                                                   | <a href="https://twitter.com/columbkilledbq">https://twitter.com/columbkilledbq</a>                       |
| Lead Applicant Name (if different):                                        | Eve Dietrich                                                                                              |
| Lead Applicant Email:                                                      | EDietrich@holymfamilydbq.org                                                                              |
| Lead Applicant Phone Number:                                               | 610-780-6025                                                                                              |
| School Level:                                                              | Elementary (PK - 5 or 6)                                                                                  |
| School Type:                                                               | Private/Independent School                                                                                |
| Description:                                                               | Urban                                                                                                     |
| School District Name:                                                      | Holy Family Catholic Schools                                                                              |
| Is your school in one of the largest 50 districts in the nation?           | No                                                                                                        |
| District Enrollment:                                                       | 1684                                                                                                      |
| Does your school serve 40% or more students from disadvantaged households? | No                                                                                                        |
| Percent receiving FRPL:                                                    | 12.0%                                                                                                     |
| Percent of limited English proficient:                                     | 1.0%                                                                                                      |
| District graduation rate:                                                  | 100.0%                                                                                                    |
| School attendance rate:                                                    | 97.0%                                                                                                     |
| Other measures:                                                            |                                                                                                           |



## Summary Narrative:

**Provide a narrative describing efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships. Be sure to cover every ED-GRS Pillar and Element.**

St. Columbkille Elementary (SCE) has put a strong effort to environmentally friendly practices, behaviors, literacy, and thoughts over the past 10 years. A green vision plan was created in 2007, and started with an effort to educate and change the behaviors of the teachers who then can pass that knowledge and behavior to the students. A green team of 5-6 teachers was created and charged with the task of changing some of the practices amongst staff first. These included (but are not limited to): reducing paper usage through using backs of papers or half sheets, reducing electric/heat usage by turning lights off when leaving a room, unplugging electrical items at the end of the day, and shutting window coverings over the weekend. All single use material in the faculty lounge were replaced with dishware. Green reminders encouraging teachers and students to turn off lights, close windows, and unplug electronics, were handed out to each teacher and placed in the classroom by the door.

SCE is attached to a community chapel and has a large parent and community support system. A series of green vision statements, lessons, and hints were released in SCE weekly newsletter. CFL light bulbs were handed out to students to take home to their parents to encourage the green behavior outside the school.

## Participation Summary:

**Is your school, district, or college participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars?** Yes

### Program(s) and level(s) achieved:

Starting in 2007, St Columbkille Elementary put efforts in to becoming a "Green Vision School". Green Vision Schools is a program started by Dubuque Metropolitan Area Solid Waste Agency to encourage schools within Dubuque area to have and institute green initiatives, behavior, and education. Within the Green Vision School program, schools can achieve a variety of 'patches' that assess the schools current dedication to the subject at hand, while also revealing where the school can improve.

Since the school's first interest in Green Vision Schools, St. Columbkille Elementary has earned many patches and continues the practices outlined within the patches and awards.

## Awards Summary:

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

### Award(s) and year(s):

"Green Vision Schools" Patches:

- Litter Free School (obtained March 2010)
- Eco-literacy (obtained April 2011)
- Sustainability School (obtained March 2012)
- Social Cultural Vibrancy (obtained May 2013)

## **School Pillar 1: Reduced Environmental Impact and Costs**

**Describe how your school is reducing environmental impact and costs by reducing or eliminating greenhouse gas emissions; improving water quality, efficiency, and conservation; reducing waste production; and using alternative transportation.**

### **Reducing or eliminating greenhouse gas emission:**

About 66% of the St. Columbille population chooses to carpool or drop off their child. This leaves 29% of the students that ride the bus, and about 5% who choose to walk to school. With these statistics, St. Columbille has put large effort in to reducing greenhouse gas emissions through our morning and afternoon transportation practices. In the morning, there are several ways that parents can drop off their children-most of which minimize the amount of car exhaust entering the air. There is a large parking lot across the street for parents to park. There is minimal street parking, and most of the street directly in front of the school is reserved for drop offs and the busses. Parents are encouraged (and often prefer) to park and walk their kids in to school.

Another (and very popular) option available is for the parents to swing up to the curb just in front of the school entrance and drop their child off with the assistance of volunteers. Parents will pull up in their vehicle, and coordinated parents/volunteers will open the car doors and assist the students. This eliminates any need for the parent to leave their car idling while dropping of their child. The parent can quickly, efficiently, conveniently, and safely drop off their child.

In the morning, the idling of the school busses are kept at a minimum, as they are doing a quick drop off. However, in the afternoon, they are required to turn off their engines completely while they wait for students to be released and load up. At the end of the school day, parents are required to park in the lot across from the school to pick up their child. The students are walked up to the corner by their teachers, and must cross the street to meet their parent or guardian. With the parking lot available, the amount of idling is cut down to almost none, as the parents must get out of their car to pick up their child.

### **Improving water quality, efficiency, and conservation:**

We have completed several projects over the past 5 years to improve water quality, efficiency, and conservation. In 2013, an 8'x15' rain garden was planned and constructed for the schools entrance. Fifth grade students researched the plants that would be most effective in a rain garden, how to construct one, its usage, etc. Students presented this research to the community during an evening open house. This rain garden is at the entrance of the school and includes the schools flag pole. It is at the bottom of two small hills, and below the gutters for drainage from the school's gym roof. This is the most effective placement of the garden, and catches a large amount of water runoff and alleviates water that may settle with the landscape. There is a variety of native species planted within the mulched space to soak up the excess water before going in to the drainage sewer. This past summer, the rain garden was improved as part of an Eagle Scout project.

In 2012, a 50'x80' plot of land was planted with native prairie plants behind the school. This was planted in partnership with Loras College (Dubuque, IA) and is intended to be used as a teaching tool. The plot includes many native plants, is adjacent to a forested area and mowed grass, and provides habitat for many animal species. This plot is utilized as an educational tool for the entire school. Classes have learned about the difference between native and non-native species, ecosystems, habitat, niche's, Iowa's native heritage etc. by exploring the prairie that is just in their back yard! As this project evolved, creative stories were turned in to books created by the students explaining the importance of prairies and the different parts of the ecosystems. These books continue to be available and used in the school's library.

In addition to the unique teaching tool that this plot has to offer, it also provides an ecological service. With the

deep roots that many of the plants have, the plot assists in rainwater retention. It is adjacent to the mowed and maintained playground, which does not host a deep rooted system, allowing rain water to become storm water run-off. The deep roots of the large prairie plot assist in the retention of this water, and decrease the amount that would enter the storm water system. While absorbing the rainwater, the roots also clean the water that does go in to the sewer and/or is used by other organisms.

This education is in the hopes of making the students more aware of the environment, and to encourage more 'green thinking'. Recently, a grant was submitted through Sustainable Dubuque to make this prairie plot more accessible. The grant included the construction of two gravel paths that will go through the plot, funds for a wayside sign explaining the plot, and small name signs to identify plants. These improvements will make the plot more accessible, attractive, and will be open to the community to utilize and learn from. With the current lesson plans and the hopeful improvements and accessibility of the plot, hopefully, the families of St. Columbkille will not only learn from the plot directly, but also consider planting prairie plots on their own property.

This past summer, an erosion problem was mediated with changes in landscape. The school has a football field sized playground behind the adjacent parish owned building that used to experience significant erosion problems. The slope was re-landscaped with moving the earth to a more gradual slope, in addition to installing a natural rock retention wall. This not only increased the play area for the students, but also solved the erosion problems.

We also make an effort to educate the students and faculty on reducing the usage of water in the bathroom. The majority of the bathroom faucets require the user to hold down the knob in order to release water. This decreases the amount of water used, as it is impossible for water to run without being manually turned on. Students are also encouraged to bring in their own re-usable water bottle. Many do, and fill up their bottle multiple times a day saving many single use bottles from being used and conserving natural resources.

### **Reducing waste production**

The extensive use of electronics as a form of communication and education helps St. Columbkille significantly reduce their waste production. Staff communication is done primarily verbally or via email. Google drive/suite is also used to create, submit, and share documents. The primary form of communication with parents and the community is through electronic means. Email is used to share the weekly newsletter, in addition to being posted on the schools website. Facebook is also used to showcase classes and students accomplishments.

Every student in the school has access to their own laptop or iPad. This is used on a regular basis for projects, quizzes, assignments. Google Drive or Google Classroom are used in nearly every classroom for assignments and learning visuals. SeeSaw, an online educational sharing portal is used regularly in the classroom for student to share their work with their parents. Surveys showed that only one in every 176 St. Columbkille families required printed communication due to a lack of computer at home.

### **Recycling in every classroom**

St. Columbkille participates in the City of Dubuque For 10 years now, there has been recycling bins in every room in the school. There are signs above each bin that were created by the students that explain what is recyclable, and what needs to be thrown in the trash. Recently, the 4<sup>th</sup> grade class updated these posters after learning about this information in their recycling unit. They gave short presentation to each class on what they have learned in their recycling unit and how to recycle properly in the classroom. The 4<sup>th</sup> grade is also in charge of recycling for the building. Every Monday, the class takes 20 minutes of their time to collect the recycling bins from each room, brings them outside to the recycling dumpster where their teacher helps them empty the bin.

This recycling then gets picked up by the local recycling company and processed appropriately.

St. Columbkille participates in the City of Dubuque food scrap collection program. Each lunch has a large compost bin that the students can put food and napkins in. Before a trash can is available, there is a bucket for any leftover liquids and a bin for solids that are compostable. There are signs hanging up behind these bins instructing the students on what can and cannot be composted. In addition to these bins, there is also a small bin for compost collection in the teacher lounge. All of the compost gets collected daily and is picked up in the designated receptacle by the city weekly.

In addition to the large recycling efforts in the classroom, there is also a large availability for the reuse of material. Each classroom has a bin of paper that can be used. This is often paper that only has printing on one side, and can be used as scratch paper for the students.

St. Columbkille has also made a significant effort to decrease the amount of paper towels and disposable paper and plastic ware over the past years. Within the bathrooms, there are several signs that encourage less waste. Signs encourage the minimal use of water, as well as paper towels. Users are encouraged to only pump the handle twice to minimize the amount of material waste from paper towels. In the teachers' lounge, there are cloth towels for both washing and drying. Several years ago, the lounge got an extensive set of dish and silver ware. This almost completely eliminated the presence of single use paper/plastic products.

**Identify your schools energy-efficient facilities and practices, ecologically beneficial uses of grounds, and methods of disposal for solid and hazardous wastes.**

**Energy-efficient facilities and practices:**

St. Columbkille makes every effort to be as energy efficient with the building we have. Snuffers are large window-sized insulated and slide able coverings that are in each classroom. These can be moved to prevent light from coming in to the room, are used as bulletin boards, and insulate the room from the air lost through windows. In every room, there are small green placards above each light switch to turn off the lights, turn off any fans, and to close the window snuffers for the weekend. In most classrooms, the students have certain jobs for the week or month. In many of those classrooms there is a 'green leader' or 'environmentalist' who is in charge of making sure all of these things are done when appropriate.

Several years ago, it was decided that as the light ballasts burnt out, they would be replaced with energy efficient lighting options. The gym was improved with more energy efficient lights, and the installation of motion sensor lights in the locker rooms.

**Ecologically beneficial uses of grounds:**

The prairie plot that is located behind the school is a perfect example of the use of St. Columbkille outdoor space for ecological beneficial. This 50'x80' plot contains a variety of plants native to Iowa/the central Midwestern region, is adjacent to a small wooded plot, and an open mowed field. The plot provides a great amount of habitat for the local animals including a variety of insects, birds, deer, small rodents, etc. With the extensive root systems that the prairie plants have, they can soak up water from rainfall and any runoff. The nutrients in the ground around that area are likely greater than the surrounding area. The plants provide food for pollinators and animals that are interested in their seeds or roots.

The newly constructed rain garden is a great natural water control tool. With the placement of this 8'x15' plot being at the bottom of two small hills that have impervious sidewalks and steps, the rain garden can catch much of the natural and man-made run off before it goes in to the sewers. The native plants that are within this garden can soak up and filter the water with their extensive root systems. Those plants can also provide food for pollinators, and hiding spaces for small mammals.

A prayer garden was re-created in 2016/17 by the students, staff, and community of St. Columbkille. This garden provides many benefits to the students and the community members. With the open space, users have the opportunity to experience a spiritual connection while being outdoors. This has been shown to enhance the overall well-being of the individual, in addition to supporting the spiritual desires of the local religious community. The simple structure, creation and availability of the garden is a model for the local community to see how an outdoor space can be utilized for overall wellness.

## **School Pillar 2: Improve the Health and Wellness of Students and Staff**

**Describe how your school improves the health and wellness of students, faculty and staff by integrating a campus-wide environmental health program and promoting sound health and wellness practices.**

*Discuss integrated pest management, contaminant controls and ventilation, asthma controls, indoor air quality, moisture control, and chemical management. Address the amount and type of outdoor time that your students and staff have, as well as the types of fresh, local, and organic food that they eat. Other components you may want to include are: health education, health services, counseling, psychological and social services, staff health promotion and family and community involvement.*

### **Outdoor time and activities:**

All members of St. Columbkille have opportunities to spend time outdoors. The students get anywhere from 20 to 30 minutes a day for recess. The playground includes a jungle gym, large field for ball games, and a baseball limestone field for kickball, a basketball area with three hoops, and other playground games. A recent addition is the ‘Gaga Ball pit’ where students must stand in a barricaded circle and avoid getting hit by a ball that is tossed around on the ground. The playground area includes these areas and equipment, but also a safe football field sized grass area for the student to run and play.

The newly re-developed prayer garden in the center of the school building offers a place for students, staff, and community to rest in the peace of the outdoors. Staff are encouraged to use for their own personal well-being, as well as for classes. The prayer garden is also open to community members outside of school hours.

In any classroom, the teachers are encouraged to use the outdoors as a teaching tool. The prairie plot is often used, as well as the prayer garden. There is also a small ‘natural playground’ behind the building that can be utilized. This fenced in area was originally designated for the preschoolers, but is occasionally used for other classes. The classes that do go outside often spend the majority of their class outdoors, then connect it back to what they’ve learned back in the classroom.

### **Physical health:**

The mental and physical health of the students and staff is held at a high priority. The school is a “Leader in Me” school teaching the 7 Habits of Highly Effective People to all staff and students, plus the parents. Through this emphasis, all learn the importance of Sharpening the Saw, which means integrating the physical, mental, emotional and spiritual health on a balanced and frequent basis.

Physical health is addressed on a daily basis. As the students arrive to school, they walk the perimeter of the gym in which they all gather. They do this until a chime tells them to sit down and have a brief moment of reflection before announcements begin. All students are required to participate in physical education two times a week. These classes are 20 minutes long and include a variety of active games from unique versions of tag, to playing more organized sports such as basketball.



The school has a wellness committee, as well as a social committee that provide many different activities. The wellness committee offers and organizes nutrition sessions, walks, exercise classes, and yoga sessions. The social committee organizes events for the staff to reduce stress, and reminds everyone to stay emotionally well.

**Mental/emotional health:**

In addition to physical well-being, St. Columbkille also pays attention to mental and emotional health of the student and staff. We have a full time guidance counselor that is dedicated to our school that helps provide this. The counselor does regular lessons with each grade twice a month, ranging on subjects from teamwork to problem solving, to emotional well-being. The counselor also meets individually with some students regularly, and is available for emergency needs when necessary. In addition to our guidance counselor, we also have a connection with St. Columbkille Catholic Church. With this connection, clergy are available to provide guidance and are often involved in some classrooms.

There is a large effort to keep families and community involved directly with the elementary school. There is a weekly newsletter that is sent out to parents and community members. This includes community information, notices and reminders from the principal and staff, notification of changes of policies, etc. These newsletters are sent out electronically as to reduce paper usage. They also include “green notes”; a short green education piece to encourage more green behavior.

**Family and community involvement:**

The school is also connected to the neighboring St. Columbkille Catholic Church which is next to the school building. Students and staff attend a morning mass weekly and on Holy days. The local chapter of Knights of Columbus also occasionally helps out the school with some of their projects. This past summer they were very helpful in the clean-up of the prayer garden.

**Pest management:**

The school district uses a local pest management vendor to address the problems created by ants and occasional mouse. This is utilized on an as needed basis, and with the most environmentally friendly tactics possible.

**Ventilation:**

There are ceiling fans installed in each classroom, along with 3-4 windows in each room. This allows the opportunity for natural ventilation, healthy air, and natural cooling.

**School Pillar 3: Effective Environmental and Sustainability Education**

**Describe how your school provides effective environmental and sustainability education by incorporating STEM, civic skills, and green career pathways.**

*Provide examples of interdisciplinary learning about the key relationships between dynamic environmental, energy, and human systems. Demonstrate how your school uses the environment and sustainability to develop STEM content, knowledge, and thinking skills. You should also discuss how your school develops and applies civic knowledge and skills to environmental and sustainability education.*

STEM is incorporated in many of the grades curriculum, with many of the teachers at St. Columbkille being trained in various programs and projects. A recent example includes the 5<sup>th</sup> grade class and Loras College education students. After the students wrote a creative script about an ecosystem that they learned about, they recorded it using an app called “GreenScreen”. The students were recorded in front of a green cloth playing out their script of a natural disaster or reporting on a certain ecosystem. With the use of the app, the background was changed in to a rainforest, shoreline, deciduous forest, etc. Fifth grade also learn about alternative energy in the



spring. Various Engineering is Elementary units are used in 2<sup>nd</sup>, 3<sup>rd</sup>, and 5<sup>th</sup> grade. Coding is also taught by the technology coach to the kindergartners and the 1<sup>st</sup> graders.

An after-school program called “Lego League” runs in the fall semester. With the guidance of the schools technology coach, and advisors from the local John Deere plant, students design and program Lego robots to assist in ‘cleaning up’ a Lego community on a large Lego table. In addition to the designing and programming of the robots, the student also must pick an environmental problem and create a plan to address it. This may include pollution, water usage, littering, energy usage, etc. The students must do research on the subject and present it to a ‘board’ of stakeholders, attempting to convince them to change their behaviors or change the building in order to address the chosen problem.

The environment is extensively taught at each grade level. Below is a list of some of the subjects taught per grade:

- Kindergarten: Composting, Investigating my senses (using all senses to observe and be aware). Field trips to local city park and nature preserve, planting seed in grade;
- 1<sup>st</sup> grade: weather and weather systems, Animals and their needs, learn about natural resources in social studies;
- 2<sup>nd</sup> grade: Earth materials, plants, Field trip to city arboretum;
- 3<sup>rd</sup> grade: electrical systems, sky and atmosphere, life cycles, field trip to Bellevue State Butterfly Park, learn about lightbulbs and reduction of energy usage;
- 4<sup>th</sup> grade: physical and chemical properties, investigating the changing earth, ecosystems, air pollution problems, watersheds, recycling, field trips to recycling center and landfill; and
- 5<sup>th</sup> grade: weather systems, human systems, environmental solutions, prairie plot, and alternative energy.

*Supporting Photos*



Kindergartners learn about composting and invertebrates from educators from the Dubuque Metropolitan Area Solid Waste Agency.



Fifth graders explore the large native prairie plot on the schools property. This area is often used as an education tool in many classes.



Recycling is a part of every classroom in the entire district. Fourth graders are responsible for collecting and disposing of the recycling every week.



Composting is available at every school, and is disposed of using the cities organic curbside pick-up service. Students learn of the importance of limiting scraps and material from entering the landfills early on in their schooling.



Tools such as this EnviroScape model help students understand that even the smallest action can make a world of difference.